



Bat Activity and Emergence Report

Corner Cottage, High Street, Bosham, West Sussex

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing. Whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date. This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated, only dominant species may be recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

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

1.0 Introduction

- 1.1 The Ecology Partnership was commissioned by JJ Architects Ltd to undertake further bat emergence surveys at Corner Cottage, High Street, Bosham, West Sussex, PO18 8LS, hereafter referred to as the 'site' (Figure 1).
- 1.2 The site (SU 80530 03859) includes one building with associated hardstanding. The site is surrounded by high density residential dwellings to the north and east, and Bosham Quay to the west and south.
- 1.3 A preliminary roost assessment was undertaken in February 2023 by The Ecology Partnership which determined the suitability of the buildings for roosting bats. The residential building was considered to have 'low' suitability for roosting bats due to the presence external potential roosting features (PRFs).



Figure 1: Building subject to surveys.

Description of Proposed Development

- 1.4 The current proposals for the site are for extending the existing building. This involves the changing the single storey flat roof section to the northeast of the building to a two-storey pitched roof. This will join the existing pitched roof of the southern section of the building.

The existing single storey lean-to extension on the northern aspect of the building is to be demolished and rebuilt.

Legislation

1.5 All UK bat species and their roosts are protected by law within The Wildlife and Countryside Act 1981 and the Habitats Directive Annex IV. This means it is a criminal 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;
- Intentionally or recklessly obstruct access to a bat roost.

2.0 Methodology

Dusk Emergence Surveys

2.1 The preliminary roost assessment recorded external PRFs on the building. Therefore, the building was subject to emergence surveys.

2.2 Dusk emergence surveys were carried out on 10th May 2023. The survey started 15 minutes before sunset and was completed 1 and a half hours after sunset. The surveys followed Bat Conservation Trust guidelines (Collins 2016) and Bat Conservation Trust guidelines (Collins 2016 & Interim Guidance Note 2022).

2.3 Surveyors were positioned to cover all aspects of the building and areas of interest (Figures 2). Infra-Red (IR) cameras with IR lamps were also utilised during the surveys to help support surveyors. All surveyors were equipped with a Batlogger M or an Echo Meter Touch 2 Pro. Surveyors included Cameron Allaway BSc (Hons) QCIEEM, Adam Broda BSc (Hons) Msc QCIEEM.



Figure 2: Surveyor positions (green stars) and IR camera positions (red star)

2.4 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.

3.0 Results

Dusk Emergence Surveys

10th May 2023

3.1 Sunset was at 20:37 and the weather was clear with 0% cloud cover and a temperature of 15°C. There were no emergences recorded at the time of the survey.

3.2 A number of bats were recorded during the survey period, with the first bat, a common pipistrelle recorded at 21.07. Common pipistrelles were also recorded at 21.22 and at 21.24 and 21:34. A soprano pipistrelle was recorded at 21:36. No bats were recorded emerging from the building.

4.0 Discussion

4.1 The surveys did not find any bats to emerge or re-enter the building and overall bat activity was relatively low albeit two species of bat were recorded during the survey period. As such, it is determined that a roost is likely absent from the buildings and no further survey is required as long as demolition occurs before April 2024.

Recommendations and Enhancements

4.2 As commuting and foraging bats were recorded during the survey effort, bats are known to be active around the site. It is therefore recommended that the bat suitable habitat, which is largely limited to the boundary vegetation around the site, are retained as part of the development or replaced where possible to ensure ecological connectivity is maintained post-development. These features should also be kept free of lighting in order to retain dark corridors for commuting bats. A sensitive lighting scheme is also recommended for the whole of the site since any new lighting would contribute to a significant change in light levels compared with present conditions. Recommendations include:

- Installing lighting only if there is a significant need;
- Using LED luminaries due to their lower intensity, sharp cut-off and good colour rendition – any lights with UV elements or metal halide lights should not be used;
- Lights with peak wavelenghts higher than 550nm to avoid the component of light most disturbing to bats (Stone 2012);
- Lights with an upward light ratio of 0% and good optical control;
- Careful consideration of column height to avoid light spill;
- Any external security lights should use motion-sensors and short (1-minute) timers;
- Avoid putting lighting near treelines or hedgerows and angling light away from these linear features which are used by commuting and foraging bats;
- Planting a barrier or using man-made features required within the scheme to form a barrier.

4.5 Bat boxes can be on or externally on the new build, to create new roosting opportunities post-development. Recommended boxes include:

- Vivara Pro WoodStone Bat Box – A general purpose bat box that supports a range of species (Figure 3). These can be hung on trees or the new builds in a variety of heights and aspects in order to provide a variety of micro-climates.
- Large Multi Chamber WoodStone Bat Box – This is a multipurpose box designed for larger colonies and a range of bat species including pipistrelles, noctules and brown long-eared bats. These should be hung on mature trees around the site (Figure 3).



Figure 3: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

4.6 The siting of bat boxes is important, bat boxes are best located, and have the best rate of occupancy, when they are situated within or adjacent to bat-friendly features, such as hedgerows or woodland, providing connectivity to the wider landscape. The bat boxes should be situated where they are sheltered from strong winds and should be exposed to the sun for most of the day, therefore southern aspects are favourable.

4.7 Sweet nectar and protein-rich pollen, especially night-scented flowers, are bait to encourage insects, a food source for bats. These species should be incorporated into the development where possible:

- Evenings primrose (*Oenothera biennis*)
- Field poppies (*Papaver rhoeas*)
- Knapweed (*Centaurea sp.*)
- Night-scented stock (*Matthiola longipetala*)
- Red campion (*Silene dioica*)

- Honeysuckle (*Lonicera periclymenum*)
- Sweet williams (*Dianthus barbatus*)
- Angelica species
- Wisteria (*Wisteria floribunda*)
- Lavenders (*Lavandula sp.*)

5.0 Conclusions

5.1 As part of the PRA, the building was assessed as having 'low' bat potential, owing to the observations of loose tiles and possible gaps underneath some of the ridge tiles, potentially providing access for small crevice dwelling bats. No evidence of bats was identified in any of the buildings on site (The Ecology Partnership, 2023).

5.2 The Ecology Partnership undertook an emergence survey in May 2023. This survey did not identify any bats emerging from the building. Bat activity recorded was restricted to common pipistrelle and soprano pipsitrelles. As such, a bat roost is considered likely absent from site and no further survey is required as part of this planning application

5.3 It is recommended that if there is to be a change in lighting, that a sensitive lighting scheme is utilised to minimise impacting the commuting and foraging potential of the site.

5.0 References

Bat Conservation Trust., (2022). *Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys*

Collins, J. (ed.), (2016)., *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). Bat Conservation Trust, London.

Institution of Lighting Professionals., (ILP - 2018)., *Guidance Note 08/18 – Bats and artificial lighting in the UK*. ILP, Rugby.

Lintott, P., & Mathews, F. (2018). *Reviewing the evidence on mitigation strategies for bats in buildings informing best-practice for policy makers and practitioners*.

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

Internet resources:

Google Maps: www.google.co.uk/maps

Magic Interactive Map: www.magic.gov.uk

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