



Bat Emergence Survey Report,
21 Hawthorne Road
Caversham
Reading
Berkshire
RG4 6LY

8th June 2017

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Notice to Interested Parties

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

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CONTENTS

EXECUTIVE SUMMARY	4
1 INTRODUCTION	5
2 METHODS.....	7
3 RESULTS.....	8
4 EVALUATION	9
5 CONCLUSIONS	9
6 BAT METHOD STATEMENT	10
REFERENCES	11
APPENDIX 1: Legislation relating to bats	12

EXECUTIVE SUMMARY

- 0.1 Arbeco Ltd were commissioned by Zoe Ridout to undertake a top-up bat dusk emergence survey at 21 Hawthorne Road, Caversham, Reading, Berkshire, RG4 6LY to help inform the proposed extension of the building on site.
- 0.2 Initial building inspections carried out by Arbeco Ltd in September 2016 recorded structural features suitable to support roosting bats. Evidence of bats in the form of bat droppings were also recorded during the external inspection of the building. The droppings were confirmed to be from a common pipistrelle *Pipistrellus pipistrellus* bat following DNA analysis by the University of Warwick.
- 0.3 Two subsequent emergence surveys were undertaken in late-September and early-October 2016 which recorded a maximum count of two common pipistrelle bats emerging from the building.
- 0.4 A third dusk emergence survey was therefore commissioned and undertaken on 21st May 2017. The survey did not record any bats emerging from the building.
- 0.5 The building has therefore been confirmed as a **day roost for a low number of common pipistrelle bats**.
- 0.6 **The proposed works to the building will need to take place under a Natural England European Protected Species Mitigation Licence.** The outline bat method statement detailed in Section 6 of this report provides an outline of appropriate mitigation measures. These include the retention or creation of roosting opportunities within the building for common pipistrelle bats including retaining *in situ* access points where possible and suitable construction materials.

1 INTRODUCTION

- 1.1 Arbeco Ltd were commissioned by Zoe Ridout to undertake an ecological assessment of bat species at 21 Hawthorne Road, Caversham, Reading, Berkshire, RG4 6LY to help inform the proposed extension of the building on site.
- 1.2 Initial building inspections carried out in September 2016 by Arbeco Ltd recorded structural features suitable to support roosting bats. Evidence of bats in the form of bat droppings were also recorded during the external inspection of the building. The droppings were confirmed to be from a common pipistrelle *Pipistrellus pipistrellus* bat following DNA analysis by the University of Warwick.
- 1.3 Two subsequent emergence surveys were undertaken in late-September and early-October 2016 which recorded a maximum count of two common pipistrelle bats emerging from the building.
- 1.4 This report details the results of the third emergence survey undertaken on 21st May 2017 and sets out recommendations which will ensure that bats are not detrimentally impacted by the works on the site, that there is no loss of ecological viability and that the favourable conservation status of the species in the local area is not affected by the proposed works.

Legislation

- 1.5 All seventeen bat species resident in the UK are fully protected under UK and European legislation. In England bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and within Europe all bat species are protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2010.
- 1.6 These pieces of legislation make it an offence to:
 - Deliberately, intentionally, or recklessly disturb, capture, injure or kill a bat;
 - Obstruct, damage or destroy a place used for shelter or protection; and
 - Damage or destroy a bat roost (breeding site or resting place).
- 1.7 All wild bird species are afforded protection under the Wildlife & Countryside Act 1981 (as amended).
- 1.8 Further details of the legislation are outlined in Appendix 1.

Site Description

- 1.9 The site is located within the suburb of Caversham within the borough of Reading at Ordnance Survey Grid Reference SU 73304 75719.
- 1.10 The site consists of a brick-built double storey residential dwelling with associated garden and driveway. The building has a pitched roof with dormer windows at the front and rear of the property. The location of the site is shown in Figure 1.1, the extent of the site boundary is shown in Figure 1.2 and the building on site that was surveyed for bat potential is shown in Figure 1.3.

Development Proposals

- 1.11 The development proposals comprise an extension of the existing house into the roof and associated garden to the north of the property. A small extension will also be added to the north-east side of the property.

2 METHODS

Bat Emergence Survey

- 2.1 One dusk emergence survey was carried out by experienced bat surveyors on the 21st May 2017 in appropriate weather conditions following standard guidelines (Collins, 2016) and when bats are likely to be active.
- 2.2 Observations were made outside the building from where it was considered bats might emerge. The dusk emergence survey commenced approximately 15 minutes before sunset, and lasted for approximately 90 minutes, the optimum time for bats to emerge from a roost, in order to record any bats that may emerge from the building.
- 2.3 A combination of real time detectors (Batlogger Elkon and Peersonic RPA2) were used to record bat echolocation calls of any emerging bats and identify species where possible.
- 2.4 All bat passes were noted, and all bats were identified to species level where possible. Echolocation calls were also recorded onto MP3 (Edirol RH-09) recorders or by the detectors in-built sound cards and subsequently analysed using BatSound computer software which facilitates species identification. Where possible additional notes on size, flight height, type of flight (such as commuting, foraging, fast or slow) and direction of flight were also recorded.

Survey Constraints

- 2.5 Bats are difficult to locate in large structures, with so many potential roosting areas, particularly in inaccessible areas such as large buildings, finding the exact roosting site can be difficult, especially male/single bat roosting sites.
- 2.6 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed. For this reason bats may potentially be present but remain undetected, particularly during day time assessment surveys.

3 RESULTS

Emergence survey results

- 3.1 One emergence survey was carried out on the building. Details of the weather conditions during the survey are presented in Table 3.1.

Table 3.1: Weather conditions during emergence surveys

Date	Sunset	Start/Finish	Weather Conditions at Sunset
21.05.2017	20:57	20:35 / 22:30	Temperature (°C): 14 Cloud cover (%): 10 Wind: Still Precipitation: None

Bat emergence survey 21st May 2017

- 3.2 Two surveyors surveyed the building. Surveyor 1 surveyed the north west elevation and surveyor 2 surveyed the south east elevation.
- 3.3 Surveyor 1 recorded no bats emerging from the building. Low soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula* and pipistrelle sp. *Pipistrellus sp.* foraging activity was recorded within the garden of the property.
- 3.4 Surveyor 2 recorded no bats emerging from the building. Low soprano pipistrelle and common pipistrelle foraging and commuting activity was recorded on site during the survey.
- 3.5 The results of the surveys are detailed in Figure 3.1.

4 EVALUATION

- 4.1 All species of bat present in the UK receive full protection under The Conservation of Habitats and Species Regulations 2010, and the Wildlife and Countryside Act 1981 (as amended).
- 4.2 The bat building assessment undertaken in September 2016 recorded droppings deposited by a common pipistrelle bat externally beneath the rear roof dormer window to the north of the property and a small number of external structural features suitable to support roosting bats.
- 4.3 The surrounding area provides opportunities for foraging and commuting bats however, these habitats are not well connected to site via suitable linear habitat features.
- 4.4 The dusk bat emergence surveys undertaken in 2016 and 2017 recorded a maximum count of two common pipistrelle bats emerging from the building.
- 4.5 The building is therefore considered to be a **day roost for a low number of common pipistrelle bats** and is therefore of a low conservation significance in a local context due to the common pipistrelle bat being widespread and common throughout the UK.
- 4.6 The current development proposals comprise the extension of the building into the associated garden which will impact upon the existing roof. In the absence of mitigation, the proposed works to the building will result in the disturbance and/or loss of the common pipistrelle bat day roost and has the potential to kill or injure bats roosting within the building. Therefore, the works to the building will need to take place under a Natural England European Protected Species Mitigation licence.

5 CONCLUSIONS

- 5.1 The building has been confirmed as a day roost for low numbers of common pipistrelle bats.
- 5.2 In the absence of mitigation, the proposed works to the building will result in the disturbance and/or loss of the common pipistrelle bat day roost and has the potential to kill or injure bats roosting within the building. Therefore, the works to the building will need to take place under a Natural England European Protected Species Mitigation licence.
- 5.3 Section 6 of this report provides details of an outline bat mitigation strategy to ensure that no bats are harmed during works to the building and that the bat roosts within the building are reinstated post-works where possible. This will ensure that bats are not detrimentally affected by the works and that there is no loss of ecological viability and that the favourable conservation status of the species in the local area is not affected by the proposed works.

6 BAT METHOD STATEMENT

6.1 The proposed works to the building will need to take place under a Natural England European Protected Species Mitigation licence. This outline method statement has been developed to ensure that no bats are disturbed or harmed due to the proposed works and to ensure that an adequate mitigation strategy will be provided to ensure the ecological continuity of bat species at the site through the provision of replacement and additional roosts. The mitigation strategy includes:

- The provision of suitable bat roosts for common pipistrelle bats within the converted building;
- Sensitive timings to avoid disturbing bats during the sensitive hibernation period i.e. all works to the roof of the building should avoid the period beginning the 1st November to the 1st March inclusive;
- No works to the roof should be undertaken during temperatures lower than 7°C to avoid disturbing any torpid bats;
- The delivery of a pre-works site induction to all site contractors involved with initial roof / hanging tile stripping works via a 'tool box talk' by the licensed ecologist regarding the bat issues on site and the legal protection afforded to them;
- Ensuring that any works to the roof of the building are done by hand under the direct supervision of a licensed bat ecologist with any tiles/slates carefully removed, turned over and checked for bats prior to disposal;
- The provision of one Schwegler 2FN bat box or similar installed on suitable mature native species of tree within the grounds of the building;
- An appropriate lighting scheme to include the placement of lights away from roost entrances and low-level lighting with stepped baffle trims to minimise disturbance to bats.

Provision of Suitable Roosting Features within Converted Building

6.2 Common pipistrelle bats are known to frequently roost within newer buildings behind hanging tiles, between roofing felt and roof tiles and behind soffit and barge and eaves boarding (Bat Conservation Trust, 2010). Therefore, it is recommended that any new areas of roof / hanging tiles where new bat roost features are installed are lined with 'bat-friendly' Monartile 1F bituminous roofing underlay.

6.3 Any remedial timber treatment to roof timbers would need to be done with chemical treatments listed as being safe for use in buildings where bats roost on Natural England Technical Information Note TIN092 (Natural England 2011).

6.4 Suitable access/egress points will need to be incorporated into the roof to allow bats to enter/exit the roost. These could comprise bat access roof and/or ridge tiles to allow crevice dwelling bats to gain access to spaces between the roof tiles and the roof lining.

Additional Roosts

6.5 To ensure ecological continuity of bat species at the site, one Schwegler 2FN bat box or similar will be installed on mature native tree species close to the grounds of the building.

REFERENCES

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

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

Mitchell-Jones A.J. and McLeish A.P. (2004) *The Bat Workers Manual* 3rd Edition. Joint Nature Conservation Committee.

APPENDIX 1: Legislation relating to bats

Bats and the places they use for shelter or protection i.e. roosts, receive European protection under The Conservation of Habitats and Species Regulations 2010, as amended (Habitats Regulations 2010, as amended). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2010 (as amended), states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2010 (as amended) for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* (rather than deliberately) kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

Several bat species are considered to be Species of Principal Importance for Nature Conservation in England.

The reader should refer to the original legislation for the definitive interpretation.

