



**Corner Cottage, High Street,
Bosham, West Sussex**

Preliminary Roost Assessment

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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 an internal and external bat inspection of Corner Cottage, High Street, Botham, West Sussex, PO18 8LS.
- 1.2 This report presents the findings of the surveys on site, which aim specifically to assess the site's potential to support roosting bats. Potential mitigation measures and recommendations for the site will be included within this report.
- 1.3 This report comprises:
- The legislative and planning context (Section 1);
 - Assessment methodologies (Section 2);
 - Results (Section 3);
 - Implications for development (Section 4);
 - Conclusions (Section 5).

Site Context

- 1.4 The site comprises one building. The site is located on the southern edge of Bosham, east of Chidham and approximately 20m north of the Bosham Quay (SU 80530 03859). The immediate surroundings comprised of high-density residential dwellings to the north and east, and Bosham Quay to the east and south.
- 1.5 The aerial photograph below (Figure 1) shows the site and the wider surroundings with Figure 2 showing a closer aerial image of the building subject to inspection.



Figure 1: Satellite image indicating the surveyed building in the wider landscape. Taken from Google Earth Pro 07/02/2023



Figure 2: Building located that was subject to inspection. Taken from Google Earth Pro 07/02/2023

Description of Proposed Development

- 1.5 Current proposals for the site are for extending the existing building (Figure 3). This involves 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.

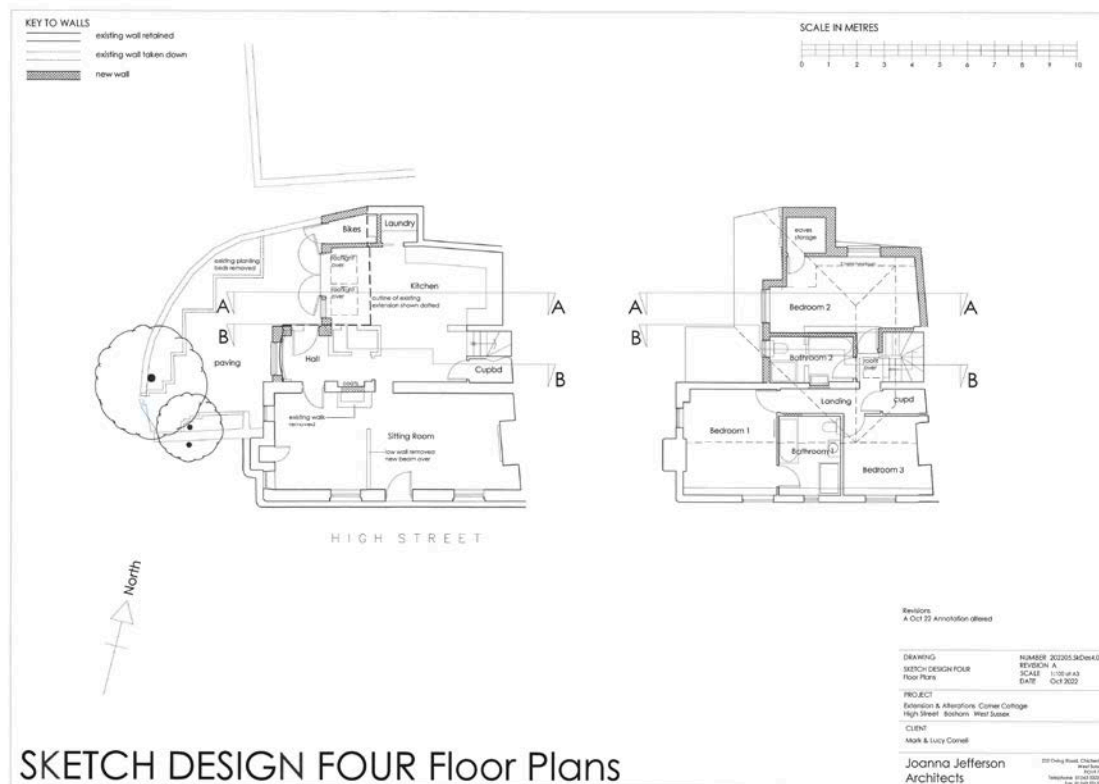


Figure 3: Proposed plan for the extension of Corner Cottage (Joanna Jefferson Architects, 10/2022)

Planning Policies

- 1.6 The site was surveyed to assess its ecological value and to ensure the proposals were compliant with relevant planning policy and legislation. Policy guidance is provided by the National Planning Policy Framework (NPPF 2021) as well as policies from Chichester Local Plan (amended July 2015). These policies included the following which are considered relevant to ecology, biodiversity and nature conservation;

- **Policy 49: Biodiversity**

- *Policy 50: Development and Disturbance of Birds in Chichister and Langstone Harbours Special Protection Areas (SPA)*
- *Policy 51: Development and Disturbance of Birds in Pagham Harbour Special Protection Area (SPA), and*
- *Policy 52: Green Infrastructure.*

Legislation

- 1.7 Under the NERC Act (2006) it is now the duty of every Government department in carrying out its functions “to have regard, so far as it is consistent with the proper exercise of those functions, to the purpose of conserving biological diversity in accordance with the Convention”.
- 1.8 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).

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)
- intentionally or recklessly obstruct access to a roost (i.e. a structure or place used for shelter or protection).

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 significantly affect 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

Desktop Study

2.1 A desktop study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and an internet-based aerial mapping service (maps.google.co.uk) was used to understand the habitats present in and around the survey area, including identifying habitat linkages and features (ponds, woodlands etc.) within the wider landscape.

Bat Internal and External Survey

2.2 The structure on site was internally and externally assessed for their suitability for roosting bats. The survey was undertaken on 7th February 2023 by The Ecology Partnership's ecologist Cameron Allaway BSc (Hons) QCIEEM and assistant ecologist Alistair McNaughton BSc (Hons) QCIEEM under the authority of Natural England bat licence holder Alexia Tamblyn MA (Oxon) MSc CEcol CEnv MCIEEM FRGS.

2.3 The surveyors assessed the buildings visually and searched for evidence such as:

- Staining beneath or around a hole caused by natural oils in bat fur.
- Bat droppings beneath a hole, roost or resting area.
- Bat droppings and/or insect remains beneath a feeding area.
- Audible squeaking from within a hole.
- Insects (especially flies) around a hole.
- Dead bats.

2.4 Buildings which are considered to have a higher potential to support roosting bats would include the following:

- Agricultural buildings (e.g. farmhouses, barns and out buildings) of traditional brick or stone construction and/or with exposed beams;
- Buildings with weatherboarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre-1960s detached buildings and structures within 200m of woodland and/or water;
- Pre-1914 buildings within 400m of woodland and/or water;
- Pre-1914 buildings with gable ends or slate roofs regardless of location;

- Buildings which are located within or immediately adjacent to woodland and/or immediately adjacent to water;
- Dutch barns or livestock buildings with a single skin roof and board and gap or Yorkshire boarding if, following a preliminary roost assessment the site appears to be particularly suited to bats.

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

Habitat and protected sites assessment

3.1 The building under inspection falls within the village of Bosham. This village borders the following designated areas.

- Solent Maritime Special Area of Conservation (SAC)
- Chichester & Langstone Harbours Special Protection Area (SPA) Ramsar
- Chichister Harbour Sit of Special Scientific Interest (SSSI)

3.2 The nearest internationally designated sites are Chichester and Langstone Harbours Ramsar, SPA, and Solent Maritime SAC which lie 20m south of site. These sites are designated for the conservation of water birds, such as; Ringed Plover (*Charadrius hiaticula*) and the Black-Tailed Godwit (*Limosa limosa islandica*).

3.3 There are multiple statutory sites in the wider area including Chichester Harbour SSSI which lies approximately 20m to the south of the site. The inspected building lies within the Impact Risk Zone (IRZ) for the above SSSI requiring all planning applications to consult the Local Planning Authority (LPA) unless they are householder applications, which this development falls under.

3.4 The LPA have also indicated that this site lies within a strategic wildlife corridor for bats set out by Chichester District Council.



Figure 3: Priority habitats including ancient & semi-natural woodland (vertical hatchings), deciduous woodland (dark green), traditional orchards (lime green), semi-improved grassland (pink), coastal saltmarsh (light green), mudflats (brown) and coastal and floodplain and grazing marsh (blue)

Internal and external building assessments

- 3.5 The building was internally and externally assessed on the day of survey for its potential to support roosting bats. The building could be split up into two distinct sections. One section is made up of a two storey pitched roof dating from at least the 19th century. On the northern aspect there is a modern single storey extension consisting of a flat roof with a skylight containing the kitchen and a small lean-to against the older building with a tiled shed roof. Photographs of the building and bat potential features are shown in **Appendix 1**.
- 3.6 The older section of the house contained a roof void which was timber framed, insulated and had bitumen felt roof lining. There was one section of the lining that was torn revealing the external tiles and was considered a potential access point. An internal inspection did not find any evidence of roosting bats in the form of droppings, insect

casings or dead bats. Externally, the roof featured multiple lifted tiles on both aspects, typical of handmade tiles, which could provide roosting potential for crevice dwelling species.

- 3.7 The modern extension sections of the building did not contain voids. Externally, there were sections of tiles which were lifted and provided potential roost space for crevice dwelling species.
- 3.8 The building had a small patio area to the northwest with introduced shrub planting providing low commuting and foraging habitat for bats.
- 3.9 Overall, the building was considered to have 'low' potential for roosting bats due to the presence of multiple lifted tiles across the building.

4.0 Discussion

Habitat and protected sites

- 4.1 The surrounding habitats consisted of residential properties to the north and east, with mudflats and coastal saltmarsh to the south and west (www.magic.gov.uk). These coastal habitats provide some opportunities for foraging and commuting bats across the harbour.
- 4.2 The site lies approximately 20m north of Chichester and Langstone Harbours SPA and Ramsar, Chichester Harbour SSSI, and Solent Maritime SAC. As the development is for extending an existing property it is not considered to result in any direct or indirect impacts on these protected sites as there will not be an increase in recreational pressure or the loss of any habitat that these sites are designated for. As such, and as a householder application, mitigation payments are not required.
- 4.3 The inspected buildings also fall within the IRZ of the Chichester Harbour SSSI. Within this IRZ it excludes householder planning applications from consultation with the LPA.
- 4.4 The site also lies within a strategic wildlife corridor. This development should consider the direct and indirect effects on roosting and commuting bats to prevent fragmentation of habitat. It must be noted that Corner Cottage is set within the development boundary of the High Street and surrounded by housing.

- 4.5 There are no significant areas of green space within the red line boundary with only a small garden area set within the curtilage of the cottage. There are no landscape features within the development area nor adjacent to the red line boundary. It is therefore considered that the redevelopment of the building will not result in the loss or fragmentation of key commuting corridors.

Bats

- 4.6 The building did not contain any internal evidence of roosting bats within the void of the older section of the house. Externally, there were multiple lifted tiles which were considered to have potential to support crevice dwelling species such as pipistrelle bats. These tiles were present on the section of the roof which will join with the two-storey extension as well as the single storey existing extension which will be demolished. The building was considered to have 'low' potential for roosting bats. As such, it is recommended that a single emergence survey is carried out.
- 4.7 Should bats be recorded emerging from the building on this survey then further surveys will be required. The aim of the survey is to determine if bats are using the external features of this building, in addition to the type and number of bats present. If no bats are found to be utilising the building, then works can proceed without a licence. If evidence of bats using the building is identified, then the results of these surveys will inform an application for a Natural England licence to legalise the loss / disturbance to bat roosts should they be present on site and appropriate mitigation.
- 4.8 Under the Bat Mitigation Guidelines, the level of mitigation required will depend upon the nature of the roost identified during the emergence/re-entry surveys. In the event of a larger roost, such as a maternity roost, being identified then a like for like replacement will be required if any roost space is to be lost.
- 4.9 Emergence surveys are to be undertaken when bats are most active, which is between April and the end of September, although May to August is the optimum time for surveys. Dusk emergence surveys commence at least 15 minutes before sunset until 2 hours after sunset, during which time, bats are identified and recorded using a bat detector, such as the Batlogger M or EchoMeter Touch 2 with Ipad. Dawn surveys commence up to two

hours before sunrise, until at least 15 minutes after sunrise. In addition to the above, bat surveys are required to be undertaken during suitable weather conditions, when conditions are relatively dry and mild with little/no wind.

General Ecological Enhancements

4.10 Several enhancements can be made to incorporate features of ecological interest to the final development of the site. These recommended enhancements are subject to change based on the results of the emergence survey.

4.11 Where possible, it is recommended that any new external lighting as part of the proposals must consider bats in the surrounding area as well as the site. 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 and foraging behaviour. 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;
- Careful consideration of column height to avoid light spill;
- Any external security lights should use motion-sensors and short (1-minute) timers.

4.12 It is recommended that bat boxes be hung on trees or the building itself. Recommended boxes include:

- Schwegler Bat Box 2F – A general purpose bat box which is ideally suited for bat protection and can provide accommodation to a large number of bats (Figure 4).
- Vivara Pro WoodStone Bat Box – A general purpose bat box that supports a range of species (Figure 4). 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 (Figure 4).



Figure 4: Schwegler Bat Box 2F (left), Vivara Pro WoodStone Bat Box (middle) and Large Multi Chamber WoodStone Bat Box (right)

5.0 Conclusions

- 5.1 An internal and external building assessment of the building at Corner Cottage, Bosham was undertaken on the 7th of February 2023.
- 5.2 The current proposals for the site involve the extension of the building affecting multiple areas of roof tiles.
- 5.3 The building was considered to have ‘low’ potential to support roosting bats due to the presence of multiple lifted roof tiles. The internal void did not contain any evidence of roosting bats.
- 5.4 As such, a single emergence survey has been recommended to further establish the use of the building by bats.
- 5.5 The proposals were not considered to have any negative impacts on neighbouring designated sites or priority habitats.

6.0 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: Photos

Photograph 1: Eastern end of the void in the older section of the house



Photograph 2: Photo highlighting a potential access point in the felt to the void.



Photograph 3: Overview of the northern aspect of the building showing the lean-to to be demolished



Photograph 4:
Overview of the western
aspect showing the
existing extension



Photograph 5: Close-up
of lifted tiles



Photograph 6: Southern
aspect of the roof from
street level



Photograph 7:
Overview of patio and
planting



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