



2 Conisboro Way, Reading

Bat Emergence Surveys

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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 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.

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 Sapna Odlin to undertake further bat surveys of the residential dwelling at 2 Conisboro Way, Caversham, Reading.
- 1.2 A preliminary roost assessment was undertaken in 2022 and determined that the building has moderate suitability to support roosting bats.
- 1.3 The building will be demolished as part of the proposed development and therefore, bat emergence surveys were undertaken in August 2022 to determine if the building supports roosting bats.

Site Context and Status

- 1.4 The surrounding area includes residential dwellings, with a sports centre to the south.



Figure 1: 2 Conisboro Way, Caversham.

Legislation

- 1.5 Under the Natural Environment and Rural Communities (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*”. Seven species of bat (Barbastelle, Bechstein’s, Noctule, Soprano pipistrelle, Brown Long-Eared (BLE), Greater horseshoe and Lesser horseshoe) are listed as Species of Principal Importance in England under Section 41 of the NERC Act.
- 1.6 All bats are covered by the following relevant legislation: the Wildlife and Countryside Act (WCA) 1981 (as amended); the Countryside and Rights of Way Act 2000; the Natural Environment and Rural Communities Act 2006; and by the Conservation of Habitats and Species Regulations (CHSR) 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);
 - 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

Dusk Emergence Surveys

- 2.1 Dusk emergence surveys were carried out on 1st August 2022 and 22nd August 2022. The surveys started 15 minutes before sunset and were completed 1 and a half hours after sunset.
- 2.2 The surveys followed Bat Conservation Trust guidelines (Collins 2016). Surveyors were positioned in order to cover areas of interest and record any flyovers and activity around the building (Figures 2 and 3).
- 2.3 Surveyors were equipped with Echo Meter Touch 2 Pros. Surveyors included Eddie Selwyn BSc (Hons) MSc QCIEEM and Anna Watkins BSc (Hons). Infrared cameras were also utilised during the surveys to help support the surveyors.



Figure 2: 1st August 2022 - Surveyor positions (orange stars) and infrared camera position (blue star)



Figure 3: 22nd August 2022 - Surveyor positions (orange stars) and infrared camera position (blue star)

3.0 RESULTS

1st August 2022 – Dusk Survey

- 3.1 Sunset was at 20:52 and the weather was clear with 100% cloud cover and a temperature of 24°C dropping to 21°C. No bats were recorded emerging from the building. The first bat recorded was at 21:03 and was a common pipistrelle foraging above the building.

22nd August 2022 – Dusk Survey

- 3.2 Sunset was at 20:12 and the weather was dry with 100% cloud cover and a temperature of 19°C dropping to 18°C. No bats were recorded emerging from the building. The first bat recorded was at 20:02 and was a common pipistrelle commuting adjacent to the building.

Bat Activity

- 3.3 During the emergence surveys, the general bat activity within the site was noted. The site was utilised by common and soprano pipistrelle bats for foraging and commuting. Approximately 4-5 individual bats were recorded at once foraging above the house during the surveys. It is considered that the tree lines along the western and eastern boundaries provide suitable foraging and commuting opportunities for bats.

4.0 CONCLUSIONS

- 4.1 The results of the emergence surveys have determined that the building does not support roosting bats.

- 4.2 As an enhancement, it is recommended that integrated bat boxes are included within the proposed buildings or bat boxes are positioned on suitable retained trees within the site. 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 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. These should be hung on mature trees around the site (Figure 4).



Figure 4: Vivara Pro WoodStone Bat Box (left) and Large Multi Chamber WoodStone Bat Box (right)

- 4.3 Boxes should ideally be exposed to the sun for most of the day, so southern and western aspects are preferable and should be hung as high as possible (around 5m above ground).
- 4.4 It is also recommended that any proposed lighting should 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. Recommendations include:
- Lighting should only be installed if there is a significant need;
 - Lighting should be avoided near woodland, tree-lines and hedgerows, with light angled away from these areas, bats use linear features such as hedgerows to commute across the landscape to forage;
 - Lights should have focused luminance on their target area, preventing light spill and pollution into other areas of the site and local area.
 - Light levels should be kept low. All luminaires should lack UV elements when manufactured and metal halide, fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.

5.0 REFERENCES

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

Parsons, S. and Jones, G. (2000) Acoustic identification of 12 species of echolocating bats by discriminating function analysis and artificial neural networks. *Journal of Experimental Biology*, 203: 2641-2656.

Internet resources:

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

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