



Bexstone House

Eastergate

Bat Survey Report 2018

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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 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 Following completion of a Preliminary Ecological Appraisal (PEA), including internal bat and buildings inspection on 23rd April 2018, The Ecology Partnership was instructed to undertake a further recommended dusk bat emergence survey for bats at the residential building within the red-line boundary of the site.
- 1.2 This report documents findings of the recommended dusk emergence survey. The previously issued PEA (April 2018) documents findings of internal inspections of the buildings within the site. These reports should be referred to in conjunction with this report.
- 1.3 Section 2 of this report documents the methodologies used by The Ecology Partnership, with results in section 3. Discussion and recommendations are found in section 4 and conclusions are provided in section 5 of this report.

Site Context and Status

- 1.4 The site is located off Barnham Road in Eastergate, Chichester (SU 95025 05194). The immediate surroundings comprise of low-density housing, Eastergate Industrial estate, a plant nursery and agricultural fields. The site covers approximately c. 0.7 ha and it consists of a single residential building with a number of outbuildings surrounded by scattered trees and maintained gardens. There are no Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNR) within 2km of the site.



Figure 1: Approximate red-line boundary of the site

Description of Proposed Development

- 1.5 The plans for the site are not currently known but will be informed by a number of surveys, of which ecology is one. It is understood that a residential development is being considered on the site. This will involve the demolition of all of the buildings on site.

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).

2.0 Methodology

Building Assessment for bats

2.1 The surveyors undertook an internal and external examination of the building to be affected by the proposed works, including all accessible roof voids. The surveyors assessed the building 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.

2.2 The building on site was accessed during the day. An external investigation assessed the tiles and structural timber joints of the building. This was undertaken in order to see if there were access points readily available for bats to utilise or crevices that bats could be roosting in.

2.3 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.

Bat Survey

- 2.4 A dusk emergence survey was carried out on the 15th May 2018. During the survey all activity including emergence points from the building were recorded. The survey followed BCT guidelines (2016). Prior to the survey, the building was inspected internally and externally in order to assess features of interest and all potential exit locations. Surveyors were positioned in such a way in order to cover areas of interest and record any flyovers and activity around the building.
- 2.5 The dusk survey started 15 minutes before sunset and observations were maintained until 1.5 hours after sunset. Bats tend to emerge about twenty minutes after sunset depending on the species, light level, weather conditions and time of year. Peak activity will normally last for about 1.5 to 2 hours after sunset, during times of peak insect activity.
- 2.6 All surveyors were equipped with either Bat Box Duet heterodyne and frequency division detectors, Elekon Batscanner detectors and an Echo Meter Touch 2 with iPad. The buildings surveyed and the number of surveys are shown in figure 2 below.



Figure 2: location of surveyors (S1, S2) and buildings (B1, B2)

Limitations

- 2.7 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.

Previous surveys and reports

- 2.8 The on-site buildings were surveyed on the 23rd April 2018 by bat licence holder Alexia Tamblyn.
- 2.9 The house was a brick building with a tiled roof and hanging tiles on the northern and southern aspect. Externally, the tiles were relatively well sealed apart from one or two of the hanging tiles close to the corners. The hanging tiles on the northern aspect of the house did not support any features which could be exploited by crevice dwelling bats. The soffit boards were relatively well sealed except for those on the southern aspect of the house which had rotted in places leaving large gaps.
- 2.10 Internally, there was one roof void with intact felt lining and insulation along the base of the void only. No evidence of bats was found in the void, only mouse droppings and there were no potential access points observed. The building was considered to have low roosting bat potential.
- 2.11 The outbuilding next to the house was made of breeze blocks and a flat corrugated metal roof. There was no void internally and the building appeared to be well-sealed. The wooden panelling on the southern aspect of the building had some large holes which may offer some bat roosting potential but the building as a whole was considered to have low roosting bat potential.
- 2.12 No conclusive evidence of bats, such as droppings or staining was identified within the structure on the day of survey. However, externally gaps were noted beneath miss-fitting hanging tiles and several of the soffit boards supported cracking, which were considered to have low potential for crevice dwelling bats, such as pipistrelles on an occasional basis.

- 2.13 The remainder of the out buildings on site were considered to be constructed of materials which were not considered suitable for roosting bats, all of the remaining buildings were therefore considered to have 'negligible' potential for bats (glass houses/green house/shed).

3.0 Results

Internal/external building inspection May 2018

- 3.1 Externally, gaps were noted beneath miss-fitting hanging tiles and broken/cracked soffit boards, which were considered to have potential for crevice dwelling bats, such as pipistrelles on an occasional basis.
- 3.2 Although no conclusive evidence of bats was found within the building during the 2018 surveys, external building features were considered to have low potential for crevice dwelling bats on an occasional basis and therefore it was recommended that a further single bat emergence survey be undertaken in order to confirm the sites usage by bats, type of roost, access / egress points and numbers of bats present within the building. Findings of this further bat survey are detailed below.

Emergence survey

15th May 2018

- 3.3 This survey was undertaken during dry and still conditions with approximately 60% cloud cover at the start of the survey. The temperature at the start of the survey was 20°C, lowering to 18°C by the end of the survey. Sunset was at 20:43 and the survey commenced at 20.20. During the survey, one surveyor was positioned at each gable end of the building on opposite corners of the building.
- 3.4 No bats were seen to emerge from building 1 or building 2 during the course of the survey. The holes within the soffit / wooden panelling of building 2, supported an active birds nest. Birds (blue tits) were recorded flying in / out of the one of the holes within this feature.

- 3.5 The first bat was recorded at 21.09 which was a noctule (*Nyctalus noctula*), flying high above the site. The noctule was not recorded foraging within the site.
- 3.6 From approximately 21.11 common pipistrelles (*Pipistrellus pipistrellus*) were recorded foraging within the garden and around the rear of the property. Common pipistrelles were recorded flying from the north, over the front garden, around the building, and recorded foraging along the tree lines and within the sheltered area to the rear of the property. Soprano pipistrelles (*Pipistrellus pygmaeus*) were also recorded foraging to around the rear of the property and along the edges, most notably along the western edge of the site.
- 3.7 Both common and soprano pipistrelles were recorded foraging within the garden, both along the tree lines, and within the rather sheltered rear back garden. No other bat species were recorded during the course of the survey period.

4.0 Discussion

Buildings assessment

- 4.1 An internal and external inspection of the buildings within the site for evidence of bats was undertaken on the 23rd April 2018. No conclusive evidence of bats was found within any of the buildings inspected however, external features, such as mis-fitting hanging tiles and several holes in the soffit boards on building 1 and 2 were considered to have low potential for crevice dwelling bats on an occasional basis and therefore it was recommended that, prior to any work on building 1, a single bat emergence survey be undertaken.
- 4.2 A single dusk bat emergence survey was undertaken at building 1 and 2 on the 15th May 2018. No bats were seen to emerge from building 1 or building 2 during the course of this survey and the survey generally identified a low level of bat activity by a small number of bats in the vicinity of the building.

- 4.3 As no conclusive evidence of bats was identified within building 1 and building 2 during either the 2018 inspections, no bats were observed emerging from the buildings during the evening emergence survey, no further surveys for bats are recommended.
- 4.4 However, it is all recommended that update surveys are undertaken on the building pre demolition. This should include an internal and external bat survey and a single emergence survey of both the buildings 1 and 2. This survey is recommended due to the presence of crevice dwelling species foraging within the site, and the likely lapse in time prior to planning being granted and development progressing. If bats are found using the building, then further surveys and a licence would be required.
- 4.5 It is also recommended that bats are considered within the development and master planning of the site. The tree lines around the edges of the site, are of some interest to bats, providing good foraging opportunities. Bats were recorded flying up and down the tree lines. It is recommended that these linear features are retained and enhanced (thought thinning and long term management) and planting around the edges of the site, to maintain that foraging and commuting corridor.
- 4.6 The design of the site should therefore be focused on the semi improve grassland habitats and the buildings and hardstanding. The enhanced edges would still retain their ecological functionality and provide the foraging interest which bats are currently using.
- 4.7 Any proposed lighting scheme as part of the development will have to take into account bats in the surrounding area as well as on 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 behaviour as well as their foraging behaviour. This needs to be taken into account, with a sympathetic lighting scheme for the development. Recommendations include:
- Lighting should only be installed if there is a significant need;
 - Light levels should be kept low, the use of low pressure sodium lamps or high-pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its uv filtration characteristics;

- Lighting should be avoided near woodland, tree-lines or hedgerows, with light angled away from these areas, bats use linear features such as treelines to commute across the landscape to forage; and
- Lights should have focussed luminance on their target area, preventing light spill and pollution into other areas of the site and local area.

4.8 In terms of enhancement of the site and surrounds for bats, installation of bat boxes will enhance the number of roosting opportunities for bats in the local area. Boxes should be hung on semi-mature and mature trees and have clear flight paths. Recommended boxes include:

- Schwegler 2F – This box simulates crevices inside to allow suitable habitats for crevice-dwellers
- Schwegler 1FD – This box is a larger version of the 2F
- Schwegler 1FW – This box is suitable for maternity or hibernation roosts

4.9 Any trees that are removed across the wider site should be replaced elsewhere on the site with native species such as: oak (*Quercus* sp), ash (*Fraxinus excelsior*), hazel (*Corylus avellana*), beech (*Fagus sylvatica*) and cherry (*Prunus* sp), this will mitigate against the loss of habitat that could be considered important under planning local policies.

4.10 Based on the findings of surveys undertaken within the site, a European Protected Species (EPS) licence is not deemed necessary for the works and it is considered that the redevelopment of the site will not impact upon the favourable conservation status of bats in the local area.

5.0 Conclusions

5.1 An internal and external inspection of the buildings within the site for evidence of bats was undertaken on in April 2018. No conclusive evidence of bats was found within any of the buildings inspected in April 2018; however, external features, such as mis-fitting roof tiles and cracks within soffit boards on building 1 and 2 were considered to have low potential for crevice dwelling bats on an occasional basis.

- 5.2 The further recommended emergence survey undertaken on 1st May 2018 identified a total of three bat species (common and soprano pipistrelle and noctule) using the site in equal measure with generally a low level of activity recorded. No bats were seen to emerge from building 1 or 2 during the survey.
- 5.3 As no conclusive evidence of bats was identified within the buildings during the 2018 inspections, no bats were observed emerging from the building during the evening emergence survey, no further surveys for bats are recommended and it is considered that this report is sufficient to support planning.
- 5.4 Recommendations for site enhancement with regard to bats have been included within this report. Based on the findings of surveys undertaken within the site, an EPS licence is not deemed necessary for the works and it is considered that the redevelopment of the site will not impact upon the favourable conservation status of bats in the local area.
- 5.5 It is always recommended that if there is a lapse in time between planning and development that the bat surveys are updated.

6.0 References

Bat Conservation Trust (2008). *Bats and Lighting in the UK – Bats and the built environment series, (Version 2)*. Bat Conservation Trust, London.

Bat Conservation Trust (2016). *Bat Surveys – Good Practice Guidelines (3rd Edition)*. Bat Conservation Trust, London.

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

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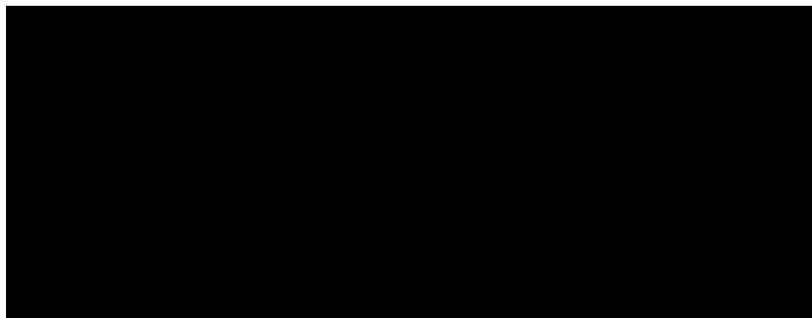
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