

LBM ECOLOGY

Bat Emergence Survey

Claremont, Copthorne

For

Vic Saunders

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1 Executive Summary

LBM Ecology was commissioned to undertake a suite of bat emergence surveys by Vic Saunders of an area of land known as Claremont, Copthorne, West Sussex, hereafter referred to as 'the site'.

This report has been produced to inform a planning submission (Ref: DM/25/0666) for the site which seeks *'Change of use from a single dwelling-house to a pair of semi-detached dwelling-houses. Conversion of rear outbuilding and main house loft space to habitable accommodation. Demolition of rear store building and rear garage. First floor side extension and remodelling of roofs'*, hereafter referred to as 'the development'.

The site consists of a building (B1), an outbuilding (B2), developed land; sealed surfaces with some shrubs along the peripheries and modified grassland.

A PRA¹ was undertaken on 27th May 2025 of B1 and B2 which were assessed with moderate suitability for summer roosting bats and low suitability for hibernating bats. Dusk emergence surveys were therefore recommended.

Two dusk emergence surveys were undertaken in July 2025. No bats were observed emerging from B1 or B2, with very low to low bat activity recorded on site and within the immediate vicinity of the site. The results of the surveys are shown on Figure 1 in Appendix A.

As roosting bats have been deemed likely absent from B1 and B2, the development can proceed lawfully with respect to legislation and policy pertaining to roosting bats. To mitigate for hibernating bats, the proposed development roofing works should be timed to avoid the hibernation period (i.e. avoid November to March inclusive) as this is when bats are most sensitive to disturbance.

In the unlikely event that a bat is discovered during the development, the works must cease and a suitability experienced ecologist contacted for further advice.

Mitigation measures regarding lighting and enhancement measures have been outlined within the PRA report¹.

The data collected during this PRA is considered valid for 24 months in accordance with CIEEM guidance³ and an updated survey will be required if the development has not started within this timeframe or should site conditions change significantly during this time.

2 Introduction

LBM Ecology was commissioned to undertake a suite of bat emergence surveys by Vic Saunders of an area of land and associated buildings known as Claremont, Copthorne, West Sussex, hereafter referred to as 'the site'.

This report has been produced to inform a planning submission (Ref: DM/25/0666) for the site which seeks *'Change of use from a single dwelling-house to a pair of semi-detached dwelling-houses. Conversion of rear outbuilding and main house loft space to habitable accommodation. Demolition of rear store building and rear garage. First floor side extension and remodelling of roofs'*, hereafter referred to as 'the development'.

2.1 Aims of Survey

The aim of the survey was to determine presence/likely absence of roosting bats within the two buildings (B1 and B2) on site.

2.2 Site Description

The site extends to approximately 0.048 hectares (ha) and is centred on Ordnance Survey National Grid Reference (OS NGR): TQ 31540 39501.

The site predominately comprises the buildings and developed land; sealed surfaces with some shrubs along the peripheries and modified grassland.

The site is set in the rural setting of Copthorne, West Sussex with residential housing directly to the north, west and south of the site. To the north-east is a play park and shortly mown amenity grassland field. Beyond the residential housing to the north are agricultural fields. Approximately 150m north-west is an area of ancient woodland, connected to other woodland areas and hedgerows lining the agricultural fields. There is a watercourse that runs through the centre of Copthorne, approximately 210m south of the site, separated by residential housing and a school. A hedgerow/line of trees directly north of the site connects the site to the agricultural fields to the north and in turn, the parcel of ancient woodland to the north-west.

2.3 Ecological Background

A Preliminary Roost Assessment¹ (PRA) was undertaken by LBM Ecology in May 2025 which comprised an external and internal inspection of B1 and B2 on site. During the assessment no signs of bats were noted during the internal assessment of B1 and B2, with external Potential Roosting Features (PRFs) recorded. B1 and B2 were assessed with moderate suitability to support roosting bats. Further dusk emergence surveys were therefore recommended.

3 Methodology

Two dusk emergence surveys were carried out to ascertain presence or likely absence of roosting bats within the two buildings which had been previously identified by LBM Ecology as having moderate suitability to support roosting bats. The surveys were spread at least three weeks apart and were undertaken at the site in July 2025.

The number and timing of the surveys was determined by the level of suitability to support roosting bats in line with best practice², as provided in Table 1 below.

Table 1 Survey effort according to the suitability to support roosting bats

Roosting Potential	Buildings or Structures	Trees
Negligible	None	None
Low	One survey visit at dusk or dawn, May to August inclusive	None
Moderate	Two separate survey visits, one at dusk and one at dawn separated by a minimum of three weeks, between May and September with at least one visit between May and August	As buildings
High and Confirmed Roost	Three separate survey visits, one at dusk, one at dawn and one at dusk or dawn, separated by a minimum of three weeks, between May and September with at least two visits between May and August	As buildings

Emergence surveys commenced 15 minutes prior to sunset and continued for 90 minutes after sunset. Each survey was covered by seven surveyor locations to ensure full visual coverage of all PRFs and aspects of the buildings could be observed. The surveyor locations are shown on Figure 1 in Appendix A.

Weather conditions including the air temperature, wind speed and precipitation were recorded at the start and end of the survey.

Table 1 Auxiliary survey data

Visit no.	Date	No of Surveyors	Survey Start	Sunset	Survey End	Conditions
Visit 1	01/07/2025	7	21:04	21:19	22:39	High: 25 Low: 23 Cloud: 1/8 Wind: 2/8 Rain: None

Visit no.	Date	No of Surveyors	Survey Start	Sunset	Survey End	Conditions
Visit 2	22/07/2025	7	20:46	21:01	22:31	High: 19 Low: 18 Cloud: 1/3 Wind: 1/8 Rain: None

Each surveyor was equipped with a mixture of Elekon Batlogger M, Elekon Batlogger M2 and Echo Meter Touch bat detector to detect, visualise and record the calls of any bat activity during the survey. Additionally, infrared Canon XA11 cameras, with Infra-Red (IR) lights, Nightfox Whisker and Guide TrackIR Pro Thermal Camera were used as Night Visual Aids (NVA) for surveyors. Stills from the darkest point of the survey from each surveyor location have been provided in Appendix B. Following the survey, desk-based analysis of video footage and bat calls was carried out using specialist computer software to confirm the species present and assess ambiguous sightings/calls.

Bat activity was calculated at each survey point using the following formula:

$$\text{Bat Activity} = \left(\frac{\text{Total number of passes}}{\text{Survey Duration (min)}} \right) \times 100$$

Table 2 Categorisation of activity level

Assessment of Activity Level	Activity Score
Very Low	<5
Low	6–30
Medium	31-50
High	51-90
Very High	90+

The activity level is not necessarily a reflection of the level of importance of the survey location for bats and must be considered in conjunction with other data for that location. For example, a high level of activity could be due to 30 bats commuting along a hedgerow or one bat foraging beneath a tree for 30 minutes. Likewise, a low level of activity could be one bat emerging from a building and commuting away or one bat commuting along the edge of the site.

3.1 Surveyors

The survey was designed by Luke Measey, who meets BCT Level 3 (Accomplished) which is more than appropriate for simple sites such as this one.

Survey visit 1 was undertaken by Victoria Mercier, Gemma Abela, Gemma Bennie, Vincenzo de Iacovo, Luke Measey, George Fuller and supplemented by one unmanned location.

Survey visit 2 was undertaken by Gemma Abela, Gemma Bennie, Vincenzo de Iacovo, Luke Measey, George Fuller and supplemented by two unmanned locations.

Victoria Mercier has a first class BSc degree in Zoology (Hons) and a Masters in Ecology, Conservation and Evolution (MRes). Victoria has six years of experience in ecological field surveys, is a qualifying member of CIEEM and holds her GCN Class 1 licence.

Gemma Abela is a bat ecologist with ten years of experience. She has an undergraduate degree in Geography of Africa and Asia BA (Hons) and MSc in Environmental Modelling, Monitoring and Management. She holds a Natural England Level 1 Class Survey Licence for bats.

Gemma Bennie is a freelance ecologist with previous professional consultancy experience working across a variety of disciplines including renewable energy, highways, and residential development.

Vincenzo de Iacovo has a Foundation degree in Arboriculture (FdSc) and an undergraduate degree in Ecology and Biogeography (BSc Hons). Vincenzo has over 25 years experience working in the arboricultural industry with both experience in the public and commercial sector and is a professional member of the Arboricultural Association). Vincenzo also has 13 years working in the commercial ecological commercial sector, specialising in bats and reptiles.

Luke Measey BSc (Hons) MCIEEM, is an ecologist with over seven years of experience and has an undergraduate degree in Ecology and Environmental Management BSc (Hons). He holds a Natural England Level 1 Class Survey Licence for Great Crested Newt, Natural England Level 1 and Level 2 Class Survey Licence for bats and is a certified tree climber.

George Fuller has 3 years of experience undertaking a variety of ecological surveys as a field ecologist. He has experience working on numerous surveys and during the season regularly carries out emergence, re-entry and activity surveys. He also holds a 1st class Bachelor of Science degree.

This report was written by Luke Measey and reviewed and verified by Gemma Abela, who confirms in writing that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and,
- Avoids invalid, biased and exaggerated statements.

3.2 Survey Limitations

There were no limitations associated with the survey.

The data collected during this PRA is considered valid for 24 months in accordance with CIEEM guidance³ and an updated survey will be required if the works have not started within this timeframe or should site conditions change significantly during this time.

4 Results

4.1 Dusk Emergence Survey

No evidence of roosting was observed during the two emergence surveys, therefore, roosting bats can be confirmed as likely absent from B1 and B2.

Very low levels of commuting bat activity was recorded along the southern, western and northern aspects of the site, with low levels of commuting and foraging activity recorded to the east of the site from common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle, noctule and myotis species during visit 1.

Very low levels of commuting bat activity was recorded along the southern, western and northern aspects of the site, with low levels of commuting and foraging activity recorded to the east of the site from common pipistrelle and brown long-eared bat during visit 2.

5 Mitigation and recommendations

5.1 Mitigation

As no bats were observed emerging from B1 or B2, they can be confirmed as likely absent of roosting bats. There is therefore no requirement for formal mitigation with regards to roosting bats and the proposed development can proceed lawfully with respect to legislation pertaining to roosting bats.

To mitigate for hibernating bats, the proposed roofing works should be timed to avoid the hibernation period (i.e. avoid November to March inclusive) as this is when bats are most sensitive to disturbance.

In the very unlikely event that a bat is discovered, the proposed works should cease and a suitably qualified ecologist contacted for further advice on how to proceed.

Measures to mitigate lighting impacts have been provided within the PRA survey¹ report.

5.2 Enhancements

Enhancements have been provided within the PRA survey report.

6 Summary and Conclusion

No bats were observed emerging from B1 and B2 and therefore confirmed as likely absent of roosting bats. Very low to low levels of incidental bat activity were recorded on and adjacent to the site. No formal mitigation is required regarding roosting bats, however the development should be timed to avoid the hibernation period.

Appendix A Figures

Figure 1 Bat Emergence Survey Results

CLAREMONT, COPTHORNE

- Legend
- Redline Boundary
 - Surveyor
- Roosting Suitability
- Likely Absent



Title: Figure 1 Bat Emergence Surevy Results

Drawn by: LM
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Date: 25/07/2025

Appendix B Darkest Point of the Survey

Date	Surveyor Location Reference	Still
01/07/25 – V1	SL01	
01/07/25 – V1	SL02	
01/07/25 – V1	SL03	

01/07/25 – V1	SL04	
01/07/25 – V1	SL05	
01/07/25 – V1	SL06	

01/07/25 – V1	SL07	
22/07/25 – V2	SL01	
22/07/25 – V2	SL02	

22/07/25 – V2	SL03	
22/07/25 – V2	SL04	
22/07/25 – V2	SL05	

22/07/25 – V2	SL06	
22/07/25 – V2	SL07	

Appendix C Legislation

All UK bats and their roosts are protected by law. Since the first legislation was introduced in 1981, which gave strong legal protection to all bat species and their roosts in England, Scotland and Wales, additional legislation and amendments have been implemented throughout the UK.

Six of the 18 British species of bat have Biodiversity Action Plans (BAPs) assigned to them, which highlights the importance of specific habitats to species, details of the threats they face and proposes measures to aid in the reduction of population declines.

The Wildlife & Countryside Act 1981 (WCA)⁴ was the first legislation to provide protection for all bats and their roosts in England, Scotland and Wales (earlier legislation gave protection to horseshoe bats only.)

All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annex IV of the Habitats Directive⁵, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 43 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019⁶, which transposes the Habitats Directive into UK law. Consequently, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

This legislation applies to all bat life stages.

The implications of the above in relation to the proposals are that where it is necessary during construction to remove trees, buildings or structures in which bats roost, it must first be determined that work is compulsory and if so, appropriate licenses must be obtained from Natural England. Additionally, although habitats that are important for bats are not legally protected, care should be taken when dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

References

¹ LBM Ecology (2025); *Preliminary Roost Assessment. Copthorne (report ref: 250609 Claremont PRA LM V02)*

² Collins, J (ed.) (2023); *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London

³ Chartered Institute of Ecological and Environmental Management (CIEEM) (2019); *On The Lifespan Of Ecological Reports & Surveys*

⁴ HM Government, (1981); *Part I and Part II of Wildlife and Countryside Act (as amended)*. HMSO

⁵ CEC (Council of the European Communities), (1992); *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora*

⁶ HM Government, (2019); *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Statutory Instrument 2019 no. 579*