

**82 CHICHESTER ROAD, TILEHURST,
READING**

**NOCTURNAL EMERGENCE AND
DAWN RE-ENTRY BAT SURVEYS**

A Report to: Mr Deacon

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

Report Version	Date	Completed by:	Checked by:	Approved by:
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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.

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

VALIDITY OF DATA

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

NON-TECHNICAL SUMMARY

In May 2018, Mr Deacon commissioned Middlemarch Environmental Ltd to undertake nocturnal emergence and dawn re-entry bat surveys at 82 Chichester Road in Tilehurst, Berkshire. These surveys are required to inform a planning application associated with a raising of the roof and addition of a second storey to the existing bungalow.

Nocturnal emergence and dawn re-entry surveys were undertaken on 15th May 2018 and 31st May 2018.

Commuting and foraging activity by common pipistrelle, soprano pipistrelle and noctule bats was recorded during the surveys. This was predominately associated with the back garden of the property. No bats emerged from or re-entered any of the buildings on site.

Following the results of the nocturnal emergence and dawn re-entry surveys, the following recommendations have been made:

R1 Bungalow and the Garage

The bungalow and the garage have been subject to a full suite of activity surveys in line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), and no bat roosts were identified. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed building have not commenced within this timeframe it will be essential to update the survey effort to establish if bats have colonised the buildings in the interim. Updated Preliminary Bat Roost Assessments can be undertaken at any time of year. Updated surveys requiring nocturnal or dawn assessment will need to adhere to the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) with the surveys undertaken between April and September inclusive. In the unlikely event that a bat is found during site works all works in that area must immediately cease and a suitably qualified ecologist should be contacted.

R2 Lighting

Bats are likely to use the back garden for foraging and commuting. Therefore, in line with paragraph 125 of the National Planning Policy Framework, the development should aim to limit the impact of light pollution on bats through the careful use of lighting in critical areas only and at a low level with minimum spillage. Any lighting, either temporary or permanent, within the back garden should be kept to a minimum and directed away from the boundary features to maintain dark areas and corridors.

R3 Habitat Enhancement

In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. The planting of species which attract night flying insects is encouraged as this will be of value to foraging bats, for example: evening primrose, goldenrod, honeysuckle and fleabane.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In May 2018, Mr Deacon commissioned Middlemarch Environmental Ltd to undertake nocturnal emergence and dawn re-entry bat surveys at 82 Chichester Road, Tilehurst, Reading in Berkshire. These surveys are required to inform a planning application associated with a raising of the roof and addition of a second storey to the existing dwelling.

A Daylight Bat Survey was undertaken by John Wenman Ecological Consultancy LLP in January 2018 (Ref: R1830/a). This survey identified the bungalow and garage on site as having moderate potential to support roosting bats and therefore, nocturnal emergence and dawn re-entry bat surveys were recommended. This report details the results of the surveys undertaken on 15th May 2018 and 31st May 2018.

All UK bat species are European protected species and they are capable of being material considerations in the planning process. A summary of the legislation protecting bats is included within Appendix 1. This section also provides some brief information on the ecology of British bat species.

1.2 SITE DESCRIPTION AND CONTEXT

The development site, which measures approximately 0.07 ha, is located within a predominately residential area of Tilehurst in Berkshire, centred at National Grid Reference SU 674 737. At the time of the survey, the site was dominated by a tarmac car park to the south and amenity grassland with ornamental planting to the north and west with a bungalow located at the centre of the site and a single storey garage located along the eastern site boundary.

The Chichester Road borders the southern boundary and residential properties are located adjacent to the remaining boundaries. Three Local Nature Reserves are located within 500m of the site: Blundell's Copse located 140 m to the south, Lousehill Copse located 300 m to the east and Round Copse located 400 m to the north east.

The wider landscape is dominated by residential buildings with school grounds and recreational grounds located further afield. The River Thames is also situated approximately 1.2 km north-east.

1.3 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Daylight Bat Survey Ref: R1830/a	John Wenman Ecological Consultancy LLP

Table 1.1: Documentation Provided by Client

2. METHODOLOGY

2.1 DESK STUDY

Search for statutory nature conservation sites designated for bats within a 10 km radius of the site was undertaken.

2.2 FIELD SURVEYS

2.2.1 Overview of Nocturnal Emergence and Dawn Re-entry Surveys

The buildings were classed as having moderate potential to support roosting bats due to the numerous features of potential interest to roosting bats identified during the daytime survey. In line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), two separate bat surveys were carried out consisting of one nocturnal emergence bat survey and one dawn re-entry bat survey. The aim of these surveys was to detect whether bats are roosting within the buildings, and to enable a profile of site utilisation by bats to be compiled.

2.2.2 Nocturnal Emergence Bat Survey

In line with the specifications detailed in Bat Surveys: Good Practice Guidelines (Collins, 2016), the nocturnal survey commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. The nocturnal emergence survey was conducted using electronic bat detectors (Echo Meter Touch 2 Pro and Bat Box Duet with associated recording devices) to facilitate the detection of bats and to aid in the determination of species of bat using the site. Subsequent computer analysis of recordings allowed all species of bat using the site to be identified.

2.2.3 Dawn Re-Entry Bat Survey

Bats swarm at their roost site 10-90 minutes prior to entering the roost at dawn (Mitchell-Jones & McLeish, 2004). Surveying for dawn swarming by bats is an efficient way of detecting bat roosts. In line with the specifications detailed by Bat Surveys: Good Practice Guidelines (Collins, 2016) the dawn survey commenced 120 minutes prior to sunrise and continued until 15 minutes after sunrise. To facilitate the detection of bats and to aid in the determination of species of bat using the site, the dawn survey was conducted using electronic bat detectors (Echo Meter Touch 2 Pro and Bat Box Duet with associated recording devices). Computer analysis of bat detector information collected was utilised to identify all species recorded on the site.

3. DESK STUDY

3.1 STATUTORY NATURE CONSERVATION SITES

The site is not located within 10 km of any statutory nature conservation sites designated for the presence of bats.

3.2 PREVIOUS BAT SURVEYS

A Daylight Bat Survey was undertaken by John Wenman Ecological Consultancy LLP in January 2018. Potential roosting features identified during the survey included gaps under roof tiles, gaps behind soffit boxes, lifted lead flashing, gaps at the junction between main roof and hanging tiles, missing hanging tiles and damaged under-cloaking at the gable ends of the garage, as well as a loft space with bitumen roofing felt present between the rafters and the tiles.

No bats or evidence of bats, such as droppings, scratch marks, urine staining or feeding remains, have been identified on site during the survey.

It was concluded that the buildings on site have moderate potential to support roosting bats and further surveys in a form of nocturnal emergence and dawn re-entry surveys was recommended.

4. SURVEY RESULTS

4.1 NOCTURNAL EMERGENCE SURVEY

The nocturnal emergence survey was undertaken on 15th May 2018 by Indre Barsketyte (Principal Ecological Consultant and CL18 (2018-34786-CLS-CLS) bat licence holder) and Rod Batistela (Ecological Projects Officer). The weather conditions recorded at the time of the survey are detailed in Table 4.1.

Parameter	Conditions	
	Start	Finish
Temperature (°C)	22	19
Cloud Cover (%)	10	0
Precipitation	None	None
Wind Speed (Beaufort)	F0	F0

Table 4.1: Weather Conditions During Nocturnal Emergence Survey

The nocturnal emergence survey commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 20:49 hrs (BBC Weather Centre Data for Tilehurst). Three species of bat, noctule *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*, were recorded during the survey.

Common pipistrelle

At 21:20 (31 minutes after sunset) two common pipistrelle bats entered the site from the west foraged around the back garden for approximately 1 minute and exited the site to the south west.

At 21:24, 21:25 and 21:27 (35, 36 and 38 minutes after sunset) a common pipistrelle bat entered the site from the north east, briefly foraged around the back garden and exited the site to north east again.

At 22:11 (82 minutes after sunset) a common pipistrelle bat was recorded commuting along the Chichester Road from west to east.

Intermittent foraging by common pipistrelle bats was recorded within the back garden throughout the duration of the survey.

Soprano pipistrelle

At 21:20 (31 minutes after sunset) a soprano pipistrelle bat entered the site from the north east, briefly foraged around the back garden and exited the site to the south west.

Noctule

At 21:53 (64 minutes after sunset) a noctule bat was observed foraging over the trees to the north east of the site.

No other species of bat were detected or observed during this survey. Analysis of the sound recordings did not identify any further species of bat. None of the bats recorded on site emerged from the buildings on site.

4.2 DAWN RE-ENTRY SURVEY

The dawn re-entry bat survey was undertaken on 31st May 2018 by Indre Barsketyte (Principal Ecological Consultant and CL18 (2018-34786-CLS-CLS) bat licence holder) and Pippa Jordan (Ecological Projects Officer). The weather conditions recorded at the time of the survey are detailed in Table 4.2.

Parameter	Conditions	
	Start	Finish
Temperature (°C)	17	16
Cloud Cover (%)	100	100
Precipitation	None	None
Wind Speed (Beaufort)	F0	F0

Table 4.2: Weather Conditions During Dawn Re-entry Survey

The dawn re-entry survey commenced 120 minutes prior to sunrise and continued until 15 minutes after sunrise. Sunrise was at 04:55 hrs (BBC Weather Centre Data for Tilehurst). One species of bat, common pipistrelle, was recorded during the survey.

Common pipistrelle

At 04:18 (37 minutes before sunrise) a common pipistrelle bat was recorded commuting over the site from east to the north west.

No other species of bat were detected or observed during this survey. Analysis of the sound recordings did not detect any further species of bat. No bats were observed re-entering the buildings on site.

5. DISCUSSION AND CONCLUSIONS

5.1 DISCUSSION

5.1.1 Summary of Proposals

It is proposed to raise the roof and add a second storey to the existing bungalow.

5.1.2 Summary of Nocturnal Emergence and Dawn Re-entry Surveys

Nocturnal Emergence Survey

Three bat species were recorded during the nocturnal survey; common pipistrelle, soprano pipistrelle and noctule. Commuting and foraging activity was recorded during the survey period. This was predominantly along the back garden of the property. No bats emerged from the buildings on site.

Dawn Re-entry Survey

One bat species was recorded during the dawn re-entry survey; common pipistrelle. Commuting activity along the front of the property was recorded. No bats re-entered any of the buildings on site.

5.2 CONCLUSIONS

Following the suite of survey work undertaken on site it can be confirmed that the bungalow and garage does not contain a bat roost.

6. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

R1 Bungalow and the Garage

The bungalow and the garage have been subject to a full suite of activity surveys in line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), and no bat roosts were identified. The survey data obtained for the site is valid for 12 months from the survey date. If development works to the surveyed building have not commenced within this timeframe it will be essential to update the survey effort to establish if bats have colonised the buildings in the interim. Updated Preliminary Bat Roost Assessments can be undertaken at any time of year. Updated surveys requiring nocturnal or dawn assessment will need to adhere to the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) with the surveys undertaken between April and September inclusive. In the unlikely event that a bat is found during site works all works in that area must immediately cease and a suitably qualified ecologist should be contacted.

R2 Lighting

Bats are likely to use the back garden for foraging and commuting. Therefore, in line with paragraph 125 of the National Planning Policy Framework, the development should aim to limit the impact of light pollution on bats through the careful use of lighting in critical areas only and at a low level with minimum spillage. Any lighting, either temporary or permanent, within the back garden should be kept to a minimum and directed away from the boundary features to maintain dark areas and corridors.

R3 Habitat Enhancement

In line with the National Planning Policy Framework, the development should aim to enhance the site for bats. The planting of species which attract night flying insects is encouraged as this will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.

REFERENCES AND BIBLIOGRAPHY

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The Conservation of Habitats and Species Regulations 2017.

APPENDIX 1

LEGISLATION

Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance 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.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or *obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*.

The reader should refer to the original legislation for the definitive interpretation.

ECOLOGY

At present, 18 species of bats are known to live within the United Kingdom, of which 17 species are confirmed as breeding. All UK bat species are classed as insectivorous, feeding on a variety of invertebrates including midges, mosquitoes, lacewings, moths, beetles and small spiders.

Bats will roost within a variety of different roosting locations, included houses, farm buildings, churches, bridges, walls, trees, culverts, caves and tunnels. At different times of the year the bats roosting requirements alter and they can have different roosting locations for maternity roosts, mating roosts and hibernation roosts. Certain bat species will also change roosts throughout the bat activity season with the bat colony using the site to roost for a few days, abandoning the roost and then returning a few days or weeks later. This change can be for a variety of reasons including climatic conditions and prey availability. Bats are known live for several years and if the climatic conditions are unfavourable at a particular roost, they may abandon it for a number of years, before returning when conditions change. Due to the matriarchal nature of bat colonies, the locations of these roosts can be passed down through the generations.

Bats usually start to come out of hibernation in March and early April (weather dependent), when they start to forage and replenish the body weight lost during the hibernation period. The female bats then start to congregate together in maternity roosts prior to giving birth and a single baby is born in June or July. The female then works hard to feed her young so that they can become independent and of a sufficient weight to survive the winter before the weather gets too cold and invertebrate activity reduces. Males generally live solitary lives, or in small groups with other males, although in some species the males can be found living with the females all year. The mating season begins in the autumn. During the winter bats hibernate in safe locations which provide relatively constant conditions, although they may venture outside to forage on warmer winter nights.