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Bat emergence surveys (updated)
4 Lotts Avenue, Backwell, Somerset
April 2021

A report by

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Report details

Site address: 4 Lotts Avenue, Backwell, Somerset, BS48 3HD
Grid reference: ST 486 683
Report date: 7th April 2021
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Report no: WOR 1429.1

Declaration of compliance

BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of practice for planning and development.

Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Validity of survey data and report

The findings of this report are valid for 12 months from the date of survey. If a European Protected Species Licence application has not been made within this period, updated surveys by a suitably qualified ecologist are likely to be required to support a licence application.

Non-technical summary

During a preliminary visual assessment for bats and breeding birds at 4 Lotts Avenue in Backwell, evidence to suggest previous use by bats was found.

Dusk emergence surveys, and a period of remote monitoring in the roof void, were completed in May/June 2020 during which time it was found that the building supports a single day roosting Serotine bat.

Works would not harm or injure this bat due to separation distance. In addition, the new extension will not lead to the loss of this roosting location nor access into it, and would not impact this Serotine bat in a way that would result in an offence. As such licencing is not required although simple mitigation is recommended.

Mitigation is proposed within Section 5 of the report based on two scenarios, one where works likely to impact this bat are completed in the period November to February when it is likely to absent, and a second scenario where works likely to impact this bat are completed in the period March to October, when the bat may be present. Under the second scenario, a Mitigation licence for European Protected Species with a supporting method statement to protect bats will be required during the process.

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1. Introduction

1.1. Background

Western Ecology has been commissioned to provide a preliminary visual assessment for bats and breeding birds at 4 Lotts Avenue in Backwell. It is proposed that the building will be the subject of a planning application to include a rear and side extension and removal of the south eastern chimney. The preliminary roost assessment found the following:

“Evidence of previous roosting by bats was found in the roof void. To determine if bats are still roosting here, two bat emergence surveys are recommended during the period May to September inclusive, with one survey in the optimal survey period of June to August. The surveys should be at least 14 days apart, will require two trained surveyors to cover all aspects of the building and should include a period of at least 7 days remote monitoring within the roof void.

Any mitigation would be informed by this additional survey work.”

This report documents this further survey work and provides a full assessment of roosting bats. This report also provides an outline of the required mitigation to allow development associated with this structure to proceed in a lawful manner.

This survey has been prepared in accordance with the Bat Conservation Trust’s “Bat Surveys Good Practice Guidelines” (Collins, 2016).

1.2. Site description

4 Lotts’ Avenue is located in Backwell, a village in north Somerset 9km to the south west of Bristol (Plan 1). It is set within the village and surrounded by dwellings to all sides. The nearest open habitats are sports fields 240 metres to the west, whilst the nearest habitat of value for bats (woodland) is approximately 500 meters to the south east. Habitats within the vicinity of the dwelling have little value for foraging bats.

Linkage for commuting bats along strong linear features is lacking as the dwelling is isolated by roads and developed areas within the village.



Plan 1. The location of 4 Lotts Avenue



Plan 2. The building surveyed

1.3. Proposed works

It is proposed that the building (Plan 2) will be the subject of a planning application to include a rear and side extension and removal of the south eastern chimney.

1.4. Survey aims

The purpose of this survey is to determine, with confidence, if bats are present at the property, and if so, to provide evidence on which to base mitigation.

The survey will also determine if a European Protected Species licence will be required to allow the proposed development to proceed lawfully.

2. Methods

2.1. Dusk emergence surveys

These surveys consist of a sufficient number of experienced bat surveyors monitoring a built structure for bat activity. BatBox Duet heterodyne bat detectors and an Echo Meter Touch time expansion bat detector, attached to an iPhone 5C and Samsung S7 running the Echo Meter app, are used during the surveys. Where necessary, Sony infrared capable camcorders (FDR AX100, HDR-SR12, DCR-SR 35), in conjunction with 850nm infrared lighting rigs (Raytec Vario I2, I4), are also used. The surveyors, including at least one licenced bat ecologist, are stationed around the building in such a way that any bat leaving or entering the structure is likely to be observed (Plan 3). Dusk emergence surveys normally begins 15 minutes before sunset and continues until at least 90 minutes after sunset or when light levels are so low that any emerging bats cannot be seen.

This survey methodology complies with guidelines produced by the Bat Conservation Trust (Collins, 2016).

Table 1. Emergence survey details

Date of each survey visit	Start and end times and time of sunset	Structure reference / location	Equipment used (include make of bat detectors and logging equipment)	Weather – (Include start and end temps, precipitation, Beaufort wind scale etc)	Comments (to include # of surveyors used for each visit):
18/5/2020	Sunset 21:02. Survey 20:35 to 22:15	4 Lotts Avenue	EMT2 + Samsung S7, EMT2+ iPhone 5C, Batbox Duet	dry, force 2 SW, 30% cloud, start 14°C finish 13°C	2 surveyors: Michael Sanders, Yolande Knight,
25/6/2020	Sunset 21:32. Survey 21:15 to 22:55	4 Lotts Avenue	EMT2+ iPhone 5C, Batbox Duet	dry, Calm, 0% cloud, start 24°C finish 19°C	2 surveyors: Colin Hicks Kristine Villalba

Table 2. Surveyor details

Michael Sanders, Natural England licence no: 2016-24281-CLS-CLS with 7 years of bat survey experience.
 Yolande Knight PhD Natural England licence no: 2020-47431-CLS-CLS with 6 years of bat survey experience.
 Colin Hicks Natural England licence no: 2015-15857-CLS-CLS with 12 years of bat survey experience
 Kristine Villalba with 4 years of bat survey experience



Plan 3. The location of surveyors for both surveys in red. Static monitor in green

2.2. Remote monitoring

A remote bat detector was deployed in the roof void of the house.

Following deployment, the data was downloaded and the resultant sonograms analysed to determine which bat species had been recorded within the building during the deployment period and their patterns of activity.

Sonogram analysis was completed using Analook software (v4.2n) and Kaleidoscope Pro by Colin Hicks CIEEM who has more than 10 years of experience in sonogram analysis during which time he has analysed more than 500,000 calls.

2.3. Desktop search

A biological records search was not considered appropriate due to the highly mobile nature of bats. It is assumed that all species of bat that are present in Somerset could be active within the vicinity which includes Barbastelle, Serotine, Noctule, Lesser Horseshoe, Greater Horseshoe, Common Pipistrelle, Soprano Pipistrelle, Nathusius Pipistrelle (very rare), Whiskered, Brandt's, Natterer's, Daubenton's, Brown Long-eared and possibly Grey Long-eared.

It is very unlikely when considering the location and structure being assessed that a data search would provide further meaningful information.

If a European Protected Species licence is required for this site, a biological records search for bats will be completed with the local records centre to support the licence application.

3. Results

3.1. Bat emergence surveys

1st Emergence survey

Completed on 18th May 2020.

During the survey one Serotine bat (21:38) emerged from a roof tile below the northerly chimney on the south west roof (Plan 4).



Plan 4 North Aspect - emerging Serotine (red circle) from a roof tile to the lower side of the chimney during 1st and 2nd emergence survey.

Weather conditions were good for bat activity and bats were present in the vicinity of the site. The first bat recorded in the area was a noctule at 21:20. Occasional common pipistrelle were observed foraging around the building. Serotine passes were recorded to the south west and to the north of the building during the survey.

2nd Emergence survey

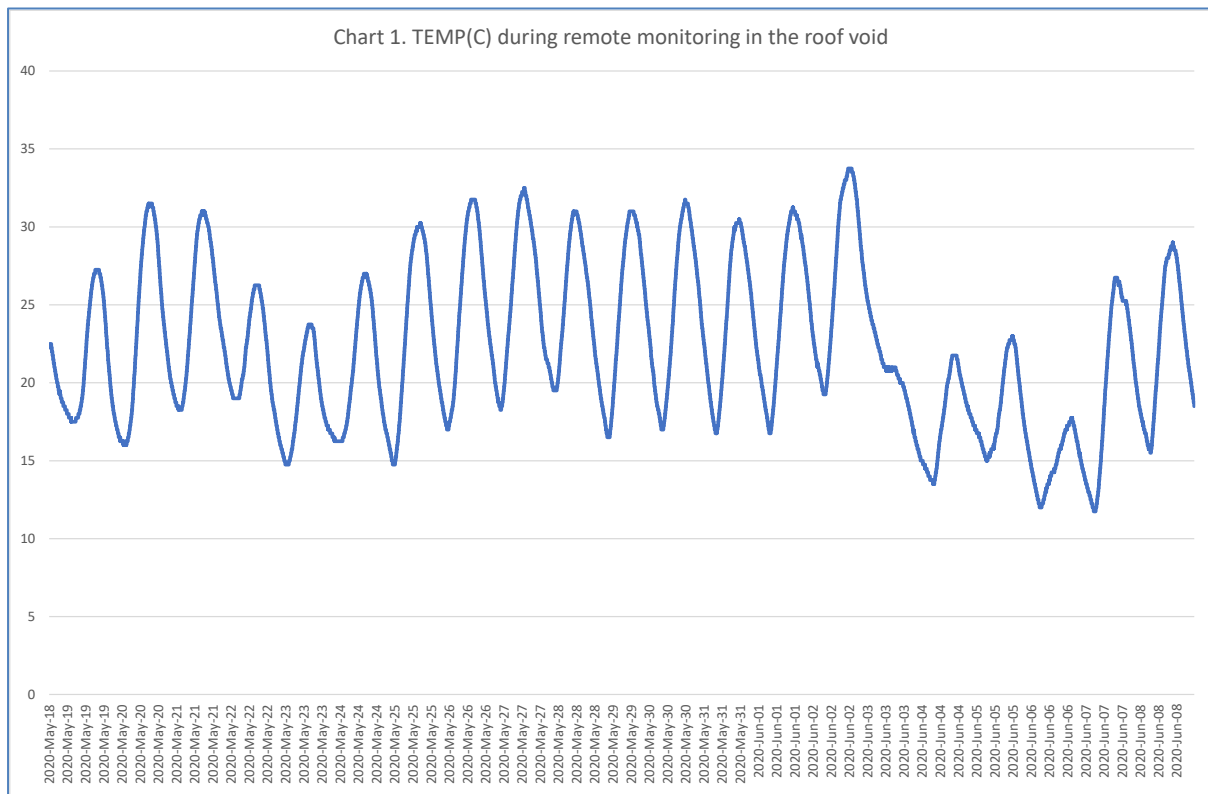
Completed on 26th June 2020.

During the survey one Serotine bat (22:07) emerged from a roof tile below the northerly chimney on the south west roof (Plan 4).

Weather conditions were good for bat activity and bats were present in the vicinity of the site. The first bat recorded in the area was a Serotine at 22:01. Occasional common pipistrelle and Serotine were observed foraging around the building.

3.2. Remote Monitoring

The remote monitor functioned correctly from 18th May to 25th June 2020 in the roof void of the house. The temperature during remote monitoring was suitable for good levels of bat activity and is given in Chart 1. No bat calls were recorded in the roof during the monitoring period.



3.3. Summary of bat survey results, interpretation and evaluation

Species, numbers of bats, roost locations, roost descriptions and interpretation, conservation significance (Mitchell-Jones, 2004) and roost value (Wray et al, 2010) are summarised in Table 3 and Plan 5.

Table 3. Summary of results

Species and numbers	Roost type	Structure reference	Roost location	Roost Conservation significance (Mitchell-Jones, 2004)	Roost Value (Wray et al, 2010)
1 x Serotine	Used frequently, non-breeding roost, summer roost, day roost	4 Lotts Avenue	In association with the chimney	Low to moderate	County importance



Plan 5. Existing plan with roosting zone of Serotina outlined in red.

4. Assessment

4.1. Survey constraints

The initial assessment and emergence surveys were completed at an optimal time for such surveys (Collins, 2016).

All areas of the building could be readily observed during this emergence survey and all equipment functioned correctly for the period of the survey.

It is the professional opinion of the surveying ecologist that the initial bat assessment in combination with the bat emergence survey provides sufficient information in relation to bats to allow the decision-maker to determine the planning permission. Further survey work would not make any material difference to the information provided.

4.2. Assessment of potential impact on bats

A single Serotine bat is day roosting in association with the chimney at site. Works would not harm or injure this bat due to separation distance. In addition, the new extension will not lead to the loss of this roosting location nor access into it.

Natural England have recently questioned a number of projects where low-level disturbance was the only impact. The definition of disturbance under the Conservation of Species and Habitat Regulations 2017 concerns an activity 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.

The proposed development would not impact this Serotine bat in a way that would result in a disturbance offence, and as such licencing is not required. Simple mitigation is recommended.

4.3. Legislation

Bats

Bats species and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (as amended). They are identified as European Protected Species. Under these laws it is an offence to:

- capture, kill, disturb or injure bats (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (even accidentally);
- obstruct access to their resting or sheltering places (on purpose or by not taking enough care); or
- possess, sell, control or transport live or dead bats, or parts of them.

Seven species of bat are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these species to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

These seven bat species are barbastelle, Bechstein's, noctule, Soprano pipistrelle, brown long-eared, greater horseshoe and lesser horseshoe and are the subject of National and Local Biodiversity Action Plans.

Activities that can affect bats (from GOV.UK)

Activities that can affect bats include:

- renovating, converting or demolishing a building
- cutting down or removing branches from a mature tree
- repairing or replacing a roof
- repointing brickwork
- insulating or converting a loft
- installing lighting in a roost, or outside if it lights up the entrance to the roost
- removing commuting habitats such as hedgerows, watercourses or woodland
- changing or removing their foraging areas
- using insecticide
- treating timber

5. Recommendation and mitigation

If the proposed works should be carried out to comply with the following mitigation measures.

5.1. Non-licenced working

Works supervision

Prior to the start of work, site staff will be briefed on the protected status of bats and what to do if a bat is unexpectedly encountered.

The licenced ecologist will remain onsite until all works likely to affect the existing roof covering have been completed.

References

Collins, J. (ed.) (2016)) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Survey Trust, London. ISBN-13 978-1-872745-96-1