



Technical Appendix 9-3

Bat Activity Report

Scout Moor II Wind Farm

Cubico Wind Development (Wind 1) Ltd



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Document Prepared For

Cubico Wind Development (Wind 1) Ltd

Document Prepared By

Jessica Hosier

Principal Ecologist

jessica.hosier@atmosconsulting.com

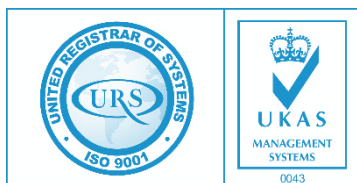
Document Approved By

Alexander Hatton

Technical Director, Ecology and Environmental Management

alex.hatton@atmosconsulting.com

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1. Introduction

1.1 Terms of Reference

Atmos Consulting Ltd (Atmos) were commissioned by Cubico Wind Development (Wind 1) Ltd in 2022 to complete bat static detector monitoring at the proposed Scout Moor II Wind Farm to assist the planning, hereafter referred to as the 'Project for Assessment'.

In 2023, the Assessment Boundary was extended to the north, with an extension area added. Following this extension, further bat static surveys were undertaken in 2023, with surveys of the entire Assessment Boundary following in 2024.

This report has been provided include results from data from the 2022, 2023 and 2024 seasons across the entire Assessment Boundary.

This report also details the results of the Preliminary Bat Roost Assessment (PBRA) of the Assessment Boundary.

1.2 Assessment Boundary Location and Description

The proposed wind farm pertains to approximately 1,024ha of upland habitat located to the north of Rochdale, Greater Manchester, extending across both sides of the county line between Lancashire and Greater Manchester. The Assessment Boundary has an approximate central national grid reference of SD 85795 18585.

The Assessment Boundary is an upland habitat, predominately open moorland with fields to the south of the Assessment Boundary that are often utilised by farmers. An existing operational wind farm lies adjacent west of the Assessment Boundary with some present in the northwest extent of the Assessment Boundary itself. The environment surrounding the Assessment Boundary is mostly urban, with Rochdale to the south of the Assessment Boundary and further housing developments being undertaken to the east of the Assessment Boundary.

1.3 Objectives

The objective of the surveys was to gather data on the usage of the Assessment Boundary by both foraging and roosting bats which could potentially be impacted by the proposed wind farm development.

The results of the survey are presented with the following details:

- legislative context;
- field survey methodology;
- field survey results; and
- evaluation and recommendations.

2. Relevant legislation

All bat species are protected through the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2017) as amended. Bats are commonly referred to as European Protected Species (EPS).

It is an offence to deliberately or recklessly:

- capture, injure or kill a bat;
- harass an individual or group of bats;
- disturb a bat while it is occupying a structure or place used for shelter or protection;
- disturb a bat while it is rearing or otherwise caring for its young;
- obstruct access to a breeding site or resting place, or otherwise deny the animal use of the breeding site or resting place;
- disturb a bat 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;
- disturb a bat 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
- disturb a bat while it is migrating or hibernating.

It is also an offence of strict liability to:

- damage or destroy a breeding site or resting place of a bat even if they are not in use at the time (i.e. a summer roost during the winter period).

3. Methodology

3.1 PBRA

Daytime surveys were undertaken across the Assessment Boundary by a suitably experienced ecologist, with habitat and structures within assessed for the potential to support roosting bats, using guidance to categorise suitability, as detailed below.

Table 9 - 3 - 1 PBRA Suitability

Potential suitability	Description of roosting habitats	Commuting and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation) A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland situation) or a patch of scrub.
PRF-I		
Moderate	A structure or with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland, or water.
High and PRF-M	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses, and grazed parkland. Site is close to and connected to known roosts.
Confirmed roost	A structure or tree supporting evidence of bat presence, such as droppings and feeding remains.	N/A

Each individual building/structure was assessed as having none, negligible, low, moderate, or high suitability for roosting bats, with any standalone trees and large groups of trees likely to be impacted by the proposed works assessed as containing either Potential Roost Features (PRFs) that likely support only individual bats (PRF-I), or multiple bats (PRF-M), according to the BCT guidelines (Collins, 2023).

Habitats with commuting, foraging and swarming suitability for bats were considered in conjunction with suitable roosting habitat.

3.2 Year 1 – Automated Bat Static Surveys

Methodology from published guidance from NatureScot, 2021¹ was used to design the survey effort for the Assessment Boundary. For the 2022 surveys, the design was considered a ‘medium’ size development. Based on the nature of the Assessment Boundary and previous survey work, it is of a ‘low risk’ to bats due to its upland, exposed nature. This meant the survey effort required 13 static detectors in total. (As per NatureScot Wind Farm guidance for developments of more than ten turbines, statics were placed at indicative locations for 13 turbines. This was increased in Year 3 as the number of proposed turbines increased). Statics were deployed to be across open turbine locations and habitat features.

13 static bat detectors (SongMeter minis) were placed in predetermined locations on Assessment Boundary at Scout Moor for 10 nights each month between June 2022 – October 2022 totalling 30 nights of data over the 2022 season. Further details of the location of each static are presented in Table 9-3-2 below and are also shown on Figure 9-5.

Table 9 - 3 - 2 Bat static location details

Static number	Habitat	Approximate grid reference
1	On stone wall near Naden Reservoir	SD 85956 16486
2	Alongside public footpath near Prickshaw Dams	SD 87072 16590
3	Away from public footpath near Prickshaw Dams	SD 87172 16710
4	Within Pike Brow Quarry (disused), off the main track of Rooley Moor Road	SD 86433 17075
5	On corner of stone wall, in open habitat	SD 86525 17557
6	On stone wall next to Fern Isle brook	SD 86411 18262
7	West off the Pennine Bridleway, next to a clough	SD 85570 18022
8	North-east off the Pennine Bridleway in stone wall	SD 85750 19104
9	Within Ding Quarry (disused), under rocks	SD 85142 18611
10	Within Ding Quarry (disused) in the wall, west from Static 9	SD 84812 18702
11	On wall next to Cragg High Level Tank.	SD 84624 19566
12	On corner of stone wall next to Cragg quarry (disused)	SD 82907 19947
13	South from Static 12, in stone wall near public footpath	SD 82978 19653

The statics were programmed to record bat activity from 1 hour before sunset to 1 hour after sunrise. Once collected, the recordings were analysed using Analook software to identify any calls to the species level, where possible. It is of note that there are datasets with more than 10 nights of data per month. This is due to an end date not being set, or the statics being left out for longer than the ten days. In result, this has resulted in larger data sets of bat activity.

For further information on statics deployed monthly, see tables 9-3-3 – 9-3-5 below.

¹ Bats And Onshore Wind Turbines: Survey, Assessment And Mitigation, Naturescot 2021

Table 9 - 3 - 3 Static deployment information for Spring 1 (June 2022)

Static	Deployer	Dates deployed	Last day of data gathered	Grid reference
1	MS	10/06/22	21/06/22	SD85968 16489
2	MS	10/06/22	21/06/22	SD87054 16581
3	MS	10/06/22	21/06/22	SD86867 16677
4	MS	10/06/22	21/06/22	SD86342 17130
5	MS	10/06/22	21/06/22	SD86355 17815
6	MS	10/06/22	21/06/22	SD86371 18138
7	MS	10/06/22	21/06/22	SD85835 17937
8	PG	21/06/22	02/07/22	SD 85756 19114
9	PG	21/06/22	02/07/22	SD 85148 18609
10	PG	21/06/22	02/07/22	SD 84794 18701
11	PG	21/06/22	02/07/22	SD 84623 19570
12	PG	21/06/22	02/07/22	SD 82975 19652
13	PG	21/06/22	02/07/22	SD 82903 19944

Table 9 - 3 - 4 Static deployment information for Summer Year 1 (August 2022)

Static	Deployer	Dates deployed	Last day of data gathered	Grid reference
1	EF/PG	11/08/22	24/08/22	SD 85956 16486
2	EF/PG	11/08/22	24/08/22	SD 87070 16579
3	EF/PG	11/08/22	24/08/22	SD 87138 16725
4	EF/PG	11/08/22	24/08/22	SD 86339 17131
5	EF/PG	11/08/22	24/08/22	SD 86564 17545
6	EF/PG	11/08/22	24/08/22	SD 86411 18262
7	EF/PG	11/08/22	24/08/22	SD 85818 17920
8	EF	16/08/22	29/08/22	SD 85774 19083
9	EF	16/08/22	29/08/22	SD 85155 18595
10	EF	16/08/22	29/08/22	SD 84794 18682
11	EF	16/08/22	29/08/22	SD 84627 19573
12	EF	16/08/22	29/08/22	SD 82903 19943
13	EF	16/08/22	29/08/22	SD 82969 19650

Table 9 - 3 - 5 Static deployment information for Autumn Year 1 (October 2022)

Static	Deployer	Dates deployed	Last day of data gathered	Grid reference
1	MS	14/10/22	24/10/22	SD 87060 16578
2	MS	14/10/22	24/10/22	SD 85956 16590
3	PG	18/10/22	29/10/22	SD 87139 16710
4	EF	12/10/22	23/10/22	SD 86340 17127
5	EF	12/10/22	23/10/22	SD 86565 17542
6	EF	12/10/22	23/10/22	SD 86409 18261
7	EF	12/10/22	23/10/22	SD 85818 17925
8	PG	18/10/22	29/10/22	SD 85752 19120
9	PG	18/10/22	29/10/22	SD 85122 18637
10	PG	18/10/22	29/10/22	SD 84773 18701
11	PG	18/10/22	29/10/22	SD 84629 19575

12	PG	18/10/22	29/10/22	SD 82901 19950
13	PG	18/10/22	29/10/22	SD 82973 19653

3.3 Year 2 – Automated Bat Static Survey

As above, the methodology from NatureScot was used again to design the survey effort for the Assessment Boundary extension. The 2023 surveys were deployed to cover the extension area. The survey effort required 3 static detectors to be deployed across open turbine locations and habitat features.

3 static bat detectors (SM Minis) were placed in predetermined locations on Assessment Boundary at Scout Moor for a minimum of 10 nights each recording period between May to October totalling 30 nights of data over the 2023 season. Further details of the location of each static are presented in Table 9-3-6 below and displayed in Figure 9-5.

Table 9 - 3 - 6 Bat static location details Year 2

Static number	Habitat	Approximate grid reference
14	Placed on the side of a stone wall	SD 85291 19784
15	On a rock face above a small waterfall	SD 85997 20259
16	On a fence surrounding a small spruce plantation.	SD 84958 20260

The statics were programmed to record bat activity from 1 hour each side of sunset to sunrise. Once collected, the recordings were analysed using Kaleidoscope Lite to identify any calls to the species level, where possible. Each static was deployed for 10 nights per month. On occasions where more than 10 nights of data was collected these have been averaged to allow direct comparison

For further information on statics deployed monthly, see tables 9-3-7 – 9-3-9 below.

Table 9 - 3 - 7 Static deployment information for Spring Year 2 (May 2023)

Static	Dates deployed	Deployer	First day of data gathered	Date of collection	Grid reference
14	10/05/23	EF	12/05/2023	22/05/23	SD 85291 19784
15	10/05/23	EF	11/05/2023	22/05/23	SD 85997 20259
16	10/05/23	EF	11/05/2023	22/05/23	SD 84958 20260

Table 9 - 3 - 8 Static deployment information for Summer Year 2 (July 2023)

Static	Dates deployed	Deployer	First day of data gathered	Date of collection	Grid reference
14	19/07/23	LH	19/07/2023	03/08/23	SD 85291 19784
15	19/07/23	LH	19/07/2023	03/08/23	SD 85997 20259
16	19/07/23	LH	19/07/2023	03/08/23	SD 84958 20260

Table 9 - 3 - 9 Static deployment information for Autumn Year 2 (October 2023)

Static	Dates deployed	Deployer	First day of data gathered	Date of collection	Grid reference
14	03/10/23	TB	03/10/2023	19/10/23	SD 85291 19784
15	03/10/23	TB	03/10/2023	19/10/23	SD 85997 20259
16	03/10/23	TB	03/10/2023	19/10/23	SD 84958 20260

3.4 Year 3 – Automated Bat Static Surveys

The methodology from NatureScot was utilised again to design the survey and this time included static locations from both year 1 and year 2. The survey required 15 static detectors to be deployed across open turbine locations and habitat features at the main Assessment Boundary and three static detectors deployed along the access route Assessment Boundary.

The 15 static bat detectors (SM Minis) were placed in predetermined locations on the main Assessment Boundary at Scout Moor for a minimum of 10 nights each recording a period between May to October totalling 30 nights of data over the 2024 season. Further details of the location of each static are presented in Table 9 below and displayed in Figure 3 at the rear of this report.

Table 9 - 3 - 10 Year 3 Bat static location details

Static number	Habitat	Approximate grid reference
1	On a fence under stand of trees adjacent to Fern Isle Brook	SD 86872 17835
2	On a fence post in a grassland habitat	SD 86541 18775
3	In long sward grassland (swamp)	SD 86585 19365
4	Within a disused quarry area	SD 87052 19610
5	Long sward grassland habitat	SD 85298 18287
6	Area of grassland grazed by livestock	SD 84962 20135
7	Short sward grassland, amongst a tall soft rush	SD 86100 20233
8	On a fence post at the edge of bog habitat	SD 85038 19388
9	Predominantly peat with common cotton grass	SD 83724 18802
10	Open area of grassland and rush	SD 83793 19425
11	Edge of Cragg Quarry	SD 83069 19755
12	In short sward grassland surrounded by soft rush	SD 86362 16400
13	Long sward grassland (bog), surrounded by soft rush	SD 87037 16968
14	Exposed short sward grassland, next to small area of rocks	SD 86055 17094
15	High up on the moors, long sward grassland (bog)	SD 86057 17988

The statics were programmed to record bat activity from 1 hour each side of sunset to sunrise. Once collected, the recordings were analysed using Kaleidoscope Lite to identify any calls to the species level, where possible. Each static was deployed for 10 nights per month. On occasions where more than 10 nights of data was collected these have been averaged to allow direct comparison.

For further information on statics deployed for each recording period, see tables 9-3-11 – 9-3-15 below.

Table 9 - 3 - 11 Static deployment information for Spring Year 3 (May 2024)

Static	Deployer	Dates deployed	Dates retrieved	Grid reference
1	GF/TL	16/05/24	28/05/24	SD 86872 17835
2	GF/TL	16/05/24	28/05/24	SD 86541 18775
3	GF/TL	16/05/24	28/05/24	SD 86585 19365
4	GF/TL	16/05/24	28/05/24	SD 87052 19610
5	GF/TL	16/05/24	28/05/24	SD 85298 18287
6	GF/TL	16/05/24	28/05/24	SD 84962 20135
7	GF/TL	16/05/24	28/05/24	SD 86100 20233
8	GF/TL	16/05/24	28/05/24	SD 85038 19388
9	GF/TL	16/05/24	28/05/24	SD 83724 18802
10	GF/TL	16/05/24	28/05/24	SD 83793 19425
11	GF/TL	16/05/24	28/05/24	SD 83069 19755
12	EP	20/05/24	14/06/24	SD 86362 16400
13	EP	20/05/24	14/06/24	SD 87037 16968
14	EP	20/05/24	14/06/24	SD 86055 17094
15	EP	20/05/24	14/06/24	SD 86057 17988

Table 9 - 3 - 12 Static deployment information for Summer Year 3 (June 2024)

Static	Deployer	Dates deployed	Dates retrieved	Grid reference
1	RC	14/06/24	25/06/24	SD 86872 17835
2	RC	14/06/24	25/06/24	SD 86541 18775
3	RC	14/06/24	25/06/24	SD 86585 19365
4	RC	14/06/24	25/06/24	SD 87052 19610
5	HM	14/06/24	25/06/24	SD 85298 18287
6	HM	14/06/24	25/06/24	SD 84962 20135
7	HM	14/06/24	25/06/24	SD 86100 20233
8	HM	14/06/24	25/06/24	SD 85038 19388
9	HM	14/06/24	25/06/24	SD 83724 18802
10	HM	14/06/24	25/06/24	SD 83793 19425
11	HM	14/06/24	25/06/24	SD 83069 19755
12	RC	14/06/24	25/06/24	SD 86362 16400
13	RC	14/06/24	25/06/24	SD 87037 16968
14	RC	14/06/24	25/06/24	SD 86055 17094
15	RC	14/06/24	25/06/24	SD 86057 17988

Table 9 - 3 - 13 Static deployment information for Autumn Year 3 (September 2024)

Static	Deployer	Dates deployed	Dates retrieved	Grid reference
1	TL	11/09/2024	20/09/2024	SD 86872 17835
2	TL	10/09/2024	20/09/2024	SD 86541 18775
3	TL	10/09/2024	20/09/2024	SD 86585 19365
4	TL	10/09/2024	20/09/2024	SD 87052 19610
5	TL	11/09/2024	20/09/2024	SD 85298 18287
6	TL	11/09/2024	20/09/2024	SD 84962 20135
7	TL	10/09/2024	20/09/2024	SD 86100 20233
8	TL	11/09/2024	20/09/2024	SD 85038 19388
9	TL	20/09/2024	20/09/2024	SD 83724 18802
10	TL	20/09/2024	20/09/2024	SD 83793 19425
11	TL	20/09/2024	20/09/2024	SD 83069 19755
12	TL	10/09/2024	20/09/2024	SD 86362 16400
13	TL	10/09/2024	20/09/2024	SD 87037 16968
14	TL	10/09/2024	20/09/2024	SD 86055 17094
15	TL	20/09/2024	20/09/2024	SD 86057 17988

5 statics failed in Autumn Year 3 so were redeployed in October 2024.

Table 9 - 3 - 14 Static redeployment for Autumn Year 3 (October 2024)

Static	Deployer	Dates deployed	Dates retrieved	Grid reference
5	KH	23/10/24	1/11/24	SD 85298 18287
6	KH	23/10/24	1/11/24	SD 84962 20135
7	KH	23/10/24	1/11/24	SD 86100 20233
9	KH	23/10/24	1/11/24	SD 83724 18802
11	KH	23/10/24	Static stolen	SD 83069 19755

Table 9 - 3 - 15 Deployment days for bat statics 2024

Static	Spring	Summer	Autumn	Total days of recording over season
1	6	10	11	27
2	10	10	11	31
3	10	10	11	31
4	-	10	10	20
5	10	10	19	39
6	10	10	13	33
7	-	17	20	37
8	10	10	10	30
9	10	17	20	47
10	10	15	12	37
11	10	11	2	23
12	-	10	11	21
13	-	10	11	21
14	18	10	11	39
15	25	10	12	47

3.5 Analysis

The data recorded from the deployed static recorders was downloaded and analysed by a suitably experienced ecologist using Kaleidoscope to enable identification of species and to calculate and assess the activity levels present across the Assessment Boundary.

The statics in general gathered a particularly high volume of data during their deployment. It was therefore necessary to use a combination of species filters in Analook and random sampling to analyse the data. On this basis, the proportion of each species was then scaled up to identify the relative activity levels across the dataset.

In 2024, bat statics data was analysed through Kaleidoscope.

3.6 Limitations

During October 2022, detectors 4 and 5 did not record any bat calls. However, they are considered to be deployed and recording correctly, as they had numerous noise recordings throughout the full ten days of deployment. Therefore, this is not considered to be a limitation to the validity of the bat data results and simply represents the lack of bat activity in these location in October.

There are no limitations for the 2023 surveys as 30 days of recording was successfully captured at all three locations in the appropriate season.

There were five statics that did not record the full 10 days within the spring 2024 season. Static 1 only recorded 6 days, however 27 days were captured over the 2024 season due to redeployments. Static 4, 7, 12 & 13 had the SD cards and batteries stolen out of the detectors whilst out in the Spring deployment, and due to seasonal constraints with a end of spring commission the statics unable to be redeployed within the spring season. Eleven of the fifteen statics deployed within the 2024 season captured more than the required 30 days.

Notwithstanding the reduction in survey nights for some statics during deployment, ten of the fifteen detectors recorded at least 30 days of activity with many exceeding 30. Those that did not reach the 30 days recommended in the guidance were Static 1, 4, 12, 11 and 13 (all featured) which recorded

27, 20, 21, 23 and 21 days of data respectively. Due to some Statics recording over 30 nights the average number of nights per static across all statics was 32.

In terms of presentation and analysis of results, this has been corrected for the varying number of nights, thus allowing direct comparison.

The changes in the Assessment Boundary are not considered a limitation to the validity of the bat survey results. The proposed turbine locations have been covered sufficiently as per NatureScot guidance across all three years of surveys.

4. Results

4.1 PBRA

4.1.1 Overview

The Assessment Boundary comprises largely open grassland, moorland and bog, with some small areas of woodland located to the periphery of the Assessment Boundary. There are very little trees found on Assessment Boundary, with the majority located in the east of the Assessment Boundary and within a small plantation in the north of the Assessment Boundary. Due to the open, exposed nature of the moorland, there are very few linear features which bats could use as commuting corridors between areas of suitable habitat on or off Assessment Boundary. As described above in Section 3, the Assessment Boundary has been deemed '**low risk**' using the NatureScot guidance (2021), due to the open nature of the habitats on Assessment Boundary. There are limited roosting habitats and commuting opportunities, with any more suitable features/areas generally situated to the outer edges of the Assessment Boundary.

The small areas of trees and buildings across the Assessment Boundary were assessed and their potential for supporting roosting and foraging bats is detailed below. A summary of the PBRA survey results is provided below, with further photographs and building/feature numbers detailed in Appendix A.

South End of Assessment Boundary

North of Shorefield

The far south end of the Assessment Boundary comprises predominantly open, upland acid grassland and modified grassland habitats, grazed by horses and sheep. A number of buildings are located in the southern-most area of the Assessment Boundary, comprising a number of metal farm sheds, wooden storage sheds with corrugated metal roofs and single-storey buildings with corrugated roofs.

Building 1, 2, 3 and 4 (B1, 2, 3, and 4) all have negligible bat roosting potential (BRP), as they are comprised mostly of wooden planks and corrugated plastic and metal with no potential roosting space.

A large house with a slate-style roof is located a small distance outside of the Assessment Boundary, south of the Assessment Boundary itself, adjacent to the Rooley Moor road and areas of grassland (Building 5 (B5)). The building was initially assessed externally as having moderate to high BRP, as it was not possible to complete an internal inspection of the loft. Thus, it would be assigned high BRP, as the loft space was not accessible.

The south end of the Assessment Boundary has therefore been assigned a precautionary **low suitability for bats**, given the only potential roosting feature is located just off Assessment Boundary, and lacks further connectivity via hedgerows or treelines. There were no hedgerows or treelines recorded in this area of the Assessment Boundary, however a small reservoir is located approximately 0.4km north west of B5. This may offer some limited foraging habitat for bats, however the area is largely isolated and exposed in nature.

East Side of Assessment Boundary

Adjacent to Cowm Reservoir and Whitworth Quarry

The east area of the Assessment Boundary comprises largely of degraded blanket bog habitat, bordered by small areas of coniferous woodland to the east and modified grassland to the south. A

total of five woodland clusters were assessed in this area of the Assessment Boundary, four areas of coniferous woodland and one line of ecologically valuable trees. Additionally, a single dead tree was noted to have PRF-M suitability as it had a number of cracks and crevices present within the trunk, potentially suitable for more than a single bat. The tree is located in close proximity to the surrounding woodland areas. The areas of coniferous woodland were all assessed as having negligible BRP, as no potential roosting features (PRF) were noted, along with the Line of Trees (LOT) which was also recorded as having negligible BRP. The line of trees comprised predominantly smooth-stemmed, mature sycamore *Acer pseudoplanatus*, beech *Fagus sylvatica* and oak *Quercus robur*. The woodland areas and LOT may offer some suitable foraging and commuting habitat for bats utilising more suitable areas outside the Assessment Boundary, closer to the Cowm Reservoir where there are a number of residential dwellings and further woodland habitat off Assessment Boundary.

This area as a whole therefore has been assigned a **low suitability for bats**, given the single potential roosting feature, and possibility of the wider area being used by bats for foraging and commuting.

Adjacent to Bagden Disused Quarry

The small area adjacent to the Bagden disused quarry includes a steep gulf with trees lining the embankments, comprising of predominantly mature beech. Other species present include oak, sycamore and immature rowan *Sorbus aucuparia*. A river runs through the centre of the trees within the gully, which may offer suitable foraging and commuting habitat for bat species. This area of woodland was assessed as having **low BRP (PRF-I)**. However, there were no hedgerows or further lines of trees recorded between these features and the wider Assessment Boundary, meaning foraging and commuting further into the Assessment Boundary is unlikely.

A short distance north of this woodland there is a small, single-storey cow shed comprised of bricks, Building 6 (B6). The shed is constructed using at least one layer of bricks with an opening on the western side. The building has a plastic corrugated roof and metal holding the walls. The walls contain a number of gaps and holes that bats could utilise as suitable roosting space. This shed is located adjacent to a small stream called Prickshaw Brook, which appears to head south toward the woodland and river discussed above. B6 was therefore assessed as having **low BRP**, and the area as a whole was assigned a **low suitability for bats** given the multiple features and potential foraging/commuting habitat along the woodland and river/brook.

North End of Assessment Boundary

East of Cowpe Reservoir

The area adjacent to the Cowpe Reservoir is predominantly made up of upland heathland, wetland and modified grassland habitats. A small plantation of cedar woodland is located east of Rooley Moor Road within an area of modified grassland. The woodland is unlikely to support roosting bats and the habitats are extremely isolated, as there are no connecting hedgerows or treelines to be used to commute to areas of more suitable habitat. Thus, the north end of the Assessment Boundary is thought to offer **negligible BRP**.

West Side of Assessment Boundary

There are no areas of woodland within the west side of the Assessment Boundary, and no hedgerows present to link to areas of more suitable roosting habitat off Assessment Boundary. The habitats comprise largely of open modified grassland, disused stone quarries, degraded blanket bog and upland acid grassland. Off Assessment Boundary, there are small areas of woodland adjacent to the Greenbooth and Naden Reservoirs, however connectivity to the wider Assessment Boundary

is limited. The habitats on Assessment Boundary are likely too open and exposed to support commuting bats, and there are no roosting opportunities within the west side of the Assessment Boundary. Thus, this area is thought to offer **negligible BRP**.

Centre of Assessment Boundary – Along Rooley Moor Road

The majority of the central area of the Assessment Boundary comprises open grassland and moorland, with very limited connectivity to more suitable areas to the periphery. Thus, the central area of the Assessment Boundary offers **negligible BRP**.

4.2 Year 1

4.2.1 Static Detectors

A total of 30 nights of data was collected across 13 locations throughout the Assessment Boundary, which began in June and ended in October. The static surveys recorded the presence of common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, nathusius pipistrelle *Pipistrellus nathusii* and *Nyctalus* and *Myotis* calls that were not identified to species level. There was also a small number of brown long-eared *Plecotus auratus* and Leisler *Nyctalus leisleri* recorded.

A moderate number of bat passes were recorded across the Assessment Boundary, with 24,085 total calls recorded over the three periods of static recordings. The table below contains an overview and breakdown of the bat data collected from the three periods months of static deployment June – October.

Table 9 - 3 - 16 Total bat recordings from all statics Year 1 2022

Static	C.pip	S.pip	N.pip	Unidentified pip	Noctule / Nyctalus species	BLE	Myotis species	Leister	Total number of calls
1	508	2	5	30	13	1	2	0	561
2	5412	76	13	271	11	1	19	0	5803
3	3940	66	10	219	15	1	21	1	4273
4	750	30	1	26	3	0	0	0	810
5	230	2	1	9	7	0	0	1	250
6	2111	3	9	164	19	0	1	0	2307
7	186	0	25	10	4	1	2	0	228
8	259	0	5	22	7	1	1	0	295
9	98	0	1	17	5	2	0	0	123
10	1177	0	85	204	4	0	7	0	1477
11	2911	0	59	188	38	0	16	0	3212
12	2245	1	14	67	5	0	12	0	2344
13	2119	0	62	156	8	0	57	0	2402
Total	21946	180	290	1383	139	7	138	2	Total calls = 24085
% of total	91.13	0.74	1.18	5.74	0.57	0.02	0.56	0.008	

Nb. Short hand used in table to allow for space for all headings. C.pip is common pipistrelle, S.pip is soprano pipistrelle, N.pip is nathusius pipistrelle and BLE is brown long eared

Spring 2022

In June, 4705 bat calls were recorded in total across the Assessment Boundary, with 86.48% of these calls being common pipistrelles. Nathusius pipistrelle was the next most commonly recorded bat species in June, with 4.2% of the calls being this species. The nathusius pipistrelles were most frequently recorded at static 10 and 11 in June.

Static 10 was the most active detector, with a total of 1389 calls recorded, and Static 9 was the least active detector, with just 17 calls recorded in June.

See the table below for a full breakdown of species recorded across the locations in June.

Table 9 - 3 - 17 Total bt recordings from statics in Spring 2022

Static	C.pip	S.pip	N.pip	Unidentified pipistrelle	Noctule / Nyctalus species	BLE	Myotis species	Total number of calls
1	158	0	4	5	5	0	0	172
2	368	0	13	24	3	1	0	409
3	125	4	6	5	0	1	0	141
4	274	27	1	10	0	0	0	312
5	40	0	1	1	0	0	0	42
6	75	0	4	3	3	0	0	85
7	26	0	25	1	4	0	0	56
8	53	0	0	9	3	0	0	65
9	14	0	1	2	0	0	0	17
10	1102	0	84	200	3	0	0	1389
11	1176	0	42	50	2	0	0	1270
12	264	0	8	12	2	0	0	286
13	394	0	9	22	0	0	36	461
Total	4069	31	198	344	25	2	36	Total calls = 4705
% of total	86.48	0.65	4.20	7.31	0.53	0.04	0.76	

Summer 2022

In August the recording period had the highest proportion of bat activity, with 15,425 bat calls being recorded in total across the recording period. The most bat activity came from Static 2 with 5,099 calls, with Static 3 following with 2,894 calls and Static 12 with 2,055 bat calls in August. Common pipistrelle was the most recorded species in August with 14,273 calls. 145 calls were from soprano pipistrelles, and there were 95 *Myotis* species calls in August.

During the August recording period, statics were left out for 13 days as opposed to the other periods standard 10 days. This will partly account for the larger total call number, when this number is corrected for the average over 10 days of recording, there is 11,865 calls in total, so still significantly more than June and October.

See the table below for a full breakdown of species recorded.

Table 9 - 3 - 18 Total bat recordings from statics in Summer 2022

Static	C.pip	S.pip	N.pip	Unidentified pipistrelle	Noctule / Nyctalus species	BLE	Myotis species	Leisler	Total number of calls
1	303	2	0	22	4	1	2	0	334

Static	C.pip	S.pip	N.pip	Unidentified pipistrelle	Noctule / Nyctalus species	BLE	Myotis species	Leisler	Total number of calls
2	4775	75	0	223	7	0	19	0	5099
3	2666	59	0	136	15	0	17	1	2894
4	476	3	0	16	3	0	0	0	498
5	190	2	0	8	7	0	0	1	208
6	912	3	0	33	3	0	0	0	951
7	143	0	0	8	0	1	1	0	153
8	193	0	5	13	4	1	0	0	216
9	82	0	0	13	5	2	0	0	102
10	11	0	0	0	0	0	7	0	18
11	817	0	17	72	36	0	16	0	958
12	1981	1	6	54	1	0	12	0	2055
13	1724	0	53	133	8	0	21	0	1939
Total	14273	145	81	731	93	5	95	2	Total calls = 15425
% of total	92.53	0.94	0.52	4.73	0.60	0.03	0.61	0.01	

Autumn 2022

October reported the lowest number of bat calls with 3,955 bat calls overall. Static 6 was the most active this month with 1,271 bat calls, followed by Static 3 with 1,238 bat calls. Common pipistrelle was the most frequently recorded species with 3,604 calls in total. There were also 21 *Nyctalus* species and seven *Myotis* bat passes recorded during this month. No brown long eared or leisler were recorded in October.

See the table below for a full breakdown of species recorded.

Table 9 - 3 - 19 Total bat recordings from statics in Autumn 2022

Static locations	Common pipistrelle	Soprano pipistrelle	Nathusius Pippistrelle	Unidentified pipistrelle	Noctule / Nyctalus species	Myotis species	Total number of calls
1	47	0	1	3	4	0	55
2	269	1	0	24	1	0	295
3	1149	3	4	78	0	4	1238
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	1124	0	5	128	13	1	1271
7	17	0	0	1	0	1	19
8	13	0	0	0	0	1	14
9	2	0	0	2	0	0	4
10	64	0	1	4	1	0	70
11	918	0	0	66	0	0	984
12	0	0	0	1	2	0	3
13	1	0	0	1	0	0	2
Total	3604	4	11	308	21	7	Total calls = 3955
% of total	91.12	0.10	0.27	7.78	0.53	0.17	

Overall Month-by-month Comparisons for Year 1

As can be seen in the table below, August was by far the most active month with 64.04% of calls. June and October presented similar activity levels, with 19.53% and 16.42% of total calls, respectively.

As mentioned above, the August recording period was 3 days longer than the other two periods, resulting in an inflated total calls for the month. This was corrected to match the 10 day recording period as per guidance, to result in 11,865 total calls, still significantly higher than the other recording periods.

The table below presents the consolidated data with monthly totals for each static.

Table 9 - 3 - 20 Overall Monthly Static Passes in 2022

Static	June	August	October
1	172	334	55
2	409	5099	295
3	141	2894	1238
4	312	498	0
5	42	208	0
6	85	951	1271
7	56	153	19
8	65	216	14
9	17	102	4
10	1389	18	70
11	1270	958	984
12	286	2055	3
13	461	1939	2
Total	4705	15425 <i>(corrected total is 11,865)</i>	3955
% of total	19.53	64.04	16.42

4.3 Year 2

4.3.1 Static Detectors

A total of 60 nights of data was collected across 3 locations throughout the Assessment Boundary. The static surveys which began in May and ended in October recorded the presence of Common Pipistrelle, Soprano Pipistrelle, Nathusius Pipistrelle, *Nyctalus* and *Myotis* calls. The latter two were not identified to species level. There was also a small number of Brown Long-Eared and Leisler bats recorded.

A total number of 814 calls were recorded over the survey period. The table below contains an overview and breakdown of the bat data collected from the three periods months of static deployment May – October.

Table 9 - 3 - 21 Total bat recordings from all statics 2023

Static	C. pip	S.pip	N.pip	Noctule / Nyctalus species	BLE	Myotis species	Leisler	Total number of calls
14	1251	1	0	0	0	4	1	1257
15	149	1	0	0	1	4	2	157

Static	C. pip	S.pip	N.pip	Noctule / Nyctalus species	BLE	Myotis species	Leisler	Total number of calls
16	1481	3	2	1	2	1	0	1290
Total	2061	5	2	1	3	9	3	Total calls = 2704
% of total	98.78	0.27	0.11	0.05	0.16	0.47	0.16	

Spring 2023

The statics deployed in May recorded 1069 bat calls were recorded in total. May had the highest number of total bat passes for the 2023 bat survey season. Common Pipistrelles were the most abundant species with 99.62% of belonging to this bat species. Static 16 was the most active detector, with a total of 796 calls recorded, and Static 15 was the least active detector, with 71 calls recorded in May.

See the table below for a full breakdown of species recorded across the locations in May.

Table 9 - 3 - 22 Total bat recordings from statics deployed in Spring 2023

Static	C.pip	S.pip	N.pip	BLE	Myotis species	Total number of calls
14	200	0	0	0	0	200
15	71	1	0	0	1	73
16	792	0	2	1	1	796
Total	1061	1	2	1	2	Total calls = 1069
% of total	99.5	0.05	0.2	0.05	0.2	

Summer 2023

The statics deployed in July recorded 587 bat calls were recorded in total. The month of July had the lowest number of recorded bat passes. Common Pipistrelles were the most abundant species with 98.99% of belonging to this bat species. Static 16 was the most active detector, with a total of 335 calls recorded, and Static 15 was the least active detector, with just 19 calls recorded in July.

See the table below for a full breakdown of species recorded across the locations in July.

Table 9 - 3 - 23 Total bat recordings from statics deployed in Summer 2023

Static	C.pip	S.pip	BLE	Myotis species	Total number of calls
14	228	1	0	4	233
15	18	0	1	0	19
16	335	0	0	0	335
Total	581	1	1	4	Total calls = 587
% of total	98.99	0.17	0.17	0.67	

Autumn 2023

In September, the bat statics failed for 15 and 16, and so these were redeployed in October.

Static 14 was the most active this month with 824 bat calls, followed by Static 14 with 358 bat calls. Common pipistrelle was the most frequently recorded species with 1240 calls. There were also 3 *Myotis* and 3 Leisler bat passes recorded during this month. A total of 1249 bat calls were recorded.

See the table below for a full breakdown of species recorded, including that redeployment.

Table 9 - 3 - 24 Total bat recordings from statics in Autumn 2023 (including redeployment)

Static locations	Common pipistrelle	BLE	Myotis species	Leisler	Total number of calls
14	823	0	0	1	824
15	65	0	0	2	67
16	354	1	3	0	358
Total	1240	1	3	3	Total calls = 1249
% of total	99.44	0.08	0.24	0.24	

4.3.2 Overall Month-by-month Comparisons for Year 2

This season a total of 2900 bat passes were recorded. As can be seen in the table below, October was by far the most active month with 43% of calls, May followed after with 36.76 and July was the least active with 20.24% of calls.

The table below presents the consolidated data with monthly totals for each static.

Table 9 - 3 - 25 Overall Monthly Static Passes in 2023

Static	May	July	October
14	200	233	824
15	73	19	67
16	796	335	358
Total	1069	587	1249
% of total	36.76	20.24	43.00

4.4 Year 3

4.4.1 Static Detectors

A minimum of 30 nights were recorded from 11 out of the 15 main Assessment Boundary statics across the 2024 season as presented in Table 14 and limitations discussed in section 3.6. The static surveys which began in May and ended in October recorded six different species of bats including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle and brown long-eared bats. *Nyctalus* and *Myotis* calls were recorded but not identified to species level.

A total number of 21,143 calls were recorded over the survey period. The table below contains an overview and breakdown of the bat data collected from the three periods months of static deployment May – October.

Table 9 - 3 - 26 Total bat recordings from all main Assessment Boundary statics 2024

Static	C.pip	S.pip	N.pip	Nyctalus species	BLE	Myotis species	Total number of calls
1	4291	85	10	18	2	10	4416
2	2422	6	12	33	1	4	2478
3	298	5	2	1	1	4	311
4	2405	10	32	23	2	6	2478
5	448	4	13	0	1	3	469
6	609	3	5	1	0	5	623
7	832	15	9	7	0	4	867
8	484	0	18	0	1	6	509

9	3036	1	38	2	0	2	3079
10	489	1	9	6	2	3	510
11	1891	2	59	8	0	152	2112
12	530	7	2	0	1	5	545
13	607	23	8	9	1	13	661
14	1484	6	8	10	1	4	1513
15	554	7	9	0	0	2	572
Total	20380	175	234	118	13	223	Total calls = 21,146
% of total	96.4	0.8	1.1	0.6	0.1	1.0	

Nb. Short hand used in table to allow for space for all headings. C.pip is common pipistrelle, S.pip is soprano pipistrelle, N.pip is nathusius pipistrelle and BLE is brown long eared.

Spring 2024

The statics deployed in Spring recorded 5908 bat calls. Spring had the lowest number of total bat passes for the 2024 bat survey season. During this deployment there were four statics that failed. Common Pipistrelles were the most abundant species with 96.8% of belonging to this bat species. Static 2 was the most active detector, with a total of 1998 calls recorded, and Static 3 was the least active detector, with 123 calls recorded in Spring.

Table 9 - 3 - 27 Total bat recordings from statics deployed in Spring 2024

Static	C. pip	S. pip	N. pip	Nyctalus species	BLE	Myotis species	Total number of calls
1	650	7	6	0	0	0	663
2	1987	1	8	0	0	2	1998
3	120	0	2	0	0	1	123
4	-	-	-	-	-	-	-
5	127	1	6	0	0	0	134
6	368	3	4	0	0	2	377
7	-	-	-	-	-	-	-
8	194	0	3	0	0	1	198
9	491	0	4	0	0	1	496
10	211	0	6	0	0	0	217
11	256	0	5	4	0	113	378
12	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	967	1	4	8	0	1	981
15	333	6	3	0	0	1	343
Total	5704	19	51	12	0	122	Total calls =5908
% of total	96.8	0.3	0.	0.2	0.0	2.1	

Summer 2024

The statics deployed in Summer recorded 8655 bat calls in total. The Summer had the highest number of recorded bat passes. Common pipistrelles were the most abundant species with 96.6% of belonging to this bat species. Static 9 was the most active detector, with a total of 2562 calls recorded, and Static 3 was the least active detector, with just 41 calls recorded in Summer.

See the table below for a full breakdown of species recorded across the locations in Summer.

Table 9 - 3 - 28 Total bat recordings from statics deployed in Summer 2024

Static	C. pip	S. pip	N. pip	Nyctalus species	BLE	Myotis species	Total number of calls
1	1342	7	4	3	1	2	1359
2	206	1	4	32	1	1	245
3	39	1	0	0	1	0	41
4	372	0	3	8	0	0	383
5	141	1	0	0	1	1	144
6	221	0	0	1	0	2	224
7	398	4	1	7	0	1	411
8	86	0	6	0	0	2	94
9	2525	1	33	2	0	1	2562
10	275	1	3	6	2	0	287
11	1635	2	54	4	0	39	1734
12	353	2	2	0	0	1	358
13	346	9	7	7	1	6	376
14	241	1	4	1	0	0	247
15	183	0	6	0	0	1	190
Total	8363	30	127	71	7	57	Total calls = 8655
% of total	96.6	0.3	1.5	0.8	0.1	0.7	

Autumn 2024

The statics deployed in Autumn recorded 6580 bat calls in total. Static 1 was the most active this month with 2394 bat calls, followed by Static 4 with 2095 bat calls. Common pipistrelle was the most abundant species recorded with 95.9% recorded of belonging to this bat species .

See the table below for a full breakdown of species recorded.

Table 9 - 3 - 29 Total main Assessment Boundary bat recordings from statics in Autumn 2024

Static	C. pip	S. pip	N. pip	Nyctalus species	BLE	Myotis species	Total number of calls
1	2299	71	0	15	1	8	2394
2	229	4	0	1	0	1	235
3	139	4	0	1	0	3	147
4	2033	10	29	15	2	6	2095
5	180	2	7	0	0	2	191
6	20	0	1	0	0	1	22
7	434	11	8	0	1	3	457
8	204	0	9	0	0	3	216
9	20	0	1	0	0	0	21
10	3	0	0	0	0	3	6
11	0	0	0	0	0	0	0
12	177	5	0	0	1	4	187
13	261	14	1	2	0	7	285
14	276	4	0	1	1	3	285
15	38	1	0	0	0	0	39
Total	6313	126	56	35	6	44	Total calls = 6580
% of total	95.9	1.9	0.9	0.5	0.1	0.7	

4.4.2 Overall Month-by-month Comparisons for Year 3

This season a total of 21,143 bat passes were recorded on the main Assessment Boundary. As can be seen in the table below, Summer was the most active month with 40.4% of calls, Autumn followed after with 30.7% and Spring was the least active with 27.9% of calls. However, Spring had 4 failed statics, therefore, this is likely to contribute to the low calls recorded.

The table below presents the consolidated data with monthly totals for each static.

Table 9 - 3 - 30 Overall Monthly Statics Passes in 2024 on the main Assessment Boundary

Static	Spring	Summer	Autumn
1	663	1359	2394
2	1998	245	235
3	123	41	147
4	-	383	2095
5	134	144	191
6	377	224	22
7	-	411	456
8	198	94	217
9	496	2562	21
10	217	287	6
11	378	1734	0
12	-	358	187
13	-	376	285
14	981	247	285
15	343	190	39
Total	5908	8655	6580
% of total	27.6	40.4	30.7

5. Summary

All species of bat in the UK are protected under the Wildlife and Countryside Act 1981 (as amended) and as European protected species under the Conservation of Habitats and Species Regulations 2017 (as amended). This legislation also applies to roost locations, whether or not they are occupied at the time.

Overall, the Assessment Boundary holds low potential for roosting bats, as the majority of the Assessment Boundary comprises open, upland habitats with limited connecting habitats and roosting features. The roosting features present are largely found within the periphery of the redline boundary, and not within the centre of the Assessment Boundary where the majority of the turbines and infrastructure are proposed to be sited.

The deployment of bat static detectors was carried out between June and October 2022 and 2023. In 2024 the deployment of bat static detectors were carried out between May and October. The results show that the Assessment Boundary is predominantly used by common pipistrelle, soprano pipistrelle, with small numbers of *Nyctalus spp*, *myotis spp* and brown long-eared bats.

5.1 PBRA

The potential roosting features and areas of more suitable habitat for bats are generally located in the east and south end of the Assessment Boundary however due to design changes all building with bat roost potential towards the south have been removed from the scope of assessment. The building located towards the east of the Assessment Area was determined to have low bat roost potential and was located approximately 1km from the nearest turbine, Turbine 4. The closest turbine to an area of suitable bat habitat is Turbine 1, located approximately 0.36km away from the woodland assessed as having moderate BRP. Connectivity to this area is very limited however, with the surrounding habitats comprising of open grassland and moorland. There were no emergence surveys undertaken within the woodland as the area will be fully retained. The level of bat activity has been monitored during the 2022 and 2024 season with static 1 located in the woodland.

5.2 Static Detectors

5.2.1 Year 1

The static detectors deployed in June and October had relatively similar number of bat calls, whereas the August recordings accounted for over half of the total bat calls. This is likely due to August being generally accepted as one of the most active months for bat activity, along with having optimal weather conditions.

The most active detectors were Static 2 and Static 3 which together, account for approximately 40% of all calls recorded. These two statics were deployed close together, located to the south-east of the Assessment Boundary. They were deployed in grassland habitats, near to building ruins and old stone walls, both suitable habitats for roosting bats.

The static with the least activity was Static 9 with 123 calls in total. Static 9 was frequently the static with the least bat calls, except for in October, when Statics 4 and 5 did not record any bat calls. Statics 4, 5 and 9 are all located in open, moorland habitat which is considered less suitable for foraging and commuting bats.

The most frequent calls recorded were common pipistrelle that represented over 91% of all calls. The second most recorded species was the Nathusius pipistrelle which represented 1.18% of total calls.

5.2.2 Year 2

In 2023 the most active detectors were 15 and 16. These static detectors were deployed near water features that would be ideal for bat foraging. Bat 14 was placed near a small area of dense conifer plantation which would be less suitable for commuting or foraging bats. October was the most active month with over 50% of calls despite a limited in recording period. In 2023 Common Pipistrelle represented over 98% of all calls, with other species only representing around 1% or less of recorded calls.

5.2.3 Year 3

In 2024 the most active detectors were 1 and 9. Static 1 was deployed on a fence under a stand of trees adjacent to Fern Isle Brook watercourse. Static 9 was deployed in an open area of peat with common grass. Static 1 was one of the statics that did not record for the full 30 days however accounts for 20.9% of the total calls recorded. Static 2 had the least amount of calls recorded, accounting for 1.5% of total bat calls recorded. This static recorded for the full 30 days.

The most common species recorded was common pipistrelle with a total of 19,795 calls, accounting for 93.6% of total calls recorded.

5.2.4 Overall Summary

It is considered that the Assessment Boundary supports a low to moderate number of commuting and foraging bats, with most of the activity focused on near to habitat features such as reservoirs, watercourses, stone buildings and stone walls.

6. References

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

NatureScot (2021) *Bats and onshore wind turbines - survey, assessment and mitigation*. Available at: <https://www.nature.scot/doc/bats-and-onshore-wind-turbines-survey-assessment-and-mitigation>.

7. Figures

Figure 1: Bat Static Detector Locations

Appendices



Appendix A. PBRA Buildings, Trees and Woodlands

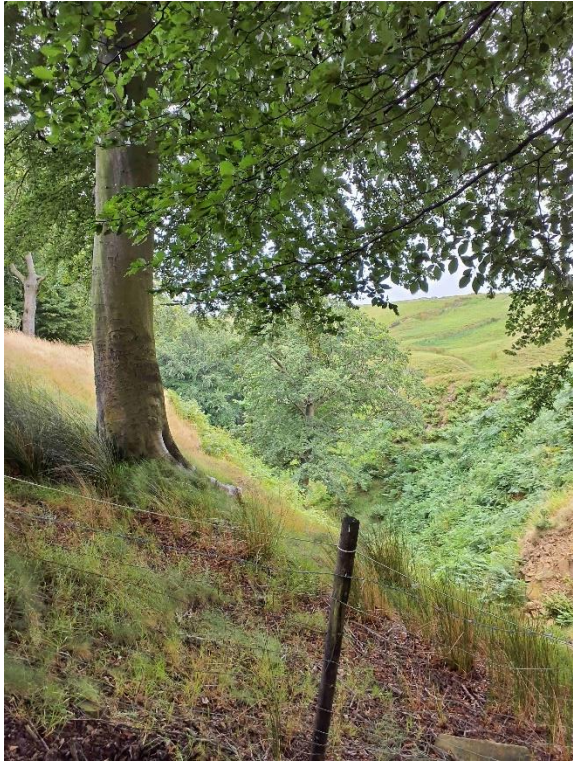
Table 9 - 3 - 31 PBRA Buildings, Trees and Woodlands

PBRA Description and Location	Photograph
B1 – metal cow sheds in southern-most end of Assessment Boundary	
B2 – small corrugated roof buildings in southern-most end of Assessment Boundary	

PBRA Description and Location	Photograph
B3 – group of storage trailers and corrugated roof buildings in southern-most end of the Assessment Boundary	
B4 – storage trailers and flat roofed sheds at southern-most end of the Assessment Boundary	

PBRA Description and Location	Photograph
B5 – slate roof farmhouse building located just outside of the Assessment Boundary, to the south	
B6 – stone cattle shed with corrugated roof in the eastern side of the Assessment Boundary	

PBRA Description and Location	Photograph
T1 – PRF-M dead tree in the eastern side of the Assessment Boundary	
Adjacent to Cowm Reservoir and Whitworth Quarry— predominantly conifer woodland planted	

PBRA Description and Location	Photograph
Adjacent to Bagden Disused Quarry – moderate potential broadleaf woodland	
Centre of Assessment Boundary open habitats with limited connectivity	

PBRA Description and Location	Photograph
Plantation Near Cowpe Reservoir – plantation cedar woodland in northern- most end of Assessment Boundary	