

Bat Emergence Survey Report

Hollyrood

Ardingly Road

Linfield

Haywards Heath

RH16 2QY



10th July 2025

Ecology & Land Management

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It should be borne in mind that the behaviour of animals can be unpredictable and may not conform to standard patterns recorded in scientific literature. Therefore, this report cannot predict with absolute certainty that animal species will occur in apparently suitable locations or habitats, or that they will not occur in locations or habitats that appear unsuitable.

In order to minimise the likelihood of adverse effects on protected animal species over time, it is accepted good practice, in accordance with Natural England (NE) (formerly English Nature) guidance for ecological surveys to be repeated should works be deferred for over 12 months from the date of initial survey.

It is the duty of the landowner, developer and operations managers to act responsibly and to comply with current environmental legislation if protected species are suspected or found prior to, or during works.

The recommendations and information contained within this report are based on the information provided on the development works prior to the surveys being carried out. Should the development proposals change then the findings and recommendations contained within would potentially require revision.

The findings within this report do not constitute legal advice. Should this be required, then a suitably qualified professional practitioner should be contacted.

1.0 SUMMARY

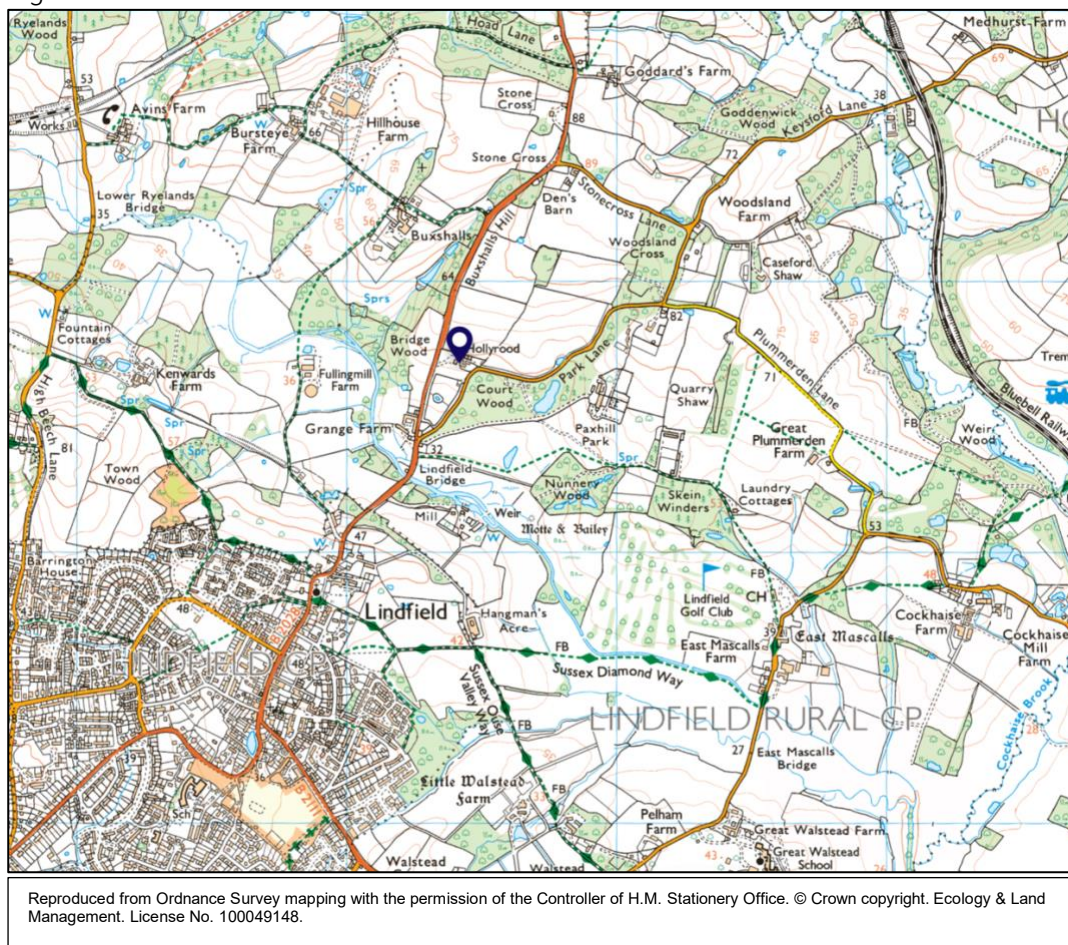
- 1.1 A bat emergence survey was conducted by Ecology and Land Management at Hollyrood, Haywards Heath, in May, June, and July 2025 in response to proposed restoration works. A previous assessment identified High bat roost potential, prompting three emergence surveys in accordance with BCT guidance. Surveys took place on 19th May, 11th June, and 4th July under suitable weather conditions.
- 1.2 During the first survey, four common pipistrelles were observed emerging from beneath hanging tiles on the building's north western elevation, confirming a day roost, and on the third visit four common pipistrelles were observed emerging again, this time two from the south eastern elevation and two from the south western elevation. All were observed emerging from hanging tiles. Additional activity from 7 bat species was recorded over all three visits including: common pipistrelle (*Pipistrelle pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), noctule (*Nyctalus noctule*), leisler (*Nyctalus leisleri*), serotine (*Eptesicus serotinus*), and a myotis. Foraging and commuting behaviour was recorded during all three visits. No evidence of maternity roosts was found, and the roost was categorised as of low conservation value.
- 1.3 The works will require a Natural England mitigation licence due to potential disturbance or destruction of the roost. Mitigation measures will include hand removal of roofing materials under ecological supervision, the installation of two Schwegler 2FN, one Greenwood box and three Schwegler 2F bat boxes in nearby trees, and the incorporation of replacement roost features (bat bricks or tiles) into the new structure.
- 1.4 To safeguard foraging bats, external lighting will follow BCT guidance to minimise light spill and disturbance, using low-temperature, directional LED fittings. With these precautions, the proposed works are not expected to result in significant harm to bat populations.

2.0 INTRODUCTION

Aims and Objectives of this Study

- 2.1 This report presents the findings of three bat evening emergence surveys carried out at Hollyrood, Ardingly road, Haywards Heath, RH16 2QY. A planning application is to be submitted for restoration works that are proposed at this location which are considered likely to impact areas that bats could potentially roost. A previous bat roost assessment report identified buildings as having high potential to support roosting bats (Sylvatica Ecology Ltd 2025). Therefore, three bat emergence surveys were carried out.

Figure 1: Site Location



Legal Status of Bats

- 2.2 The potential presence of bat roosts within a proposed development site has to be considered as all eighteen of the UK's bat species are protected under Section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended). The WCA states that '*a person is guilty of an offence if intentionally or recklessly they disturb [a bat] while it is*

occupying a structure or place which it uses for shelter or protection; or he obstructs access to any structure or place which [a bat] uses for shelter or protection’.

2.3 Bats are also protected under the Conservation of Habitats and Species Regulations 2017. Bats are listed as European protected species under which it is an offence if;

- *a person deliberately captures, injures or kills any wild animal of a European protected species;*
- *deliberately disturbs wild animals of any such species;*
- *damages or destroys a breeding site or resting place of such an animal.*

2.4 Disturbances of animals include in particular any disturbance which is likely to impair their ability to;

- *survive, breed or reproduce, or to rear or nurture their young;*
- *in the case of animals of a hibernating or migratory species, to hibernate or migrate; or*
- *to affect significantly the local distribution or abundance of the species to which they belong.*

3.0 METHODOLOGY

- 3.1 The survey work used the guidance detailed within Bat Surveys Guidelines for Professional Ecologists – Good Practice Guidelines (BCT 2023a) and the Interim Guidance Note on Surveys and Night Vision Equipment (BCT 2022) as the basis to the survey methodology.

Lead Surveyor

- 3.2 The survey work and reporting has been led by Oliver Westergaard BSc MRes QCIEEM (Bat Class 1 Registration Number: 2025-12626-CL17-BAT) supported by Henriette Westergaard BSc, MSc, CEnv, CMLI, MCIEEM with over 30 years' experience of ecological surveys.

Equipment Used

- 3.3 Echometer Pro 2 bat detector with iPad processor unit and Bat Box Duet detectors were used to detect bat echolocation. A mixture of night vision equipment was used including: Guide TK612 and Pixfra Arc were used. Calls were analysed, when required, identifying species following Russ (2021).

- 3.4 The night vision observation equipment gave a view of the features of the building surveyed that was not possible with the naked eye, enabling effective observation to continue in the dark. The cameras were installed on tripods, which enabled the surveyor to work normally without having to hold the camera steady. The cameras enabled a live feed to be viewed and recorded directly through a suitable tablet, which in this incidence was a mounted monitor for the Guide TK612. The Guide TK612 thermal camera provided a wide angled view which is also recorded and fixed throughout the survey.

Survey Type

- 3.5 Emergence survey is undertaken to observe bats emerging from roost. In addition to observation, night vision and thermal imaging equipment was used to ensure that features can be effectively viewed in the dark and that any footage can be reviewed following the survey.

Figure 2: Surveyor and Camera Positions



4.0 RESULTS

- 4.1 This section provides an account of the results from the surveys carried out and from the records search. These findings will inform any further recommendations outlined within this report.

Survey Meta Data

Table 1: Timings and Weather Conditions

Date	Sunset/ Sunrise	Survey Start and End	Temp	Rain	Wind Speed and direction
19/05/2025	20:49	20:25- 22:25	14°C	None	8 mph SW
11/06/2025	21:16	20:55- 22:55	17°C	None	9 mph N
04/07/2025	21:16	20:55- 22:55	18°C	None	9mph NE

- 4.2 The bat surveys were conducted under suitable weather conditions on three occasions: 19th May, 11th June and 4th July. On 19th May, sunset occurred at 20:49, with the survey running from 20:25 to 22:25. The temperature was 14°C with no rainfall, and a light south-westerly breeze was recorded at 8 mph. On 11th June, sunset was at 21:16, with the survey conducted from 20:55 to 22:55. Conditions remained dry throughout, with a warmer temperature of 17°C and a northern breeze at 9mph. On 4th July, sunset was at 21:16, with the survey conducted from 20:55 to 22:55. Conditions remained dry throughout, with a similar north eastern breeze at 9mph.

Bat Survey Results

Table 2: 19th May 2025 Emergence Survey

Time	Species/ Frequency	Passes	Comments
			Surveyors B1 west elevation survey recordings
21:03	CP	1	HNS
21:06	CP	Multiple	Circling front courtyard foraging

Time	Species/ Frequency	Passes	Comments
21:08-14	CPx4	Multiple	Four emergences from hanging tiles on entrance side of building
21:28	L	1	Circled front courtyard foraging
21:31-36	S	Multiple	Circled front courtyard foraging
21:35-End	CP	Multiple	Circling front courtyard foraging
			Surveyors B4 survey recordings
21:05-16	CP	Multiple	Regular passes suspected to be foraging in treeline
21:20-end	S+CP	Multiple	Regular passes suspected to be foraging in treeline. Commonly commuting using E-W corridor
			Surveyor B14 survey recordings
21:23-29	CP+N	Multiple	Regular activity above building of interest.
21:36	SP	1	HNS
21:38	CP	1	Circled above surveyor
21:40	SP	1	HNS
21:45	CP	1	HNS
21:50-57	CP+SP	Multiple	HNS
			Surveyors B5 recordings
21:01	SP	1	Flew above surveyor
21:19	CP	1	Flew S-N above surveyor
21:25	CP	1	HNS
21:27	CP+SP	Multiple	Foraging overhead
21:29	CP	1	Feeding overhead
21:31-38	CP+SP	Multiple	HNS
21:45	CP	1	HNS
21:50	CP	1	Feeding overhead
21:53-54	CP	Multiple	Feeding overhead

Time	Species/ Frequency	Passes	Comments
21:57		1	HNS
			Surveyors B1 side elevations survey recordings
21:07	CP+SP	Multiple	Foraging along treeline
21:10	CP	1	Foraging along treeline
21:10-29	CP+SP	Multiple	Continuous activity circling surveyor and foraging in treeline
21:30	S	1	Flew along western treeline
21:38	CP	1	Flew along western treeline
21:45- 22:03	CP	Multiple	Constant activity above surveyor and along treeline

- 4.3 The bat activity survey recorded passes by common pipistrelle, soprano pipistrelle, Serotine, and a single pass from a Leisler. Confirmed emergences of 4 common pipistrelles was observed between 21:08-21:14 from beneath hanging tiles on the north western face of the building, indicating the presence of a roost. Subsequent activity included foraging and commuting behaviour in all areas where trees were present close to the survey area. Several additional detections of common pipistrelle, soprano pipistrelle, and serotine were heard but not seen, suggesting continued activity in the area. These results confirm the building supports a common pipistrelle roost and is used by foraging and commuting bats.

Table 3: 11th June 2025 Emergence Survey

Time	Species/ Frequency	Passes	Comments
			Surveyors B1 survey recordings
21:21	cp	1	Flew from western treeline into the courtyard
21:23	cp	1	Circled courtyard
21:35	cp	1	Flew along northern treeline into courtyard

Time	Species/ Frequency	Passes	Comments
21:42	cp	1	Circled courtyard
21:49	cp	1	Flew towards western treeline
22:04	cp	1	HNS
22:15	sp	1	HNS
22:18	sp	1	HNS
			Surveyor B4 survey recordings
21:20	cp	1	HNS
21:32	cp	1	HNS
21:35	cp	1	Flew north to west, parallel to house
21:40	cp	1	HNS
21:54-end	cp	multiple	Regular activity, sometimes constant sometimes in intervals, mostly flying NE along treeline
			Surveyor B5 survey recordings
21:54	cp	1	HNS
22:05	cp	1	Flew from NE to SE
22:07-08	cp	1	HNS
22:11	cp	1	HNS
22:14	cp	1	HNS
22:22	sp	1	HNS
			Surveyor B14 survey recordings
21:43-53	cp	multiple	Circling building and flying along treeline from W-E
22:07	cp	1	Flew W-N
			Surveyor B1 side elevation survey recordings
22:04-08	cp	multiple	Flying up and down path
22:10-22	cp	multiple	Activity in intervals flying up and down path
22:30	cp	multiple	HNS

- 4.4 The second survey period recorded continued bat activity focused on common pipistrelle, with consistent passes recorded over the entire survey by all surveyors. Soprano pipistrelle was also recorded on one occasion. Commuting behaviour was noted repeatedly along the treeline surrounding the site and up and down the concrete paths connecting the buildings.

Bat Survey Results

Table 4: 4th July 2025 Emergence Survey

Time	Species/ Frequency	Passes	Comments
			Surveyors B1 survey recordings
21:14	SP	1	HNS
21:18	CP	1	HNS
21:21	CP	1	HNS
21:29	CP	1	HNS
21:55- 22:03	CP	Multiple	Flying back and forth parallel to front of main building
			Surveyors B4, B5 and B14 survey recordings
21:17	CP	1	HNS
22:17	SP	1	HNS
22:21	CP	1	HNS
22:22	S	1	HNS
22:34	CP	Multiple	HNS
22:42	SP	1	HNS
			Surveyor B1 south elevation survey recordings
21:10	SP	1	HNS
21:11	SP	1	HNS
21:21	CP	Multiple	Foraging along southern treeline
21:24	CP	Multiple	Foraging along southern treeline
21:32	SP	Multiple	Foraging along southern treeline
21:45	CPx1	Multiple	One emergence from broken hanging tiles near left side of cornice during constant CP activity along southern treeline
21:59	CPx1	Multiple	One emergence from broken hanging tiles near left side of cornice during constant CP activity along southern treeline
22:00	CP	1	HNS
22:01-10	CP	Multiple	HNS
22:10	CP	1	HNS
22:20-22	CP+MYO	Multiple	HNS
22:23	S	1	HNS
22:35	MYO	1	HNS

Time	Species/ Frequency	Passes	Comments
22:40	BLE	1	HNS
			Surveyor B1 east elevation survey recordings
21:17	CPx1	1	One emergence from hanging tiles of eastern gable end
21:29	CPx1	1	One emergence from hanging tiles of eastern gable end
21:32	SPx3	Multiple	Three SPs flew over the eastern gable end as if having emerged from roof tiles, however this location was out of reach for both surveyors and cameras. They flew towards eastern treeline, foraging
21:53	CP	1	Flew N-E across buildings
21:56	CP	1	Foraging in a circle around buildings
22:10	CP	1	HNS
22:18	CP	1	HNS
22:22	S	1	HNS
22:28	SP	1	HNS
22:34-End	CP	Multiple	HNS continuous activity

5.0 DISCUSSION AND RECOMMENDATION

5.1 Four common pipistrelles were observed emerging from the northwestern elevation of the main building B1 closest to the entrance drive. Two were recorded emerging from the eastern elevation under the hanging tiles, and the last two from the south western elevation under broken hanging tiles above the cornice in the left corner. The main body of activity consisted of common pipistrelle and soprano pipistrelle commuting and foraging activity observed and recorded during all surveys within the location area, with a small amount of serotine activity during survey one and two and passes from a Leisler during survey one, with brown long-eared plus multiple myotis passing in survey three.

Roost Categorisation

5.2 The maximum count of bats emerging from this building during a survey was four common pipistrelles. With eight emergences recorded over the three surveys. No maternity roosts were identified. Based on the limited number of common pipistrelles recorded (maximum of four individuals) and the absence of maternity roosting behaviour, this roost is assessed as being of low conservation value, in line with Natural England (2004) and Wray et al. (2010).

Impact Assessment

- 5.3 Any works to the building that would impact **on** the location where bats have been found to be roosting would constitute either a disturbance or destruction of the roost present here.
- 5.4 Without mitigation, any impact is likely to be permanent and would result in both the disturbance and likely destruction of the common pipistrelle roost. These carried out without licence would constitute an offence under the Wildlife and Countryside Act (1981).

Mitigation Licencing

- 5.5 A mitigation licence is required as it is predicted that there will be disturbance of the roost as a result of the works a mitigation licence is required from Natural England. The licence would require the production of a method statement of works, which would include measures such as hand removal of the hanging and roof tiles and any cladding under the supervision of a licenced ecological consultant and the use of bitumen felt, rather than a semi-breathable membrane, under any tiles, so to avoid causing injury or death to bats through entanglement.
- 5.6 It is recommended that at least seven bat boxes are installed prior to the works. These could be installed on the adjacent trees and could consist of types that would be specific to the bat species present. For common and soprano pipistrelle, these would take the form of two Greenwood Boxes, one Schwegler 2FN, and three Schwegler 2F bat boxes installed within adjacent trees as close as possible to the location of the roost. Should any bats be found during the works, then they can be relocated to these.
- 5.7 It is recommended that replacement roost locations would be installed into the newly developed areas. These should utilise bat access tiles/ bricks, the type and design would be suitable to the design of any newly constructed location.
- 5.8 To account for the foraging activity of bat species within the local area, any lighting installed at the property will conform to the specifications which are outlined within BCT Guidance Note (2023b). This will reduce any light pollution would have on nocturnal activity of fauna, namely bat species, some of which are extremely sensitive to light pollution. Light spill into adjacent habitats will be reduced and avoided by the following:
- *All luminaries will lack UV elements; metal halide and fluorescent sources will be avoided,*

- *A warm white light spectrum on external lighting will be adopted (<2700kelvin) to reduce the blue light component,*
- *LED luminaries will be used where a sharp cut off is required to avoid light spill into adjacent habitat,*
- *External luminaries will feature wavelengths higher than 550nm to avoid the component of light most disturbing to bats,*
- *Column heights of external lighting will be limited,*
- *Luminaries will be mounted on the horizontal plane, with no upwards tilt,*
- *Security lighting will be set on motion sensors and on short timers (<1min).*

Conclusion

5.9 Eight common pipistrelle were confirmed emerging from beneath normal and broken hanging tiles across the north western, eastern, and south western elevations confirming the presence of five day roosts. Further activity from common pipistrelle and soprano pipistrelle was recorded across all survey visits, with other species such as brown long-eared, serotine, Leisler, and a *Myotis sp.* also being recorded entering the site. Observations of foraging and commuting, particularly along the treeline in the southern area of the site was frequent. The roost was assessed as a day roost of low conservation value, with no evidence of a maternity colony. Any unlicensed disturbance or destruction of the roost would constitute an offence under wildlife legislation.

6.0 REFERENCES

BCT (2022) Interim Guidance: Use of night vision aids for bat emergence surveys and further comment on dawn surveys

BCT (2023a) Bat Survey Guidelines for Professional Ecologist 4th Edition – Good Practice Guidelines

BCT (2023b) Bats and Artificial Lighting in the UK – Bats and the Built Environment Series.

HMSO (1981) The Wildlife and Countryside Act 1981 (as amended) HMSO, London.

HMSO (2017). The Conservation (Natural Habitats, &c). (As amended) Regulations 2017

Russ, J (2021) Bat Calls of Britain and Europe – A Guide to Species Identification. Pelagic Publishing

Sylvatica Ecology Ltd (2023) Bat Roost Potential Survey Report: 10 Copse Hill, Sutton.

7.0 CAMERA VIEWS

Plate 1: Start View



Plate 2: End View with emergence locations



Plate 3: Start View



Plate 4: End View with emergence locations



Plate 5: Start view



Plate 6: End view



Plate 7: Start view



Plate 8: End view with emergence points



Plate 9: Start view



Plate 8: End view



8.0 BAT BOXES



Greenwood box
tile



Schwegler 2FN



Schwegler 2F Bat access

9.0 SUMMARY MAP OF BAT ACTIVITY



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