3 Heathside Close
Northwood
Hertfordshire
HA62EQ

Bat Survey Report

Report Date: 31st August 2021

Survey and Report by

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Report quality management and constraints

This report has been compiled by Dr Jennifer Jones MCIEEM of Jones and Sons Environmental Sciences Ltd. The report format follows standard guidance produced by the British Standards Institute (2013), Chartered Institute of Ecology and Environmental Management (2017) and Bat Conservation Trust (Collins 2016).

To achieve the study objectives the conclusions were based on the best information available at the time of the survey and within the limits prescribed by our client within the agreement contract.

It should generally be recognised that bat requirements change throughout the year. Roosts can be of a transient nature and bats may move from roost to roost. A single bat may use a large number and wide variety of roosts during a year. The survey therefore represents a 'snap shot' in time.

In the event of any significant delay in the development (for example over 18 months) an updated survey maybe required to ensure there has been no change to the report's conclusions

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A Executive Summary

This 2021 report documents the results of a dusk emergence survey at 3 Heathside Close, Northwood, Hertfordshire HA6 2EQ. (Ordnance Survey Grid Reference TQ 0873 9240)

There are proposals to convert the loft of the house to provide additional accommodation that potentially could impact on bats (protected species).

A previous daytime Preliminary Bat Assessment (documented in the Jones & Sons Environmental Sciences Ltd, 20th May 2021, 3 Heathside Close Bat Assessment Report) concluded that the house supports low suitability for roosting bats.

No signs of any use by bats such as bat droppings were found but features with the potential to be used by roosting bats were identified and any presence of bats could not be discounted. A dusk emergence survey was therefore recommended to ensure reasonable effort had been undertaken to have confidence in a negative result.

At the request of the owner of the property (Mr Kamal Shehata) ecologists (including holders of Natural England Bat Survey licences) from Jones and Sons Environmental Sciences Ltd undertook the bat survey on the 12th August 2021.

No bats emerged from the house and it can be concluded that the development will not impact on a known bat roosting site and therefore there are no restrictions to the development with regard to bats.

Although no bats emerged from the house, common pipistrelle bats *Pipistrellus pipistrellus* were recorded flying and feeding along the bordering trees. To ensure the garden habitats remain favourable for commuting bats it is recommended that the bordering trees and dark interconnecting bat flight corridors are retained.

Since bats were recorded flying across the site and roosts can be of a transient nature a cautious approach to the development is recommended. Although currently considered unlikely, in the event of bats or signs of bats being discovered at a future time all building works must stop and Natural England or a licensed bat ecologist consulted for advice.

Bats are always investigating for roosting opportunities. Therefore, if there is any significant delay in the building works (for example over 18 months), it may be necessary to repeat the survey to ensure no changes to the roost status of the building.

B Introduction

A bat emergence survey was carried out at 3 Heathside Close, Northwood, Hertfordshire HA6 2EQ. The survey focused on the house situated at central Ordnance Survey Grid Reference TQ 0873 9240.

There are proposals to convert the loft of the house to provide additional accommodation. An initial bat assessment of the house was undertaken on the 17th May 2021 and documented in the Jones & Sons Environmental Sciences Ltd (20th May 2021) 3 Heathside Close Bat Assessment Report. No bats or any signs of bat use were found during the external and internal (loft) inspection but a few potential bat access gaps and features providing roosting opportunities were identified and any presence of bats could not be discounted.

Applying the standard Bat Survey Guidelines (Collins 2016) for buildings of low roost suitability, the report recommended that an evening bat emergence survey be undertaken to determine any presence of roosting bats.

Bats are species protected under the Conservation of Habitats and Species Regulations (2017 as amended) and the presence of protected species is a material consideration in the planning process (National Planning Policy Framework 2021). A further bat survey is therefore required.

Jones and Sons Environmental Sciences Ltd undertook bat emergence survey on the 12th August 2021 at the request of the owner of the property (Mr Kamal Shehata).

The main objectives of the surveys were to:

- Undertake a dusk emergence survey of the house to identify any presence of roosting bats and determine the bat activity across the site.

- Determine any potential impact of the proposed works on the bat populations within the local area;

- If any potential impact is identified provide a mitigation strategy to ensure that bat populations are maintained at a favourable status within the local area and the building works comply with the legislation protecting bats.

The report includes: the qualifications and experience of the surveyors, methodology used, results of the dusk emergence survey and evaluation of the findings. The relevant legislation and tabulated weather and bat survey results are included within the Appendix.

C Survey Methodology

Surveyors and Experience

Ecologists from Jones and Sons Environmental Sciences Ltd undertook the bat emergence survey on the 12th August 2021. Personnel included:

Dr Jennifer Jones BSc PhD - a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), holder of Natural England Bat Survey Licences for 30 years and has held numerous standard EPS Mitigation Licences for several species of bat and is also a Registered Ecological Consultant with Natural England for Low Impact WML-CL21 Licences). For 10 years Dr Jones worked as a county ecologist advising Local Planning Authorities on protected species

Mr Adam Jones BSc MMedSci -an affiliate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holder of Natural England Bat Survey Licences. Adam has considerable experience of bat surveys and has held a bat survey licence for 15 years.

Miss Sarah Callow BSc MSc ecologist assisting Jones and Sons Environmental Sciences Ltd with several years' experience of bat surveys.

Ms Jessica Leslie–training with Jones and Sons Environmental Sciences Ltd with two years' experience of bat surveys.

Field Survey Methods

The surveys followed the Good Practice Guidelines published by the Bat Conservation (Collins, J. 2016).

The dusk survey was designed to watch for any bats emerging from the house, to determine the species using the site and also to assess the general bat activity in the area. Three models of detectors were used - a time expansion Petterssen D240, EM3 (frequency division and time expansion) and Echo Metre Touch 2Pro (3 detectors). Recordings of the bat sounds were made to allow subsequent computer analysis and critical identification of the bat species using Kaleidoscope and Song Scope.

Four observers watched for bat emergence with the assistance of hand-free radios that were used by the observers to communicate bat movements during the survey. Observers watched from the four corners of the house to ensure all elevations could be viewed. Observations began approximately 15 minutes before sunset and continued for 70 minutes post sunset when it was considered that any bats present would have emerged.

Light levels were monitored using a data logging light meter to measure lux levels and an electronic weather data logger was used for recording weather conditions during the evening survey.

Constraints/Limitations

No constraints were encountered during the survey. All elevations could be viewed and the survey was undertaken during the summer months with weather conditions suitable for bat activity being warm with no strong wind and no rain (see weather table in the appendix).

However, it should generally be recognised that bat requirements change throughout the year. Roosts can be of a transient nature and bats may move from roost to roost. A single bat may use a large number and wide variety of roosts during a year. The survey therefore represents a 'snap shot' in time.

D Survey Findings

The results of the evening survey and weather conditions on the 12th August 2021 are summarised below with further details given in the appendix.

Table 1: Dusk survey timings and weather conditions on the 12th August 2021

Timings (hours)	Temperature °C	Wind speed	Light levels	Comment
Start time 20:10 Sunset time 20:24 End time 21:34	Start 17 °C. Sunset 15.4 °C End 12.9 °C	Range 0 – 1.7 mph Beaufort Scale 1	Lux range Start 208 lux 0 lux at 21:02 End 0 lux	No rain warm

Table 2: Summarised dusk survey bat activity 12th August 2021

Bat Emergence	No bat emergence was observed from the house
Bats flying through the area.	Common Pipistrellus *Pipistrellus pipistrellus*
Common pipistrelle bat activity	The first bat was recorded commuting across the rear garden at 23 minutes post sunset. A small number of bats (minimum 2 bats seen on any one occasion) recorded feeding in the garden, mainly around the trees in the rear garden

Plan showing summarised bat activity 3 Heathside Close 12th August 2021

Common pipistrelle bat commuting

Common pipistrelle bat foraging

Common pipistrelle bat occasional activity

0 Observer locations

E Evaluation and Recommendations

3 Heathside Close, Northwood is located within a residential area with adjacent habitats assessed as being of moderate value for flying and foraging bats with good potential flight connectivity from the survey site to the wider area.

No bats emerged from the house during the dusk emergence survey on the 12th August 2021 but common pipistrelle bats were recorded commuting through the area and foraging along the bordering hedgerows of the property.

No signs of any bat use such as bat droppings were found during the daytime inspection (Jones & Sons Environmental Sciences Ltd, 20th May 2021, bat assessment report) and the assessment concluded that the house supports low suitability for roosting bats. Gaps under the red clay tiles provided opportunities for bats to access potential roosting sites in the roof structure and any presence of roosting bats therefore could not be discounted.

Standard Bat Survey Guidelines (Collins 2016) for buildings of low roosting suitability require a minimum of one dusk emergence survey to have confidence in a negative result. Since no bats emerged from the house, under suitable weather conditions, it can be concluded that the development will not impact on a known bat roosting site and therefore there are no current restrictions to the development with regard to bats.

Although no bat emergence was recorded, bats were recorded flying along the bordering trees and since bats may investigate new roosting opportunities, a cautious approach to the development is recommended. Although currently considered unlikely, in the event of bats or signs of bats being discovered at a future time all building works must stop and Natural England or a licensed bat ecologist consulted for advice.

If there is any significant delay in demolition (for example over 18 months), it may be necessary to repeat the survey to ensure no changes to the roost status of the building.

It is also recommended that the bordering hedgerows are maintained as dark habitats with no light spillage across to the bordering trees to preserve dark interconnecting flight corridors through the area. High light levels can disrupt bat flight paths and have an adverse impact on bats (Jones, J 2000; Bat Conservation Trust 2014).

Any external lighting required for security reasons should be low level downward orientated PIR LED lighting designed to direct light to where it is needed thereby avoiding any upward light spillage. Further information on designing lighting schemes to ensure minimal impact on bats is given in the Bat Conservation Trust and Institute of Lighting Professionals (2018) Guidance Note 08/18.

F References

Bat Conservation Trust (2014) Artificial Lighting and Wildlife

Bat Conservation Trust & Institute of Lighting Professionals (12 September 2018) Bats and artificial lighting in the UK. Guidance Note 08/18

British Standards Institution (2013) BS42020 Biodiversity-A code of practice for planning and development

Chartered Institute of Ecology and Environmental Management (2015) Guidelines for ecology report writing.

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

Department for Communities & Local Government (2021) National Planning Policy Framework.

HMSO (1981) The Wildlife and Countryside Act 1981. The Stationary Office Ltd, Norwich.

HMSO (2017 as amended) The Conservation of Habitats and Species Regulations 2019. The Stationary Office Ltd, Norwich.

HMSO (2006) The Natural Environment & Rural Communities Act

Jones, J (2000) The impact of lighting on bats

Jones & Sons Environmental Sciences Ltd (20th May 2021) 3 Heathside Close, Northwood, Bat Assessment Report

Mitchell-Jones, A.J. & A.P. McLeish (2004) The bat workers' manual. JNCC.

G Appendix

G1 Relevant Legislation and Policy

Relevant Legislation for Bats

All bats and their roost sites are protected by the Wildlife and Countryside Act 1981 (as amended) and through inclusion in Schedule 2 of the Conservation of Habitats and Species Regulations 2017. Amendments to the legislation means that legal protection for bats falls mostly under the Habitats and Species Regulations 2017 (2019 draft EU Exit amendment).

In England the legislation makes it illegal to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat which is likely to impair their ability to survive, breed, rear young or hibernate or significantly affect their local distribution or abundance,
- Incidentally or deliberately damage or destroy a breeding site or resting place of a bat.
- Possess, control, transport, sell, exchange or offer for sale or exchange, any live or dead bat or any part of a bat.

Resting places used by bats are known as bat roosts. Because bats tend to reuse the same roosts, the roost is protected whether or not bats are present at the time. Deliberately is interpreted as someone who, although not intending for example to harm a bat, performs the relevant action being sufficiently aware of the possible presence of bats. The Wildlife and Countryside Act additionally makes it an offence to:

- Intentionally or recklessly disturb a bat at a roost
- Intentionally or recklessly obstruct access to a roost.

Building works that would contravene the protection afforded to bats under the Conservation of Habitats and Species Regulations 2017 require an EPS Licence prior to the commencement of works. Natural England, under powers conferred by the Secretary of State, has authority to issue licences but only for certain purposes.

Policy

National Planning policies for England are set out in the National Planning Policy Framework (NPPF) updated on July 2021. The NPPF has a presumption in favour of sustainable development. In an environmental aspect sustainable development means developments should contribute to protecting and enhancing our natural, built and historic environment and, as part of this, help to improve biodiversity.

The NPPF states that the planning system should "minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity". To minimise impacts on biodiversity and geodiversity planning policies should "promote the preservation, restoration and re-creation of priority habitats,

ecological networks and the protection and recovery of priority species populations, linked to national and local targets".

In addition, the Natural Environment and Rural Communities Act (NERC) 2006 places a duty on all public bodies to promote and enhance biodiversity in all its functions. Section 40 of the Act states "Every public authority must, in exercising its functions, have regard, as far as is consistent with the proper exercise of these functions, to the purpose of conserving biodiversity". Special attention is paid to species included on the Government's list of species of principal importance that includes bat species.

G2 Tabulated Raw Data

Appendix Table 1: Bat Activity at 3 Heathside Close Northwood 12th August 2021

Time hours	Bat Species	Notes
20:10		Start of survey
20:24		Sunset
20:47	common pipistrelle	Bat in rear garden flew south to north along east side and then flew west
20:48-20:49	common pipistrelle	Bat feeding by trees rear garden
20:50-20:51	common pipistrelle	2 bats feeding around west hedge, 1 bat flew along trees east side to the front.
20:53-20:54	common pipistrelle	Bat feeding in rear garden (east side)
20:57-20:58	common pipistrelle	Bat feeding in rear garden
21:00	common pipistrelle	Bat feeding in rear garden
21:03	common pipistrelle	Bat feeding around trees rear garden west side then flew north towards the front
21:04	common pipistrelle	2 bats feeding around trees rear garden east side, circled up to extension roof and back to trees.
21:06	common pipistrelle	Bat flew rear garden east to west, circled around trees west side and flew south
21:08	common pipistrelle	Bat feeding trees rear garden
21:09-21:14		No bat activity
21:15	common pipistrelle	Bat detected front garden
21:16-21:24		No bat activity
21:25	common pipistrelle	Bat flew by trees rear garden
21:28	common pipistrelle	Bat detected briefly trees rear garden
21:29-21:34		No bat activity
21:34		End of survey.

Appendix Table 2: Weather at 3 Heathside Close Northwood 12th August 2021

16th August 2021	Lux	Wind Speed	Temperature	Relative Humidity
Sunset 20:22		mph	°C	%
20:02	208	0	17	62.9
20:07	652	1.2	16.3	64.2
20:12	463	1.7	15.9	65.3
20:17	328	0	15.6	65.9
20:22	198	0	15.4	66.6
20:27	111	0	15.1	67.5
20:32	62	0	14.8	68.6
20:37	29	0	14.5	70.3
20:42	12	0	14.4	70.5
20:47	5	0	14.1	71.6
20:52	2	0	14	72.2
20:57	1	0	13.7	73.2
21:02	0	0	13.5	74.4
21:07	0	0	13.4	75.5
21:12	0	0	13.3	76.6
21:17	0	0	13.2	77
21:22	0	0	13	77.2
21:27	0	0	13.2	77.2
21:32	0	0	12.9	77.6
21:34	0	0	12.9	78