



Bat Emergence Survey
22 Vermont Drive,
East Preston, Littlehampton

Contents

1.0	INTRODUCTION	3
	BACKGROUND	3
	SITE CONTEXT AND STATUS	3
2.0	METHODOLOGY	5
	BAT EMERGENCE SURVEYS	5
	LIMITATIONS	6
3.0	RESULTS	6
4.0	DISCUSSION.....	7
5.0	CONCLUSIONS	9

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 and 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 maybe 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

Background

- 1.1 The Ecology Partnership was commissioned by Rodway Planning to undertake a bat emergence survey of a building extension located on land at 22 Vermont Drive, East Preston, Littlehampton BN16 1LA. This follows an initial preliminary ecological appraisal (PEA) and building assessment on 30th June 2021, which identified the current extension to the residential dwelling as retaining 'low' bat roost potential. There was no internal void space within the extension but there were several potentially suitable external features which included lifted and missing tiles, which could provide potential roosting space for crevice dwelling bats such as pipistrelles. The extension is the only section of the building to be impacted by the proposed works.
- 1.2 This report presents the results of The Ecology Partnership's emergence survey conducted on the dwelling on 19th August 2021, and how the results may affect the proposed development

Site Context and Status

- 1.3 The site is located within the village of East Preston (TQ0729 0203) and covers an area of approximately 0.1 hectares, consisting of garden habitats including hardstanding, improved grassland, hedgerows, scattered trees, shrubs and ornamental planting. A swimming pool, several sheds and a small section of the residential dwelling are also located within the red-line boundary. The immediate surrounds comprise of moderate density residential development.
- 1.4 The aerial photograph overleaf (Figure 1) shows the site and its immediate surroundings. The red line depicts the area of the building surveyed and the surveyor positions are labelled as yellow stars.



Figure 1: Surveyed part of the building (red line) and surveyor positions (yellow stars).

Description of Proposed Development

- 1.5 Proposals are for the demolition of the existing extension along the eastern elevation of the main house, to create access for a new residential dwelling to be built south of the existing property.

Legislation

- 1.6 Bats are covered by the following relevant legislation: the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010).
- 1.7 Under the WCA 1981 it is an offence to:
- intentionally, recklessly or deliberately disturb a roosting or hibernating bat i.e. disturbing it whilst it is occupying a structure or place used for shelter or protection)

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- intentionally or recklessly obstruct access to a roost (i.e. a structure or place used for shelter or protection).
- 1.8 Under the CHSR 2010 it is an offence to:
- deliberately capture (or take), injure or kill a bat
 - intentionally, recklessly or deliberately disturb a bat, in particular (i) any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) any disturbance which is likely to impair their ability in the case of hibernating or migratory species, to hibernate or migrate; or (iii) any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong
 - damage or destroy a breeding site or resting place (roost) of a bat.

2.0 Methodology

Bat Emergence Surveys

- 2.1 Following the Bat Conservation Trust guidelines (Collins 2016), the 'low' bat roost potential main residential dwelling requires a single emergence/re-entry survey to take place, involving one dusk emergence survey of the building. This survey should occur within the optimal time period between May and August.
- 2.2 The aim of the survey is to confirm the site's usage by bats, type of roost, access/egress points and the numbers of bats present within the building. The results of the survey will inform the application for a Natural England licence to legalise the loss / disturbance to bat roosts on site as part of proposals and to inform appropriate mitigation.
- 2.3 Dusk emergence surveys commence at least 15 minutes before sunset until up to 2 hours after sunset, during which time, bats are identified and recorded. Bat surveys are required to be undertaken during suitable weather conditions, when conditions are relatively dry and mild with little/no wind.

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- 2.4 Surveyors: Senior ecologist Chris Jennings BSc (Hons) MSc MCIEEM and ecologist Aimee Littlechild BSc (Hons) conducted the survey. The surveyors were equipped with an Echometer Touch with an iPad and a Batlogger M.

Limitations

- 2.5 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

Bat emergence survey 19th August 2021

- 3.1 An emergence survey was carried out on the extension to the dwelling on 19th August 2021. Two surveyors watched the building and noted any bat activity observed around the dwelling.
- 3.2 Sunset was at 20:15 and the survey started at 20:00. The temperature at the start of the survey was 17°C and remained at that temperature for the rest of the survey. Whilst it had rained immediately prior to the survey, conditions were mild and dry for the majority of the survey, with only light spitting for a total of five minutes during the survey. Cloud cover was 100% and a light breeze (2 on the Beaufort scale) was present.
- 3.3 The first activity of the survey was a single common pipistrelle (*Pipistrellus pipistrellus*) bat which was heard but not seen foraging in the gardens behind the southern surveyor at 20:13. Nine additional common pipistrelle bat passes were recorded by both surveyors, foraging over the gardens south of the house and the hedgerow to the north. At 20:36 a common pipistrelle was observed commuting from north to south over the extension, returning 3 minutes later. This was repeated 3 times during the survey until 21:06. A single soprano pipistrelle (*Pipistrellus pygmaeus*) was recorded at 20:43, foraging in the gardens south of the house, then commuting north over the extension. The last bat recorded was a common pipistrelle heard but not seen at 21:17. No other bat species were recorded during this survey.

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- 3.4 No bats were recorded emerging or re-entering from the extension or the eastern elevation of the main house at any point. This suggests likely absence of bats from this building at the time of the survey.

4.0 Discussion

- 4.1 There was no internal void space within the extension but there were several potentially suitable external features in the form of slipped and missing tiles which could provide potential roosting space for crevice dwelling bats such as pipistrelles. As such, it was recommended that one precautionary emergence be undertaken. The emergence survey did not identify any use of the building by bats but general bat activity around the building at the time of the survey was considered to be limited, from only two common UK species.
- 4.2 Due to the lack of external evidence and the lack of emergences, no bats were using the building at the time of survey. As such, it is not considered that the development is constrained by roosting bats or would impact the favourable conservation status of bats in the local area.

General recommendations

- 4.3 Bats are likely to use residential gardens for foraging and commuting purposes, with moderate density housing comprising the immediate surroundings. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Bats are known to be affected by light levels which can affect both their roosting behaviour as well as their foraging behaviour. A sensitive lighting scheme is recommended for 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 wavelengths 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;

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- 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 It is always recommended that where possible enhancements for wildlife are included within the new developments including where possible.

4.6 Bat boxes can be hung on mature trees surrounding the site 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 2). These can be hung on trees 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 2).

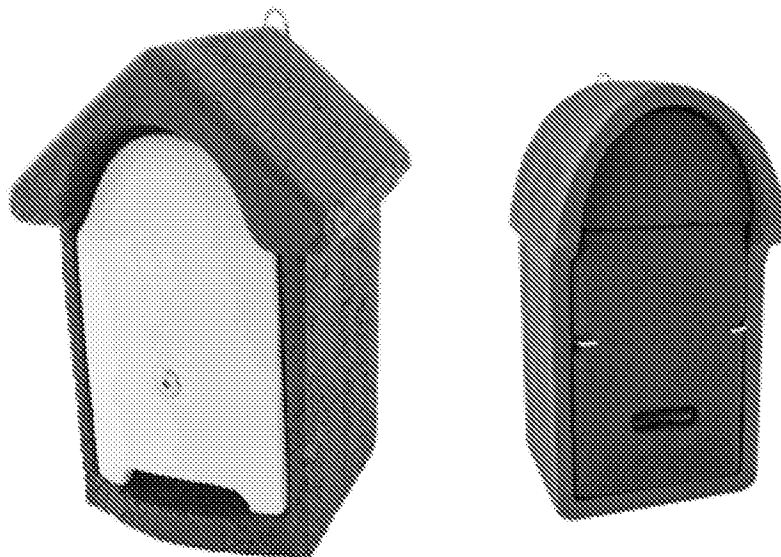


Figure 2: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

4.7 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. Multiple boxes may be hung on one large tree, facing different aspects. Bat boxes should be hung as high as possible, preferably around 5m high, although lower boxes may also be used by brown long-eared bats.

4.8 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 A single emergence survey was recommended for the extension to the residential building on site which was considered to have 'low' potential for roosting bats. An emergence survey was undertaken on 19th August 2021 in suitable conditions and no bats were seen to emerge from any of the observable features. General bat activity on site was considered to be moderate but by a low diversity of common bat species.

5.2 The demolition of the existing extension and construction of a new dwelling on site will not impact the favourable conservation status of bats in the local area and no further surveys are required.

5.3 It is considered that this bat survey in combination with recommendations made above and within the PEA are sufficient to maintain favourable conservation status of bats in the wider area.

6.0 References

Bat Conservation Trust, (2018)., *Bats and artificial lighting in the UK*. Guidance Note 08/18, London.

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

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

The Ecology Partnership., (2021)., *Land at Shepherd's Hey – Preliminary Ecological Appraisal*. The Ecology Partnership, Leatherhead.

Internet resources:

Magic Interactive Map: www.magic.gov.uk

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

IUCN Red List: www.iucnredlist.org

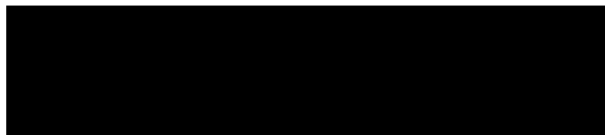
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