



Urban Tree Experts

BS5837 – Tree Surveys – Ecological Consulting

PRELIMINARY ECOLOGICAL APPRAISAL (BATS) AT 11 YARNTON CLOSE CAVERSHAM



**Prepared for:
Mr A Mukherjee
11 Yarnton Close
Emmer Green
Reading
RG4 8UW**

13th March 2018

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Unit H Bridge Farm
Reading Road
Arborfield
Reading

Berkshire RG2 9HT

Tel: 0118 976 2904

Mobile: 07557 982091

Email: info@batsurveys-uk.com

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The validity of this report ceases at the prescribed time limit or after twelve months from the site inspection, or if the site conditions change due to unspecified works that affect the site whichever is the sooner.



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Executive Summary

Urban Tree Experts was commissioned by Mr A Mukherjee to conduct a preliminary ecological appraisal (bats) of 11 Yarnton Close, Emmer Green, Reading RG4 8UW. This is to support a forthcoming planning application to Reading Borough Council.

The site visit was carried out on Wednesday 13th March 2018 at 9.30am, during daylight hours. An internal and external inspection of the property and garage took place to look for signs of bats.

The preliminary ecological appraisal (bats) comprised a detailed search of the interior and exterior of the property and garage for bats, signs of bats and features suitable for use by roosting bats. This includes droppings, internally or externally, scratch marks, rubbing and staining at exit holes, live or dead bats and other features such as missing tiles, this list is not exhaustive.

The property and garage are both in a good condition. Externally there was no evidence of bats. Internally, with the loft of the property, there were no bats however we observed the desiccated remains of bat droppings on the inside of the northern gable end wall and on the ceiling beneath the wall. The droppings were sent to Warwick University for DNA analysis, the results of which were inconclusive, and we believe this is due to the age (degradation of the DNA) of the droppings, a copy of the results are included at Appendix 1. It is concluded that bats have, historically, used the building to roost but that improvement works to the fascias and soffits, complete in the recent past, may have sealed access points and that bats have not used the building in the last two years.

The building has been used as a roost however, it has low potential for bats to roost and the proposed work has a low risk of disturbing bats therefore no European Protected Species License (EPSL) is required. There remains a low risk that bats may use the building to roost and therefore in line with best practice guidelines, one dusk emergence or dawn return to roost survey is recommended to assess the current status of roosting bats within the building, in order to inform appropriate mitigation for the proposed works.



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1. Introduction

1.1 Instruction

Urban Tree Experts was instructed by Mr A Mukherjee to conduct a preliminary ecological appraisal (bats) of 11 Yarnton Close, Emmer Green, Reading RG4 8UW to support a forthcoming planning application to Reading Borough Council.

1.2 Aims and Objectives

The preliminary ecological appraisal (bats) is designed to:

- Identify the presence/likely absence of bats within the buildings.
- Provide information on the status of bats using the buildings (currently or previously).
- To add confidence where no bats are found, or to categorise the nature of a roost where evidence of bats are found.
- To establish whether further surveys, mitigation or a European Protect Species Licence (EPSL) is required.

The preliminary ecological appraisal (bats) and report writing were carried out in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition) (Bat Conservation Trust, 2016).

1.3 Proposed Works

The survey was commissioned in connection with a forthcoming planning application to Reading Borough Council for the construction of a side extension to the existing property following demolition of the garage.

1.4 Surveyor Background and Experience

The preliminary ecological appraisal for bats and report was completed by Simon Holmes CEnv. He holds Class 3 (CL19) and 4 Bat (CL20) Licenses (Nos. 17637 and 17638) and a Science and Education license (SCI29096). He has 27 years' experience of carrying out bat surveys and bat conservation work and has attended training courses on bat surveys, bat call analysis and bat identification run by the Bat Conservation Trust, Wildwood Ecology and local bat groups.

2. Legislation and Planning Policy

2.1 Legislative Background

All species of British bat are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981, as amended. Under this legislation it is an offence to kill or injure a bat or interfere with any roosting or resting site. A bat roost is interpreted as "*any structure or place used for shelter or protection*" whether or not bats are present at the time. A summary of the main legislation and planning considerations are included at Appendix 2.

Seven species of bat are also Species of Principal Importance for nature conservation in England under Section 41 of the Natural Environment and Rural Communities Act 2006. This places a duty on all government departments to have regard for the conservation of these species and on the Secretary of State to further, or promote others to further, the conservation of these species.



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3. Site Location and Description

3.1 Site Location

The property is located at Grid Reference SU 72199 76954, see Figure 1 below. An overview of the immediate area is shown on Figure 2, courtesy of Bing maps.

Figure 1. 11 Yarnton Close, Emmer Green highlighted.



Figure 2. 11 Yarnton Close, Emmer Green, overview of the immediate area.





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3.2 Site Description

The application site is set in an urban area of Emmer Green, to the north of the urban conurbations of Caversham and Reading. The site comprises a detached property with detached garage. The rest of the application site comprises a front driveway, a small front garden and a rear garden, laid mainly to lawn with a single tree, see Figure 3 below. The site itself offers limited foraging and commuting habitat for bats.

Figure 3. Rear garden, 11 Yarnton Close, Emmer Green. 13.03.18



4. Survey Methodology

4.1 Pre-Survey Data Search

Due to the sub-urbanised area, the small size of the development and the very local impact that will occur, no data was sought from local records centres. Google Earth and MAGIC maps (magic.defra.gov.uk) were used prior to the survey to determine the suitability of the surrounding habitat to support roosting bats and to identify any statutory designated sites within 2km of the site.

To the north, south and west are properties of similar styles and sizes. 100 metres to the east is Clayfield Copse, a Local Nature Reserve (LNR) together with the open spaces of Caversham Amateur Football Club and Caversham Park Tennis Club. Further west is Reading Golf Club and to the south is the River Thames and the marina at Sonning Eye. These areas provide good roosting, foraging and commuting habitats for bats however, there is limited ecological connectivity from the site to these areas.



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The property is situated in an area of Outstanding Natural Beauty – the Chilterns. Clayfield Copse, a (LNR) lies within 100 metres of the proposed development site (Magic Maps 2017). A search of the Magic interactive website indicated that four EPSL's for bats were granted within 2km of the proposed development site, the details of which are provided in Table 1 below.

Table 1. EPS Licence for bats within 2km of the site

EPSL reference	Licence start date	Species on licence
EPSM2013-6025	2013	Brown long-eared bat
EPSM2012-4727	2012	Common pipistrelle bat Soprano pipistrelle bat Brown long-eared bat
EPSM2011-3175	2011	Common pipistrelle bat
EPSM2012-4078	2012	Brown long-eared bat Daubentons bat Natterer's bat

4.2 Daylight Survey

A preliminary ecological appraisal (for bats) of 11 Yarnton, Emmer Green, Reading RG4 8UW was carried out by Simon Holmes on Wednesday 13th March 2018 at 9.30am. The weather conditions for the survey were dry and sunny with a temperature of 13 degrees. Equipment used included a high-powered torch, a digital and pole camera and a ladder.

During the preliminary ecological appraisal (bats) an internal and external inspection of the buildings was carried out to identify any signs of occupation by bats and features that could offer potential roosting sites following standard survey guidelines. Features investigated included:

- Construction of the buildings – soffits, loft space, tiles/slates, lead flashings etc.
- Building condition – structure of roof and walls.
- Internal conditions – microclimate stability, draughts etc.
- Access points – potential entry and exit points for bats.
- Roosting points – cracks and crevices, between underlay and roofing tiles/slates.

Field signs that would indicate the presence of bats were searched for. These included:

- Bat droppings on the floor and walls of the buildings.
- Feeding remains (particularly butterfly and moth wings).
- Evidence of urine and/or oily staining around possible roost entrances.
- Presence of areas cleared of cobwebs.
- Where a breathable roofing membrane has been fitted staining on the membrane may suggest use by bats.
- Odour can sometimes suggest the present of bats.
- Squeaking and chattering can reveal bats roosting between the tiles and roofing underlay.

Buildings or structures with no bat roosting potential and that were unsuitable for roosting bats were not inspected in detail.



4.3 Constraints

The bitumen felt lining of the loft tiles restricted a full inspection. Full access to the site during the visit was made possible by the client.

5. Survey Findings

5.1 External Inspection

The external features of the buildings were examined for signs described in section 4.2. Windowsills, exposed features around the windows, fascias and walls were inspected for any evidence of bat droppings or staining.

The property is a detached, brick built house and detached brick garage with flat bitumen roof, both of which are in a good condition externally. The main roof of the house is pitched and covered in composite, close fitting tiles, see Figure 4 below. A previously completed front extension added a flat rooved dormer window, Velux window together with roof over a car port, see Figure 5 and 6 on page 9. The hanging tiles on the dormer are close fitting and the bitumen flat roof is in good condition, see Figure 5 on page 9 and Figure 7 on page 10.

The detached garage is situated behind the car port, see Figure 6 on page 9. The uPVC windows, fascia's and soffits are in a very good condition with no gaps, see examples at Figure 7 and 8 on page 10. The verges are in a fair condition, see Figure 8 on page 10.

The garage has a flat, bitumen roof with uPVC fascia's which are in good condition, see examples at Figure 9 and 10 on page 10.

No bats or evidence of bats was recorded during the external inspection of the house and garage. Potential access and roosting opportunities for bats is restricted due to the refurbishment of the roof in the recent past.

Figure 4. Close fitting roof and ridge tiles, 11 Yarnton Close, Emmer Green. 13.03.18





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Figure 5. Front dormer and Velux, 11 Yarnton Close, Emmer Green. 13.03.18



Figure 6. Roof over car port, 11 Yarnton Close, Emmer Green. 13.03.18





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Figure 8. Close fitting hanging tiles, 11 Yarnton Close, Emmer Green. 13.03.18



Figure 8. Close fitting uPVC fascias and soffits, 11 Yarnton Close, Emmer Green. 13.03.18





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Figure 9. Bitum flat roof over garage, 11 Yarnton Close, Emmer Green. 13.03.18



Figure 10. Close fitting bitumen and uPVC fascias on garage, 11 Yarnton Close, Emmer Green. 13.03.18





5.2 Internal Inspection

An internal inspection of the roof void within the main property and garage was undertaken and examined for any signs of bats (as described in section 4.2).

The loft of the main building was accessed via a hatch on the first floor using a telescopic ladder. The loft was lit, partially boarded and insulated, see Figure 11 below. The tiles were lined with bitumen felt (Figure 12 on page 13), which was in good condition.

Decomposed bat droppings were observed on the breeze block wall forming the northern gable end wall, see Figure 13 on page 13. A sample of the droppings was sent for DNA analysis, there was insufficient DNA for analysis, see Appendix 1. There are no obvious access points for bats internally.

Internally, the garage was cluttered with no loft space, see Figure 14 on page 14. The garage roof is open and is wood lined and does not afford any roosting potential for bats.

No bats were recorded within the main house and internally the garage has a low potential to support roosting bats.

Figure 11. Example of loft space, 11 Yarnton Close, Emmer Green. 13.03.18





Figure 12. Example of bitumen lining. 11 Yarnton Close, Emmer Green. 13.03.18



Figure 13. Example bat droppings. 11 Yarnton Close, Emmer Green. 13.03.18





Figure 14. Garage interior, 11 Yarnton Close, Emer Green. 13.03.18.



6. Evaluation

The bat roost potential of the features within the site has been assessed with reference to the criteria laid out in the Bat Mitigation Guidelines (Mitchell-Jones, 2004). These criteria are listed on page 15 with the features **highlighted in bold**.

The likelihood of bat roosts being present will be higher where structures:

- are of a pre-20th Century construction;
- are in a lowland rural setting;
- **have woodland**, mature trees, species-rich grassland **and/or water nearby**;
- have large dimension roof timbers with cracks, joints and holes;
- have numerous crevices in stonework and structures;
- **have an uneven roof covering with gaps, though not too draughty**;
- have hanging tiles or roof cladding, especially on south-facing walls;
- **have a roof warmed by the sun**;
- are disused or little used; largely undisturbed;
- provide appropriate hibernation conditions, such as abandoned mines, tunnels, kilns, or fortifications; or
- Recent or historical records of bats on the site, or **bat roosts in the general area**.



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The likelihood of bat roosts being present will be lower where structures:

- **are in an urban setting with little green space;**
- are subject to heavy disturbance (constant movement due to draughts and noise, also unstable microclimate);
- **have a small, cluttered roof void (particularly for brown long-eared);**
- are of a modern construction with few gaps or crevices that bats can fly or crawl through (though pipistrelle bats may still be present);
- are comprised of prefabricated steel or sheet materials; (some sections);
- are active industrial premises.

Please note that the above list provides generic screening criteria only and there are exceptions to consider.

7. Conclusions

7.1 Interpretation

There were no live or dead bats recorded during the survey, but the presence of droppings internally provides a high level of confidence that bats have historically used the building for roosting. The low number of droppings and location support the theory that the loft was used as a day roost for a low number of bats (<5). The building has a low potential to support roosting bats following repairs (re-pointing). Gaps remain in the roof and therefore further survey effort is required.

Based on the Bat Workers Manual and the Bat Surveys Good Practice Guidelines, it is recommended that one dusk emergence and/or return to roost survey are undertaken on the building between May and August, to assess the current status of roosting bats, in order to inform appropriate mitigation for the proposed works. Two surveyors will be required, in order to cover the entire building and all the potential roost locations.

If bats are recorded roosting during the survey two further activity surveys and an EPSL for bats will be required in order for the proposed development to proceed lawfully. If bats are not observed roosting within the building during the activity survey, the building works can proceed without the need for a bat license given the low impact of the proposed development provided that a method statement is prepared and implemented as part of any planning conditions.

7.2 Contingency Plan

If, for whatever reason, there is a time delay of greater than 12 months between this survey and the commencement of work, then the survey should be repeated as the condition of the building may have changed and become more suitable to support roosting bats.



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8. References

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

HM Government (2017) Conservation of Habitats and Species Regulations.

HM Government (1981) The Wildlife and Countryside Act.

HM Government (2006) Natural Environment and Rural Communities Act.

Mitchell-Jones, A.J. & McLeish, A.P. (1999). Bat Workers' Manual (2nd Edition). Joint Nature Conservancy Committee, Peterborough.

9. Queries

Any queries regarding this report should be addressed, in the first instance, to Urban Tree Experts:

Telephone: 01189 762904
Fax: 01189 761168
Email: info@batsurveys-uk.com

Urban Tree Experts
Unit H, Bridge Farm
Reading Road
Arborfield
Berkshire RG2 9HT

Simon Holmes CEnv
Consultant, Urban Tree Experts
Natural England Licence C137073



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APPENDIX 1

22 April 18

Re: Species Identification Results for Katie, Tree Surveys

Job number 11600, received 27 March 2018

Sample labelled: 11 Yarnton Close sample 1

PCR amplification unsuccessful.

Unfortunately, our analysis of this sample failed. We normally re-attempt the analysis up to three times depending on the availability of guano sent. There are usually three possible reasons for sample failure:

1. DNA degradation has occurred to an extent beyond which we can detect it using PCR technology.
2. The sample might have an unusually high content of inhibiting substances causing enzymatic failure in the analysis.
3. The sample might not have been bat/other target species.

Without further data we are not in a position to judge which of these possibilities is more likely correct. We are sorry to not have been able to identify this sample for you, and we make no charge for the attempt.

Best regards,

Robin Allaby
Associate Professor.

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

Professor Robin Allaby

School of Life Sciences,
Gibbet Hill Campus,
University of Warwick,
Coventry CV4 7AL
Tel: 02476575059
Fax: 02476574500
Email: r.g.allaby@warwick.ac.uk



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APPENDIX 2

In summary, the legislation combined makes it an offence to:

- Intentionally or recklessly damage, destroy or obstruct access to a structure or place used for shelter by a bat.
- Intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate.
- Intentionally or deliberately kill, injure or take any bat.

Planning Considerations:

Government guidance to Local Planning Authorities stipulates the need to consider biodiversity and protected species during the consideration of planning applications. The NPPF makes clear that the planning system should help minimise the impacts that development can have on biodiversity and provide net gains in biodiversity where possible. In addition, the ODPM Circular 04/2005 states *“It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision”*.

Policy CS36 of the Reading Borough Core Strategy states *“Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes. On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that: -*

- i. The need for development clearly outweighs the need to protect the value of the site; and*
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided”*.

Developments that compromise the protection afforded to bats or roosts under the provisions of the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 will require a European Protected Species (EPS) licence from Natural England (NE).

NE, the government’s statutory conservation advisory organisation, is responsible for issuing EPS licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations.

Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:

- Reg 44(2)(e) – the derogation is “in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”.
- Reg 44(3)(a) – there is “no satisfactory alternative” to the derogation.
- Reg 44(3)(b) –the derogation is “not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range”.

Tests (a) and (e) can be met with the issue of planning permission for the proposed works. Test (b) is determined by NE’s ecology department that requires the development of a suitable mitigation strategy that would ensure that any bats present on site, are retained at the same population level or better.