

BAT EMERGENCE SURVEY

**36A RUSSELL ROAD,
MOOR PARK, NORTHWOOD, HERTFORDSHIRE**



Commissioned by: **Mr & Mrs D. Jolliffe**

Report Number: ASW/DJ/013/25/2021
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EXECUTIVE SUMMARY

1. During this follow-up bat emergence survey, three bat species were recorded foraging and commuting over the property at 36a Russell Road. These were common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*).
2. No bat roost was found to be present within the existing house at the application site during any of the bat survey visits.
3. Overall, bat activity was confined to mainly commuting across or near to the site from emerging elsewhere in the wider area, as well as general foraging in the gardens.
4. Based on this follow-up bat emergence survey, there will be no negative impact to the local bat populations from the proposed demolition works at the stated application site, as long as all recommendations within this report are strictly followed by both the client and all contractors.

1. INTRODUCTION

- A Bat Emergence Survey was undertaken at 36A Russell Road, Moor Park, Northwood, Hertfordshire HA6 2LR, during Spring 2021, for the client: Mr & Mrs D. Jolliffe.
- This bat survey was required due to the proposal to demolish the existing house and to replace with a new dwelling.
- This is a follow-up investigation to the previous Preliminary Bat Roost Assessment Report (ASW Ecology Ltd, April 2021).
- The main method used for this follow-up bat emergence survey, as well as the full results and the final recommendations can be found within this report.
- Both this bat survey and the report were undertaken and compiled by Mr Andrew S. Waller, Ecologist, ASW Ecology Ltd, with the kind help from an assistant.
- Mr Andrew S. Waller MSc BSc (Hons) MCIEEM, Director of ASW Ecology Ltd - has been a Consultant Ecologist since 1997, and has very extensive experience/knowledge of protected wildlife species/issues including bats, for which he is fully licensed to survey throughout England by Natural England for consultancy purposes (Bat Class 2 Licence Registration Number: 2015-15703-CLS-CLS). He also has Natural England survey licences for great crested newts and barn owls. He has been studying bats for 28 years and wildlife in general for 40 years. He is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and meets the requirements of being a Suitably Qualified Ecologist.

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2. METHODOLOGY

2.1 Bat emergence survey method

- During May to June 2021, two Bat Emergence Survey visits were undertaken at 36a Russell Road.
- Two bat emergence survey visits were needed to be undertaken at the stated building, so to adhere to current best practice bat survey guidelines by BCT (2016). Since the building had been previously identified as having Moderate bat roost potential.
- Two experienced bat surveyors, including a licensed bat ecologist, using Bat Box Duet bat detectors and Echo Meter Touch bat detector/recorders, were present on the stated bat survey visits. Two video cameras were also used at the house at dusk as well as static bat detectors so to provide robust coverage of the key features.
- The dusk based visits were undertaken in suitable weather conditions only, so there was the best chance of finding any possible emerging bats. The dusk visits started before sunset and lasted for up to 2 hours after sunset.
- The focus of this survey was to show if bats were present or not roosting at the building by searching for emerging bats; where any bat roost access points would be if bats were present; and if any notable commuting/foraging features were present adjacent to the structures.
- All results from this bat survey can be found in the next chapter of this report and a map showing all bat sightings is shown in Appendix 2.

2.2 Constraints

- Due to the commissioning of this bat survey, only the Spring period could be covered. This though is a standard constraint for any bat survey which can only investigate part of any year.
- The June to August period is important to bats since this is when maternity roosts are present and young bats will be born. Large roosts are sometimes present within structures, and can be very visible during bat emergence surveys. This survey was commissioned when such roosts will be forming soon, so was timed at the key time of the year for bats.
- As always though, without taking into account any further active surveying or monitoring, this study can only provide a “snapshot” of the presence of bats at the site during the period of this study. Please also note that any bat survey report is valid for one year only, as stated in the BCT bat survey guidelines (BCT, 2016).

3. BAT SURVEY RESULTS

3.1 Bat emergence survey

Bat emergence survey - visit 1 – 10/5/2021

Sunset time: 8.40pm

Weather: dry, mild, light breeze, light cloud (2/8CC)

Windspeed (max): 5mph

Inverts present: small flies, moths, mosquitoes

Temp (sunset): 12°C

Relative humidity: 58%

Bat Species	Time Noted	Location
Common Pipistrelle	9.31pm	Seen flying across the front drive from neighbouring property then to the rear garden
Common Pipistrelle	9.45pm	Over the rear garden
Common Pipistrelle	9.57pm	Heard at rear garden
Common Pipistrelle	10pm	Across front garden
Noctule	10.02pm	High over drive of house
Common Pipistrelle	10.08pm	Brief contact near house front. No further bats after this time to the end of the survey visit

Bat emergence survey - visit 2 – 2/6/2021

Sunset time: 9.10pm

Weather: dry, warm, calm, cloudy (8/8CC)

Windspeed (max): 0mph

Inverts present: small flies, moths, mosquitoes, beetles

Temp (sunset): 21°C

Relative humidity: 63%

Bat Species	Time Noted	Location
Soprano Pipistrelle	9.43pm	Near to the rear garden
Soprano Pipistrelle	9.48pm	Over the rear garden
Soprano Pipistrelle	9.51pm	Over front drive
Noctule	9.58pm	Over the site, flying high over the area, and not seen
Common Pipistrelle	10.01pm	Over front drive
Common Pipistrelle	10.05pm	Over the rear garden
Common Pipistrelle	10.10pm	Over the rear garden
Common Pipistrelle	10.11pm	Over front drive
Noctule	10.13pm	Over the rear garden area but not seen as flying high
Common Pipistrelle	10.13pm	Over front drive
Common Pipistrelle	10.18pm	Near rear garden
Common Pipistrelle	10.20pm	Over front garden
Common Pipistrelle	10.23pm	Near rear garden
Common Pipistrelle	10.25pm	Over rear garden

Common Pipistrelle	10.31pm	Near rear garden
Common Pipistrelle	10.32pm	Over rear garden and front drive too
Common Pipistrelle	10.40pm	Brief contact near front garden boundary. No further bats after this time to the survey end

4. CONCLUSIONS

4.1 Significance of the follow-up bat emergence survey results

- In summary, a total of three bat species were recorded foraging and commuting over the property at 36a Russell Road. These were common pipistrelle, which has more generalist habitat requirements, so can survive within a suburban environment, as well as soprano pipistrelle and noctule.
- Only a few noctule contacts were recorded so this was probably a commuting bat flying over local gardens to reach a feeding site.
- Common pipistrelle will roost in buildings, whilst noctule will mainly roost in trees, although can roost in structures on rare occasions it has been found.
- Soprano pipistrelle will roost in both houses and trees, and has a preference for foraging at waterbodies.
- There was no bat roost found to be present within the existing house at the application site during the bat survey visits.
- Bat activity was restricted to commuting and foraging over the rear garden as well as over the front drive. Bats were also noted over the neighbouring gardens.
- It will be the case that bats will be roosting in houses within the same road and at adjacent roads as well as trees, but well away from the application site.
- It is considered that there will be no negative impact to the local bat populations from the proposed demolition works at the stated application site.
- Please see the following chapter for the key recommendations for both the client and all site contractors to follow, in respect to the planned site works.

4.2 Impact assessment

In the absence of any mitigation measures or precautions, the following direct or indirect impacts from the proposed development works on bats at would now be predicted as:

DIRECT: No bat roosts were present at the existing house, so there cannot be any negative impact to the bat populations in the area due to the planned works. There is no risk of any bats being disturbed, injured or killed by the works, or any bat roosts to be damaged or lost. **Impact magnitude predicted: Nil**

INDIRECT: Since no significant bat foraging habitat or commuting routes are to be impacted or lost, without mitigation, there is a no risk of the loss of high quality bat related habitat or fragmentation of the local bat population due to the planned works at this site. **Impact magnitude predicted: Nil**

4.3 Summary of the legal protection of bats in the UK (Simplified summary only of the legislation – please see other texts for full details)

4.3.1 THE LEGAL PROTECTION OF BATS IN ENGLAND AND WALES

Introduction

All species of bats in England and Wales are protected by law. Their legal protection derives from two sources:

- the strict species protection provisions of the EU Habitats Directive as implemented in England and Wales by Part 3 of the Conservation of Habitats and Species Regulations 2017 (the “**2017 Regulations**”); and
- Part 1 of the Wildlife and Countryside Act 1981 (as amended).

Conservation of Habitats and Species Regulations 2017 (“2017 Regulations”)

The 2017 Regulations came into force on 30th November 2017. They replace the previously applicable regulations (Conservation (Natural Habitats, &c) Regulations 1994 and the 2010 Regulations) in relation to England and Wales. The 2017 Regulations are the principal means by which the EU Habitats Directive is transposed in England and Wales.

The Regulations contain a number of Parts which set out the protection to be afforded to “European Protected Species” (“EPS”), which includes all species of British bats. The list also includes other species which are rare on a European scale, such as great crested newts, otters and dormice.

Under the 2017 Regulations both bats themselves and their “breeding sites and resting places” (most commonly their roosts) are protected.

It is a criminal offence to do the following (note that this is not an exhaustive list of all offences but rather a list of offences which will be of most relevance to developers):

- a. to damage or destroy a breeding site or resting place of a bat (even if bats are not present at the time);
- b. to deliberately capture, injure or kill a wild bat;
- c. to intentionally or recklessly disturb a bat in its roost or to deliberately disturb a group of bats, in particular:
 - i. any disturbance of bats which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or
 - ii. any disturbance of bats which is likely to impair their ability to hibernate or migrate; or
 - iii. any disturbance of bats which is likely to affect significantly the local distribution or abundance of the species to which they belong;

- d. to have in one's possession or to control or to transport or to sell or exchange or offer to sell or exchange any live or dead bat or part of a bat which has been taken from the wild; or any part of, or anything derived from, a bat or any part of a bat; and
- e. to intentionally or recklessly obstruct access to a bat roost.

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of the company may also be prosecuted if the offence has been committed with their consent or connivance, or is attributable to their neglect.

Wildlife and Countryside Act 1981 ("WCA 1981")

The WCA 1981 protects a wide range of animals, plants and habitats in the UK. All British bat species are afforded protection under Part 1 of the WCA 1981, in addition to the protection they have under the 2010 Regulations.

As regards England and Wales the following offences apply to protect bats under the W&CA 1981:

- a. to intentionally or recklessly disturb any bat while it is occupying a structure or place which it uses for shelter or protection (s9(4)(b) WCA 1981);
- b. to intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection (s9(4)© WCA 1981);
- c. attempting either of the above (s18(1) WCA 1981).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of that company may also be prosecuted if the offence has been committed with their consent or connivance or is attributable to their neglect (s69(1) WCA 1981).

5. RECOMMENDATIONS

5.1 Best practice guidance – bats and development

- As a standard precaution only as per any development related site, the future demolition contractors should be fully aware of the legal protection of bats and what to do if an unexpected bat is found or suspected at the site during all works.
- This is especially relevant during any soft stripping works, where external/internal features may be removed by hand, such as roof tiles, ridge tiles, slates, fascias, soffit boxes, stonework, brickwork, timbers, roofing felt and lead flashing, for example.
- Bats and their evidence such as droppings can unexpectedly be present under such features and be completely hidden until accidentally uncovered.
- If any new bat evidence such as crumbly droppings composed of insect remains or an actual bat is seen, during any building related works, then such work must stop and a licensed bat consultant contacted immediately for urgent advice.
- Usually, late summer/early autumn e.g. late August/September/October or early spring e.g. April/early May, are ideally the best times to work on such structures, as this avoids both the main bat breeding season and the winter hibernation period.
- **However, since no bat evidence and no bat roosts have been found at the stated building at this property, there are no bat related constraints in regards to when the demolition related works can commence.**

5.2 Best practice guidance – breeding birds and development

- As per any development related site, the general advice is that no vegetation eg trees, bushes, shrubs, hedges, bramble scrub or dense ivy cover should be removed during the bird nesting season as all bird nests are fully protected by law, and this includes whilst a nest is being built by the adult birds. This also includes buildings that have been proved to have active bird nests present.
- If any nests are present within the proposed development footprint during the works phase, then these must be left alone until the young birds have fully fledged from the nest and no further breeding attempts are to take place.
- The bird nesting season in the UK, currently runs mainly from mid-January to September, but sometimes birds can start breeding before or after this period e.g. some resident birds can start building nests during the first half of January or earlier, including crows, magpies, feral pigeons and woodpigeons.
- Therefore, September to early January can be the best months for barn conversion works, although with a bird watching brief for any early or late nesters as stated above.

5.3 Biodiversity enhancement options for bats

5.3.1 Bat boxes

- As a biodiversity enhancement option for the client, it would be possible to install at least two to three bat boxes at the new development scheme for local bats to use.
- The bat box model proposed would be the 2F Schwegler Bat Box and this is a high quality bat box which will be used by a number of different bat species, including for the bat species recorded here. This box is made of woodcrete and is a long lasting box.
- The bat boxes can be located on separate trees nearby the barn eg one per tree ideally, so there is a better chance of them being used by bats, or onto buildings.
- Bat boxes should be installed at least six metres up a tree trunk, facing SE, S or SW ideally and with enough space for bats to fly under the box easily. No artificial lighting must illuminate any of the installed bat boxes as this would deter bats from using the boxes.
- The NHBS is a good ecological equipment supplier and this bat box model can be purchased from them. The web link for this bat box is:

<http://www.nhbs.com/title/158629/2f-schwegler-bat-box-general-purpose>

5.3.2 Bat friendly planting

- It would also be advantageous if any bat friendly planting can be introduced to the new landscaping scheme, by the use of night scented plants, which will attract insects which bats prey on.
- Native plants should always be chosen ideally, since these species will have the most benefits to wildlife. But the occasional non-invasive hybrid or exotic would be fine.
- Suitable border plant species can include corn flower, field poppies, mallow, evening primrose, cherry pie, soapwort, sweet rocket, bladder campion, Nottingham catchfly, night-scented catchfly, ox-eye daisy, primrose and yarrow.
- Herbs can also be very good for insects and include borage, coriander, fennel, lavender, rosemary, chives and thyme.
- Trees, shrubs and climbers suitable for insects, so to benefit bats, include dog rose, elder, gorse, guelder rose, English oak, goat willow, silver birch, blackthorn, hawthorn, hazel, honeysuckle, ivy and jasmine.
- Further information can be provided on the above if needed.

5.3.3 Bats and lighting

- It will also be important that dark corridors are maintained for bats. This will mean that bats, if present, can use the gardens, especially whilst commuting between sites.
- Artificial lighting can cause a vacuum effect at greenspaces and at other sites, where such artificial light will pull flying insects at night away from areas where bats feed. So adjacent darker areas will have less insects for bats to survive on and that negatively affects the life cycles of the insect species present.
- If lighting is added in the future, this should be bat friendly and adhere to best practice on this aspect. Low pressure sodium lights are better to use than high pressure ones in regards to the impact on bats, for example.
- In regards to any future lighting, it would be beneficial for both insect populations and for bats, any new lighting is switched off at the new site well before midnight or be based on sensors.
- Light spillage should also be curtailed, as hoods can be used and light should focus on where it is needed only. Screening by vegetation such as new trees, bushes and shrubs can also be used to mitigate the effects of any new lighting scheme.
- The following latest best practice guidance note should be read and followed, in regards to how lighting affects bats and how to mitigate this at a site:

<https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

6. REFERENCES

- (1) Altringham, J.D. (2003) *British Bats*. HarperCollins *Publishers*, London.
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- (3) Collins, J. (Ed) (2016) *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (3rd Ed). Bat Conservation Trust, London.
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- (5) Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature.
- (6) Mitchell-Jones, A.J. and McLeish, A.P. (2004) *The Bat Workers' Manual*. 3rd Ed. JNCC.
- (7) Treweek, J. (1999) *Ecological Impact Assessment*. Blackwell Science Ltd, UK.

APPENDIX 1

Photographs A-B



Photograph A

Bats such as common pipistrelles were recorded foraging and commuting over the rear garden and front drive on both bat survey visits

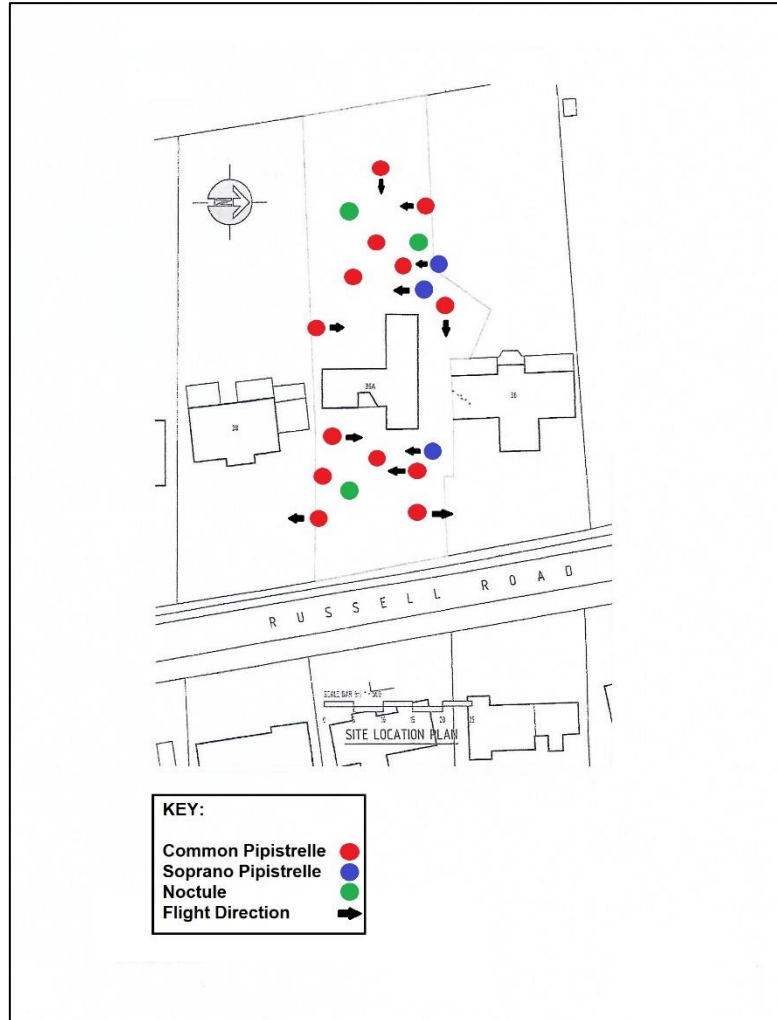


Photograph B

No bats emerged from the existing house during either of the night based bat survey visits

APPENDIX 2

Map A – Location of the bat sightings at 36a Russell Road - 2021



APPENDIX 3

Selected bat sonograms for the bat emergence survey - 2021

Figure 1 – Bat sonogram of a common pipistrelle – flying over the rear garden

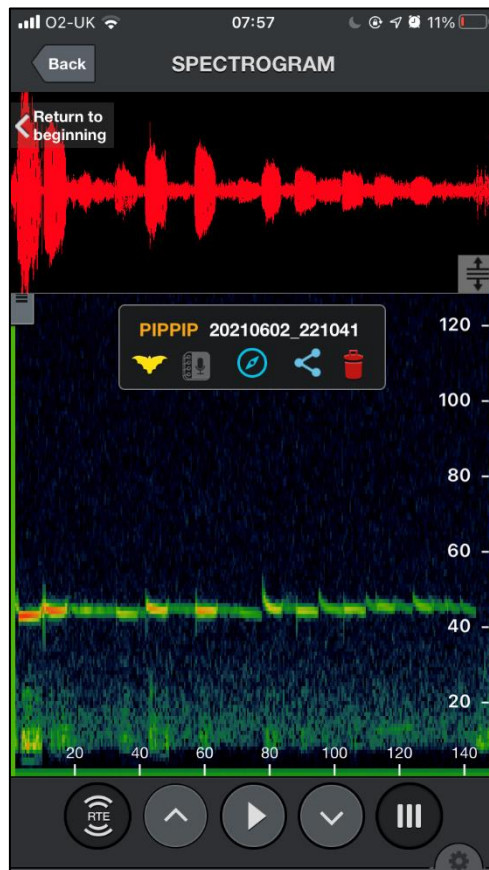


Figure 2 – Bat sonogram of a noctule – flying over the site

