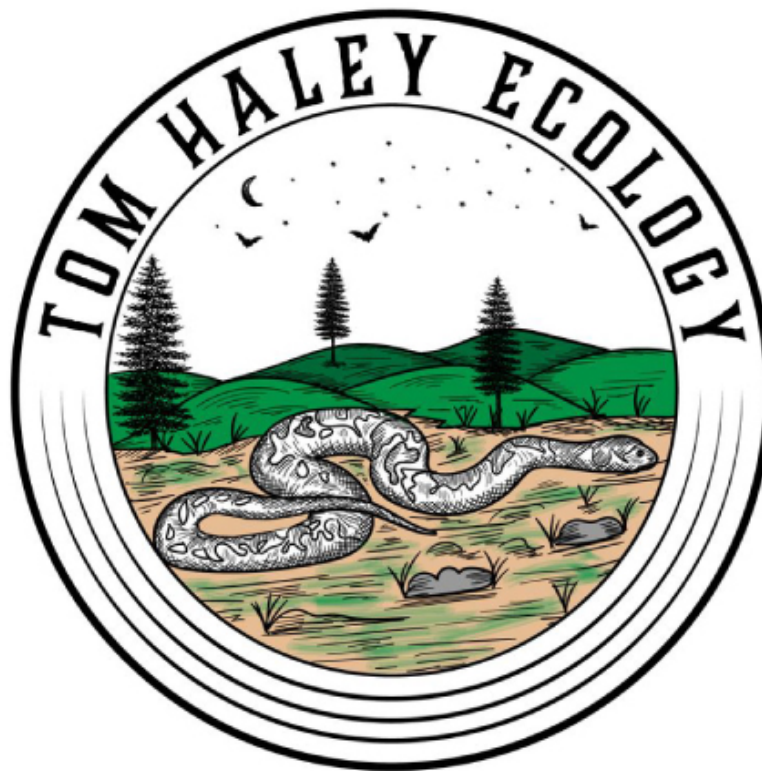




Bat Emergence Survey Report

Spicers Farm, Whitethroat Lane, Balcombe, RH17 6JN.

Document Version/Ref	Date	Author	Reviewed By
250406-PEA-01	21.07.2025	Brooke Waites, MCIEEM, Principal Ecologist	Tom Haley MSc, Head of Ecology

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1. EXECUTIVE SUMMARY

This report assesses bat roosting activity within the site and the anticipated impact of the proposed development.

The proposed development involves an extension to the north-west of the existing dwelling and the works to the existing barn, to create a habitable space, together with associated hardstanding to provide additional parking provision. The immediate surroundings of the proposed development site include an established residential garden, mainly laid to lawn, with mature trees, a wildlife pond, and a small traditional orchard.

The report is broadly considered valid for 18 months, after which time an update may be required.

The survey findings and recommendations for mitigation are outlined in the table below. See report for further details.

	Summary	Notes
Roosting Bats	Yes	Main House supported numerous roosts including common pipistrelle maternity, common pipistrelle, brown long-eared and daubentons day roost. The barn supported brown long-eared and common pipistrelle roosts
General Activity	Moderate – High	Regular passes by common and soprano pipistrelles on all surveys. Occasional passes by brown long-eared and myotis also recorded.
Licence Required?	Yes	EPS licence for the proposed works to the barn will be required. Due proposed works impacting the roof/loft structure (raising ridge line for insulation), a full mitigation licence will be required.

2. INTRODUCTION

Project Background

This report has been instructed by Mr and Mrs Black.

The proposed development involves an extension to the north-west of the existing dwelling and the works to the existing barn, to create a habitable space, together with associated hardstanding to provide additional parking provision. The immediate surroundings of the proposed development site include an established residential garden, mainly laid to lawn, with mature trees, a wildlife pond, and a small traditional orchard.

This report has been completed with reference to the following plans and proposals:

Where changes to the below plans are inconsequential to biodiversity within the development, updates to this report may not be required.

- Spicers Farm, Proposed Block Site Plan, Atelier de Linde (ref. 236.02.01)
- (Barn) Proposed Elevations, Atelier de Linde (ref. 236.02.37)
- (House) Proposed Rear and Side Elevations, Atelier de Linde (ref. 236.02.37)

Overall Site Description

The site is located within the High Weald Area of Outstanding Natural Beauty, in a rural area of Balcombe, West Sussex, situated within a predominantly agricultural landscape characterised by a mosaic of arable fields, improved grassland, and scattered woodland blocks. The surrounding habitat includes ghylls, ancient and deciduous woodland in combination with expanses of pasture and arable fields.

The central grid reference for the site is TQ 29971 28566.

Previous Ecological Surveys

A Preliminary Ecological Appraisal was undertaken by Tom Haley Ecology on 13th May 2025. The survey confirmed the main house and barn as bat roosts due to the presence of droppings found during the internal inspection. As such, it was recommended each structure was surveyed on three occasions between May – August (inclusive).

Survey Objectives

Bat emergence surveys aim to collect sufficient data to draw conclusions about the use of the buildings/trees by roosting bats, to assess the potential impacts of the proposed development on bats and their roosting places.

This report contains the details of the survey methodologies and results of the surveys. Survey findings will be used to assess the conservation value of the site for the bat species present and determine likely impacts of the proposed development.

Legislation

All species of bat and their breeding sites or resting places (roosts) are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2017 and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Section 9 of the Wildlife and Countryside Act 1981. It is an offence for anyone intentionally to kill, injure or handle a bat, to possess a bat (whether live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.

3. METHODOLOGY

Emergence Surveys

Bat emergence surveys were undertaken on the site between [months/year]. Multiple surveys of each feature were separated by at least three weeks, in accordance with Bat Conservation Trust's Bat Surveys for Professional Ecologists (Collins, 2023).

In order to provide coverage of all potential roosting features and access points, 9 observation points were used to cover the buildings. Surveyor positions are shown in Appendix B.

Surveyors were paired with infra-red cameras, and additional cameras were placed around the site to act as an aid for adjacent surveyors. Elekon Batlogger M2 and Wildlife Acoustic Echo Meter Pro bat detectors were used to detect and record bat calls. The cameras used included Thermal Camera Guide TK612, Canon XA11 and Canon XA10 with additional infra-red torches, Nightfox Whiskers and Sony Handycam AX53. Surveyor details are given in Appendix C.

Dusk surveys were commenced at least 15 minutes before sunset and continued for 90 minutes after sunset.

Following the surveys, camera footage was reviewed using video viewing software VLC. The review targeted times where the origin of bats was unknown, and once the light levels dropped, restricting the surveyors view. Activity was then compared with recordings from the associated bat detector. Images showing the cameras view at the darkest point of the survey is shown in Appendix B.

The weather conditions during the bat emergence survey were as follows;

Date	Building Surveyed	Survey Start	Sunset Time	Survey End	Cloud Cover (%)	Rain	Wind (Beaufort)	Temperature at sunset (°C)
11.05.2025	Main House (Building B1)	20:37	20:53	22:23	10	None	Light Breeze	13

22.05.2025	Barn (Building B2)	20:36	20:52	22:22	25	None	Light Breeze	14
11.06.2025	Main House (Building B1)	21:00	21:15	22:45	20	None	Moderate Breeze	16
12.06.2025	Barn (Building B2)	21:00	21:15	22:45	10	None	Light breeze	17
02.07.2025	Main House (Building B1)	21:03	21:18	22:48	40	None	Light-Moderate	18
03.07.2025	Barn (Building B2)	21:02	21:17	22:47	10	None	None	16

Automated Bat Detector Methods (Summer)

The aim of this survey technique was to sample bat activity inside the Main House, to provide information as to their use by bats over a number of days. An automated bat detector was deployed inside the loft space. The detector used was a Wildlife Acoustics Song Meter Mini 2.

The detector was deployed between nocturnal surveys 2 and 3.

Bat Dropping DNA Analysis Methods

Bat droppings samples were taken from the loft space and barn as part of the Preliminary Ecological Appraisal on the 13th May 2025.

The samples were analysed by Ecotype Genetics using multi-species analysis to identify to species. The results of the DNA analysis are detailed within this report. The results are shown in Appendix D.

Limitations

Bat emergence surveys, even when undertaken during the optimal season and over the recommended number of occasions, can only take a snapshot of bat roosting patterns. Bats are often nomadic in their roosting habits and may use some roosting features only sporadically and in low numbers. In sites where a high number of potential roost features exist, there remains some possibility of bats roosting within features not identified as roosts during the surveys. As such, mitigation measures should include a precautionary approach to features with high potential to be used by bats, even where their presence was not recorded during surveys.

Automated bat detectors do not discern between multiple bats or a single bat passing the microphone several times and therefore the data recorded can only provide an indication of bat activity as bat passes per unit time.

The calls of bat species of the genus *Myotis* require detailed analysis to differentiate between species. However, bats displaying roosting behaviour have all been identified to species level with a reasonable degree of confidence.

The lower amplitude of calls of species such as brown long-eared or barbastelle are more difficult to detect. Therefore, passes by these species may be under-recorded.

4. EMERGENCE SURVEY RESULTS

Roosting Bats

The table below details the findings from the emergence surveys. Where roosting bats were identified, the location of the roost is shown in Appendix A. Photographs of the site, and roosting locations are shown in Appendix B.

Survey Number	Building Ref	Emergences	Notes
Survey 1	Building B1	18 common pipistrelles	Hanging tiles on southern elevation.
Survey 1	Building B1	2 common pipistrelles	Eaves/Hanging tiles on northeastern corner of the house.
Survey 2	Building B1	1 Daubenton's bat	Hanging tiles on southern elevation.
Survey 3	Building B1	4 common pipistrelles	Various locations of hanging tiles on the eastern elevation (northern end) of the property.
Survey 1	Building B2	3 common pipistrelles	Emerged from building through wooden cladding and open doorway but likely roosting in ridge.
Survey 2	Building B2	2 common pipistrelles	Seen emerging from internal ridge
Survey 3	Building B2	2 common pipistrelles	Two individuals seen flying around barn prior to leaving via opening.

DNA Analysis of Droppings

Main House

Multiple species analysis was undertaken of the droppings found within the loft space of the main house.

The analysis confirmed the presence of Common pipistrelle and Brown long-eared bats (see Appendix D for full results). No other species were detected within the sample.

Barn

A light scattering of droppings was present within the barn. Samples were taken from the main large section of the barn and sent for Multi-species analysis.

The analysis confirmed the presence of Brown long-eared bats (see Appendix D for full results). No other species were detected within the sample.

Automated Bat Detector Survey

An automated bat detector was deployed in the loft space of the main house for three weeks, between Nocturnal Surveys 2 and 3, to monitor the loft space's use by roosting bats.

The detector recorded a total of 193 bat calls. Of the calls, the majority were brown long-eared bats (which accounted for 181 of the calls).

In addition, 8 common pipistrelle bat calls were recorded, and 4 Noctule bat passes.

Due to the high amplitude of noctule calls and the timings of calls (recorded in the middle of the night), it is considered likely these bats are passing over the building, rather than present internally.

General Bat Activity

During the surveys, levels of bat activity across the site were considered to be high. Regular common pipistrelle, soprano pipistrelle and noctule bat passes were recorded on all surveys. Occasional activity by Myotis species and brown long-eared bat was also recorded. Activity levels were highest to the rear of the main property, adjacent to the pond, and along the access track where bats were foraging along the hedgerow outside of the site boundary.

5. CONCLUSION AND RECOMMENDATIONS

Roosting bats

Survey findings

The following sites have been identified within the site:

Roost Type	Building ref.	Location	Species	Peak Count
Maternity Roost	Building B1 (Main House)	Hanging tiles (southern elevation)	Common Pipistrelle	18
Day Roost	Building B1 (Main House)	Loft void	Brown long-eared bat	Unknown – Recorded on static detectors only
Day Roost	Building B1 (Main House)	Hanging tiles (southern elevation)	Daubenton's bat	1
Day Roost	Building B1 (Main House)	Eaves and Hanging tiles on eastern elevation	Common pipistrelle	4
Day Roost	Building B2 (Barn)	Internal crevices along ridge	Common pipistrelle	3
Day Roost and potential feeding roost.	Building B2	Internal Space	Brown long-eared bats	Unknown – detected through droppings and feeding remains only.

Anticipated Impacts

Main House

The proposed extension on the north-western elevation of the property is not due to impact any known bat roosts directly.

The proposed installation of new insulation and raising the ridgeline will result in modification and temporary disturbance of multiple bat roosts within the loft structure.

The common pipistrelle maternity roost, located on the hanging tiles to the south of the site, will not be directly impacted, but in the absence of mitigation, will be subject to disturbance during the works.

Barn

The proposed works to the barn into habitable accommodation will result in the loss of a common pipistrelle and brown long-eared bat roost. In the absence of mitigation, the work has the potential to kill or injure bats, if present at the time.

Mitigation and Licensing Requirements

The proposed works of the Barn (Building B2) and roof works associated with Building B1 (Main House) will result in the loss and/or damage of a known bat roost. As such, a Natural England Mitigation Licence will be required.

A Natural England Bat Mitigation Licence will be required to enable works to proceed. As part of the licence application, an updated site visit (within 6 months of the licence application) will be required and an ecological consultant.

Natural England Licences typically take 30 working days to be assessed and an application cannot be made until planning permission has been granted, and all wildlife-related conditions discharged.

The following measures will be required as part of the mitigation strategy:

- Ecologist supervision when dismantling potential bat roost features.
- Restricted timing of dismantling works to minimise the risk of harm to bats – particularly avoiding disturbance of bat maternity roost features, such as hanging tiles on the southern elevation of the main house, and adjoining loft space between May and September.
- Retention/re-instatement of bat roost features wherever possible.
- Provision of additional permanent replacement roost features into the buildings.
- Woven Breathable Roof Membranes will not be used anywhere, as they are known to entangle bats. Traditional 1F bitumen felt will be used.

Please note, in the event that work to the barn proceeds and work to the house is put on hold, an alternative licence type may be suitable. In this case, the use of the Earned Recognition Level 1 licence may be appropriate.

The use of this licence method will only be applicable where maternity roosting features are not being disturbed or impacted. Once a schedule of work is outlined, the licensing approach should be confirmed with an ecologist.

General Bat Activity

Survey Findings

Regular common pipistrelle, soprano pipistrelle and noctule bat passes were recorded on all surveys. Occasional activity by Myotis species and brown long-eared bat was also recorded. Activity levels were highest to the rear of the main property, adjacent to the pond, and along the access track where bats were foraging along the hedgerow outside of the site boundary.

Anticipated Impacts

The proposed development is not due to alter the overall character of the site and is due to retain habitats of value to foraging and commuting bats such as hedgerows and tree lines which are located outside of the work area.

Mitigation Measures

A Sensitive Lighting Strategy should be implemented to minimise light spill from the scheme on to trees and hedgerows within the wider landscape, which provide potential bat roosting, foraging and commuting habitat. The Sensitive Lighting Strategy will benefit bats and other nocturnal and crepuscular species. The Sensitive Lighting Strategy will address four key design principles:

- Use of unnecessary lighting will be avoided.
- The horizontal and vertical spread of artificial light will be minimised and take into account both primary and reflected light sources. Directional lighting can be achieved through the use of LED bulbs and by angle and orientation of beam. Use of a cowl, louvre or other light shield may also be implemented if required.
- Timers should be used to ensure that overall illumination is reduced during core night-time hours.
- Light intensity will be minimised and light sources selected should emit zero ultra

6. ENHANCEMENT OPPORTUNITIES

Wherever possible, ecological enhancements should be designed into the proposed development and landscape design. The section below details possible ecological enhancements which should be considered within the scheme.

Bats Boxes

To provide new opportunities for roosting bats within the site, bat boxes should be installed within the site. These can be integrated into the new structure or installed on mature trees within the site.

The boxes should be placed at least 3 m above the ground, away from dense vegetation and artificial light. Ideally boxes will be placed facing south or east. Recommended models are shown below.



Habitat Bat Box 001 - Custom Brick Facing



Beaumaris Bat Box

Wildlife Friendly Garden Planting

In order to enhance the sites suitability for bats and other wildlife, wildlife friendly planting within the site should be encouraged.

To maximise ecological value, species should be chosen with a range of flowering periods and aim to include night flowering plants to encourage night flying invertebrates. Recommended species include¹:

- Red Campion (*Silene dioica*)
- Red Valerian (*Centranthus ruber*)
- Sweet Williams (*Dianthus barbatus*)
- Wood Forget-me-not (*Myosotis sylvatica*)
- Knapweed species (*Centaurea sp.*)
- Lavender (*Lavandula*)
- Night Scented Jasmine (*Cestrum nocturnum*)
- Dog Rose (*Rosa canina*)
- Honeysuckle (*Lonicera periclymenum*)

Shrub planting

Shrub planting should include a variety of species found on the Royal Horticultural Society's 'Plants for Pollinators' lists, such as:

- Heather (*Calluna vulgaris*)
- Common box (*Buxus sempervirens*)
- Common hawthorn (*Crataegus monogyna*)
- Bell heather (*Erica cinerea*)
- Blackthorn (*Prunus spinosa*)
- Guelder rose (*Viburnum opulus*)
- Barberry (*Berberis species*)

¹ Bat Conservation Trust (2015) Encouraging Bats: A Guide for bat-friendly gardening and living

7. APPENDICES

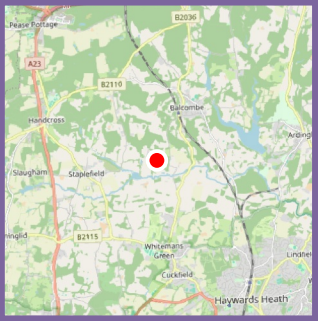
Appendix A – Bat Survey Plan

Appendix B – Photographs

Appendix C – Surveyor Details

Appendix D – DNA Results

Appendix A – Bat Survey Plan



Legend

Red Line Boundary

Bat surveys

Surveyor positions

Emergence data

Common pipistrelle

Daubenton's



Site name:
Spicers Farm, Balcombe

Plan title:
Bat Emergence Survey Plan

Date: 21/07/2025

Appendix B – Photographs



Image 1: IR View at darkest point of Barn (western elevation)



Image 2: Internal view of Barn. Approx. roosting location in ridge shown in red.



Image 3: IR View of Barn (Southern elevation)



Image 4: Thermal imaging view of Main House (eastern elevation). Approximate roosting locations of common pipistrelles shown in red.



Image 5: IR View of Main House (Southern and western elevation). Maternity roost location shown in red.



Image 6: IR View of Main House (Northern and western elevation)



Image 7: IR View of Main House (south-eastern elevation)

Appendix C – Surveyor Details

Surveyor	Bat Survey Licence Holder	Experience Levels	Licence number
Brooke Waites MCIEEM Principal Ecologist	Yes – Level 2 and BER Level 1	Over 9 years of experience undertaking bat surveys.	2019-39448-CLS- CLS
Becky Nye Assistant Ecologist	No	First season undertaking bat surveys.	
Faye Dixon Assistant Ecologist	No	Two years undertaking bat surveys	
Thomas Haley Director and Head of Ecology	Yes – Level 2	Over 10 years of experience undertaking bat surveys.	2020-44792-CLS- CLS
Daniel Davies Freelance Ecologist	No	Over 5 years of experience undertaking bat surveys	
Izabela Kennedy Freelance Ecologist	No	Two years undertaking bat surveys	

Appendix D – DNA Results

Laboratory Report

Order Number: EG-2152

Order Details

Client Information:

Name: Brooke Waites

Company: Tom Haley Ecology

Email: brooke@thaley.co.uk

Phone: 07903703199

Sample log:

Order Date: 16/05/2025 10:41

Date Sample Arrived at Lab: 22/05/2025

Results Date: 23/05/2025

Ecotype Genetics Limited.

Registered in England. **Company No:** 11328606. **VAT:** 295 2037 94

Registered office: Parkers Cornelius House, 178-180 Church Road, Hove, East Sussex, BN3 2DJ

e: orders@ecotypegenetics.co.uk **t:** 01273704505 **w:** ecotypegenetics.co.uk

Results

Sample ID: EG-2152-1

Sample information:

Sample type: Faecal

Species group: Bats

Suspected species: Common pipistrelle

Site Location: TQ 29952 28575

Comments: Large number of droppings on chimney in main house - Scattering around area.

Laboratory information:

DNA Extraction Code: EG-2025-0873

Identification method: qPCR

Analysis Procedure Notes:

Laboratory Comments:

None

Species Identified:

Species 1: Pipistrellus pipistrellus (Common pipistrelle bat)

qPCR Ct Value: 21

Species 2: Plecotus auritus (Brown long-eared bat)

qPCR Ct Value: 28

Ecotype Genetics Limited.

Registered in England. **Company No:** 11328606. **VAT:** 295 2037 94

Registered office: Parkers Cornelius House, 178-180 Church Road, Hove, East Sussex, BN3 2DJ

e: orders@ecotypegenetics.co.uk **t:** 01273704505 **w:** ecotypegenetics.co.uk

Sample ID: EG-2152-2

Sample information:

Sample type: Faecal

Species group: Bats

Suspected species: Brown long-eared

Site Location: TQ 29993 28580

Comments: Light scattering around barn - Possibly multiple species.

Laboratory information:

DNA Extraction Code: EG-2025-0874

Identification method: qPCR

Analysis Procedure Notes:

All UK bat species tested for - only a single species detected in this sample.

Laboratory Comments:

None

Species Identified:

Species 1: Plecotus auritus (Brown long-eared bat)

qPCR Ct Value: 21

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e: orders@ecotypegenetics.co.uk **t:** 01273704505 **w:** ecotypegenetics.co.uk

What do my results mean?

DNA extraction code: This identifies the DNA extraction sample within our laboratory so that it can be revisited if necessary. We keep these extractions for a minimum of 6 months.

ID method: qPCR - These results are obtained using species-specific qPCR (a.k.a real-time PCR) tests. A positive result indicates the presence of DNA from the species reported.

ID method: DNA sequencing - where qPCR fails or is not possible, standard DNA sequencing will be performed. Sequences are then matched against the BLAST database.

Ct value: This is a relative measurement of the amount of species DNA in the sample, derived from the qPCR data. The lower the value, the more DNA present in the reaction. This is for laboratory reference only.

% match - this value is the percentage match of sequences derived from DNA sequencing compared to the database. Due to differences in DNA sequence between individuals within a species this match may not always be exactly 100%.

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