



CLOVERWOOD
— Ecology Ltd —

Bat Emergence Survey Report

Project Name: The Spindles, Wargrave

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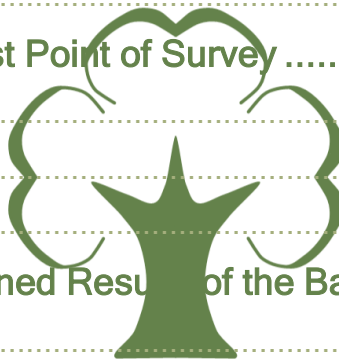
The findings and recommendations presented in this report are based on the information available at the time of survey and reflect the conditions observed during the site visit. This report has been prepared in line with the best practice guidelines provided by Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM, 2017). Cloverwood Ecology Ltd accepts no responsibility for the use of this report for purposes other than those for which it was originally commissioned. Any such party referring to or relying upon this report does so at entirely their own risk.



Contents

1	Summary	1
1.1	Site Details	1
1.2	Development Proposals	1
1.3	Brief	1
1.4	Legislation & Planning Policy	1
1.5	Results	1
1.6	Recommendations	2
2	Introduction	3
2.1	Site Details	3
2.2	Ecological Background	3
2.2.1	<i>Building B1</i>	<i>3</i>
2.2.2	<i>Building B2</i>	<i>4</i>
2.3	Development Proposals	4
2.4	Brief	4
3	Legislation & Planning Policy	6
4	Methodology	7
4.1	Desk Study	7
4.2	Bat Emergence Surveys	7
4.2.1	<i>Description & Aims</i>	<i>7</i>
4.2.2	<i>Method</i>	<i>8</i>
4.2.3	<i>Survey Details</i>	<i>8</i>
4.2.4	<i>Equipment</i>	<i>8</i>
4.2.5	<i>Data Analysis</i>	<i>9</i>
4.3	DNA Analysis	9
4.4	Discussion	9
4.5	Survey Limitations	10
4.5.1	<i>Visit 1</i>	<i>10</i>
4.5.2	<i>Visit 3</i>	<i>10</i>
5	Results	11
5.1	Desk Study	11
5.2	Bat Emergence Surveys	13
5.2.1	<i>Visit 1</i>	<i>13</i>
5.2.2	<i>Visit 2</i>	<i>13</i>

5.2.3	Visit 3	14
5.3	DNA Analysis	14
6	Discussion	15
7	Recommendations	16
8	Conclusion	18
9	References	19
10	Figure 1 - Results of Bat Emergence Surveys - Visit 1	21
10.1	Figure 1a.....	21
10.2	Figure 1b.....	22
11	Figure 2 - Results of Bat Emergence Surveys - Visit 2	23
11.1	Figure 2a.....	23
11.2	Figure 2b.....	24
12	Figure 3 - Results of Bat Emergence Surveys - Visit 3	25
12.1	Figure 3a.....	25
13	Appendix 1 - Glossary of Terms	26
14	Appendix 2 - Legislation & Planning Policy	29
14.1	Bats.....	29
14.2	Local Planning Policy	30
14.2.1	Wokingham Borough Council, Adopted Core Strategy Development Plan Document (Adopted January 2010) (Wokingham Borough Council, 2010)	30
14.2.2	Wokingham Borough Council, Managing Development Delivery Local Plan (Adopted February 2014) (Wokingham Borough Council, 2014).....	30
15	Appendix 3 - Surveyor Field of View.....	32
15.1	Visit 1	32
15.2	Visit 2	35
15.3	Visit 3	38
16	Appendix 4 - Darkest Point of Survey	41
16.1	Visit 1	41
16.2	Visit 2	44
16.3	Visit 3	47
17	Appendix 5 - Combined Results of the Bat Emergence Surveys..	50
17.1	Visit 1	50
17.2	Visit 2	50



17.3	Visit 3	50
18	Appendix 6 - Guidance and Rationale for Assessment on Ecological Significance.....	52
18.1	Species Rarity	52
18.2	Roost Type.....	53
18.3	Geographical Frame of Reference	54
18.4	Assessing Importance of Roosts.....	55



1 Summary

A glossary of terms is provided in Appendix 1.

1.1 Site Details

Site Name: The Spindles, Wargrave

Site Address: The Spindles School Hill, Wargrave, Reading, RG10 8DY.

Grid Reference: SU 7897 7818.

Client Name: Dani Czernuszka-Watts

1.2 Development Proposals

The development proposals are for a householder application for the proposed erection of single storey side and rear extension onto the existing building (B1) with rooflights and adaptation for wheelchair accessibility. The development proposals also include changes to fenestration on building B1, addition of air source heat pumps, and the extension of the existing pebbled driveway. The removal of an existing small wild cherry tree, approximately 100 m² of closely mown modified grassland, and a shed (building B2) are also required to facilitate the development.

1.3 Brief

The brief of the bat emergence surveys was to identify the presence of roosting bats in the structures on site and identify the likely ecological constraints associated with the project, including the impacts on roosting bats within the structures on site.

1.4 Legislation & Planning Policy

Bats and their roosts are fully protected under UK and European legislation. Full details of the legal protections afforded to bats and their roosts are provided in Appendix 2.

1.5 Results

The key findings of the assessment include the following:

- Approximately 100-150 bat droppings were recorded in Void 1 of building B1 (Cloverwood Ecology Ltd, 2026), which were confirmed to belong to brown long-eared bats (University of Warwick, 2026).
- During visit 1, one soprano pipistrelle was recorded emerging from building B2 from a gap at the eaves at 21:31. No bats were recorded emerging from building B1 (see Figure 1).
- During visit 2, one soprano pipistrelle was recorded emerging from building B2 from a gap at the eaves at 21:34. No bats were recorded emerging from building B1 (see Figure 2).

- During visit 3, no bats were recorded emerging from buildings B1 and B2 (see Figure 3).
- It has been assessed the roost within building B1 is likely a day roost supporting an individual number of brown long-eared bats of local importance and the roost within building B2 is likely a day roost supporting an individual number of soprano pipistrelles of local importance.
- In the absence of avoidance and mitigation measures, the development proposals will result in the disturbance and alteration of a brown long-eared bat day roost of local importance within building B1 and the destruction of a soprano pipistrelle roost of local importance within building B2.

1.6 Recommendations

For the works to proceed lawfully and without breaching wildlife legislation relating to bats, a European Protected Species Licence (EPSL) for bats is required from Natural England. The development must be granted full planning permission prior to the EPSL application. Works must not commence until the EPSL has been granted by Natural England and all conditions of the licence are adhered to in full.

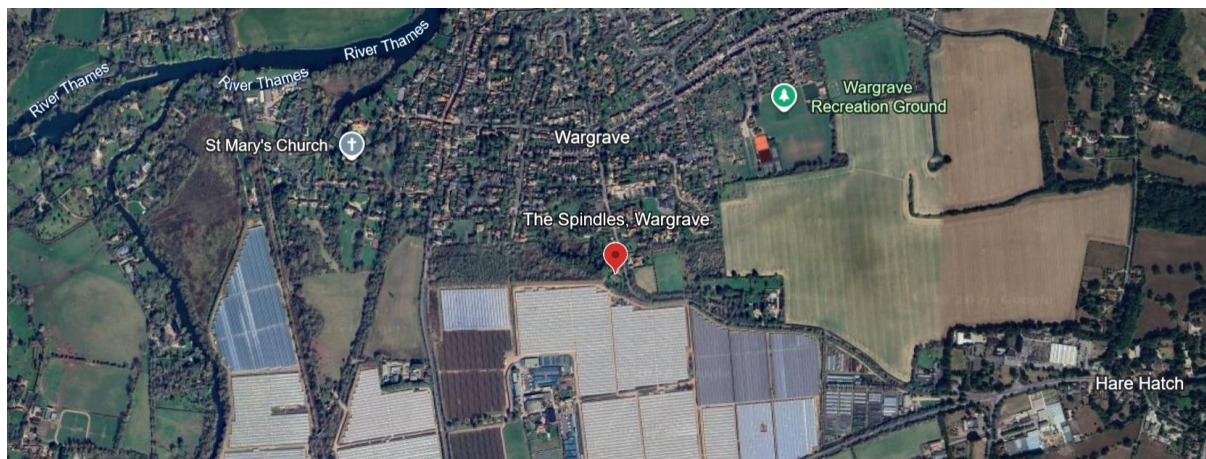
2 Introduction

2.1 Site Details

The site is located at The Spindles, School Hill, Wargrave, Reading, RG10 8DY. The central Grid Reference for the site is SU 7897 7818. The site is located on the edge of a residential area in Wargrave village, off School Hill. Directly adjacent to the western boundary is a parcel of deciduous woodland, which is a Priority Habitat. Directly adjacent to the southern boundary is a plant nursery. Residential buildings border the site to the north, while School Hill and pastoral fields border the site to the east. The wider landscape comprises agricultural fields and further residential buildings. Hare Hatch village is located approximately 1.3 km to the south-east and the River Thames, which is a Priority Habitat, is located approximately 745 m to the north-west. The site is located within the Network Enhancement Zone 2 (Natural England, 2020).

An aerial image of the site is provided below, see Plate 1.

Plate 1. Aerial image of the site (red pin) taken from Google Earth Pro, accessed 22nd May 2026.



2.2 Ecological Background

A Preliminary Roost Assessment (PRA) was conducted by Cloverwood Ecology Ltd on 27th May 2026 of the structures on site (Cloverwood Ecology Ltd, 2026).

2.2.1 Building B1

Description

A single storey bungalow with a complex roof structure. The central section of the roof is hipped with a red brick chimney. On the front elevation there is a porch with a hipped roof. On the rear elevation, there is a single storey bay window with a conical roof structure and an intersecting gable with a hipped roof. On the western elevation, there is an extension, in the form of a garage, with a flat hipped roof and there is an intersecting gable on the rear elevation with a pitch, hipped roof. The roof comprises machine-made clay tiles with extensive moss cover. The roof also has plastic soffits.

There are two roof voids present, which are a timber framed construction and lined with bitumen felt. Void 1 is a king's trussed construction with two intersecting gables on the rear elevation and one intersecting gable on the front elevation. The roof void is insulated with fibreglass insulation and is partly boarded. There is one red brick chimney present in the void. The internal dimension of the void is approximately 17 m in length, 5 m in width, and 4 m in height. Void 2 is trussed and has a flat roof lined with timber boarding. There is an intersecting gable on the rear elevation. The roof void is not insulated and not boarded. The internal dimension of the void is approximately 7 m in length, 5 m in width, and 4 m in height.

Assessment

Approximately 100 to 150 bat droppings were recorded in Void 1, and two bat droppings were recorded in Void 2 of building B1. Multiple external and internal Potential Roosting Features (PRFs) for bats were recorded. Therefore, in accordance with the best practice guidelines (Collins, 2023), building B1 has been assessed as a confirmed roost.

2.2.2 Building B2

Description

A timber panelled shed with timber framed windows situated on a concrete slab. The roof is hipped and comprises timber panels. On the rear elevation, a section of the roof has been removed and replaced with bitumen felt. There is no internal void that could be used by roosting bats.

Assessment

External PRFs for bats were recorded on building B2 in the form of gaps under timber cladding. Building B2 is located approximately 6 m from building B1, which has been assessed as a confirmed roost. Due to the close proximity of building B2 to building B1, building B2 could potentially be a satellite roost to the bat roost present in building B1. Therefore, in line with the best practice guidelines (Collins, 2023), building B2 has been assessed as having high suitability to support roosting bats.

2.3 Development Proposals

The development proposals are for a householder application for the proposed erection of single storey side and rear extension onto the existing building (B1) with rooflights and adaptation for wheelchair accessibility. The development proposals also include changes to fenestration on building B1, addition of air source heat pumps, and the extension of the existing pebbled driveway. The removal of an existing small wild cherry tree, approximately 100 m² of closely mown modified grassland, and a shed (building B2) are also required to facilitate the development.

2.4 Brief

The brief of the bat emergence surveys was to:

- Determine the presence or likely absence of roosting bats in the structures on site.
- Confirm the bat species roosting in the structures on site, if present.
- Confirm the PRFs and access/egress points on the structures being used by roosting bats, if present.
- Provide recommendations for avoidance and mitigation measures for bats, where appropriate.

3 Legislation & Planning Policy

Bats and their roosts are fully protected under UK and European legislation. National planning policy also recognises the importance of conserving bats and their habitats. Full details of the legal protections afforded to bats and their roosts are provided in Appendix 2.

The results of this assessment will inform the development of a suitable avoidance and mitigation strategy to ensure adherence to UK and European legislation in relation to bats.

4 Methodology

The findings and recommendations provided in this report are valid for up to 18 months from the date of survey, in accordance with current best practice guidance (CIEEM, 2024). This reflects the potential for changes in site conditions, habitat suitability, and species presence over time. Beyond this period, an updated survey may be required to ensure that the information remains accurate and robust for decision-making purposes.

4.1 Desk Study

The purpose of the desk study was to gather existing ecological information relevant to bats and their habitats within the local area to provide contextual information on the potential presence of bats within the wider landscape. Multi-Agency Geographical Information for the Countryside (MAGIC) mapping (Natural England, 2025) was consulted for information on designated sites, priority habitats, and granted EPSLs relating to bats within 2 km of the site. A search of planning applications within 1 km of the site was conducted for records of known bat roosts (Wokingham Borough Council, 2026). The National Biodiversity Network (NBN) (NBN Atlas Partnership, 2026) was referred to for species records within 5 km.

The desk study should not be taken as a definitive list of bats and bat roosts that occur within the wider landscape.

4.2 Bat Emergence Surveys

4.2.1 Description & Aims

During the PRA carried out by Cloverwood Ecology Ltd, building B1 was assessed as a confirmed roost and building B2 was assessed as having high suitability to support roosting bats (Cloverwood Ecology Ltd, 2026).

The purpose of the bat emergence surveys was to determine the presence or likely absence of roosting bats in the structures on site. If bats are recorded as being present in the structures on site, the purpose is to also confirm the PRFs and access/egress points being used, the species that are present, and categorise the likely roost type.

Bat surveys provide a snapshot of activity at the time they are undertaken. As such, results are influenced by a range of factors including, but not limited to, weather conditions, seasonal variation, and bat behaviour. Therefore, roosting bats may be present at other times and professional judgement must be used when making assessments.

Bats may utilise different roosts at different times, and their use of a site may vary seasonally or annually. Therefore, survey findings should be considered representative of the survey period only and not as a definitive long-term assessment of bat presence or absence.

4.2.2 Method

The bat emergence surveys were conducted, following the best practice guidelines (Collins, 2023). The bat emergence survey began 15 minutes before sunset and ended 90 minutes after sunset. The number of survey visits was determined based on the level of suitability the structures were assessed during the PRA (Cloverwood Ecology Ltd, 2026), in accordance with the best practice guidelines (Collins, 2023). The survey visits were carried out at least three weeks apart during suitable weather conditions.

Surveyors were strategically positioned around the structures on site to record the bat emergences and activity around the structures. Six positions were used to sufficiently cover the structures on site. Positions for visit 1 are presented in Figure 1, for visit 2 are presented in Figure 2, and for visit 3 are presented in Figure 3.

4.2.3 Survey Details

The weather conditions at the time of the survey were recorded using data provided by the Met Office from the nearest available weather station (Met Office, 2026). The weather conditions were assessed as suitable for carrying out bat emergence surveys in accordance with the best practice guidelines (Collins, 2023). Table 1 provides details of the survey visits.

Table 1. Survey Details for Bat Emergence Surveys

	Visit 1	Visit 2	Visit 3
Date	8 th June 2026	29 th June 2026	20 th July 2026
Temperature (°C)	12	19	20
Cloud Cover (%)	0	90	33
Wind (mph)	12	8	7
Precipitation	None	None	None
Start Time	21:02	21:27	21:10
Sunset	21:17	21:42	21:25
Finish Time	22:47	23:12	22:55
Lead Surveyor*	MR	MR	MR
Surveyor(s)*	SP	SP	SP
Number of Autonomous Positions	4	4	4

*MR: Martin Roche BSc (Hons) ACIEEM - Bat Level 2 Licence (CL18); SP: Steve Preston Qualifying Member of CIEEM.

4.2.4 Equipment

Each surveyor was equipped with a Night Vision Aid (NVA) and a bat detector with recording capabilities. Where necessary, the NVAs were supplemented with an Infra-Red (IR) illuminator to ensure the structures are sufficiently illuminated to optimise the quality of the recorded footage. Where necessary, an autonomous set-up, comprising an NVA and an accompanying bat detector with recording capabilities, was used as a substitute for a surveyor. The positioning and optimisation of the autonomous set-ups were the responsibility of the lead surveyor.

The following equipment was used during the bat emergence surveys:

- Nightfox Whisker IR camera.
- Nightfox Nova IR camera.
- Nightfox IR illuminator.
- Elekon BatLogger M2.
- Elekon BatLogger S2.

4.2.5 Data Analysis

The IR footage recorded during the surveys was reviewed by Martin Roche BSc (Hons) ACIEEM - Bat Level 2 Licence (CL18) to identify any bats emerging from the structures on site and the PRFs and access/egress points used by bats. The surveyor field of view for each visit is presented in Appendix 3. The darkest point for each visit is presented in Appendix 4.

The bat echolocation data recorded during the bat emergence surveys was analysed by Martin Roche BSc (Hons) ACIEEM - Bat Level 2 Licence (CL18) using BatExplorer software to identify the calls to a species level where possible. The combined results from the bat emergence surveys are provided in Appendix 5.

The analysis of bat echolocation recordings is subject to inherent limitations and identification of bat species from acoustic data is not always definitive. Some species produce calls with overlapping characteristics and therefore professional judgement must be used when analysing bat data. Certain species, particularly those with low-intensity or frequency-modulated calls, may be under-recorded or undetected altogether, especially when survey conditions are suboptimal.

The bat detectors were positioned in strategic locations to improve the quality of the recordings; however, recording quality can be affected by environmental conditions, including background noise, vegetation density, wind, and precipitation, all of which may reduce the detectability or clarity of bat calls.

Results of acoustic analysis should be interpreted as indicative of bat activity within the survey area during the recording period, rather than as a definitive measure of species absence or population size.

4.3 DNA Analysis

DNA analysis was performed on a sample of bat droppings recorded in Void 1 of building B1 to confirm the bat species present. The sample of bat droppings was sent to a Natural England approved laboratory to complete the DNA analysis.

4.4 Discussion

Following the results of the desk study and the bat emergence surveys an assessment was made on the ecological significance of the bat roost within the structures on site, if present, following best practice guidelines provided by Bat Conservation Trust (BCT) (Collins, 2023) and CIEEM (Reason & Wray, 2025), (CIEEM, 2024). The assessment of the ecological importance of the bat roost within the structures on site, if present, is

determined using professional judgement and the consideration of multiple factors including species present, species rarity, roost type, site context, habitat connectivity, and geographical frame of reference.

Full details of the guidance and rationale for making the assessment on the ecological significance of the bat roost is provided in Appendix 6.

4.5 Survey Limitations

4.5.1 Visit 1

During visit 1, the memory card within the NVA located at position 1c unexpectedly malfunctioned and stopped recording the footage, meaning the footage after 21:20 was lost and a screenshot of the darkest point for this position is not available (see Section 16.1). However, this is not considered a significant limitation because a surveyor was located at position 1c and, although the NVA was not recording, the surveyor was able to use the NVA to observe whether there were any emergences during the survey. No emergences were observed by the surveyor from building B1. In addition, the coverage of the adjacent NVA located at position 1d overlapped much of the rear elevation that the NVA located at position 1c was viewing and no emergences were recorded.

4.5.2 Visit 3

During visit 3, the timestamp on the NVA located at position 1b was two minutes and forty seconds fast and the date is two days ahead and the timestamp on the NVA located at position 1d was three minutes fast. However, this is not considered a significant limitation because the actual time and date of the recording was noted at the start of the survey in order to calculate the accurate time of any emergences, if present.

Despite these limitations, the surveys undertaken are considered sufficient to inform the assessment.

5 Results

5.1 Desk Study

Designated Sites

There are no European designated sites located within 5 km of the site and there are no statutory designated sites located within 1 km of the site.

Habitats

Table 2 provides details on the priority habitats located within 2 km of the site.

Table 2. Priority Habitats located within 2 km of the Site

Habitat	Number of Parcels	Distance of Nearest Parcel from Site (m)
Deciduous woodland	75	0 (directly adjacent to western boundary)
Pond	31	150
Traditional orchard	24	250
River	2 (River Thames & Loddon)	745
Wood-pasture and parkland	2	745
Chalk river	3	865
Coastal and floodplain grazing marsh	7	1,340

Table 3 provides details on the parcels of ancient woodland located within 2 km of the site.

Table 3. Ancient Woodland parcels located within 2 km of the Site

Habitat	Number of Parcels	Distance of Nearest Parcel from Site (m)
Semi-natural ancient woodland	20	1,225

Granted EPSLs

Table 4 provides details on the granted EPSLs for bats recorded within the last 10 years located within 2 km of the site.

Table 4. Granted EPSLs for Bats located within 2 km of the Site

Case Reference	Common Name	Species Name	Distance from Site (m)	Details	Licence Start & End Date
2020-44644-EPS-MIT	Common pipistrelle Brown long-eared bat	<i>Pipistrellus pipistrellus</i> <i>Plecotus auritus</i>	1,325	Destruction of a resting place	05/02/2020 - 31/08/2020
2018-35667-EPS-MIT	Common pipistrelle	<i>Pipistrellus pipistrellus</i>	1,475	Destruction of a resting place	01/09/2018 - 31/08/2019

2018-35667-EPS-MIT-1	Common pipistrelle	<i>Pipistrellus pipistrellus</i>	1,475	Destruction of a resting place	01/01/2019 - 31/12/2019
2015-7819-EPS-MIT	Common pipistrelle Soprano pipistrelle	<i>Pipistrellus pipistrellus</i> <i>Pipistrellus pygmaeus</i>	1,700	Destruction of a resting place	24/04/2015 - 30/04/2020
2015-7300-EPS-MIT	Common pipistrelle Soprano pipistrelle Brown long-eared bat	<i>Pipistrellus pipistrellus</i> <i>Pipistrellus pygmaeus</i> <i>Plecotus auritus</i>	2,000	Destruction of a resting place	07/04/2015 - 30/03/2020
2015-7300-EPS-MIT-1	Common pipistrelle Soprano pipistrelle Brown long-eared bat	<i>Pipistrellus pipistrellus</i> <i>Pipistrellus pygmaeus</i> <i>Plecotus auritus</i>	2,000	Destruction of a resting place	09/06/2015 - 30/04/2020
2015-7300-EPS-MIT-2	Common pipistrelle Soprano pipistrelle Brown long-eared bat	<i>Pipistrellus pipistrellus</i> <i>Pipistrellus pygmaeus</i> <i>Plecotus auritus</i>	2,000	Destruction of a resting place	19/11/2015 - 30/04/2020
2017-29718-EPS-MIT	Soprano pipistrelle Brown long-eared bat	<i>Pipistrellus pygmaeus</i> <i>Plecotus auritus</i>	2,000	Destruction of a resting place	12/06/2017 - 08/06/2022
2020-49294-EPS-MIT	Common pipistrelle Soprano pipistrelle	<i>Pipistrellus pipistrellus</i> <i>Pipistrellus pygmaeus</i>	2,000	Destruction of a resting place	14/10/2020 - 31/08/2025

Planning Application Search

A common pipistrelle day roost was recorded in a dwelling located approximately 70 m to the north of the site during bat emergence surveys carried out by John Wenman Ecological Consultancy LLP in May 2026 (John Wenman Ecological Consultancy LLP, 2026).

NBN Atlas

Table 5 provides details on the NBN bat records within the last 10 years located within 5 km of the site.

Table 5. Bat Records recorded on the NBN within 5 km of the site

Common Name	Species Name	Number of Records	Most Recent Record (Year)
Brown long-eared bat	<i>Plecotus auritus</i>	6	2022
Common pipistrelle bat	<i>Pipistrellus pipistrellus</i>	60	2025
Daubenton's bat	<i>Myotis daubentonii</i>	285	2025
Natterer's bat	<i>Myotis nattereri</i>	1	2016
Noctule bat	<i>Nyctalus noctula</i>	1	2021
Soprano pipistrelle bat	<i>Pipistrellus pygmaeus</i>	7	2022

5.2 Bat Emergence Surveys

Full results of the bat emergence surveys are provided in Appendix 5.

5.2.1 Visit 1

For the results of visit 1 of the bat emergence survey, see Figure 1.

During visit 1, no bats were recorded emerging from building B1; however, one soprano pipistrelle was recorded emerging from building B2 from a gap at the eaves at 21:31 (see Figure 1).

A total of 406 bat passes were recorded during the survey. At least six species were recorded including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle (*Pipistrellus nathusii*), noctule, brown long-eared bat (*Plecotus auritus*), and *Myotis* sp. One bat pass was identified as a *Myotis* sp. as it was not possible to identify to a species level.

Three common pipistrelle passes were recorded within 15 minutes after sunset (21:17), which indicates the common pipistrelles could potentially have commuted from the known roost in a dwelling located approximately 70 m to the north of the site (John Wenman Ecological Consultancy LLP, 2026) and/or another roost located nearby off-site. Twenty-three soprano pipistrelle passes were recorded within 15 minutes after sunset (21:17), which indicates there could be a soprano pipistrelle roost(s) located nearby off-site.

5.2.2 Visit 2

For the results of visit 2 of the bat emergence survey, see Figure 2.

During visit 2, no bats were recorded emerging from building B1; however, one soprano pipistrelle was recorded emerging from building B2 from a gap at the eaves at 21:34 (see Figure 2).

A total of 460 bat passes were recorded during the survey. At least five species were recorded including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, serotine (*Cnephaeus serotinus*), and *Myotis* sp. Thirteen bat passes were identified as a *Myotis* sp. as it was not possible to identify to a species level.

Four common pipistrelle passes were recorded within 13 minutes before sunset (21:42) and 15 passes within 15 minutes after sunset, which indicates the common pipistrelles could potentially have commuted from the known roost in a dwelling located approximately 70 m to the north of the site (John Wenman Ecological Consultancy LLP, 2026) and/or another roost located nearby off-site. One hundred and twenty-two soprano pipistrelle passes were recorded within 17 minutes before sunset (21:42) and 95 passes within 15 minutes after sunset, which indicates there could be a soprano pipistrelle roost(s) located nearby off-site.

5.2.3 Visit 3

For the results of visit 3 of the bat emergence survey, see Figure 3.

During visit 3, no bats were recorded emerging from buildings B1 and B2 (see Figure 3).

A total of 776 bat passes were recorded during the survey. At least seven species were recorded including common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, noctule, serotine, barbastelle (*Barbastella barbastellus*), and *Myotis* sp. Three bat passes were identified as a *Myotis* sp. as it was not possible to identify to a species level.

Two common pipistrelle passes were recorded within 8 minutes before sunset (21:25) and 56 passes within 15 minutes after sunset, which indicates the common pipistrelles could potentially have commuted from the known roost in a dwelling located approximately 70 m to the north of the site (John Wenman Ecological Consultancy LLP, 2026) and/or another roost located nearby off-site. Twenty-two soprano pipistrelle passes were recorded within 6 minutes before sunset (21:25) and 195 soprano pipistrelle passes, 10 Nathusius' pipistrelle passes, and one *Myotis* sp. pass were recorded within 15 minutes after sunset, which indicates there could be a roost(s) located nearby off-site.

5.3 DNA Analysis

DNA Analysis of the sample of bat droppings collected from the Void 1 of building B1 has been confirmed to belong to brown long-eared bats (University of Warwick, 2026).

6 Discussion

There are numerous parcels of potential roosting, foraging, and commuting bat habitat located within 2 km of the site namely a parcel of deciduous woodland, which is located offsite directly adjacent to the western site boundary and provides direct habitat connectivity for bats from the site to habitats within the wider landscape. Evidence of roosting bats has been recorded within the wider landscape, including a common pipistrelle day roost in a dwelling located approximately 70 m to the north of the site (John Wenman Ecological Consultancy LLP, 2026) and nine granted EPSLs located within 2 km of the site, the closest being approximately 1,325 m from the site.

Based on the information gathered during the PRA carried out by Cloverwood Ecology Ltd in May 2026 (Cloverwood Ecology Ltd, 2026) and the bat emergence surveys, it has been confirmed the roost present in building B1 supports brown long-eared bats (University of Warwick, 2026), and it has been assessed the roost is likely a day roost supporting an individual number of brown long-eared bats, owing to approximately 100-150 droppings present in Void 1 (Cloverwood Ecology Ltd, 2026). It has been assessed the brown long-eared bat roost is likely not a maternity roost because no brown long-eared bats were recorded emerging from building B1 during the maternity period for bats (June and July, inclusive) and it is expected the number of droppings present in Void 1 would be greater than the 100-150 droppings that were recorded.

In addition, it has been confirmed the roost present in building B2 supports soprano pipistrelle bats (see Section 5.2) and it has been assessed the roost is likely a day roost supporting an individual number of soprano pipistrelle bats, owing to a combined total of two emergences recorded throughout the three survey visits. Even though soprano pipistrelles were recorded emerging during the maternity period (June and July, inclusive), it has been assessed that the soprano pipistrelle roost present in building B2 is likely not a maternity roost because only an individual number of soprano pipistrelle bat emergences were recorded and building B2 lacks an internal roof void that could support a maternity colony of soprano pipistrelles.

Therefore, in the absence of avoidance and mitigation measures, the development proposals will result in the disturbance and alteration of a brown long-eared bat day roost of local importance within building B1 and the destruction of a soprano pipistrelle roost of local importance within building B2.

7 Recommendations

Building B1 supports a brown long-eared bat day roost of local importance and building B2 supports a soprano pipistrelle bat day roost of local importance, which will be adversely impacted by the development proposals.

All species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981) and the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017). Therefore, for the works to proceed lawfully and without breaching wildlife legislation relating to bats, an EPSL for bats is required from Natural England. Works must not commence until the EPSL has been granted by Natural England and all conditions of the licence are adhered to in full.

The development must be granted full planning permission prior to the EPSL application. The EPSL application must be informed by up-to-date survey information and a detailed method statement outlining appropriate mitigation, compensation, and enhancement measures, in accordance with current best practice guidelines (CIEEM, 2024) (Reason & Wray, 2025), must be provided.

It is recommended measures are included in the design to minimise the potential adverse impacts of artificial external lighting of bat activity, in line with the guidance provided by the Bat Conservation Trust (Bat Conservation Trust, 2023), which includes the following:

- Avoidance of lighting:
 - PRFs and access/egress points for bats on the structures on site must not be illuminated by artificial external lighting at any time of year, particularly on confirmed bat roosts and at night.
 - Bat foraging and commuting habitat on site and in the wider landscape must not be illuminated by artificial external lighting, particularly at night during the active bat season (April to October, inclusive).
- Minimise light spill:
 - Where use of external artificial lighting is unavoidable, lighting should be installed as low as feasibly possible, directed downwards below the horizon, and fitted with cowls, hoods, or shields.
 - Internal lighting should be recessed, where possible.
- Minimise light intensity:

- Where use of external artificial lighting is unavoidable, metal halide, fluorescent, UV lights, or lighting with peak wavelengths greater than 550nm should be avoided and warm colour temperature lighting ($\leq 2700\text{K}$) or red-light bulbs with an intensity no greater than 2000 lumens should be used, where possible.
- Minimise light duration:
 - Where use of external artificial lighting is unavoidable, timers, motion sensors, and dimming controls should be used.

8 Conclusion

This report highlights the ecological constraints associated with the proposed works at The Spindles, Wargrave.

The key findings include the following:

- Approximately 100-150 bat droppings were recorded in Void 1 of building B1 (Cloverwood Ecology Ltd, 2026), which were confirmed to belong to brown long-eared bats (University of Warwick, 2026).
- During visit 1, one soprano pipistrelle was recorded emerging from building B2 from a gap at the eaves at 21:31 (see Figure 1).
- During visit 2, one soprano pipistrelle was recorded emerging from building B2 from a gap at the eaves at 21:34 (see Figure 2).
- During visit 3, no bats were recorded emerging from buildings B1 and B2 (see Figure 3).
- It has been assessed the roost within building B1 is likely a day roost supporting an individual number of brown long-eared bats of local importance and the roost within building B2 is likely a day roost supporting an individual number of soprano pipistrelles of local importance.
- In the absence of avoidance and mitigation measures, the development proposals will result in the disturbance and alteration of a brown long-eared bat day roost of local importance within building B1 and the destruction of a soprano pipistrelle roost of local importance within building B2.

Recommendations have been provided in Section 7 for how the works can proceed lawfully and without breaching wildlife legislation relating to bats. The contents of this report are valid for 18 months. Should this date pass, updated surveys may need to be required by a suitably qualified ecologist.

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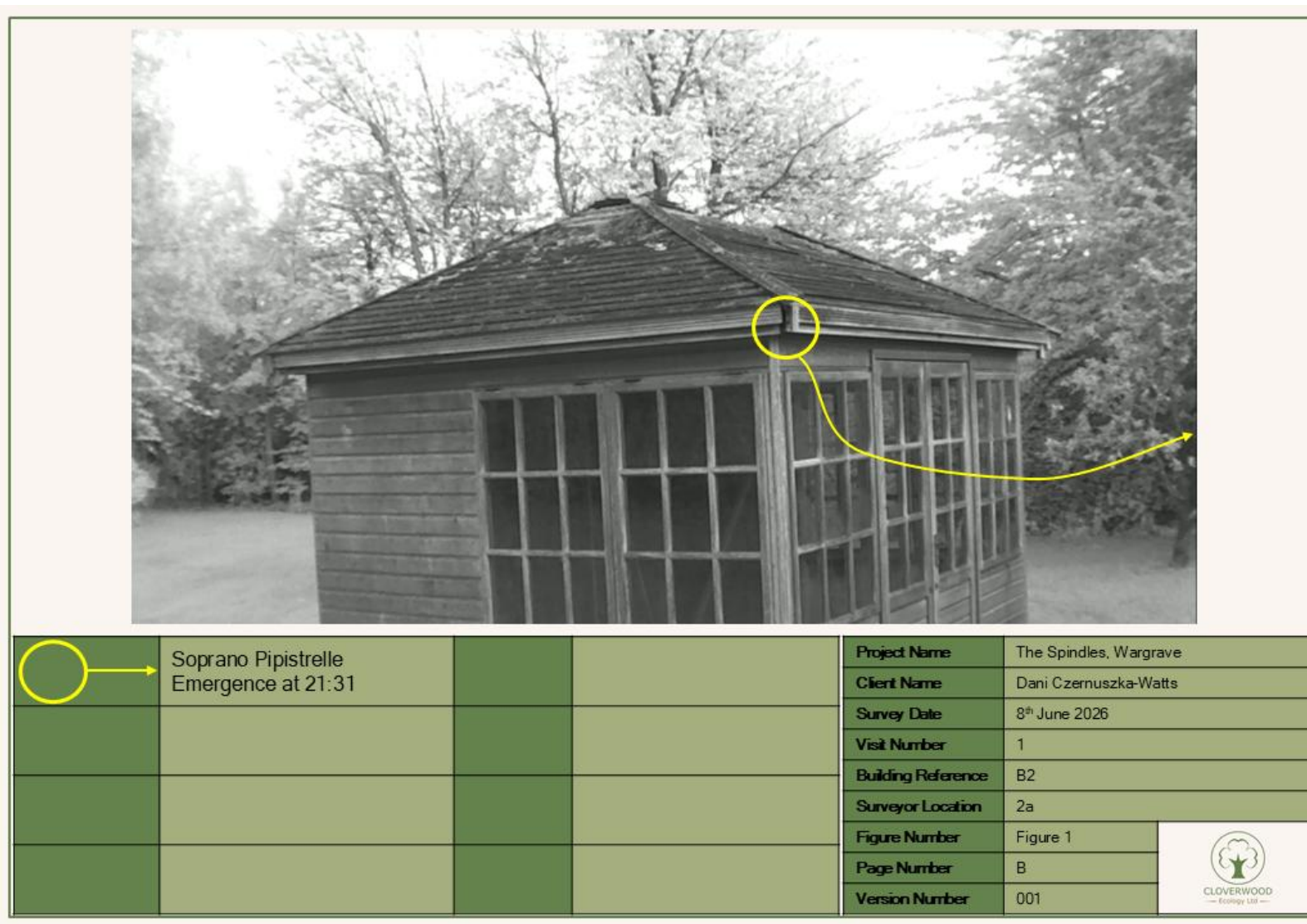
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10 Figure 1 - Results of Bat Emergence Surveys - Visit 1

10.1 Figure 1a

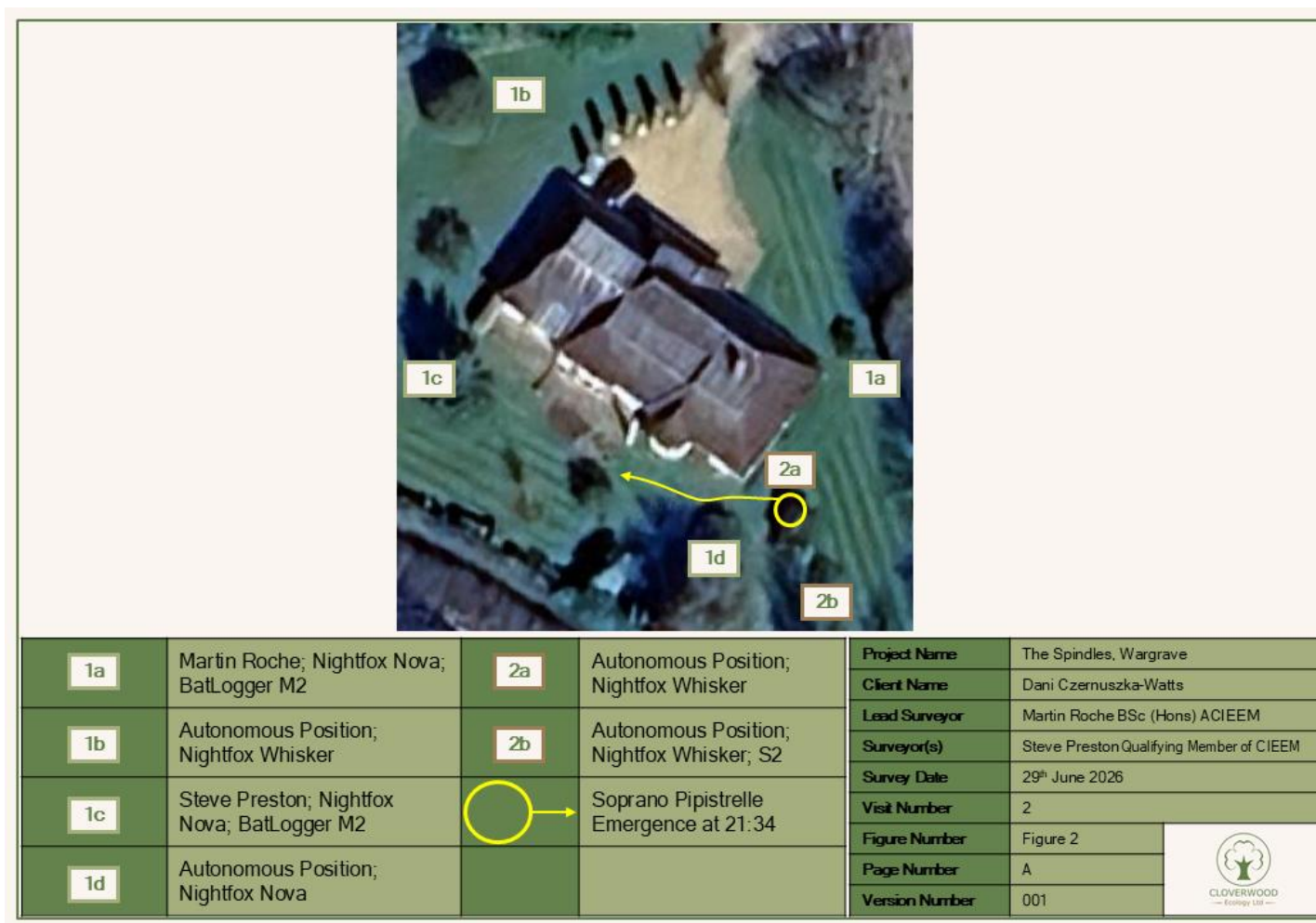


10.2 Figure 1b

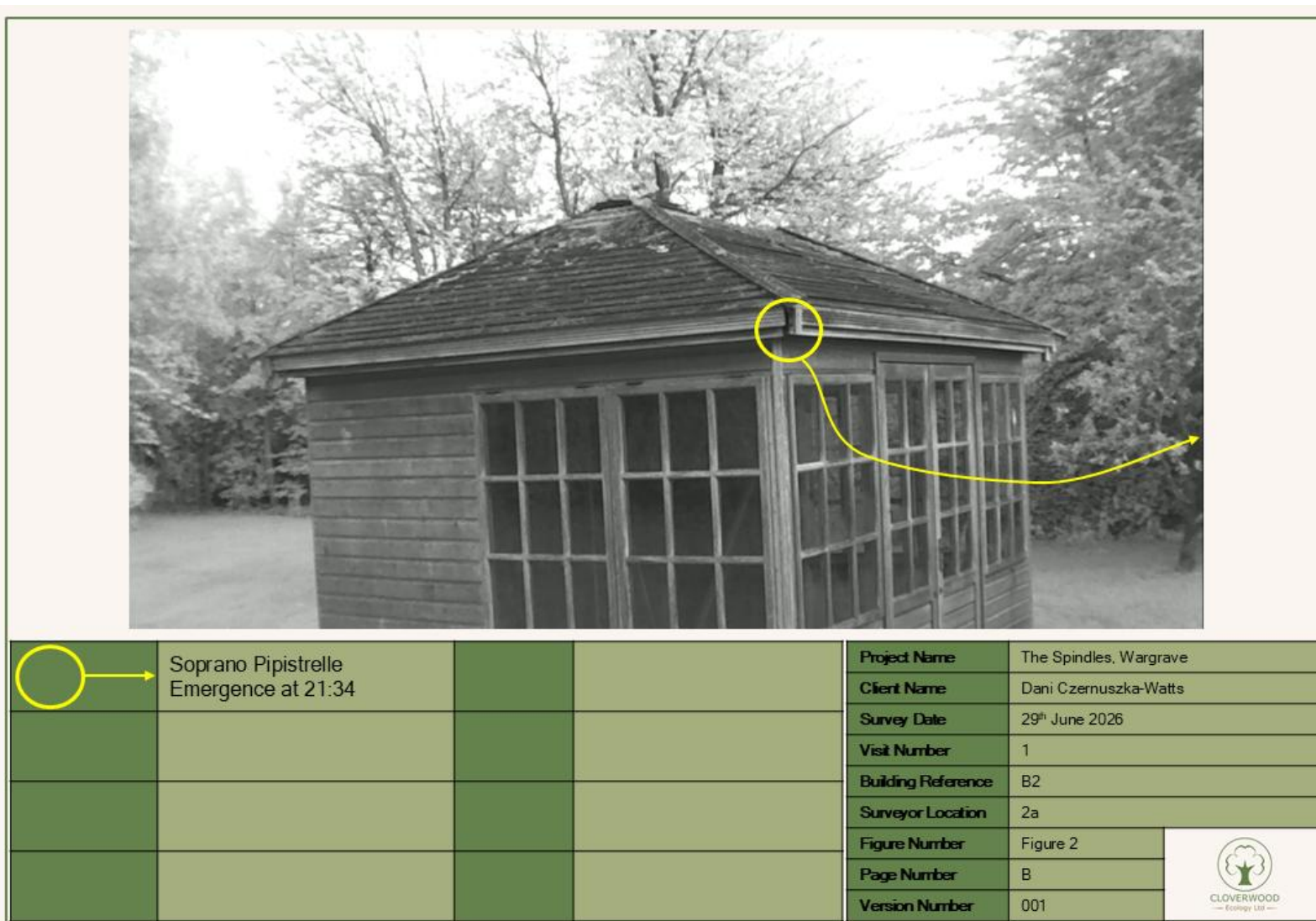


11 Figure 2 - Results of Bat Emergence Surveys - Visit 2

11.1 Figure 2a



11.2 Figure 2b



12Figure 3 - Results of Bat Emergence Surveys - Visit 3

12.1 Figure 3a



13 Appendix 1 - Glossary of Terms

Term	Definition
Access/Egress Point	A feature within a building or tree that may be used by bats as a means to enter a bat roost such as gaps, holes, or cracks
Ancient Woodland	Woodland that has existed continuously since at least 1600 AD
Avoidance	Measures implemented to prevent impacts on ecological features, often through design changes or timing of works to ensure that effects do not occur
Bat Activity	Any behaviour exhibited by bats, including commuting, foraging, social interactions, and roosting-related movements, typically recorded during bat surveys
Bat Pass	A bat pass is defined as a sequence of echolocation calls recorded as a bat moves through the detection range of a bat detector. It is typically used as a unit of measure to indicate bat activity, although a single pass may represent multiple calls from one individual bat or, in some cases, multiple passes by different individuals. Bat passes provide an indication of relative activity levels but do not, on their own, provide a direct measure of the number of bats present
Chartered Institute of Ecology and Environmental Management (CIEEM)	The professional body representing ecologists and environmental managers in the UK and Ireland, which provides guidance, standards, and training for ecological practice
Commuting	Regular movement of bats between roost sites and foraging areas, often along linear landscape features such as hedgerows, tree lines, and watercourses
Compensation	Measures implemented to offset residual adverse impacts that cannot be avoided or fully mitigated, typically involving the provision of replacement habitats or roosting opportunities
Desk Study	A review of existing ecological data and records for a site and its surroundings
Droppings	Small, dark, friable pellets produced by bats that resemble grains of rice and crumbles into dust when crushed, often found beneath roost access points or within roost sites, and used as an indicator of bat presence
Echolocation	A biological sonar system used by bats to navigate and locate prey by emitting sound waves and interpreting the returning echoes. The echolocation frequencies and patterns can be analysed to determine species identification
Ecological Impact Assessment (EclA)	A process for identifying, quantifying, and evaluating the potential ecological impacts of a proposed development on ecological variables, and for identifying appropriate avoidance, mitigation, compensation, and enhancement measures

Emergence Survey	A survey undertaken at dusk to observe and record any bats emerging from a roost to confirm presence, species, roost type, and roost usage
Enhancement	Measures that provide a net benefit to biodiversity, improving habitat quality or increasing opportunities for wildlife beyond baseline conditions
European Protected Species Licence (EPSL)	A licence issued by Natural England permitting works that would otherwise constitute an offence under national or international wildlife legislation, such as disturbance or destruction of a bat roost, subject to specific conditions
External Feature	A feature located on the outside of a structure that may provide access or roosting opportunities for bats, such as gaps beneath roof tiles, soffits, or hanging tiles
Foraging	The behaviour of bats feeding on insects, typically undertaken within suitable habitats such as woodland edges, grassland, and waterbodies
Geographic Frame of Reference	The spatial scale at which ecological features are valued (e.g. local, district, county, regional, national, international), used in Ecological Impact Assessment to determine the significance of effects
Habitat	The natural environment in which a species or group of species lives, including the physical, chemical, and biological factors that support it
Impact	A change to an ecological feature or resource resulting from a proposed development or activity. Impacts may be positive or negative, direct or indirect
Infra-Red (IR)	A type of electromagnetic radiation with wavelengths longer than visible light, commonly used in survey equipment (e.g. cameras) to observe bats in darkness without disturbance
Internal Feature	A feature located within a structure that may provide suitable conditions for roosting bats, such as roof voids, cavities, or crevices within the building fabric
Mitigation	Measures designed to reduce or minimise adverse impacts on ecological features where impacts cannot be entirely avoided
Natural England	The statutory nature conservation body for England, responsible for protecting and managing the natural environment, including issuing licences for works affecting protected species
Night Vision Aid (NVA)	Equipment used during emergence surveys to improve visibility in low light conditions, such as infra-red cameras or thermal cameras
Potential Roosting Feature (PRF)	A feature within a building or tree that may be used by bats for roosting, such as cracks, crevices, cavities, lifted tiles, or holes. Generally, any features that is big enough to fit an index finger

Preliminary Roost Assessment (PRA)	A survey comprising a desk study and a day-time walkover survey of a structure or tree to identify evidence of bats and assess the suitability of the structure to support roosting bats
Priority Habitat	Habitats identified as being of principal importance for the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006
Roost	Any structure or place used by bats for shelter or protection. This includes sites used for resting, breeding, rearing young, hibernation, or temporary refuge
Significance	A measure of the importance of an ecological impact, based on magnitude and the value of the affected feature
Statutory Designated Site	A site legally protected for its nature conservation value under national or international legislation, such as Sites of Special Scientific Interest (SSSIs) or Special Areas of Conservation (SACs)
Structure	Any building or built feature, such as a dwelling, bridge, or wall, that may provide opportunities for bats to roost
Sunset	The time at which the upper edge of the sun disappears below the horizon, used as a reference point for timing dusk emergence surveys
Suitability	An assessment of the likelihood that a structure could support roosting bats, based on the presence, number, and condition of suitable features
Thermal (Thermal Imaging)	A survey technique that detects heat signatures (infra-red radiation) emitted by objects or animals, used to assist in the detection and observation of bats in low light or dark conditions
Zone of Influence (Zoi)	The area over which a proposed development may have ecological impacts

14 Appendix 2 - Legislation & Planning Policy

14.1 Bats

All British species of bat and their roosts are fully protected under UK and European legislation. In England, bats are protected as European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017), which transpose the requirements of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) into domestic law. Bats and their roosts are also protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981) and receive further protections through the Countryside Rights of Way (CROW) Act, 2000 (HM Government, 2000).

Under this legislation it is an offence to:

- Deliberately or recklessly capture, injure or kill a bat;
- Deliberately or recklessly disturb bats in a way that is likely to impair their ability to survive, breed, reproduce, or rear their young, or affect the local distribution or abundance of the species;
- Deliberately or recklessly damage or destroy a bat roost, regardless of whether bats are present at the time;
- Deliberately or recklessly obstruct access to a bat roost; and
- Possess, transport, sell, or exchange a bat (alive or dead) or any part of a bat without an appropriate licence.

A bat roost is defined as any structure or place used by bats for shelter or protection, including breeding sites and resting places. Bat roosts remain protected regardless of whether bat is present or not.

Several British bat species are also listed as Species of Principal Importance for the Conservation of Biodiversity in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006 (HM Government, 2006). Public authorities, including local planning authorities, are required to pay due regard to protecting and enhancing biodiversity when considering planning applications.

National planning policy also recognises the importance of conserving bats and their habitats. The National Planning Policy Framework (NPPF), 2025 (HM Government, 2025), requires the planning system to contribute to and enhance the natural environment by minimising impacts on biodiversity and providing net gains where possible. When determining planning applications, local planning authorities must consider the potential impacts of development on protected species, including bats, and ensure compliance with relevant wildlife legislation.

14.2 Local Planning Policy

14.2.1 Wokingham Borough Council, Adopted Core Strategy Development Plan Document (Adopted January 2010) (Wokingham Borough Council, 2010)

Policy CP7 - Biodiversity

Policy CP7 of the Wokingham Borough Council, Adopted Core Strategy Development Plan Document (Adopted January 2010) (Wokingham Borough Council, 2010), states:

‘Sites designated as of importance for nature conservation at an international or national level will be conserved and enhanced and inappropriate development will be resisted. The degree of protection given will be appropriate to the status of the site in terms of its international or national importance.

Development:

- a. Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or*
- b. Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly or;*
- c. That compromises the implementation of the national, regional, county and local biodiversity action plans will be only permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and:*
 - i. Mitigation measures can be put in place to prevent damaging impacts; or*
 - ii. Appropriate compensation measures to offset the scale and kind of losses are provided.*

14.2.2 Wokingham Borough Council, Managing Development Delivery Local Plan (Adopted February 2014) (Wokingham Borough Council, 2014)

Policy TB23: Biodiversity and Development

Policy TB23 of the Wokingham Borough Council, Managing Development Delivery Local Plan (Adopted February 2014) (Wokingham Borough Council, 2014), states: ‘

- 1) Sites of national or international importance are shown, and sites of local importance are defined on the Policies Map.*

- 2) *Planning permission for development proposals will only be granted where they comply with policy CP7 - Biodiversity of the Core Strategy and also demonstrate how they:*
- a) *Provide opportunities, including through design, layout and landscaping to incorporate new biodiversity features or enhance existing*
 - b) *Provide appropriate buffer zones between development proposals and designated sites as well as habitats and species of principle importance for nature conservation*
 - c) *Ensure that all existing and new developments are ecologically permeable through the protection of existing and the provision of new continuous wildlife corridors, which shall be integrated and linked to the wider green infrastructure network'.*

15Appendix 3 - Surveyor Field of View

15.1 Visit 1





Position 1c. Steve Preston Qualifying Member of CIEEM. Nightfox Nova.



Position 1d. Autonomous Position; Nightfox Nova



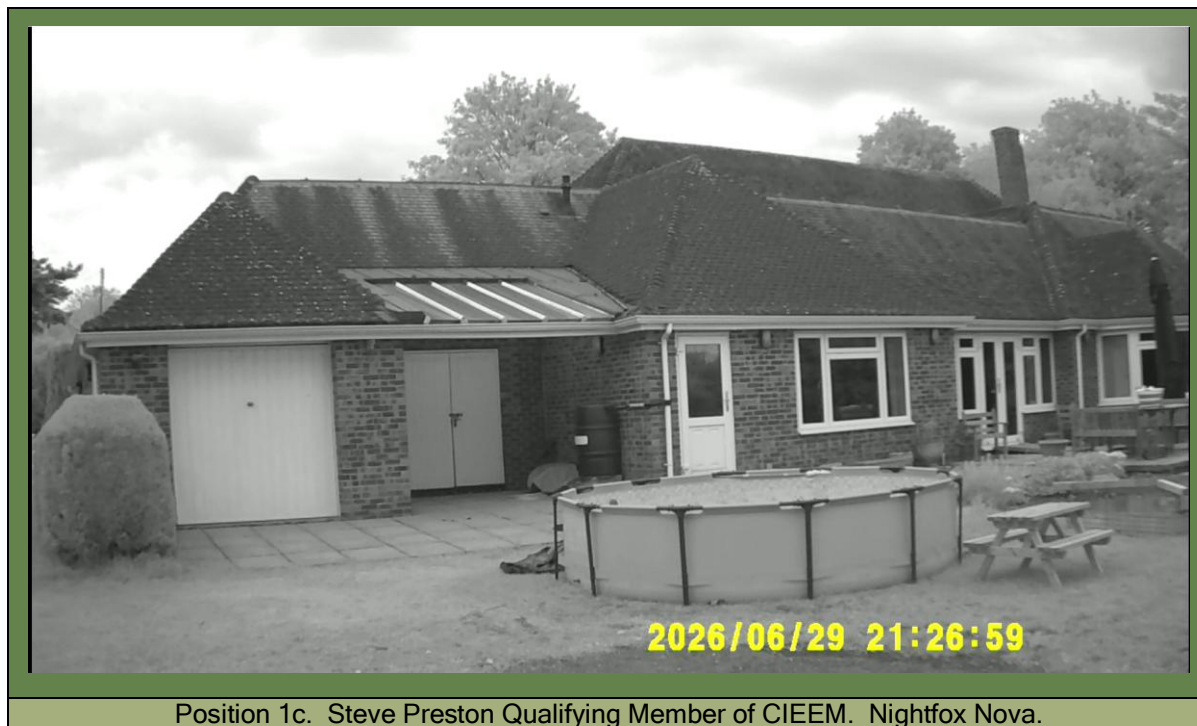
Position 2a. Autonomous Position; Nightfox Whisker



Position 2b. Autonomous Position; Nightfox Whisker

15.2 Visit 2







Position 2a. Autonomous Position; Nightfox Whisker



Position 2b. Autonomous Position; Nightfox Whisker

15.3 Visit 3





Position 1c. Steve Preston Qualifying Member of CIEEM. Nightfox Nova.



Position 1d. Autonomous Position; Nightfox Nova



Position 2a. Autonomous Position; Nightfox Whisker



Position 2b. Autonomous Position; Nightfox Whisker

16Appendix 4 - Darkest Point of Survey

16.1 Visit 1





Position 1c. Steve Preston Qualifying Member of CIEEM. Nightfox Nova. See Section 4.5.1.



Position 1d. Autonomous Position; Nightfox Nova



Position 2a. Autonomous Position; Nightfox Whisker



Position 2b. Autonomous Position; Nightfox Whisker

16.2 Visit 2





Position 1c. Steve Preston Qualifying Member of CIEEM. Nightfox Nova.



Position 1d. Autonomous Position; Nightfox Nova



Position 2a. Autonomous Position; Nightfox Whisker



Position 2b. Autonomous Position; Nightfox Whisker

16.3 Visit 3





Position 1c. Steve Preston Qualifying Member of CIEEM. Nightfox Nova.



Position 1d. Autonomous Position; Nightfox Nova



Position 2a. Autonomous Position; Nightfox Whisker



Position 2b. Autonomous Position; Nightfox Whisker

17 Appendix 5 - Combined Results of the Bat Emergence Surveys

17.1 Visit 1

Table 6 provides the combined results of visit 1 carried out on 8th June 2026.

Table 6 Combined Results of Visit 1

Species	Number of Emergences	Time of Emergences	Number of Passes	Time of First Recording	Totals
Common Pipistrelle	0	N/A	165	21:29	165
Soprano Pipistrelle	1	21:31	233	21:29	234
Nathusius' Pipistrelle	0	N/A	1	22:40	1
Noctule	0	N/A	5	22:18	5
Brown Long-Eared Bat	0	N/A	1	22:38	1
<i>Myotis</i> sp.	0	N/A	1	21:52	1
Totals	1	-	406	-	407

17.2 Visit 2

Table 7 provides the combined results of visit 2 carried out on 29th June 2026.

Table 7 Combined Results of Visit 2

Species	Number of Emergences	Time of Emergences	Number of Passes	Time of First Recording	Totals
Common Pipistrelle	0	N/A	135	21:29	135
Soprano Pipistrelle	1	21:34	299	21:25	300
Nathusius' Pipistrelle	0	N/A	9	22:18	9
Serotine	0	N/A	3	22:32	3
<i>Myotis</i> sp.	0	N/A	13	22:40	13
Totals	1	-	459	-	460

17.3 Visit 3

Table 8 provides the combined results of visit 3 carried out on 20th July 2026.

Bat Emergence Survey Report



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— Ecology Ltd —

Table 8 Combined Results of Visit 3

Species	Number of Emergences	Time of Emergences	Number of Passes	Time of First Recording	Totals
Common Pipistrelle	0	N/A	217	21:17	217
Soprano Pipistrelle	0	N/A	520	21:19	520
Nathusius' Pipistrelle	0	N/A	11	21:31	11
Noctule	0	N/A	14	22:01	14
Serotine	0	N/A	9	22:01	9
Barbastelle	0	N/A	2	22:51	2
<i>Myotis</i> sp.	0	N/A	3	21:35	3
Totals	0	-	776	-	776

18Appendix 6 - Guidance and Rationale for Assessment on Ecological Significance

18.1 Species Rarity

Table 9 provides the rarity categories for each species in Southern and South-Eastern England as shown in Table 3.1 on page 30 of the UK Bat Mitigation Guidelines (Reason & Wray, 2025).

Table 9. Species Rarity Categories for Southern and South-Eastern England (Reason & Wray, 2025)

Rarity Category	Southern England	South-Eastern
Widespread	Brown long-eared bat Common pipistrelle Soprano pipistrelle	Brown long-eared bat Common pipistrelle Soprano pipistrelle
Widespread in many geographies, but not as abundant in all	Brandt's Daubenton's Natterer's Noctule Whiskered	Daubenton's Natterer's Noctule
Rare or restricted distribution	Alcathoe Leisler's Nathusius pipistrelle Serotine	Brandt's Leisler's Nathusius pipistrelle Serotine Whiskered
Rarest Annex II species and very rare	Barbastelle Bechstein's Greater horseshoe Grey long-eared bat Lesser horseshoe	Alcathoe Barbastelle

18.2 Roost Type

Table 10 provide the definitions of the bat roost types as shown in Table 3.1 on page 29 of the Bat Surveys for Professional Ecologists. Good Practice Guidelines (4th Edition) (Collins, 2023).

Table 10. Bat Roost Types (Definitions Written by the Natural England Earned Recognition Project) (Collins, 2023)

Roost Type	Natural England Definition
Day roost	A place where individual bats, or small groups, rest or shelter in the day during the summer
Night roost	A place where bats rest or shelter in the night but are not found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony
Feeding roost	A place where individual bats, or a few individuals, rest or feed for short periods during the night but are not present by day
Transitional roost	A place used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation
Maternity roost	A place where female bats give birth and raise their young to independence. In some species males may also be present in the maternity roost
Hibernation roost	A place where bats may be found individually or together during winter. They have a constant cool temperature and high humidity
Satellite roost	An alternative roost found in close proximity to the main nursery colony used by a few individuals to small groups of breeding females throughout the breeding season

18.3 Geographical Frame of Reference

The assessment of ecological importance has been undertaken with reference to the geographical frame of reference provided in *Valuing Bats in Ecological Impact Assessment* (Wray, Wells, Long, & Mitchell-Jones, 2010), which provides definitions for assigning value at local, county, regional, national, and international levels, see Table 11.

Table 11. Valuing Bat Roosts (Wray, Wells, Long, & Mitchell-Jones, 2010)

Geographic Frame of Reference	Roost Type
District, Local, or Parish	Feeding perches (common species) Individual bats (common species) Small numbers of non-breeding bats (common species) Mating sites (common species)
County	Maternity sites (common species) Small numbers of hibernating bats (common and rare species) Feeding perches (rarer/rarest species) Individual bats (rarer/rarest species) Small numbers of non-breeding bats (rarer/rarest species)
Regional	Mating sites (rarer/rarest species) including well-used swarming sites Maternity sites (rarer species) Hibernation sites (rarest species) Significant hibernation sites for rarer/rarest species or all species assemblages
National/UK	Maternity sites (rarest species) Sites meeting SSSI guidelines
International	SAC sites

18.4 Assessing Importance of Roosts

Table 12 provides guidance for the assessment of the importance of bat roosts as shown in Table 3.2 on page 33 of the UK Bat Mitigation Guidelines (Reason & Wray, 2025).

Table 12. Assessing the Importance of Roosts ^a (Reason & Wray, 2025)

Conservation Status / Distribution	Feeding perches; Night-roosts; Individual or very small Occasional / Transitional / Opportunistic Roosts	Non-Breeding Day Roosts (small numbers of species)	Mating Sites (excluding individual trees & large swarming sites); Small Numbers of Hibernating Bats	Larger Transitional Roosts	Hibernation Sites	Autumn Swarming Sites (largely species which hibernate underground)	Maternity Sites
Widespread all geographies	Local	Local	Local	Local	District/County (larger hibernation sites rare in UK)	District/County (very large pipistrelle swarming sites as yet unknown)	Unlikely to exceed District importance unless colonies are atypically large; Importance increases for assemblages
Widespread in many geographies, but not as abundant in all	Local	Local	Local, dependent on local distribution	District	District/County (importance dependent on size ^b & number of species)	County/Regional importance dependent on size ^b and local distribution; Increase value with assemblages	Unlikely to exceed District importance unless colonies are atypically large; Importance increases for assemblages

Rarer or restricted distribution	Local (very well-used night roosts may be of District importance for some species)	Local/District (dependent on local distribution)	Local/District (dependent on local distribution)	District	District/County (importance dependent on size ^b & local distribution) Increase value for assemblages	County/Regional (importance dependent on size ^b & local distribution) Increase value for assemblages	County/Regional (importance dependent on size ^b & local distribution) Increase value for assemblages
Rarest Annex II species and very rare	Local (very well-used night roosts may be of District importance for some species)	Local/District (dependent on local distribution)	Local/District (dependent on local distribution)	District	County/Regional importance on size ^b and local distribution Increased value for assemblages	County/Regional importance on size ^b and local distribution Increased value for assemblages	County/Regional importance on size ^b and local distribution Increased value for assemblages

a. Sites within or functionally linked to SACs are of International importance for Qualifying Species. Sites that could be functionally linked to SACs may or may not have that level of importance.

b. In all cases, 'size' needs to be interpreted as 'relative to typical sizes for the species'.