LIZARD
Landscape Design and Ecology

BAT ROOST ASSESSMENT
AND BAT EMERGENCE SURVEY REPORT

Horelands, West Chiltington, West Sussex

On behalf of: Ms T Alwyn

Client:	Ms T Alwyn			
Project:	Horelands, West Chiltington, West Sussex			
Reference:	LLD3345-ECO-REP-001-00-PRA			
Revision:	**Date:**	**Author**	**Proof**	**Approved**
00	16/10/23	Sam Hall MSc BSc	Joe Jackson BA (Hons) LA DipLA CMLI	Joe Jackson BA (Hons) LA DipLA CMLI

Disclaimer:

The information provided within this report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

This report is intended for the sole use of the Client and their agents in accordance with the agreement under which our services were performed. Unauthorised communication, reproduction, or usage of this report by any party other than the aforementioned is prohibited. No liability is accepted by Lizard Landscape Design and Ecology for any use of this report, other than for the purposes for which it was originally prepared and provided. This report does not constitute legal advice. No warranty, express or implied, is made as to the advice in this report or any other service provided by us.

Validity:

This report is valid for 18 months from the date of the site visit. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. lizard.landscape@btconnect.com W. lizardlandscapeecology.com

Contents

		Page No.
SUMMARY		01
1.0	Introduction	02
2.0	Scope of the Survey	03
3.0	Methodology	04
4.0	Results	07
5.0	Evaluation and Recommendations	10
6.0	Opportunities for Ecological Enhancement	12
7.0	Conclusions	13
8.0	References	14

TABLES

Table No. 01 – Criteria for Assessing the Bat Roosting Suitability of Structures

Table No. 02 – Bat Emergence Survey Details

Table No. 03 – Statutory Designated Sites

APPENDICES:

Appendix A – Site Photographs

LIZARD
Landscape Design and Ecology
The Old Bank, 34 South Street, Tarring, Worthing, West Sussex, BN14 7LH
T. 01903 216033 E. lizard.landscape@btconnect.com W. lizardlandscapeecology.com

SUMMARY

Lizard Landscape Design and Ecology has been commissioned by Ms T Alwyn to undertake a Preliminary Roost Assessment (PRA) of Horelands, West Chiltington, West Sussex (located around central grid reference: *TQ 09692 22027* – hereafter referred to as 'the site'). A site visit was completed on the 18th September 2024 to allow the existing habitats on site to be assessed.

The site encompasses a residential property within rural surrounds, and proposals are focused on the 2 no. storey dwelling on site. The dwelling is brick-built with pitched tiled roofs and hanging tiles on the south and west aspects. Multiple slipped tiles and tile gaps were noted during the initial inspection throughout the roof and hanging tiles. The dwelling was assessed as of 'high' suitability for roosting bats.

Subsequent bat emergence / re-entry surveys were recommended to provide data to inform an assessment of the impacts of the development upon roosting bats. It has been recommended that 3 no. emergence / re-entry surveys should be carried out between May and September (inclusive), with at least 2 no. of the surveys between May and August (inclusive). Surveys should be spaced at least 3 no. weeks apart from one another. Due to timing constraints, 1 no. bat emergence survey was able to be completed in the 2024 season. The bat emergence survey carried out on the residential property B01 at Horelands, West Chiltington on 26th September 2024 recorded a single common pipistrelle emerging from the hanging tiles on the southern aspect and no other evidence of an active bat roost. The results of this survey indicate the presence of a day roost of 1 no. common pipistrelle. (See Image No. 01).

It is understood that the proposals include reroofing of the property and replacement of windows, to resolve ongoing significant rainwater ingress. To carry out further surveys would delay the planning application significantly, with the impacts upon the homeowner likely disproportionate to the information that would be provided. Precautionary working methods have been provided including avoiding work around the confirmed day roost of common pipistrelle and removing roof tiles under a soft strip method under the ecological supervision of a bat licenced ecologist. A disturbance notification should be sent to Natural England. Application for a bat mitigation licence from Natural England is not recommended, however, should a bat be found during the soft strip of the roof, then all works should cease and a licence sought.

1.0 INTRODUCTION

1.1 Lizard Landscape Design and Ecology has been commissioned by Ms T Alwyn to undertake a Preliminary Roost Assessment (PRA) of Horelands, West Chiltington, West Sussex (located around central grid reference: TQ 09692 22027 – hereafter referred to as 'the site').

1.2 The purpose of this report is to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging, or commuting. This has been undertaken with due consideration to the "Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)" publication (Collins, 2023).

Site Information

1.3 The survey is focussed on a residential dwelling located within a c. 0.2 hectares (ha) of residential property. The property also features 2 no. out buildings, lawns, scattered trees, ornamental planting, a pond, and access / parking. Much of the site boundary is enclosed by hedgerows, and open farmland surrounds the property.

Surrounding Landscape

1.4 The site is located to the north of West Chiltington, a village in West Sussex. The surrounding landscape is predominantly occupied by open farmland with some woodland and sparse residential development.

Development Proposals

1.5 It is understood that proposals include reroofing and replacement of windows.

2.0 SCOPE OF THE ASSESSMENT

2.1 The aim of the surveys has been:

- To assess the buildings for signs of current use by bats;
- To establish the location of any roosts if present;
- To establish the numbers and species of bats present;
- To identify access points and flight lines to and from the building;
- To provide suitable mitigation measures.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 The Multi-Agency Geographic Information for the Countryside (*MAGIC*) was consulted for all designated sites within a practicable zone of influence of the site. This included Local Nature Reserves (LNRs), National Nature reserves (NNR) and Sites of Special Scientific Interest (SSSIs) within a 2.0km radius of the site, and international statutory designated sites including Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsars (Wetlands of International Importance) within a 10km radius of the site. Where SAC's designated for their bat interest are present, this ZoI was extended to 12.0 km in accordance with recent guidance (SDNP, 2021).

3.1.2 MAGIC was also used to provide information on all Priority Habitats within a 2.0km radius of the site, and all records of granted European Protected Species Mitigation licences within a 1.0km radius of the site.

3.2 Field Survey

3.2.1 The field survey was undertaken on 18th September 2024 by an experienced ecologist (Sam Hall, accredited agent under 2016-20460-CLS-CLS). Weather conditions were warm (c.19°C), with a light breeze (Beaufort Scale 2), 30% cloud cover and no rain.

Preliminary Bat Roost Assessment

3.2.2 A Daytime Bat Walkover (DBW) survey was undertaken on 18th September 2024 by a suitably experienced surveyor (Sam Hall, Accredited Agent Under; Louise Barker (Bat Level 2 Class Licence; 2023-11422-CL18-BAT)).

3.2.3 The Daytime Bat Walkover (DBW) survey entailed a slow walkover of the site, during which time the surveyor identified any structures, trees, and other features that could be suitable for bats to roost in, and any habitats which could be suitable for bats to commute, forage, or swarm in.

3.2.4 During this survey any direct evidence of bats was searched for and recorded, such as grease marks, urine stains, bat droppings, feeding remains and dead / live bats. Furthermore, the dwelling was inspected for features such as, but not limited to, slipped, missing or uneven tiles, gaps around the soffit / barge board, raised flashing.

Evaluation Criteria

3.2.5 All suitable bat habitat was assessed in accordance best practice criteria (Collins, 2023), which is outlined herein. During the survey, the dwelling was assessed using the following criteria:

Table No. 01 – Criteria for Assessing the Bat Roosting Suitability of Structures

Potential Suitability	Description
None	No habitat features on site likely to be used by any roosting bats at any time of year.
Negligible	No obvious habitat features on site likely to be used by roosting bats. However, some small uncertainty remains, as bats can use small and apparently unsuitable features occasionally.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these do not provide enough shelter, space, protection, appropriate conditions, or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	A structure with one of more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat, but unlikely to support a roost of high conservation status, irrespective of species conservation status.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat, with the potential to support high conservation status roosts irrespective of species conservation status.
Confirmed	Direct evidence of bats identified.

3.3 Bat Emergence Survey

3.3.1 In accordance with current best practice guidelines (BCT, 2023), the survey was carried out between May and September (inclusive) and in suitable weather conditions (10°c+ and dry).

3.3.2 3 no. bat surveyors on the 26th September were assigned a point each to adequately cover all potential roost features of the building.

3.3.3 The emergence surveys started 15 minutes before sunset and terminated 1.5 hours after sunset. Data including species, behaviour and general patterns of activity were recorded throughout the survey. Details of the survey visits can be found in *Table No. 02* below:

Table No. 02 – Bat Emergence Survey Details

Date	***26/09/24***
Survey Type	*Dusk*
Surveyors	*SH, OB, MD*
Weather	*14°C, WF3, 50% cloud, dry*
Sunset	*18:50*
Start	*18:35*
Finish	*22:20*

3.3.4 Bats were identified using Echo Meter Touch Pro 2 bat detectors. 2 no. Sannce CCTV infra-red cameras with additional illuminators and 1 no. Whisker Nightfox infra-red camera were also used to aid the surveys in line with interim guidance (BCT, 2022).

Data Analysis

3.3.5 Sonogram analysis was undertaken using the Kaleidoscope programme and video footage was reviewed to check any potential emergences identified over the course of the surveys, as well as the darkest half an hour at the end of the emergence survey.

3.4 Constraints and Limitations

3.4.1 Full access / visual assessment was possible for all loft spaces and all roof aspects during the initial survey.

3.4.2 No limitations to the emergence surveys were encountered, the surveys were undertaken at the optimal time of year and in suitable weather conditions for bats to be active.

4.0 RESULTS

4.1 Desk Study

4.1.1 The following designated sites are not necessarily representative of the existing site's ecology but are indicative of the ecological context of the surrounding area; a factor that may be important when assessing the presence / absence potential of certain species groups. Statutory Designated Sites identified within a potential zone of influence of the site include:

Table No. 03 – Statutory Designated Sites

Site	Description	Location
International Statutory Designated Sites within a Potential Zone of Influence		
Arun Valley SAC / SPA / RAMSAR	Annex II species that are a primary reason for selection of this site: **4056** Ramshorn snail *Anisus vorticulus*	5.4 km SW
The Mens SAC / SSSI	The most extensive example of Wealden Woodland in West Sussex. Annex I habitats that are a primary reason for selection of this site: **9120** Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) **1308** Barbastelle *Barbastella barbastellus*	6.7 km WNW

Site	Description	Location
Ebernoe Common SAC / SSSI	Annex I habitats that are a primary reason for selection of this site: **9120** Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) Annex II species that are a primary reason for selection of this site: **1308** Barbastelle *Barbastella barbastellus* **1323** Bechstein's bat *Myotis bechsteinii*	11.7 km WNW
National Statutory Designated Sites within 2.0km		
	None found	

4.1.2 The site is within the wider conservation areas of The Mens SAC / SSSI and Ebernoe Common SAC / SSSI whereby significant impacts or severance to flightlines in relation to bats should be assessed.

Non-Statutory Designated Areas

4.1.3 *Local Wildlife Sites* (*LWSs*) are designations applied to the most important non-statutory nature conservation sites. They are recognised by the *National Planning Policy Framework (2021)* and as such are material considerations when assessing planning applications. LWSs were not identified within 2.0 km of the site.

Priority Habitats

4.1.4 In accordance with the MAGIC dataset, within 2.0 km of the site there are priority habitats (NERC, 2006) of *Lowland Mixed Deciduous Woodland* (much of which is categorised as ancient) *and Traditional Orchard*. No priority habitats were noted within or adjacent to the site.

Species Records

4.1.5 Common Pipistrelle *Pipistrellus pipistrellus* bats have been recorded within 2.0 km of the site area.

4.1.6 No mitigation licences in relation to bats were identified to have been issued within 1.0 km of the site.

4.2 Preliminary Roost Assessment Results

Trees

4.2.1 No trees were noted within the likely impact zone of proposals.

Buildings

External Assessment

4.2.2 B01 is a 2 no. storey brick-built dwellings with a pitched, tiled roof and hanging tiles on the south and west aspects. This building featured wooden window frames and appeared in an overall moderate state of repair (The homeowner reports significant rainwater ingress). Numerous small gaps amongst the roof and hanging tiles were noted throughout.

Internal Assessment

4.2.3 The loft spaces were open and relatively unobstructed by physical barriers but significant cobwebs were noted throughout. The roofing felt appeared undamaged although unattached to the roof at its upper and lower extremities. No direct evidence of bats was recorded. B01 has been as assessed as offering 'high' bat roost suitability.

Foraging and Commuting Suitability

4.2.4 The site comprises mature trees, a pond and shrubs that offer potential foraging habitat. The site is also connected to woodland in the local surrounds via tree lines and hedgerows, although those areas of woodland were not noted as extensive. Overall, the site has been assessed as of **site level value** to foraging and commuting bats.

4.2.5 At 6.7 km from The Mens SAC / SSSI and 11.7 km from Ebernoe Common SAC / SSSI the site falls within the wider conservation area of these designated sites whereby significant impacts or severance to flightlines must be considered.

4.2.6 Both Ebernoe Common and The Mens feature Barbastelle bats within their SAC designations. Ebernoe Common also features Bechstein's bats within its designation. These species are associated with mature woodland and may choose to hibernate in underground habitats. On site mature trees and local woodland therefore provides suitable potential habitat of **low value** for these species.

4.3 Bat Emergence Survey – B01 – 26/09/24

4.3.1 Moderate commuting and foraging activity of low numbers of soprano pipistrelle, noctule, and common pipistrelle was recorded on site by surveyors between 19:11 and 20:15. A single common pipistrelle was recorded emerging from the hanging tiles on the southern aspect of the dwelling and commuting south. Further detail can be found within Appendix B – Full Survey Results and the emergence location is highlighted in Image No. 01 – cpip emergence.

5.0 EVALUATION AND RECOMMENDATIONS

5.0.1 The following section provides recommendations to avoid, mitigate or compensate potential impacts to protected or notable species, in line with the 'Mitigation Hierarchy' (BSI, 2013) (CIEEM, 2018). If potential impacts are anticipated, recommendations for further assessment and or mitigation are provided, to ensure that the presence, or potential presence of these species are adequately considered in the scheme design.

5.1 Potential Impacts

5.1.1 Building B01 has been assessed as offering high bat roost potential. In the absence of mitigation, proposals are concentrated on the roof and windows, and could result in the disturbance of a bat, which would constitute an offence under the *Wildlife and Countryside Act (1981) (as amended)*. Any new external lighting or removal of vegetation could disturb local commuting or foraging bats using the boundary vegetation or adjacent woodland habitats.

5.1.2 Should proposals require extensive removal of hanging tiles from the southern aspect of B01, this could result in the killing or injury of a bat and / or the destruction of a bat roost, which could constitute an offence the *Habitats Regulations (2017)*, in which case a mitigation licence from Natural England would be required.

5.1.3 Proposals are concentrated on the exiting dwelling (B01) and do not involve removal of any semi-natural habitat. Therefore, when considered the wider conservation zones of The Mens and Ebernoe Common, no significant impacts to bats or severance to flightlines is likely to occur.

5.2 Recommendations

5.2.1 The timing constraint of carrying out a further 2 no. bat emergence surveys in line with guidance would halt planning submission until spring 2025. Considering the current state of disrepair of the roof of the dwelling, the costs have been assessed as likely disproportionate to the information that further bat emergence surveys would provide. It is therefore recommended that a bat disturbance notification is sent to Natural England relating to the identified day roost of 1 no. common pipistrelle in the hanging tiles of the southern aspect of B01.

5.2.2 Works to the very edges of the southern aspect hanging tiles could disturb a day roost. Works impacting day roosts can be undertaken at any time of year (although should aim to avoid the hibernation season).

5.2.3 It is also recommended that as a precautionary approach any removal of roof tiles is carried out under a soft strip method and under the supervision of a bat licenced ecologist. Should a bat be discovered during the soft strip, all works shall cease, and a European Protected Species Mitigation Licence applied for through Natural England. Any mitigation measures required as part of any such licence would be agreed as part of the licence application.

5.2.4 Proposals should be mindful of the potential for bats to occur in the area by ensuring that surrounding vegetation is protected from inappropriate nocturnal lighting, and by limiting the need for nocturnal lighting in the first instance. Any external lighting designs should be assessed by a suitably qualified ecologist to advise on their adherence to best practice standards in regard to external lighting and bats (BCT & ILP, 2023) wherever possible. Generally, lighting should avoid the illumination of adjacent habitats, use features such as hoods / cowls to avoid light spill, use PIR lights and lights with low frequency wavelengths wherever practicable.

6.0 OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

6.1 There is a requirement laid out in national planning policy (Ministry of Housing, Communities & Local Government, 2021) that development should result in net gains for biodiversity. This development does not impact any semi-natural habitats and so is exempt from the 10% calculable Biodiversity Net Gain mandated by the *Environment Act (2021)*, which has become legally binding via amendment to the *Town and Country Planning Act (1990).* Opportunities for ecological enhancements which could be incorporated into the scheme design are provided below:

- Installation of bat boxes to the southern aspect of mature trees or buildings on site;
- Provision of native planting favourable for moth species such as *Solanum sp*. (nightshades), *Tilia* (lime) and *Ligustrum* (privet).

7.0 CONCLUSIONS

7.1 The site consists of a single residential building, out buildings, associated gardens and access / parking. The greatest ecological interest at the site is associated with the shrubs and trees scattered throughout the garden areas, and boundary vegetation which should be retained and protected throughout proposals, wherever practicable. Proposals are concentrated on the dwelling house (B01).

7.2 Further ecological survey with regards bats was recommended and subsequently carried out (in part). A bat emergence survey was carried out focused on the dwelling (B01) on 26th September and confirmed the presence of a day roost of 1 no. common pipistrelle bat in the hanging tiles of the southern aspect of B01.

7.3 The timing constraint for carrying out bat emergence surveys in line with guidance would halt planning submission until spring 2025. The costs of which have been assessed as likely disproportionate to the information that further bat emergence surveys would provide. It is therefore recommended that a bat disturbance notification is sent to Natural England relating to the identified day roost of 1 no. common pipistrelle in the hanging tiles of the southern aspect of B01.

7.4 It is also recommended that any removal of roof tiles is carried out as a soft strip and under the supervision of a bat licenced ecologist. Should a bat be discovered during the soft strip, all works shall cease, and a European Protected Species Mitigation Licence applied for through Natural England. Any mitigation measures required as part of any such licence would be agreed as part of the licence application.

7.5 Opportunities for ecological enhancement are provided herein, to ensure proposals result in net gains for biodiversity. A series of recommendations are provided to ensure the scheme accords with best practice in regard to ecological receptors and complies with all local and national planning policy guidance and legislation. Overall, no constraints were identified which would preclude the provision of a scheme which is well designed, and sensitive to the presence, or potential presence of ecological receptors.

8.0 REFERENCES

Altringham, J (2003). *British Bats*. New Naturalist. HarperCollins.

BCT & ILP. (2023). *Guidance Note 08/23. Bats and artificial lighting in the UK. Bats and the Built Environment series*

BCT. (2022). *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys.* Bat Conservation Trust, May 2022. Available online: https://cdn.bats.org.uk/uploads/pdf/Interim-guidance-note-on-NVAs-May-2022-FINAL.pdf?v=1653399882 [last accessed 25.06.2023]

BSI. (2013). *BS 42020:2013 Biodiversity – Code of practice for planning and development.* London: BSI - British Standards Institution

BSI. (2015). BS8596:2015 *Surveying for bats in trees and woodland*. British Standard Institution, London.

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2023). *The UK Habitat Classification User Manual Version 2.1* at http://www.ukhab.org/

Collins., J. (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition) The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6.

English Nature (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

Jones, K and Walsh, A (2006). *A Guide to British Bats*. The Mammal Society, London.

Ministry of Housing, Communities & Local Government. (2021). *National Planning Policy Framework*. Fry Building, 2 Marsham Street, London. This publication is available [online] at www.gov.uk/government/publications

Mitchell-Jones, A.J. & McLeish, A.P. (2004). *The Bat Workers' Manual* (3nd Ed.). JNCC, Peterborough.

Multi-Agency Geographic Information for the Countryside (MAGIC). (2013). Interactive Map. [online]. Available at http://www.magic.gov.uk/Magicmap.aspx

Appendix A – Site Photographs



Image No. 01 – cpip emergence highlighted with a blue circle

Appendix B – Full Bat Survey Results

Date	26/09/24
Survey Type	Dusk
Sunrise / Sunset	18:50
Start Time	18:35
End Time	20:20
Start Temperature	14 ºC
End Temperature	13 ºC
Wind (Beauforts)	4
Cloud Cover	4/8
Rain	None

Surveyor	SH	
Survey Point	S	
Brief Summary of Observed Bat Activity		
Time	Species	Notes
19:11	spip	Commute over house E to W
19:13	cpip	flew toward surveyor. Emergence confirmed on IR
19:28	cpip	hns
19:29	cpip	hns
19:39	cpip	hns
19:46	cpip	hns
20:03	cpip	hns
20:05	cpip	hns
20:07	cpip	hns

Surveyor	OB	
Survey Point	NW	
Brief Summary of Observed Bat Activity	Fairly low activity, no evidence of emergence from my point of view	
Time	Species	Notes
19:11		Flew over house from E to W. No call recorded
19:12	bird	bird flew past camera
19:14	spip	hns
19:19	noct	hns
19:28	cpip	hns
19:26 - 19:28	cpip	hns - social calls
19:30	cpip	hns x 2
20:03 - 07	spip	hns
20:05	noct	hns
20:05	cpip	hns
20:12 – 15	cpip	hns x 3

Surveyor	MD	
Survey Point	NE corner	
Brief Summary of Observed Bat Activity		
Time	Species	Notes
19:07	N/A	bird land on E roof - NOT BAT
19:13	spip	HNS
19:14	spip	flew W to E along tree to N
19:16	spip	HNS - faint social calls
19:24	cpip	flew W to E over house
19:24-31	cpip	HNS - several passes E along tree line
19:29	spip	HNS
19:35	cpip	Commute towards NE
19:38	cpip	HNS
19:46	cpip	HNS
20:04	cpip	HNS
20:07	cpip	HNS
20:14	cpip	HNS

HNS – Heard and not seen