

51 CRESSINGHAM ROAD, READING

DAYTIME & NOCTURNAL EMERGENCE

BAT SURVEY

A Report to: Morningwood Developments Ltd

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REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	24/09/2015	Maral Miri MSc CEnv, MCIEEM (Senior Ecological Consultant)	Colin Bundy MCIEEM (Associate Director)	Dr Philip Fermor MCIEEM, CEnv (Managing Director)

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, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

NON-TECHNICAL SUMMARY

Middlemarch Environmental was commissioned by Morningwood Developments Ltd to undertake a daytime bat inspection and a nocturnal emergence bat survey of 51 Cressingham Road in Reading. The proposals are currently unknown and the existing building could be demolished or refurbished and extended. The site is centred at National Grid Reference SU 726 709.

The external¹ structure of the building on site was assessed in September 2015 to determine its suitability to support roosting bats. The building was found to contain a number of features suitable for roosting bats in the form of missing roof tiles, gaps under the ridge tiles and gaps behind hanging tiles. Due to the height at which these features were located, it was not possible to inspect them and establish if bats had used these features to enter a roost location at the time of surveying.

Following the daytime bat inspection of the building, one nocturnal emergence bat survey was carried out on 15th September 2015. No bats were recorded emerging from the building. In line with The Bat Conservation Trust (Hundt, 2012) guidance, three bat surveys are required to be carried out consisting of one to two nocturnal emergence bat surveys and one to two dawn re-entry bat surveys for buildings with moderate to high bat potential. At least two of these surveys should be undertaken between mid-May and August. As this was not possible due to seasonal constraints, two additional dusk emergence and/or dawn re-entry surveys during the peak active season (May-August) should be undertaken in 2016 in order to determine the presence/absence of a bat roost within the building.

¹ Internal inspection was not possible due to lack of access.

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In September 2015, Morningwood Developments Ltd commissioned Middlemarch Environmental Ltd to undertake a Daytime Bat Survey and one Nocturnal Emergence Bat Survey at 51 Cressingham Road in Reading. This assessment is required to inform a planning application; however full details of the proposed works is unknown at this stage.

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 site is located in Reading, at the junction of Cressingham Road and Birdhill Avenue and comprises a single storey detached house with associated garden area. The site covers an area of approximately 0.1 ha and is centred at National Grid Reference SU 726 709.

At the time of survey, the site was dominated by a relatively large building, areas of amenity grassland, scrub and scattered trees.

The site lies to the south of Cressingham Road and is bounded to the east by Birdhill Avenue. To the south and west is residential buildings with their associated gardens.

The wider landscape is dominated by residential units and their gardens.

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
Title Plan / BK72427	HM Land Registry

Table 1.1: Documentation Provided by Client

2. METHODOLOGY

2.1 FIELD SURVEY

2.2.1 Overview of Daytime Survey

In line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys: Good Practice Guidelines (Hundt, 2012), a daytime survey of the site was conducted.

A visual assessment was undertaken to determine the potential roosting value of the site, together with a general appraisal of the suitability of the site for foraging and commuting. Suitable roosting areas and accessible features which could allow bat access into potential roosting areas were inspected using a torch and endoscope for evidence of possible bat presence. Buildings were surveyed externally and internally.

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

2.2.2 Overview of Nocturnal Emergence Survey

The building on site was classed as having moderate to high potential to support roosting bats due to the features of potential interest to roosting bats identified during the daytime survey. In line with The Bat Conservation Trust (Hundt, 2012) guidance, three bat surveys were recommended to be carried out consisting of one to two nocturnal emergence bat surveys and one to two dawn re-entry bat surveys. The aim of these surveys is to detect whether bats are roosting within the building, and to enable a profile of site utilisation by bats to be compiled. The bat activity season extends from May to September. At least one of the surveys should be a dawn re-entry survey, and at least two of the surveys should be undertaken between mid-May and August. This survey was commissioned in September 2015 and due to seasonal constraints, only one nocturnal emergence survey was carried out.

The survey commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. The nocturnal emergence survey was conducted using electronic bat detectors (EM3+ 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.

3. SURVEY RESULTS

3.1 INTRODUCTION – DAYTIME BAT SURVEY

The daytime bat survey was conducted on 15th September 2015 by Maral Miri, Senior Ecological Consultant, Licence Number WML CL17. The results of the Daytime Bat Survey are presented in the following sections.

Weather conditions at the time of the daytime bat survey were recorded and are presented in Table 3.1.

Parameter	Conditions
Temperature (°C)	14
Cloud Cover (%)	100
Precipitation	Rain
Wind Speed (Beaufort)	F1

Table 3.1: Weather Conditions during the Daytime Survey

3.2 CONSTRAINTS

No access was provided to the inside of the building and therefore an internal assessment of this structure was not possible.

3.3 SURVEY RESULTS – DAYTIME BAT SURVEY

3.3.1 51 Cressingham Road

External Assessment

51 Cressingham Road is a single storey, occupied brick building with a hipped roof covered by clay tiles (Plate 3.1). A brick gable-end was also present along the northern elevation of the building (Plate 3.2). The brickwork was generally in a good condition with no suitable holes, cracks or gaps recorded for roosting bats. Whilst the majority of the roof tiles were in a good state of repair, a number of missing and broken tiles were recorded along the northern and southern elevations (Plate 3.3). Furthermore, a number of gaps were recorded below some of the ridge tiles where the mortar was missing (Plate 3.4). In the northern gable-end there was a vent feature which could potentially provide access into the roof space (Plate 3.2). It was not possible to inspect the features noted above due to the height at which they were located and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying.



Plate 3.1: View of 51 Cressingham Road (right – southern aspect, left – northern aspect)



Plate 3.2: Brick gable-end in the northern elevation with potential access point into the building for bats through the vent

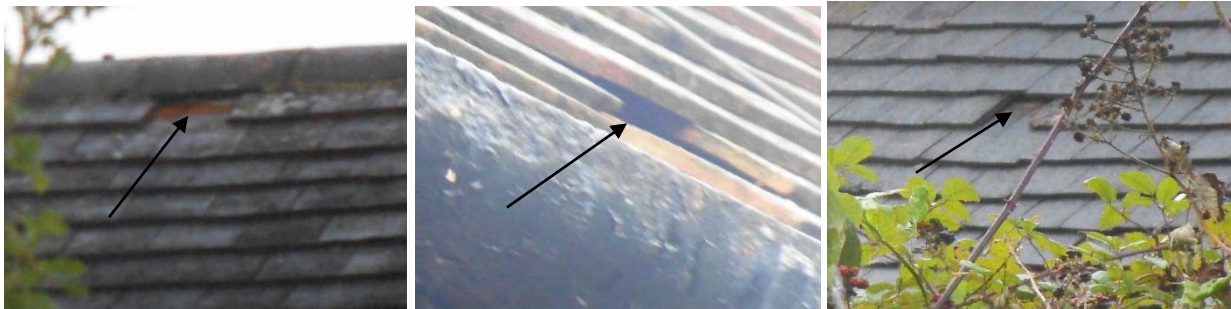


Plate 3.3: Missing roof tiles



Plate 3.4: Missing mortar under ridge tiles

A total of four dormer windows were present along the northern, southern and western elevations of the building. Hanging tiles covered the sides of the dormer windows which were in good condition and were tightly fitted with the exception of one hanging tile with a gap behind (Plate 3.5). In addition, missing tiles were recorded at the junction of the dormer window with the roof (Plate 3.6). Due to the height and location of these features, it was not possible to inspect them and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. A total of three brick chimneys were recorded with tight lead flashing around their base along the northern, western and southern aspects of the building (Plate 3.7). The windows present were also set tightly in their frames with no gaps recorded around them. A wooden soffit box was present in the eaves which was in a good state of repair.



Plate 3.5: Gap under the dormer window hanging tile

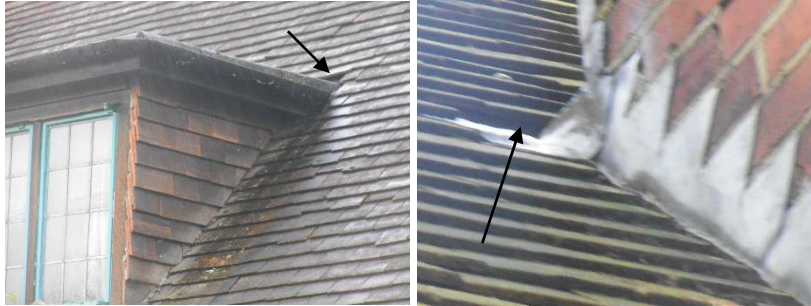


Plate 3.6: Missing tiles around the dormer windows



Plate 3.7: Location of the brick chimneys

Numerous features were recorded around the building which could be utilised by bats to gain entry into the building and potential roost locations. These features include:

- Missing roof tiles (Plate 3.3).
- Gaps under the ridge tiles where the mortar is missing (Plate 3.4).
- Missing tiles around the dormer windows (Plate 3.6).
- Vent feature (Plate 3.2).
- Gaps behind the hanging tiles of the dormer windows (Plate 3.5).

It was not possible to inspect the features listed above due to the height at which they were located and health and safety concerns and as such it was not possible to establish if bats had used these features to enter a roost location at the time of surveying. No evidence of roosting bats, e.g. droppings, urine staining, feeding remains or scratch marks, was recorded within the features that could be fully inspected during the survey.

Internal Assessment

No internal access was provided at the time of survey. However, due to the presence of dormer windows, it is likely that no loft void is present and these spaces have been converted to rooms. Presence of a small roof void could however not be discounted where the brick gable-end was located in the northern elevation (Plate 3.8). The surveyors were however informed that no loft hatch providing access to this area was present.



Plate 3.8: Location of a potential roof void

3.4 INTRODUCTION – NOCTURNAL EMERGENCE BAT SURVEY

The nocturnal emergence survey was undertaken on 15th September by:

- Maral Miri (Senior Ecological Consultant, Licence Number WML CL17); and,
- George Kiely (Ecological Project Officer).

The weather conditions recorded at the time of the survey are detailed in Table 3.2.

Parameter	Conditions	
	Start	Finish
Temperature (°C)	14	13
Cloud Cover (%)	100	80
Precipitation	Dry	Dry
Wind Speed (Beaufort)	F1	F1

Table 3.2: Weather Conditions during First Nocturnal Emergence Survey

3.5 SURVEY RESULTS - NOCTURNAL EMERGENCE SURVEY

The nocturnal emergence survey commenced 20 minutes prior to sunset and continued until 120 minutes after sunset. Sunset was at 19:21 hrs (BBC Weather Centre Data). Two species of bat, noctule *Nyctalus noctula* and common pipistrelle *Pipistrellus pipistrellus* were recorded during the survey.

Common pipistrelle

The first common pipistrelle was detected at 19:28 (7 minutes after sunset). This bat was recorded commuting in a westerly direction along the northern elevation of the building. This bat was not observed emerging from any features associated with the site. At 19:37, another common pipistrelle was recorded foraging in the north-western corner of the site and then flying off site in a northerly direction. Another common pipistrelle was observed commuting at 19:38 along the southern boundary of the site. At 19:58 and 20:05, common pipistrelle calls were logged (no visual contact was made).

Noctule

At 19:29 (9 minutes after sunset), a noctule was detected flying high over the site commuting from north to south. At 19:34, a noctule call was heard only (no visual contact was made).

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.

3.6 SITE AND SURROUNDING HABITATS

The habitats within the proposed development site including the building, scattered trees and areas of scrub provide suitable roosting, foraging and commuting features for bats.

Habitats within 1 km of the site suitable for roosting, commuting and foraging include:

- Residential houses and associated gardens.
- Pockets of woodland.
- Recreation grounds with associated open grassland habitats and tree lined boundaries.

4. DISCUSSION AND CONCLUSIONS

4.1 SUMMARY OF PROPOSALS

The proposed works is currently at the feasibility stage and it is unknown whether the existing building will be demolished or refurbished and extended.

4.2 ASSESSMENT OF BUILDINGS

The external inspection of the existing building confirmed the presence of a number of suitable access points such as missing tiles, gaps under the ridge tiles and behind hanging tiles. No evidence of bats was recorded during the external assessment, however it was not possible to inspect these features due to the height at which they occurred.

No access was provided into the building and as such no internal inspection of this building was carried out. It is however likely that with the exception of a small roof void associated with the northern gable-end, the remaining loft spaces have been converted to rooms.

The external inspection of the building confirmed that 51 Cressingham Road is of moderate to high value to roosting bats due to the number of potential access points. Further surveys are therefore required to robustly establish the presence/absence of a bat roost.

4.3 POTENTIAL VALUE OF SITE TO BATS

The habitats on site provide suitable roosting, foraging and commuting habitat for bat species in the form of a building, scattered trees and areas of scrub. As the site is considered to be of moderate to high value to roosting, foraging and commuting bats, it is therefore considered likely that bats utilise the site regularly.

4.4 SUMMARY OF NOCTURNAL SURVEYS

Two species of bats were recorded during the nocturnal survey; common pipistrelle and noctule. No bats were observed emerging from the building and the activities recorded belonged to commuting and foraging bats.

Due to insufficient survey data (for buildings with moderate to high potential three dusk and/or dawn surveys are required), it could not be concluded at this time if the building is used as a bat roost and as such further surveys in peak bat activity season (mid-May to August) are required.

5. 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

51 Cressingham Road has been identified as having moderate to high potential to support roosting bats. Bat Surveys: Good Practice Guidelines published by the Bat Conservation Trust (Hundt, 2012) recommends that for buildings with high bat roosting potential at least three nocturnal emergence and/or dawn re-entry surveys be undertaken during the bat activity season to determine the presence/absence of roosting bats within the building. The bat activity season extends from May to September. At least one of the surveys should be a dawn re-entry survey, and at least two of the surveys should be undertaken between mid-May and August.

Due to seasonal constraints only one nocturnal emergence survey could be carried out in September 2015. Therefore, two dusk emergence and/or dawn re-entry surveys are required during peak bat activity season running from mid-May to August 2016. If a roost is discovered during these surveys, a Natural England licence application may be required.

REFERENCES AND BIBLIOGRAPHY

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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 2010, as amended (Habitats Regulations 2010, as amended). 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 2010 (as amended), 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 2010 (as amended) 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* (rather than deliberately) 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.