

Bat Survey Report Phase 1 & 2

1 Copse Way, Finchampstead, RG40 4EJ

Surveys conducted between May and June 2022

Document Control Sheet

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SUMMARY

An internal and external daytime inspection for evidence of bats and bat roosting potential was conducted by ecologist Lisha Price of Plan Ecology at 1 Copse Way, on the 5th of May 2022.

The proposed works seek to add a new double storey extension to the front of the property where there is currently a single storey garage.

The Site consists of a brick-built house with an attached garage and back garden. It is located in a residential area among similar houses.

The building was carefully inspected, and the potential features were examined in the accessible spaces using an endoscope. Bat roosting potential was identified in the form of the loft space, flashing around the chimney and the wooden soffits on the house. The bat roosting potential was assessed according to the scale negligible, low, moderate, or high and the house was deemed to have high bat roosting potential with a confirmed roost present.

Approximately 100 bat droppings were found inside the loft of the main house during the visit conducted on 5th May 2022. A sample of droppings was sent to Warwick University and was identified as Brown long eared bat.

Three bat activity, dusk and dawn, surveys were carried out during optimal weather conditions over a period of about 5 weeks to illustrate the use of the building as a bat roost over a period of time. Surveys needed to take place between May and September, with two surveys during the bat maternity period May to August.

A total of one bat access point and one roosting area were identified during the survey, consisting of:

A day roost for one brown long eared bat was recorded in the main loft space of the house and was recorded emerging from under the roof near the gutter line on the South elevation of the main house.

As the planned works will not affect this part of the building and the roost and its access will not be altered in any way, as the loft will not be opened up into the extension, no further surveys or licencing are required. Should any plans be altered then this case will need to be reviewed by a qualified ecologist. **No works which would alter the loft space of the house or affect the access on the south side of the house should take place without an ecologist being consulted. No bats were found to be roosting in the garage and works to the garage can proceed without any precautions for bats.**

It is recommended that works only take place in the daytime to avoid any light or noise disturbance to bats or birds which may be nesting or foraging nearby.

Biodiversity Enhancements of a bat brick and bird nesting brick in the new extension have been advised.

1. INTRODUCTION

1.1 Site Description

1 Copse Way, Finchampstead is a detached brick-built house with an attached garage and back garden. It is located in a residential area among similar houses.

1.2 Proposed works

The proposed works seek to add a new double storey extension to the front of the property removing the single storey garage.

See APPENDIX 3 for Proposed Elevations

1.1 Aims of the survey

A Phase 1 bat survey was carried out with the aim to look for evidence of bats roosting and for the presence of structures within the buildings which hold bat roosting potential. Bat roosting potential was identified, and Phase 2 emergence and dawn surveys were there carried out.

1.2 General information about bats and buildings

Loft spaces can potentially be utilised by bat species such as e.g. Brown Long-eared bats or Serotine bats which are known to commonly roost inside loft spaces. This can generally be discovered via droppings inside the loft as the droppings will stay protected from weather elements.

External features of the building can potentially be used as roosting sites by e.g. Pipistrelle bat species (*Pipistrellus* spp). Pipistrelle bats are the most common bats out of the British species and they are known to almost exclusively roost inside buildings utilising areas such as cavity walls, soffits and fascia boards, and between tiles and roofing felt. It is not practical to carry out a full physical examination of such building features, which is why activity surveys must be done during summer months (May-September) when the bats are fully active.

Access points of 1-2 centimetres only are used by bats to enter and exit their roosting sites. Most buildings will have gaps of such size in roof areas as ventilation of the roof void would otherwise not be possible.

2. METHODOLOGY

The surveys were undertaken in accordance with the methods described in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn), Bat Conservation Trust (BCT).

2.1 External and internal inspection - Phase 1

The building was surveyed during the daytime on 5th May 2022 by Lisha Price (Natural England bat licence No. 2015-11503-CLS) of Plan Ecology. Lisha is an experienced ecologist with over fifteen years in the industry.

The building was inspected for evidence of bats in the form of live or dead bats, droppings, urine staining and insect feeding remains such as moth and butterfly wings. A careful visual search using a Clulite torch was conducted of the loft space. An endoscope (Ridgid) was used for spot checks of internal and external gaps. The exterior of the building was surveyed for droppings on walls and window ledges.

2.2 Bat roosting potential – Phase 1

The building was examined internally and externally to identify structural features that hold bat roosting potential.

The bat roosting potential was assessed according to the scale negligible, low, moderate, high or confirmed:

Negligible: Negligible habitat features on site likely to be used by roosting bats. For example; a simple wooden garden shed, a corrugated iron barn or precast concrete modular garage may fit this category.

Low: A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost Sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).

Moderate: A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.

High: A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Confirmed: This category is used where evidence of bats such as live or dead bats or bat droppings are present, or where there are records of a bat roost in the building.

2.3 Emergence survey methodology - Phase 2

Emergence surveys of the building were conducted by Myfanwy Price (bat licence 2019-40496), Hayley Johnstone and Lisha Price (bat licence 2015-11503) of Plan Ecology Ltd on 19th May and 2nd June 2022. The surveys started 15 minutes before the official sunset and were completed 1½ hour after sunset. Bat passes were recorded with EchoMeter Touch bat detectors. Infrared cameras (Sony AX53) and associated equipment was used to assist the surveys. A series of large infrared lights are used to light up areas for the camera once it is dark enough to use night mode. Each camera rig is also set up with a detector this allows the bat calls to be assigned to bats seen on the camera and provide more coverage and information on bats using the Site.

2.4 Dawn survey methodology - Phase 2

A dawn survey of the building was conducted by Myfanwy Price and Lisha Price of Plan Ecology Ltd on 19th June 2022. The survey began 2 hours before official sunrise time and finished 15 minutes after. Bat passes were recorded with EchoMeter Touch bat detectors. Dawn surveys, in general, provide a better overview of a building as the morning light increases the visibility of any bats flying around to enter their roost, and the bats tend to spend longer time on re-entry than they will on emergence. The bats may do a “swarming behaviour” in the morning just outside of their roost access point. Infrared cameras (Sony AX53) and associated equipment was used to assist the surveys. A series of large infrared lights are used to light up areas for the camera once it is dark enough to use night mode. Each camera rig is also set up with a detector this allows the bat calls to be assigned to bats seen on the camera and provide more coverage and information on bats using the Site.

2.5 Weather conditions

This information was taken from the BBC Weather online forecast for Finchampstead, to illustrate that the survey was conducted during suitable weather conditions. Bats are generally fully active in the months of May - September at temperatures above 10°C if there are favourable weather conditions such as no strong winds (less than 15 mph) and no overnight rain.

Survey date	Sunset/ Sunrise	Weather 22:00/04:00	Temp	Wind speed	Humidity
19 th May 2022	20:54	Mostly cloudy	15°C	7 mph	59%
2 nd June 2022	21:11	Slightly cloudy	15°C	5mph	68%
19 th June 2022	04:46	Cloudy	11°C	9 mph	85%

2.6 Sound Analysis

The recordings made during the surveys were analysed on kaleidoscope software. All bat call recordings were compared to published reference material such as British Bat Calls Jon Russ (2012) and to a private reference library of previous recordings made from known bat species.

3. RESULTS

3.1 External and internal inspection results – Phase 1

Bat roosting potential: The building was carefully inspected, and the potential features were examined in the accessible spaces using an endoscope. Bat roosting potential was identified in the form of the loft space, flashing around the chimney the wooden soffits on the house. The bat roosting potential was assessed according to the scale negligible, low, moderate, or high and the house was deemed to have high bat roosting potential with a confirmed roost present.

See APPENDIX 1 for photographs

Evidence of bats:

Approximately 100 bat droppings were found inside the loft during the visit conducted on 5th May 2022. A sample of droppings was sent to Warwick University and was identified as Brown long eared bat *Plecotus auritus*.

See APPENDIX 5 for DNA results.

3.2 Emergence survey results – Phase 2

19th May 2022: Common pipistrelle (*Pipistrellus pipistrellus*), Noctule (*Nyctalus noctula*), Brown long eared (*Plecotus auritus*) and Serotine (*Eptesicus serotinus*) bats were recorded and observed near the property

One brown long eared bat was seen emerging from the gutter line on the south elevation of the house.

2nd June 2022: Common pipistrelle bats were seen foraging and commuting nearby.

Dawn survey results – Phase 2

19th June 2022: Noctule and Whiskered myotis (*Myotis mystacinus*) bats were heard foraging in the area.

See Appendix 6 for activity survey and sound analysis results

3.3 Identified bat roosting areas

A total of one bat access point and one roosting area were identified during the survey, consisting of:

A day roost for one brown long eared bat in the loft space of the house with the access point at the gutter line on the south elevation of the house. No other access points were found and no bats were recorded using the garage area for roosting.

See Appendix 2 for position of bat access points and Appendix 4 for survey details.

4. ASSESSMENT

4.1 Constraints on study information

All accessible areas of the building could be surveyed without restrictions.

The phase 1 survey was carried out on one visit during the month of May. As such, seasonal variations could not be observed and potentially only a selection of all species that occur within the survey area will have been noted. The Survey therefore provides a general assessment of potential nature conservation value. However, it is considered that the combination of biological records from the desk study and the site visit provides an accurate representation of the various species and habitat types present or potentially present within the survey area.

Bat survey results are generally considered to be valid within a year of the survey date or until the next active bat season of May-September. The County Council Ecologists and/or Natural England may ask for updated surveys if the reports are older than one year.

4.2 Potential impacts on bat foraging and commuting habitat.

There will be no negative impact on bat commuting and foraging areas as the buildings will not increase significantly in footprint enough to have an effect.

4.3 Legislation and policy guidance

As population numbers have fallen, all bats and their roosts are protected under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.

Under this legislation it is an offence to:

- deliberately capture (or take), injure or kill a bat;
- intentionally, recklessly or deliberately disturb a bat (in relation to the Wildlife and Countryside Act 1981 (as amended) the offence applies whilst the species is occupying a structure or place which it uses for shelter or protection; in relation to the Conservation of Habitats and Species Regulations 2017 it applies anywhere);
- damage or destroy the breeding or resting place (roost) of a bat;
- possess a bat (alive or dead), or any part of a bat;
- intentionally or recklessly obstruct access to a bat roost;
- sell (or offer for sale) or exchange bats (alive or dead), or parts of bats.

Please refer to the original legislation for the definitive interpretation.

5. RECOMMENDATIONS

5.1 Discussion of results

A day roost for one brown long eared bat was recorded within the main loft space of the house with the access point for the bat on the roof line on the south elevation of the house.

As the planned works will not affect this part of the building and the roost and its access will not be altered in any way as the loft will not be opened up into the extension, no further surveys or licencing are required. Should any plans be altered then this case will need to be reviewed by a qualified ecologist. No works which would alter the loft space of the house or affect the access on the south side of the house should take place without an ecologist being consulted. No bats were found to be roosting in the garage and works to the garage can proceed without any precautions for bats.

5.2 Survey Effort

The building was deemed to have high bat roosting potential and three activity surveys were therefore carried in accordance with the Bat Conservation Trust Bat Survey Guidelines. These guidelines are used by Local Planning Authority ecology team during the planning application process to determine the level of survey effort that is needed.

Activity dusk and dawn surveys were conducted over a period of about 5 weeks to illustrate the use of the building as a bat roost over a period of time. The surveys were conducted during a time of the year when bats are generally fully active, and a bat maternity roost would be present and were done during optimal weather conditions.

As the planned works will not affect this part of the building and the roost will not be altered in any way, no further surveys or licencing are required. Should any plans be altered then this case will need to be rereviewed by a qualified ecologist.

Ecological Enhancement Opportunities

The National Planning Policy Framework (NPPF), issued in March 2012, states that the planning system should contribute to "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures". It also states that "opportunities to incorporate biodiversity in and around developments should be encouraged".

The master planning process should maximise opportunities for enhancement, in order to achieve a net increase in biodiversity. This is in accordance with the NERC Act (2006) which requires that "every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the

purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.” Recommendations for ecological enhancement are provided below....

- Minimising light and noise pollution on the site. In particular minimising the hours the construction site is lit.
- Bat brick on the exterior of the building can provide bat roost potential.
- Nesting bird potential can be enhanced with the inclusion of a bird brick.

Details of possible biodiversity enhancement have been illustrated in Appendix 6.

7. REFERENCES

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

Mitchell-Jones A J & McLeish A P (Ed.), 2004. *The Bat Workers' Manual*. JNCC, Peterborough, United Kingdom.

Mitchell-Jones A J. 2004. *Bat Mitigation Guidelines*, English Nature. Peterborough, United Kingdom.

Natural England and Countryside Council for Wales, 2007. *Disturbance and protected species: understanding and applying the law in England and Wales. - A view from Natural England and the Countryside Council for Wales*. United Kingdom.

Parsons, K *et al* (Ed.) 2007. *Bat Surveys - Good Practise Guidelines*. Bat Conservation Trust, London, United Kingdom.

Richardson, P. 2000. *Distribution Atlas of Bats in Britain and Ireland 1980-1999*. Bat Conservation Trust, London, United Kingdom.

Russ, J. 1999. *The Bats of Britain and Ireland*. Alana Books, Alana Ecology Ltd. United Kingdom.

APPENDIX 1: Photographs



Photograph 1: Front elevation with adjacent garage

Photograph 2: Front elevation of house.



Photograph 3: Side of brick built garage.

Photograph 4: Brick built garage.



Photograph 5: Wooden Soffits.



Photograph 6: Side elevation.



Photograph 7: Flashing around chimney.



Photograph 8: Rear elevation.



Photograph 9: Wooden barge board.



Photograph 10: Loft space.



Photograph 11: Loft space used for storage.



Photograph 12: Bat droppings in main loft space.



Photograph 13: Loft space.



Photograph 14: Loft space.



Photograph 15: Loft space.



Photograph 16: Loft space.



Photograph 17: Bat dropping in loft space.



Photograph 18: Large amount of bat droppings in loft space.



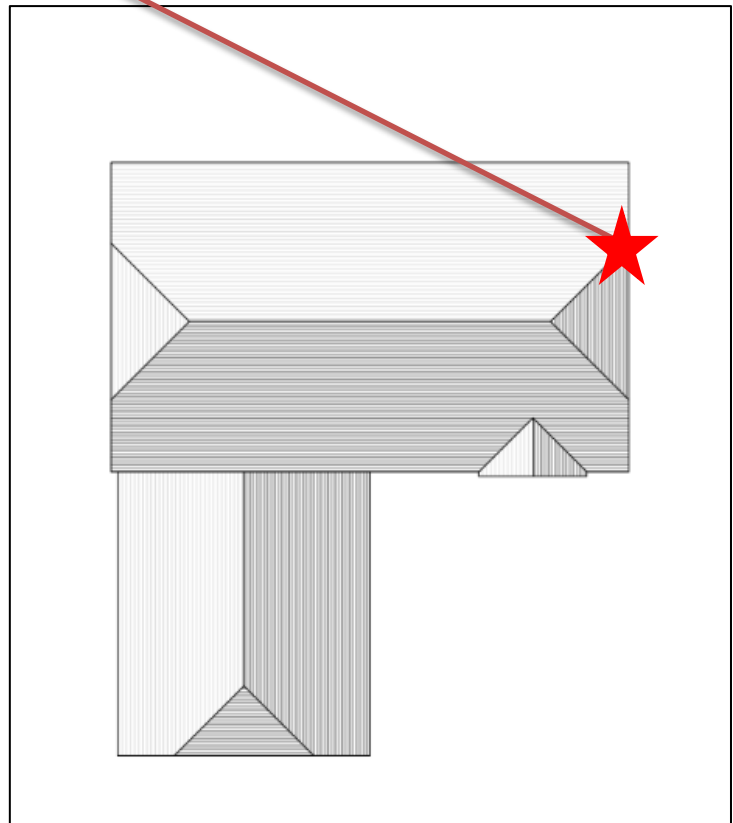
Photograph 19: Loft space.



Photograph 20: Bitumen lined loft space.

APPENDIX 2: Position of Bat Roosts

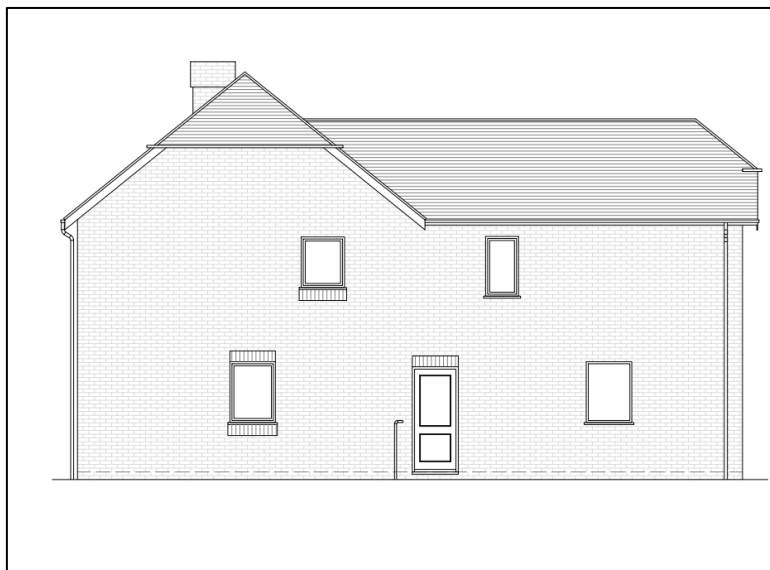
A day roost for one brown long eared bat in the main loft space. Access at the south side of the roof at the gutter line.



APPENDIX 3: Proposed Elevations



Front elevation



Side elevation



Rear elevation



Side elevation

APPENDIX 4: Activity Survey & Sound Analysis Results

Emergence 1 Survey 19th May 2022

Surveyors Myfanwy Price and Hayley Johnstone

Time	Species	Activity	Flight Direction
20:39	Survey start		
20:54	Official sunset		
21:46	Brown long eared	Emerged from gutter line of roof on South elevation.	
22:24	Survey Finish		

Emergence 2 Survey 2nd June 2022

Surveyors Myfanwy Price and Lisha Price

Time	Species	Activity	Flight Direction
20:56	Survey start		
21:11	Official sunset		
22:41	Survey end		

Dawn Survey 19th June 2022

Surveyors Myfanwy Price and Lisha Price

Time	Species	Activity	Flight Direction
03:01	Survey start		
04:46	Official sunrise		
05:01	Survey end		

APPENDIX 5: DNA Results



24 May 22

Re: Identification Results for Lisha Price, Plan Ecology

Job number 18029, received 11 May 2022

Sample labelled: Copse

PCR amplification successful. DNA sequence:

ACCAACATTGAAAAGTCCCACCCTCTCATAAAAATTATCAATGACTCATTGACTT
ACCTGCTCCCTCAAATATTTTCATCATGAGAACTTGGATCTCTCTAGGCA

Phylogenetic analysis identification: *Plecotus auritus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

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

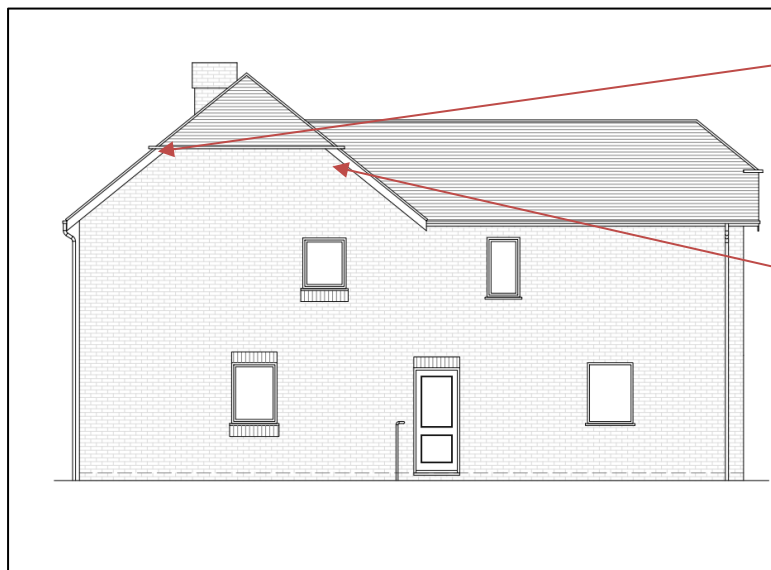
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APPENDIX 6: Biodiversity Enhancements

Woodstone Built in Open nest box



Forticrete Bat brick



Bat brick to be installed near roof line away from any lighting.

Nest box brick to be installed near roof line away from any lighting.