



**Preliminary Roost Assessment, Bat Emergence Survey,
BNG Review**

**Land at The Blue Ship, The Haven, Billingshurst,
RH14 9BS**

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Contents

1.0 INTRODUCTION	3
2.0 METHODOLOGY	4
3.0 RESULTS	7
4.0 DISCUSSION.....	10
5.0 BIODIVERSITY NET GAIN.....	16
6.0 CONCLUSION.....	17
7.0 REFERENCES	18

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 Dowsett Mayhew to undertake a Preliminary Roost Assessment, bat dusk emergence survey, and Biodiversity Net Gain Exemption on Land at The Blue Ship, The Haven, Billingshurst RH14 9BS, hereafter referred to as the 'site' (Figure 1).
- 1.2 The site (TQ08343053) is an outbuilding located within the land of an active public house located at The Haven, north of Billingshurst, West Sussex. The site consists of the outbuilding only. The site is situated in a rural setting.



Figure 1: Approximate site boundary.

Description of Proposed Development

- 1.3 The proposed development is for the conversion of the outbuilding into a holiday let. The development will be on the same footprint as the existing outhouse.

Legislation

1.4 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

Desktop Study

2.1 A desktop study was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites, current and past European Protected Species (EPS) mitigation licences for bat species within 1km, and priority habitats within the surrounding area.

Preliminary Roost Assessment

2.2 The buildings (internally and externally) were assessed for their suitability for roosting bats following Bat Conservation Trust Good Practice Guidelines (Collins 2023). This survey was undertaken on 6th August 2025 by assistant ecologist Joe Hopkins MBiol (Hons) and seasonal field surveyor Tom Rayfield BSc (Hons). The surveyors checked for evidence of roosting bat species and Potential Roosting Features (PRFs) as per Table 1 below.

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement. Table 4.1 within the 'Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th ed), 2023'.

Potential Suitability	Description of Roosting Habitats in structures	Potential flight paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade /

	crevices / suitable shelter at all ground / underground levels).	protection for flight-lines, or generate / shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of bats as flight paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or 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 (with respect to roost type only such as maternity and hibernation – the categorization described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool / stable hibernation site	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, stream, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Dusk Emergence Survey

- 2.3 Building B1 was considered to support 'Low' suitability for roosting bats during the initial walkover of the site. Therefore, a single dusk emergence survey for the building was required between the months of May to August to assess the use of this building by roosting bats.
- 2.4 A dusk emergence survey was carried out on 6th August 2025. 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 & Interim Guidance Note 2022). Surveyors were positioned to cover all aspects of the building and areas of interest (Figure 3). Infra-Red (IR) cameras (Sony Handycam XAVC S and SiOnyx Aurora CDV-100C) were utilised during the survey to support surveyors. All surveyors were equipped with an Echo Meter Touch 2 Pro. Surveyors included Joe Hopkins MBiol (Hons) and Tom Rayfield BSc (Hons).



Figure 2: Surveyor positions (yellow stars) and IR camera position (orange stars)

3.0 Results

Desktop Study

3.1 There are no internationally statutory designated sites located within 1km of the site and no national statutory designated sites within 1km of the site, with the closest of each designation being:

- **The Mens Special Area of Conservation (SAC)** located approximately 6.2km southwest of the site.
- **Coppedhall Hanger Site of Special Scientific Interest (SSSI)** located approximately 2.85km south of the site.

3.2 There are three priority habitat types located within 1km of the site (Figure 3). The closest of each are:

- **Ancient & Semi-natural Woodland** located approximately 130m south of the site.
- **Deciduous Woodland** located approximately 180m southwest of the site.
- **Ancient Replanted Woodland** located approximately 710m southeast of the site.

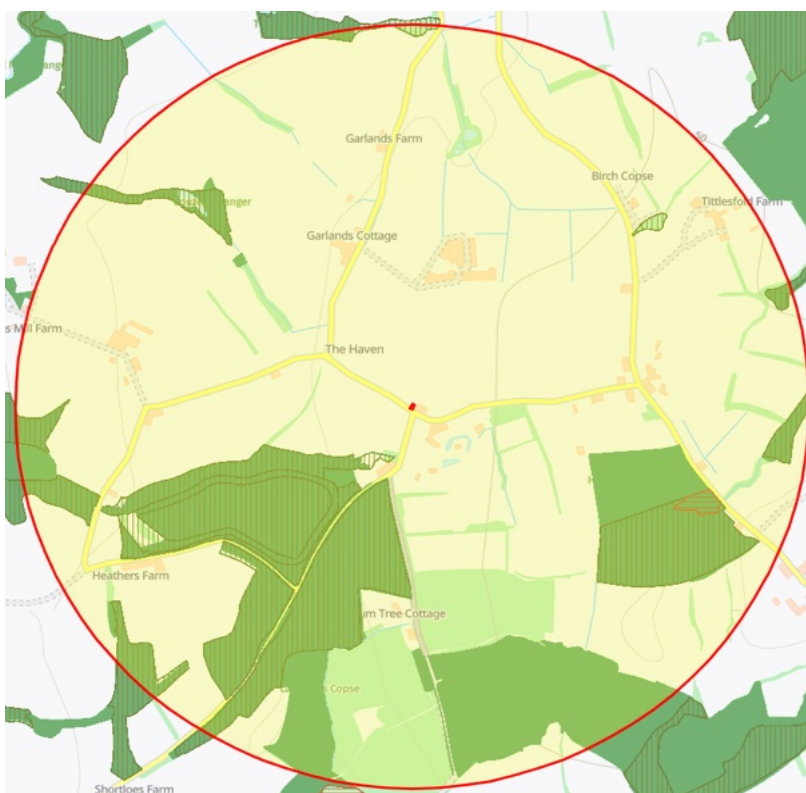


Figure 3: Priority habitats located within 1km of the site (Deciduous Woodland – green; Ancient & Semi-natural Woodland – vertical hatching; Ancient Replanted Woodland – horizontal hatching).

- 3.3 The closest EPS licence for bats is located approximately 1.05km west of the site, and is a 2018-19 licence for the destruction of a resting place for soprano pipistrelle *Pipistrellus pygmaeus* (Figure 4).

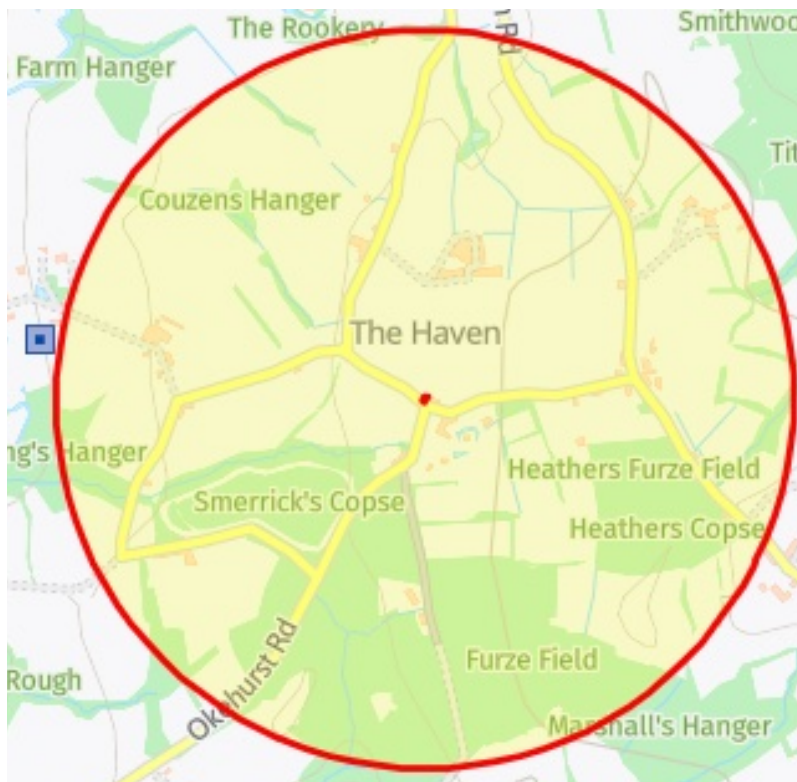


Figure 4: EPS licences within 1km of the site (blue square – bat).

Preliminary Roost Assessment

- 3.4 The outbuilding (building B1) present on site was assessed for its suitability for roosting bats.
- 3.5 The building is a two-story brick-constructed building in active use for storage. The clay-tiled roof is multi-level, pitched, and timber framed. The building contains four internal void spaces.
- 3.6 Externally, building B1 was in slightly worn condition. Some visible cracks were present in the brickwork with some small gaps present. The eaves were mostly open, except in the southern part of the building where chicken wire was present obstructing this. The roof supports some lifted and loose clay tiles were present. a gap was present between the ridge tiles in the northern part of the building. Moss, Virginia creeper, and English ivy

were present growing over the roof effectively sealing some areas and providing some potential value for bats.

- 3.7 Building B1 was inspected internally, and all four internal voids were accessed. Internal void 1 was located on the ground floor in the north of building B1. It was constructed of timber beams with no lining. This void was actively in use for storage, and dense cobwebs and mouse droppings were present throughout. Multiple gaps were present in the roof tiles allowing the ingress of natural light, providing potential points of access for bats, although no direct evidence of roosting bats was recorded within this void.
- 3.8 Internal void 2 was located on the ground floor in the centre of building B1. It was brick-constructed with a timber ceiling, and well-sealed from the outside with no access to the roof. This void was actively in use for storage with electrical lighting, and dense cobwebs were present throughout. No direct evidence of roosting bats was recorded within this void.
- 3.9 Internal void 3 was located on the ground floor in the south of building B1. It was brick-constructed with a wooden ceiling that isolated a small inaccessible void beneath the apex of the roof. This void was actively in use for storage and dense cobwebs and mouse droppings were present throughout. Small gaps were present in the ceiling allowing potential access into the apex void and roof by bats, although no direct evidence of roosting bats was recorded within this void.
- 3.10 Internal void 4 was located on the first floor in the centre of the building. It was timber-constructed with a lining. A large window was present on the western aspect of the building allowing ingress of large amounts of natural light, reducing the suitability of the internal environment of the void for roosting bats. This void was actively in use for storage and dense cobwebs and mouse droppings were present throughout. A partial Peacock butterfly *Aglais io* wing was recorded within the void. No direct evidence of roosting bats was recorded within this void.
- 3.11 Overall, whilst no direct evidence of roosting bats was recorded, based on the number of PRFs recorded externally on the building, building B1 is considered to have 'Low' suitability for roosting bats.

Dusk Emergence Survey

6th August 2025

- 3.12 Sunset was at 20:39 and there was a light breeze with 100% cloud cover. The starting temperature was 17°C, decreasing to 16°C at the end of the survey. The first bat recorded was an unseen registration of soprano pipistrelle at 20:44. Common pipistrelles were recorded foraging above the oak trees located immediately to the south of building B1 at 20:52 and 21:00. A single common pipistrelle was recorded commuting over building B1 from east to west at 21:17, and a common pipistrelle was recorded foraging over the pub garden at 21:24. Other sporadic bat activity was recorded throughout the course of the survey, with unseen registrations from common pipistrelle at 21:14, 21:26, 21:31, 21:51, and 22:08, from soprano pipistrelle at 21:08, 21:13, 21:18, 21:34, 21:54, and 21:58, from noctule at 21:28, from brown long-eared bat at 21:33, and from serotine at 22:02. No other bats were recorded during the survey.
- 3.13 Following the emergence survey, video footage was reviewed, and no further evidence of bat emergence was observed. Overall, no bats were recorded emerging from the building during the survey.

4.0 Discussion

- 4.1 Building B1 was subject to a Preliminary Roost Assessment and was considered to support 'Low' suitability for roosting bats. Therefore, a single dusk emergence survey for the building is required between the months of May to August to assess the use of this building by roosting bats. The result of this survey will identify the need for additional surveys.
- 4.2 A single dusk emergence survey was completed on the 6th August 2025. No bats were recorded emerging during the dusk emergence survey. Therefore, building B1 which is to be impacted by the proposed development is not considered to support roosting bats and can be impacted without further surveys.
- 4.3 It is understood that the building will be refurbished as part of the development, and as such, it is advised that an update inspection of the building is undertaken prior to any works, the results of which will determine the need of any subsequent work would be

required. If no bats or new evidence of bat activity is identified (e.g. new bat droppings), works can commence without a licence, but it is recommended that sensitive tile removal is undertaken.

- 4.4 A precautionary approach to the tile removal would be required. If a bat is found during works, then all works must cease and a licence applied for.

Recommendations and Enhancements

- 4.5 Bats are likely to use the boundary vegetation features for foraging and commuting purposes due to their connectivity to the wider landscape. These are being retained within the scheme.
- 4.6 It is recommended that the proposed lighting scheme as part of the development considers bats in the surrounding area, as well as on site. All bat species are nocturnal, resting in dark conditions during 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. Recommendations include the use of a sensitive lighting scheme, with external lights limited and any external security lights should use motion-sensors and short (1-minute) timers. Accessories such as baffles and hoods should be used as a last resort to reduce light spill and direct light only to where needed.
- 4.7 As an enhancement, bat boxes could also be installed on the building or on the surrounding trees on site post development. A range of boxes can be used which are designed for different bat species, for example;
- Vivara Pro WoodStone Bat Box – A general-purpose bat box that supports a range of species (Figure 5). 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 could be hung on the buildings on site post development (Figure 5).



Figure 5: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

- 4.8 Another type of roost which can be incorporated into the redevelopment of the building is a soffit bat box. This caters for crevice-dwelling species such as pipistrelles and certain *Myotis* species such as Natterer's and Whiskered bat. This type of box makes use of an underutilised area of a building and would require no maintenance as droppings would drop through the entrance hole, shown in Figure 6.



Figure 6: Soffit bat box (Wildcare)

- 4.8 Bat boxes should ideally be exposed to the sun for most of the day, therefore southern and western aspects are preferable. Bat boxes should be hung as high as possible (around 5m above the ground).
- 4.9 It is always recommended that where possible enhancements for wildlife are included within the new development.

4.10 Plants that produce sweet nectar and protein-rich pollen, especially night-scented flowers, attract and encourage the presence of many insect species, a food source for bats. These species should be incorporated into the development where possible:

- Evening primrose *Oenothera biennis*
- Field poppy *Papaver rhoeas*
- Knapweed *Centaurea* sp.
- Night-scented stock *Matthiola longipetala*
- Red campion *Silene dioica*
- Honeysuckle *Lonicera periclymenum*
- Sweet williams *Dianthus barbatus*
- Angelica *Angelica* sp.
- Wisteria *Wisteria floribunda*
- Lavender *Lavandula* sp.

4.11 A Schedule 9 Invasive non-native species Virginia Creeper *Parthenocissus quinquefolia* was recorded growing externally on building B1. It is recommended that this species is sensitively removed by a specialist ecological contractor.

5.0 Biodiversity Net Gain

5.1 The Statutory Metric is used to calculate biodiversity losses and gains for terrestrial habitats within the application area. This metric underpins the Environment Bill's provisions for mandatory biodiversity net gain in England.

5.2 The Biodiversity Metric uses habitat as a proxy for wider biodiversity with different habitat types scoring different values according to their relative biodiversity value and dependent on the condition and location of the habitat, to calculate 'biodiversity units'.

5.3 The site has been assessed during the PRA assessment. The site is considered 100% hardstanding. As the site does not support any habitats, the site proposals fall within the '*de minimis*' development threshold and therefore are not required to provide biodiversity net gain post-development.

- 5.4 The development is considered exempt from Biodiversity Net Gain owing to the '*de minimis*' exemption¹, which includes any development that does not impact a priority habitat and impacts less than 25m² of habitat. Therefore, no metric will be submitted with this application. However, some recommendations for enhancements have been provided.
- 5.5 Existing trees and vegetation immediately adjacent to the site may require l in order to gain full access to the site for works, but will not be removed as part of the development.

Additional Recommendations

- 5.6 Additional recommendations are made below which can be incorporated to enhance the biodiversity value of the site post-development.
- 5.7 Small shrubs could be provided in planting beds. To maximise biodiversity value, it is recommended that planters incorporate species of known value to pollinators, as listed on the Royal Horticultural Society's (RHS) approved 'Plants for Pollinators' list.
- 5.8 Bird boxes can be installed onto the brickwork to increase the number of breeding opportunities. Woodcrete (or similar) boxes are recommended as they provide better thermal properties, are longer lasting and more durable than wooden boxes. Boxes should be positioned on a north or east facing aspect and at least 2m above the ground if possible.



Figure 7: Vivaro Pro Woodstone Box and Habibat Small Bird Nest Box and integrated swift box.

¹ Draft biodiversity net-gain planning guidance - Paragraph: 003 Reference ID: 74-003-2023

- 5.9 To support invertebrates, such as bees, potentially present in nearby offsite vegetation, Bee Bricks can be incorporated into the building. The Bee Brick can be used in place of a standard brick or block in construction to create nesting habitat for solitary bees. Bee Bricks need to be placed in a warm sunny spot on a south facing wall at a minimum height of 1m, with no vegetation obstructing the holes. No cleaning or management of the Bee Bricks is required.



Figure 8: Bee bricks to be incorporated into the development.

6.0 Conclusion

- 6.1 The site consisted of a single public house outbuilding in active use for storage. This building (building B1) was subject to a Preliminary Roost Assessment and was considered to support 'Low' suitability for roosting bats due to the presence of gaps under loose, raised, and missing clay roof tiles.
- 6.2 A subsequent bat emergence survey was undertaken on building B1 on the 6th August 2025, where no bats were recorded emerging from the building. Therefore, building B1 is not considered to support an active bat roost and no further emergence surveys are required.
- 6.3 It is currently understood that building B1 will be renovated as part of the inspection and it is therefore advised that an update inspection is undertaken prior to any works, the results of which will determine the need for further mitigation. If no bats or no new evidence of bat activity is identified, works can commence without a licence, but it is recommended that sensitive tile removal is undertaken.

- 6.4 During the PRA assessment, The development is considered exempt from Biodiversity Net Gain owing to the '*de minimis*' exemption, due to the site being considered 100% hardstanding.
- 6.5 Enhancements and mitigation measures have been laid out within the report to help support roosting bats and other native biodiversity post-development.

7.0 References

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

Appendix 1: Photographs

Photograph 1: Building B1 external view	 A photograph of a two-story brick building with a gabled roof. The building is partially covered in ivy, particularly on the left side. A large, light-colored double door is visible on the ground floor. A small window is visible on the upper floor. The building is surrounded by trees and a wooden fence in the foreground.
Photograph 2: Internal void 1 in active use for storage, with exposed roof tiles and gaps allowing ingress of natural light visible	 A photograph of the interior of a building, showing a cluttered storage area. The roof is made of exposed wooden beams and tiles, with gaps allowing natural light to enter. Various items are stored on the floor, including a large white bag, a red bag, and a white box. A small plant is visible hanging from the ceiling.

Photograph 3:

Internal void 3
in active use for
storage

**Photograph 4:**

Internal void 3
in active use for
storage



Photograph 5:

Internal void 4
in active use for
storage, with
large windows
allowing ingress
of large
amounts of
natural light

**Photograph 6:**

Partial Peacock
butterfly wing
present within
internal void 4



Photograph 7: Gaps present underneath loose, lifted, and missing clay roof tiles	
Photograph 8: Virginia creeper present externally on building B1	

Photograph 9:

Surveyor view
of the south east
aspect of
building B1, 6th
August 2025

**Photograph 10:**

Surveyor view
of the north east
aspect of
building B1, 6th
August 2025

**Photograph 11:**

Surveyor view
of the north
west aspect of
building B1, 6th
August 2025



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