

Angmering Sports Hub
Decoy Drive
Angmering
Litthehampton
West Sussex
BN16 4DN

Interim Bat Activity Survey

Report ref.: R2769_BAS_a

Report Quality Control Information	
Author	Meghan Porter (Qualifying member of CIEEM)
Reviewer	John Wenman MCIEEM

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 **JOHN WENMAN**
ecological consultancy

1 Diesel House, Honey Hill, Wokingham, Berkshire RG40 3BL

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Registered office: 100 New Wokingham Road, Crowthorne, Berkshire RG45 6JP where you may look at a list of members' names.

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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Mace to undertake a Bat Activity Survey (BAS) at Palmer Road Recreation Ground in Angmering, West Sussex. The BAS was commissioned to accompany a planning application for the creation of a sports hub to replace the existing Angmering Sports and Social Club.
- 1.1.2** The BAS is one of multiple surveys being carried out to determine the baseline of species present within the site boundary. This interim report summarises the findings of the autumn BAS carried out in October 2024.
- 1.1.3** The distribution of bat calls recorded across the site during the transect surveys highlighted the habitat features used most on site by bats, with at least nine species recorded on site, including nationally scarce species barbastelle. The key habitat features on site are the tree-lines along the northern, eastern and western boundaries of the site.
- 1.1.4** In the absence of mitigation, the addition of artificial night lighting has the potential to deter bat species from using the key habitat features on site; however, proposed lighting scheme will avoid illuminating much of the habitat of importance to bats but will lead to some low level illumination of nearby tree lines. The use of lighting curfews would mitigate impacts on key species.

2 INTRODUCTION

2.1 Project Background

2.1.1 John Wenman Ecological Consultancy LLP was instructed by Mace to undertake a Bat Activity Survey (BAS) at Palmer Road Recreation Ground in Angmering, West Sussex. The BAS was commissioned to accompany a planning application for the creation of a sports hub to replace the existing Angmering Sports and Social Club.

2.1.2 This interim report follows a Ground Level Tree Assessment (GLTA) report produced by John Wenman Ecological Consultancy LLP (reported separately, R2769_GLTA_a). The GLTA report highlighted suitable commuting and foraging habitat for bats on site.

2.2 Site Location and Context

2.2.1 The application site consists of a 4.0 ha plot of land on the northwest side of Decoy Drive in Angmering, Littlehampton, West Sussex (OS grid reference: TQ 06597 05097).

2.2.2 The Palmer Road Recreation Ground is situated within a suburban area with houses and their gardens along Decoy Drive and Arundel Road to the south and east respectively. Agricultural land is situated along the western boundary of the sports ground with parcels of mixed priority woodland defined under Section 41 of the NERC Act 2006 approximately 270 metres northeast and 370 metres north of the pavilion.

2.3 Report Objectives

2.3.1 Due to the presence of potential roosting sites and suitable commuting and foraging habitat for bats on site, a BAS was recommended to include dusk transect surveys and automated/static surveys during the each season of the period of bat activity i.e. spring (March-April), summer (June-August) and autumn (September-October). This report details the first survey i.e. autumn survey, which was carried out in October 2024.

2.3.2 The key aims of this report are to:

- Describe the methodology of the bat activity surveys including any

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limitations;

- Detail the survey findings including tables of bats recorded/observed and an annotated plan of the site;
- Interpret the interim survey results including information on the species assemblage and the temporal and spatial distribution of recorded bat activity on site;
- Complete an initial assessment of the impacts of the proposals on roosting, commuting and foraging bats..

3 SURVEY METHODOLOGY

3.1 Bat Activity Survey

- 3.1.1** A transect walk was undertaken on October 1st 2024. The transect started at sunset and continued for 2 hours after sunset. The survey was carried out by two surveyors (Meghan Porter – registered under Natural England Bat Survey Class Licence CL17 (Registration no.: 2023-11300-CL17-BAT) and Jake Morgan) equipped with a Batlogger M2 detector.
- 3.1.2** A transect route was developed to sample all habitat types within the site but with weighting towards the tree-lines. The transect was walked twice during the survey visit. The transect route was subdivided into eight fixed listening points where surveyors stopped and recorded bat activity for 5-minute intervals (see **Appendix 1**).
- 3.1.3** In conjunction with the transect survey, two automated Batlogger S2 static detectors were deployed in two fixed locations on site for a period of five consecutive nights to provide further data on bat activity. The static and transect detector data was later analysed using the BatExplorer software package.
- 3.1.4** The transect survey was undertaken as dusk surveys, which began at sunset and finished at least two hours after sunset in accordance with the third edition of the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2023).

3.2 Survey Constraints

- 3.2.1** Full access was available to the site and the weather conditions were suitable for bat activity i.e. dry with air temperatures above 10°C and therefore there were no significant access constraints.

4 BAT ACTIVITY SURVEY FINDINGS

4.1 Overview

- 4.1.1 A summary of the bat activity survey detector data is shown in **Tables 1, 2a & 2b** below. Raw bat activity survey detector data is detailed in **Appendix 2**, survey maps for each site are presented in **Appendix 3** and survey findings are described in **Sections 4.2 & 4.3**.

Table 1. Summary of Elekon Batlogger M2 detector data for Transect Route

Species	No. of recordings
<i>Pipistrellus pipistrellus</i>	122
<i>Pipistrellus pygmaeus</i>	178
<i>Plecotus</i> sp.	2
<i>Myotis</i> sp.	3
<i>Barbastella barbastellus</i>	6
<i>Nyctalus noctula</i>	1
Total	312

Table 2a. Summary of static detector data for Location 1

Species	No. of recordings(% of total calls)
<i>Barbastella barbastellus</i>	83 (1.7%)
<i>Eptesicus serotinus</i>	47 (1.01%)
<i>Myotis</i> sp.	1448 (31.12%)
<i>Nyctalus noctula</i>	60 (1.29%)
<i>Nyctalus leisleri</i>	3 (0.06%)
<i>Pipistrellus nathusii</i>	25 (0.53%)
<i>Pipistrellus pipistrellus</i>	1473 (31.66%)
<i>Pipistrellus pygmaeus</i>	1444 (31.03%)
<i>Plecotus</i> sp.	70 (1.5%)

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Total	4653
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Table 2b. Summary of static detector data for Location 2

Species	No. of recordings (% of total calls)
<i>Barbastella barbastellus</i>	21 (0.34%)
<i>Eptesicus serotinus</i>	46 (0.76%)
<i>Myotis</i> sp.	143 (2.3%)
<i>Nyctalus noctula</i>	21 (0.35%)
<i>Pipistrellus pipistrellus</i>	5233 (86.96%)
<i>Pipistrellus pygmaeus</i>	489 (8.14%)
<i>Plecotus</i> sp.	53 (0.88%)
Total	6006

4.2 Survey Findings

Transect Route

4.2.1 A total of at least six bat species were recorded along the transect route during the survey, with the first bat recorded being a soprano pipistrelle (*Pipistrellus pygmaeus*) at 18:52, 13 minutes after sunset, indicating the bat likely emerged from a roost nearby. The bat species recorded included soprano pipistrelle (*P. pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), *Myotis* species, barbastelle (*Barbastella barbastellus*), noctule (*Nyctalus noctula*) and a long-eared species (*Plecotus* sp.). Out of these, soprano pipistrelle (*P. pygmaeus*) was the most frequently recorded bat followed by common pipistrelle (*P. pipistrellus*), with both species recorded at all transect stop points.

4.2.2 A total of at least 10 bat species were recorded by the static detectors set out from 1st till 5th of October 2024. The bat species recorded included common pipistrelle (*P. pipistrellus*), soprano pipistrelle (*P. pygmaeus*), Nathusius' pipistrelle (*Pipistrellus nathusii*), *Myotis* species, barbastelle (*B. barbastellus*), noctule (*Nyctalus noctula*), Leisler's (*Nyctalus leisleri*),

serotine (*Eptesicus serotinus*) and long-eared species (*Plecotus* sp.). Common pipistrelle were the most abundantly recorded species during the 5 nights, with the highest number of passes recorded at Detector 2 on the northern boundary accounting for almost 87% of all the calls.

4.2.3 The number of calls recorded at Detector 1 was lower than Detector 2, but 9 of the 10 species recorded were detected and the distribution of calls was more evenly spread between the species with common pipistrelle, soprano pipistrelle and Myotis species accounting for most of the calls and approximately a third each.

4.2.4 .

5 DISCUSSION AND RECOMMENDATIONS

5.1 Interim Assessment of Conservation Importance

- 5.1.1** A high level of bat activity was recorded during the transect activity survey and on all five nights the static detectors were set out. These findings highlight the significance of the tree-line around the site, in particular the northern and western boundary, used for commuting and foraging bats.
- 5.1.2** Common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are an abundant and widespread species (Wray and Reason 2023) that accounted for most of the calls showing they very frequently use the site for commuting and foraging. Common and soprano pipistrelle bats were recorded within their typical emergence window during the transect survey, indicating that there are roosts nearby.
- 5.1.1** Noctule (*Nyctalus noctula*), which is a widespread but less abundant species and the rarer leisler's (*Nyctalus leisleri*) were recorded on site (Wray and Reason 2023). Noctule (*N. noctula*) and Leisler's (*N. leisleri*) are sometimes thought to benefit from artificial night lighting (Mathews *et al.* 2018) so the urban lighting along the southern side of the site could be having a positive effect on this species.
- 5.1.2** Species observed also included light-sensitive and slower flying species species such as the nationally rare barbastelle (*B. Barbastellus*) and *Plecotus* sp. and *Myotis* sp. which were recorded along the northern and western boundaries of the site. They prefer foraging habitat away from light sources and will make use of foraging within and along dense vegetation (Wray and Reason 2023). These species were recorded by both of the static detectors, which show they are likely to use the tree lines along the northern, eastern and western sides of the site.

5.2 Interim Impact Assessment

- 5.2.1** The proposals involve the installation of artificial night lighting including new floodlighting for the 3G pitch and path lighting associated with the redevelopment of the new sports hub, car park and synthetic sports pitches. The lighting proposals produced by Ion Building Services Consulting Engineers shows that the lighting design will impact the eastern side of the

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site and a small areas of the northern tree line. The artificial lighting may result in light spill onto the tree lines higher than 1.0 Lux around the 3G pitch. This level of lighting may have some impact on more light sensitive species recorded on site. The impacts could be mitigated using lighting for fixed periods and operating curfews to avoid the key flight times for particularly sensitive species.

- 5.2.2** Furthermore, most of the lighting will be contained to the centre or southern side of the site where low numbers of only soprano and common pipistrelle bats were recorded, who are well adapted to urban environments.

5.3 Next Steps

- 5.3.1** Further transect and static detector surveys will be conducted in spring and summer 2025 to provide a full assessment of the site's importance to bats and the distribution of bat species on site.

6 REFERENCES

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

Dietz *et al.* (2009). *Bats of Britain Europe and Northern Africa*. A&C Black.

Gemma Lighting (2024) *Palmer Road Sports Hub - Arun District Council* (reference; HM270824-1).

Institution of Lighting Professionals (2023). *Guidance Note GN08/23: Bats and Artificial Lighting At Night* <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.

APPENDIX 1 – RAW BAT ACTIVITY SURVEY DETECTOR DATA

Elekon Batlogger M2 (Transect Route 1) – 01/10/2024:

Recording	Timestamp	Species Text	Calls [#]	Temperature [°C]	Latitude [WGS84]	Longitude [WGS84]
14400003	18:52:16	<i>Pipistrellus pygmaeus</i>	12	13	50.83525	-0.48973
14400002	18:51:36	<i>Pipistrellus pygmaeus</i>	33	13	50.83525	-0.48971
14400004	18:52:34	<i>Pipistrellus pygmaeus</i>	40	13	50.83524	-0.48973
14400006	18:55:34	<i>Pipistrellus pygmaeus</i>	13	13	50.83524	-0.48974
14400007_1	18:56:07	<i>Pipistrellus pygmaeus</i>	26	13	50.83524	-0.48977
14400008	18:56:23	<i>Pipistrellus pygmaeus</i>	14	13	50.83525	-0.48977
14400009	18:56:29	<i>Pipistrellus pygmaeus</i>	18	13	50.83525	-0.48977
14400010	18:56:42	<i>Pipistrellus pygmaeus</i>	17	13	50.83525	-0.48977
14400011_1	18:56:58	<i>Pipistrellus pygmaeus</i>	14	13	50.83527	-0.48977
14400012	18:57:04	<i>Pipistrellus pygmaeus</i>	15	13	50.83532	-0.48982
14400013	18:57:11	<i>Pipistrellus pygmaeus</i>	13	13	50.83536	-0.48988
14400014	18:58:12	<i>Pipistrellus pygmaeus</i>	9	13	50.8359	-0.49032
14400015	18:59:16	<i>Pipistrellus pygmaeus</i>	7	13	50.836	-0.49039
14400016	19:00:55	<i>Pipistrellus pygmaeus</i>	16	13	50.83601	-0.49039
14400017	19:01:02	<i>Pipistrellus pygmaeus</i>	10	13	50.83601	-0.49038
14400018	19:01:36	<i>Pipistrellus pygmaeus</i>	41	13	50.83601	-0.49037
14400019	19:01:44	<i>Pipistrellus pygmaeus</i>	16	13	50.836	-0.49037
14400020	19:02:10	<i>Pipistrellus pygmaeus</i>	17	13	50.83601	-0.49037
14400021	19:02:19	<i>Pipistrellus pygmaeus</i>	25	13	50.83601	-0.49037
14400022	19:03:07	<i>Pipistrellus pygmaeus</i>	24	13	50.83601	-0.49039
14400024	19:04:22	<i>Pipistrellus pygmaeus</i>	8	13	50.83617	-0.48941
14400025	19:04:26	<i>Pipistrellus pygmaeus</i>	12	13	50.83618	-0.48938
14400026	19:04:55	<i>Pipistrellus pygmaeus</i>	9	13	50.83619	-0.48938
14400027_1	19:05:21	<i>Pipistrellus pygmaeus</i>	24	13	50.8362	-0.48937
14400028	19:05:30	<i>Pipistrellus pipistrellus</i>	33	13	50.8362	-0.48936
14400029	19:05:45	<i>Pipistrellus pipistrellus</i>	34	13	50.8362	-0.48936
14400030_1	19:05:56	<i>Pipistrellus pipistrellus</i>	23	13	50.8362	-0.48935
14400030_2	19:05:56	<i>Pipistrellus pygmaeus</i>	1	13	50.8362	-0.48935
14400031_1	19:06:08	<i>Pipistrellus pygmaeus</i>	51	13	50.8362	-0.48935

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14400031_2	19:06:08	<i>Pipistrellus pipistrellus</i>	11	13	50.8362	-0.48935
14400032	19:06:24	<i>Pipistrellus pygmaeus</i>	5	13	50.8362	-0.48937
14400033	19:06:27	<i>Pipistrellus pygmaeus</i>	19	13	50.8362	-0.48936
14400034	19:06:40	<i>Pipistrellus pipistrellus</i>	22	13	50.8362	-0.48937
14400035_1	19:06:47	<i>Pipistrellus pygmaeus</i>	32	13	50.8362	-0.48938
14400035_2	19:06:47	<i>Pipistrellus pipistrellus</i>	7	13	50.8362	-0.48938
14400035_3	19:06:47	<i>Pipistrellus pygmaeus</i>	2	13	50.8362	-0.48938
14400035_4	19:06:47	<i>Pipistrellus pipistrellus</i>	1	13	50.8362	-0.48938
14400035_5	19:06:47	<i>Pipistrellus pipistrellus</i>	2	13	50.8362	-0.48938
14400036	19:07:14	<i>Pipistrellus pipistrellus</i>	29	12	50.83619	-0.48937
14400037	19:07:30	<i>Pipistrellus pipistrellus</i>	27	12	50.83619	-0.48935
14400038	19:07:45	<i>Pipistrellus pipistrellus</i>	51	12	50.8362	-0.48937
14400039_1	19:08:00	<i>Pipistrellus pygmaeus</i>	33	12	50.83619	-0.48937
14400039_2	19:08:00	<i>Pipistrellus pipistrellus</i>	20	12	50.83619	-0.48937
14400040_1	19:08:18	<i>Pipistrellus pipistrellus</i>	21	12	50.83619	-0.48937
14400041	19:08:26	<i>Pipistrellus pipistrellus</i>	10	12	50.83619	-0.48937
14400042	19:08:46	<i>Pipistrellus pygmaeus</i>	31	12	50.83619	-0.48936
14400043	19:08:57	<i>Pipistrellus pygmaeus</i>	25	12	50.8362	-0.48937
14400044	19:09:06	<i>Pipistrellus pygmaeus</i>	22	12	50.8362	-0.48936
14400045_1	19:09:17	<i>Pipistrellus pipistrellus</i>	32	12	50.8362	-0.48935
14400045_2	19:09:17	<i>Pipistrellus pygmaeus</i>	1	12	50.8362	-0.48935
14400046_1	19:09:31	<i>Pipistrellus pygmaeus</i>	40	12	50.83621	-0.48916
14400046_2	19:09:31	<i>Pipistrellus pipistrellus</i>	16	12	50.83621	-0.48916
14400047	19:09:46	<i>Pipistrellus pygmaeus</i>	60	12	50.83622	-0.48893
14400048	19:10:04	<i>Pipistrellus pygmaeus</i>	48	12	50.83624	-0.48877
14400049	19:10:17	<i>Pipistrellus pygmaeus</i>	23	12	50.83626	-0.48857
14400050	19:10:38	<i>Pipistrellus pygmaeus</i>	16	12	50.83628	-0.4883
14400051	19:10:56	<i>Pipistrellus pygmaeus</i>	25	12	50.83627	-0.4883
14400052	19:11:05	<i>Pipistrellus pygmaeus</i>	16	12	50.83626	-0.4883
14400053	19:11:46	<i>Pipistrellus pygmaeus</i>	39	12	50.83626	-0.48831
14400054_1	19:12:40	<i>Pipistrellus pipistrellus</i>	10	12	50.83626	-0.48829
14400055_1	19:12:43	<i>Pipistrellus pipistrellus</i>	15	12	50.83626	-0.48829
14400055_2	19:12:43	<i>Pipistrellus pygmaeus</i>	2	12	50.83626	-0.48829

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14400056	19:12:51	<i>Pipistrellus pipistrellus</i>	20	12	50.83626	-0.48829
14400057	19:13:02	<i>Pipistrellus pipistrellus</i>	52	12	50.83626	-0.48829
14400058	19:13:15	<i>Pipistrellus pipistrellus</i>	1	12	50.83627	-0.48828
14400059	19:13:19	<i>Pipistrellus pipistrellus</i>	47	12	50.83627	-0.4883
14400060	19:13:34	<i>Pipistrellus pipistrellus</i>	52	12	50.83626	-0.48829
14400061	19:13:49	<i>Pipistrellus pipistrellus</i>	47	12	50.83627	-0.48827
14400062	19:14:28	<i>Pipistrellus pygmaeus</i>	18	12	50.83626	-0.48823
14400063	19:14:35	<i>Pipistrellus pygmaeus</i>	14	12	50.83626	-0.48824
14400064	19:14:41	<i>Pipistrellus pygmaeus</i>	3	12	50.83625	-0.48824
14400065	19:14:44	<i>Pipistrellus pygmaeus</i>	60	12	50.83625	-0.48824
14400066	19:14:58	<i>Pipistrellus pygmaeus</i>	13	12	50.83625	-0.48824
14400067_1	19:15:18	<i>Pipistrellus pygmaeus</i>	21	12	50.83626	-0.48824
14400067_2	19:15:18	<i>Pipistrellus pipistrellus</i>	1	12	50.83626	-0.48824
14400068	19:15:40	<i>Pipistrellus pygmaeus</i>	59	13	50.83626	-0.48825
14400069_1	19:15:58	<i>Pipistrellus pygmaeus</i>	46	13	50.83629	-0.48796
14400069_2	19:15:58	<i>Pipistrellus pipistrellus</i>	1	13	50.83629	-0.48796
14400070_1	19:16:12	<i>Pipistrellus pipistrellus</i>	19	13	50.83631	-0.48772
14400070_2	19:16:12	<i>Pipistrellus pygmaeus</i>	12	13	50.83631	-0.48772
14400071	19:16:27	<i>Pipistrellus pipistrellus</i>	25	13	50.83635	-0.48748
14400072	19:16:57	<i>Pipistrellus pipistrellus</i>	39	13	50.8364	-0.48704
14400074	19:19:24	<i>Pipistrellus pygmaeus</i>	40	13	50.83652	-0.48623
14400075	19:19:46	<i>Pipistrellus pygmaeus</i>	51	13	50.83653	-0.48624
14400076_1	19:20:01	<i>Pipistrellus pygmaeus</i>	24	13	50.83654	-0.48621
14400077_1	19:20:24	<i>Pipistrellus pygmaeus</i>	6	13	50.83653	-0.48621
14400078	19:20:28	<i>Pipistrellus pygmaeus</i>	37	13	50.83653	-0.48621
14400079	19:20:49	<i>Pipistrellus pygmaeus</i>	34	13	50.83651	-0.4862
14400080	19:21:03	<i>Pipistrellus pygmaeus</i>	37	13	50.8365	-0.48619
14400081	19:21:13	<i>Pipistrellus pygmaeus</i>	45	13	50.83649	-0.48618
14400082	19:21:30	<i>Pipistrellus pygmaeus</i>	14	13	50.8365	-0.48619
14400083_1	19:22:09	<i>Pipistrellus pygmaeus</i>	4	13	50.8365	-0.48618
14400084	19:22:28	<i>Pipistrellus pygmaeus</i>	24	13	50.83651	-0.48619
14400085_1	19:22:54	<i>Pipistrellus pygmaeus</i>	4	13	50.83652	-0.48619
14400086	19:22:58	<i>Pipistrellus pygmaeus</i>	19	13	50.83652	-0.4862

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14400088	19:26:06	<i>Nyctalus spec.</i>	4	13	50.83595	-0.48614
14400090	19:31:30	<i>Pipistrellus pipistrellus</i>	20	12	50.83541	-0.48791
14400091	19:31:41	<i>Pipistrellus pipistrellus</i>	18	12	50.83536	-0.48795
14400092	19:31:55	<i>Pipistrellus pipistrellus</i>	24	12	50.83535	-0.48796
14400093	19:32:09	<i>Pipistrellus pygmaeus</i>	13	12	50.83535	-0.48796
14400094	19:32:20	<i>Pipistrellus pipistrellus</i>	13	12	50.83534	-0.48796
14400095	19:32:29	<i>Pipistrellus pipistrellus</i>	18	12	50.83534	-0.48795
14400096	19:35:44	<i>Pipistrellus pipistrellus</i>	52	12	50.83534	-0.48795
14400097	19:35:58	<i>Pipistrellus pipistrellus</i>	17	12	50.83534	-0.48795
14400098	19:36:10	<i>Pipistrellus pipistrellus</i>	12	12	50.83534	-0.48794
14400101	19:38:02	<i>Pipistrellus pygmaeus</i>	2	12	50.83498	-0.48926
14400102_1	19:38:06	<i>Pipistrellus pygmaeus</i>	2	12	50.83498	-0.48926
14400103	19:38:15	<i>Pipistrellus pygmaeus</i>	14	12	50.83498	-0.48927
14400104	19:38:28	<i>Pipistrellus pygmaeus</i>	6	12	50.83498	-0.48928
14400105	19:38:57	<i>Pipistrellus pygmaeus</i>	7	12	50.83496	-0.48927
14400106	19:39:01	<i>Pipistrellus pygmaeus</i>	5	12	50.83496	-0.48927
14400107_1	19:39:18	<i>Pipistrellus pygmaeus</i>	9	12	50.83496	-0.48926
14400108_1	19:39:41	<i>Pipistrellus pygmaeus</i>	3	12	50.83495	-0.48925
14400109	19:39:49	<i>Pipistrellus pygmaeus</i>	10	12	50.83495	-0.48925
14400110	19:39:59	<i>Pipistrellus pygmaeus</i>	3	12	50.83495	-0.48925
14400111	19:40:09	<i>Pipistrellus pygmaeus</i>	6	12	50.83496	-0.48926
14400112	19:40:56	<i>Pipistrellus pipistrellus</i>	12	12	50.83499	-0.48927
14400113	19:44:19	<i>Pipistrellus pipistrellus</i>	9	12	50.83539	-0.48994
14400114	19:44:26	<i>Pipistrellus pipistrellus</i>	21	12	50.83538	-0.48994
14400115	19:48:27	<i>Barbastella barbastellus</i>	10	12	50.83538	-0.48994
14400116	19:48:33	<i>Barbastella barbastellus</i>	13	12	50.83538	-0.48994
14400117	19:49:52	<i>Myotis spec.</i>	12	12	50.83563	-0.4902
14400118_1	19:50:39	<i>Pipistrellus pygmaeus</i>	7	12	50.83597	-0.49041
14400119	19:50:49	<i>Pipistrellus pipistrellus</i>	45	12	50.836	-0.49042
14400120_1	19:51:04	<i>Pipistrellus pipistrellus</i>	27	12	50.836	-0.49042
14400121	19:51:10	<i>Pipistrellus pipistrellus</i>	28	12	50.83601	-0.49041
14400122	19:51:24	<i>Pipistrellus pipistrellus</i>	7	12	50.83604	-0.49042
14400123_1	19:51:33	<i>Pipistrellus pipistrellus</i>	11	12	50.83603	-0.49043

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14400124	19:51:42	<i>Pipistrellus pipistrellus</i>	10	12	50.83603	-0.49042
14400125	19:51:45	<i>Pipistrellus pipistrellus</i>	15	12	50.83603	-0.49042
14400126	19:51:54	<i>Pipistrellus pipistrellus</i>	18	12	50.83603	-0.49042
14400127	19:51:58	<i>Pipistrellus pipistrellus</i>	7	12	50.83602	-0.49042
14400128	19:52:00	<i>Pipistrellus pipistrellus</i>	14	12	50.83602	-0.49041
14400129_1	19:52:14	<i>Pipistrellus pipistrellus</i>	2	12	50.83603	-0.4904
14400130_1	19:52:19	<i>Myotis spec.</i>	28	12	50.83603	-0.49039
14400130_2	19:52:19	<i>Myotis spec.</i>	5	12	50.83603	-0.49039
14400131_1	19:52:29	<i>Barbastella barbastellus</i>	6	12	50.83603	-0.49039
14400131_2	19:52:29	<i>Barbastella barbastellus</i>	1	12	50.83603	-0.49039
14400132_1	19:52:48	<i>Pipistrellus pipistrellus</i>	3	12	50.83603	-0.4904
14400132_2	19:52:48	<i>Pipistrellus pipistrellus</i>	1	12	50.83603	-0.4904
14400132_3	19:52:48	<i>Pipistrellus pipistrellus</i>	1	12	50.83603	-0.4904
14400133	19:53:23	<i>Pipistrellus pipistrellus</i>	23	12	50.83602	-0.49039
14400134	19:53:32	<i>Pipistrellus pipistrellus</i>	11	12	50.83603	-0.49039
14400135_1	19:53:38	<i>Pipistrellus pipistrellus</i>	11	12	50.83604	-0.49039
14400135_2	19:53:38	<i>Pipistrellus pipistrellus</i>	1	12	50.83604	-0.49039
14400136_1	19:53:41	<i>Pipistrellus pipistrellus</i>	17	12	50.83604	-0.49039
14400136_2	19:53:41	<i>Pipistrellus pipistrellus</i>	1	12	50.83604	-0.49039
14400137	19:53:45	<i>Pipistrellus pipistrellus</i>	19	12	50.83604	-0.49039
14400138_1	19:53:50	<i>Pipistrellus pipistrellus</i>	10	12	50.83604	-0.49039
14400138_2	19:53:50	<i>Pipistrellus pipistrellus</i>	2	12	50.83604	-0.49039
14400139	19:53:57	<i>Pipistrellus pipistrellus</i>	7	12	50.83603	-0.49039
14400140	19:54:03	<i>Pipistrellus pipistrellus</i>	15	12	50.83604	-0.4904
14400141	19:54:09	<i>Pipistrellus pipistrellus</i>	10	12	50.83605	-0.49041
14400142_1	19:54:52	<i>Pipistrellus pipistrellus</i>	12	12	50.83604	-0.49043
14400142_2	19:54:52	<i>Pipistrellus pygmaeus</i>	1	12	50.83604	-0.49043
14400143_1	19:55:04	<i>Pipistrellus pipistrellus</i>	18	12	50.83603	-0.49042
14400143_2	19:55:04	<i>Pipistrellus pipistrellus</i>	1	12	50.83603	-0.49042
14400144	19:55:17	<i>Pipistrellus pipistrellus</i>	10	12	50.83602	-0.49042
14400145_1	19:55:30	<i>Pipistrellus pipistrellus</i>	20	12	50.83602	-0.49044
14400145_2	19:55:30	<i>Pipistrellus pipistrellus</i>	2	12	50.83602	-0.49044
14400146_1	19:55:41	<i>Pipistrellus pipistrellus</i>	14	12	50.83604	-0.49034

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14400146_2	19:55:41	<i>Pipistrellus pygmaeus</i>	1	12	50.83604	-0.49034
14400148_1	19:55:57	<i>Pipistrellus pipistrellus</i>	6	12	50.83611	-0.49011
14400149	19:55:59	<i>Pipistrellus pipistrellus</i>	49	12	50.83612	-0.49006
14400150	19:56:09	<i>Pipistrellus pipistrellus</i>	1	12	50.83615	-0.48994
14400152_1	19:56:19	<i>Pipistrellus pipistrellus</i>	9	12	50.83616	-0.48987
14400153	19:56:43	<i>Barbastella barbastellus</i>	14	12	50.83622	-0.48942
14400154	19:56:46	<i>Barbastella barbastellus</i>	2	12	50.83622	-0.48938
14400157_1	19:57:02	<i>Pipistrellus pygmaeus</i>	18	12	50.83623	-0.4891
14400158	19:57:07	<i>Pipistrellus pygmaeus</i>	9	12	50.83623	-0.48909
14400159_1	19:57:13	<i>Pipistrellus pygmaeus</i>	14	12	50.83622	-0.48909
14400160	19:57:36	<i>Pipistrellus pygmaeus</i>	23	12	50.83623	-0.48911
14400161_1	19:57:50	<i>Pipistrellus pygmaeus</i>	16	13	50.83623	-0.48912
14400162_1	19:58:01	<i>Pipistrellus pygmaeus</i>	21	13	50.83623	-0.48912
14400162_2	19:58:01	<i>Pipistrellus pipistrellus</i>	20	13	50.83623	-0.48912
14400163	19:58:21	<i>Pipistrellus pygmaeus</i>	1	13	50.83623	-0.48912
14400164_1	19:58:24	<i>Pipistrellus pygmaeus</i>	30	13	50.83621	-0.48912
14400165_1	19:58:47	<i>Pipistrellus pipistrellus</i>	29	13	50.83622	-0.4891
14400165_2	19:58:47	<i>Pipistrellus pygmaeus</i>	11	13	50.83622	-0.4891
14400166_1	19:58:59	<i>Pipistrellus pygmaeus</i>	14	13	50.83622	-0.48909
14400167	19:59:10	<i>Pipistrellus pygmaeus</i>	19	13	50.83622	-0.48911
14400168_1	19:59:21	<i>Pipistrellus pygmaeus</i>	33	13	50.83622	-0.48911
14400169_1	19:59:45	<i>Pipistrellus pygmaeus</i>	16	13	50.83622	-0.4891
14400170_1	19:59:53	<i>Pipistrellus pygmaeus</i>	17	13	50.83622	-0.48912
14400171_1	20:00:01	<i>Pipistrellus pygmaeus</i>	24	13	50.83621	-0.48912
14400172	20:00:12	<i>Pipistrellus pygmaeus</i>	18	13	50.83623	-0.48909
14400173	20:00:23	<i>Pipistrellus pygmaeus</i>	18	13	50.83624	-0.48907
14400174	20:00:32	<i>Pipistrellus pygmaeus</i>	3	13	50.83624	-0.48909
14400175_1	20:00:34	<i>Pipistrellus pygmaeus</i>	31	13	50.83624	-0.48909
14400176_1	20:01:01	<i>Pipistrellus pygmaeus</i>	9	13	50.83624	-0.48911
14400177_1	20:01:07	<i>Pipistrellus pygmaeus</i>	4	13	50.83624	-0.48911
14400178_1	20:01:09	<i>Pipistrellus pygmaeus</i>	29	13	50.83624	-0.4891
14400179	20:01:26	<i>Pipistrellus pygmaeus</i>	24	13	50.83623	-0.4891
14400180_1	20:01:41	<i>Pipistrellus pygmaeus</i>	32	13	50.83623	-0.4891

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14400181_1	20:02:12	<i>Pipistrellus pygmaeus</i>	17	13	50.83623	-0.4891
14400182	20:02:30	<i>Pipistrellus pygmaeus</i>	60	13	50.83624	-0.48901
14400183	20:02:45	<i>Pipistrellus pygmaeus</i>	13	13	50.83624	-0.4889
14400184	20:02:50	<i>Pipistrellus pygmaeus</i>	15	13	50.83624	-0.48887
14400185_1	20:03:04	<i>Pipistrellus pygmaeus</i>	14	13	50.83625	-0.48868
14400186	20:03:18	<i>Pipistrellus pygmaeus</i>	8	13	50.83628	-0.48845
14400187_1	20:03:21	<i>Pipistrellus pygmaeus</i>	7	13	50.83628	-0.48842
14400188_1	20:03:31	<i>Pipistrellus pygmaeus</i>	46	13	50.8363	-0.48822
14400188_2	20:03:31	<i>Pipistrellus pipistrellus</i>	4	13	50.8363	-0.48822
14400189	20:03:46	<i>Pipistrellus pipistrellus</i>	40	13	50.83633	-0.48797
14400190_1	20:04:04	<i>Pipistrellus pipistrellus</i>	11	13	50.83637	-0.48765
14400190_2	20:04:04	<i>Pipistrellus pygmaeus</i>	2	13	50.83637	-0.48765
14400191	20:04:14	<i>Pipistrellus pipistrellus</i>	65	13	50.83637	-0.48768
14400192_1	20:04:28	<i>Pipistrellus pipistrellus</i>	54	13	50.83637	-0.48771
14400192_2	20:04:28	<i>Pipistrellus pygmaeus</i>	1	13	50.83637	-0.48771
14400193	20:04:43	<i>Pipistrellus pipistrellus</i>	56	13	50.83637	-0.48771
14400194_1	20:04:59	<i>Pipistrellus pipistrellus</i>	45	13	50.83638	-0.48772
14400194_2	20:04:59	<i>Pipistrellus pygmaeus</i>	2	13	50.83638	-0.48772
14400195	20:05:14	<i>Pipistrellus pipistrellus</i>	51	13	50.83637	-0.4877
14400196_1	20:05:32	<i>Pipistrellus pygmaeus</i>	38	13	50.83636	-0.48769
14400196_2	20:05:32	<i>Pipistrellus pipistrellus</i>	27	13	50.83636	-0.48769
14400196_3	20:05:32	<i>Pipistrellus pygmaeus</i>	4	13	50.83636	-0.48769
14400197_1	20:06:04	<i>Pipistrellus pipistrellus</i>	56	13	50.83638	-0.48772
14400197_2	20:06:04	<i>Pipistrellus pygmaeus</i>	2	13	50.83638	-0.48772
14400198	20:06:19	<i>Pipistrellus pipistrellus</i>	18	13	50.83636	-0.48771
14400199_1	20:06:26	<i>Pipistrellus pipistrellus</i>	24	13	50.83637	-0.48771
14400199_2	20:06:26	<i>Pipistrellus pygmaeus</i>	3	13	50.83637	-0.48771
14400200	20:06:44	<i>Pipistrellus pipistrellus</i>	31	13	50.83635	-0.4877
14400201	20:07:08	<i>Pipistrellus pipistrellus</i>	11	14	50.83636	-0.48769
14400202_1	20:07:16	<i>Pipistrellus pipistrellus</i>	10	14	50.83637	-0.4877
14400202_2	20:07:16	<i>Pipistrellus pygmaeus</i>	1	14	50.83637	-0.4877
14400203_1	20:07:19	<i>Pipistrellus pipistrellus</i>	56	14	50.83637	-0.4877
14400204	20:07:34	<i>Pipistrellus pipistrellus</i>	18	14	50.83637	-0.4877

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14400205_1	20:07:40	<i>Pipistrellus pipistrellus</i>	35	14	50.83637	-0.4877
14400206_1	20:07:59	<i>Pipistrellus pipistrellus</i>	28	14	50.83638	-0.48771
14400206_2	20:07:59	<i>Pipistrellus pygmaeus</i>	25	14	50.83638	-0.48771
14400207	20:08:14	<i>Pipistrellus pipistrellus</i>	5	14	50.83638	-0.48772
14400208	20:08:20	<i>Pipistrellus pipistrellus</i>	28	14	50.83638	-0.48772
14400209	20:08:34	<i>Pipistrellus pipistrellus</i>	29	14	50.83638	-0.48772
14400210	20:08:45	<i>Pipistrellus pipistrellus</i>	45	14	50.83638	-0.48772
14400211_1	20:08:59	<i>Pipistrellus pipistrellus</i>	18	14	50.83639	-0.48757
14400212_1	20:09:19	<i>Pipistrellus pipistrellus</i>	2	13	50.83643	-0.4873
14400216_1	20:12:18	<i>Pipistrellus pygmaeus</i>	19	13	50.83647	-0.48622
14400217	20:12:52	<i>Pipistrellus pygmaeus</i>	1	13	50.83645	-0.48619
14400218_1	20:12:56	<i>Pipistrellus pygmaeus</i>	4	13	50.83646	-0.48618
14400219_1	20:12:59	<i>Pipistrellus pygmaeus</i>	3	13	50.83647	-0.48618
14400220	20:13:01	<i>Pipistrellus pygmaeus</i>	2	13	50.83647	-0.48618
14400221_1	20:13:06	<i>Pipistrellus pygmaeus</i>	1	13	50.83647	-0.48618
14400222_1	20:13:46	<i>Pipistrellus pygmaeus</i>	2	13	50.83649	-0.48619
14400223	20:13:49	<i>Pipistrellus pygmaeus</i>	1	13	50.83649	-0.48619
14400224	20:14:33	<i>Pipistrellus pygmaeus</i>	3	13	50.83648	-0.48618
14400225	20:15:02	<i>Pipistrellus pygmaeus</i>	3	13	50.8365	-0.48618
14400227_1	20:22:41	<i>Pipistrellus pygmaeus</i>	9	13	50.8358	-0.48761
14400230_1	20:24:04	<i>Pipistrellus pipistrellus</i>	14	12	50.83534	-0.48802
14400232_1	20:30:49	<i>Plecotus spec.</i>	9	13	50.83499	-0.4893
14400232_2	20:30:49	<i>Plecotus spec.</i>	1	13	50.83499	-0.4893

APPENDIX 3 – BAT ACTIVITY SURVEY MAP (AUTUMN)



Angmering Sports Hub
Angmering
West Sussex

Bat Activity Plan - Autumn 2024

Key:

- ◆ Barbastelle
- ◆ Common Pipistrelle
- Myotis sp.
- ◆ Nycatalus sp.
- ◆ Plecotus sp.
- ◆ Soprano Pipistrelle
- ◆ Activity Survey Listening Stops
- ▲ Static Detector Locations

Mapped by: John Wenman
Date: Nov 5th 2024

John Wenman Ecological Consultancy