



**1015 Oxford Road, Reading,
Berkshire RG31 6TL**

Bat Survey Report

June 2022

on behalf of Parkgrove Developments Ltd

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	Signed	Name	Position	Date
Prepared by		Oliver Bevan <i>MEnvSci</i>	Ecologist	15/06/2021
Reviewed by		Edward Bodsworth <i>MA (Cantab)</i> <i>PhD MCIEEM</i>	Director	17/06/2022

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1 Introduction

1.1 Site Description

1015 Oxford Road is a detached dwelling located to the south-west of Oxford Road, within the suburb of Tilehurst, Reading, Berkshire RG31 6TL. The approximate Ordnance Survey grid reference of the property is SU 6726 7524.

The building is a two-storey house constructed from brick with rendered walls. There is a single-storey lean-to structure on the north-eastern elevation. The roof is ridged and gable-ended and constructed from concrete tiles, which are locally covered in mosses.

There are gaps beneath the edge tiles on the north-eastern elevation and some raised ridge tiles. There is raised lead flashing around the intersection of a lean-to on the front elevation. The soffit box is of uPVC design and appears to be in good condition, however there are several small gaps in the soffit box along the north-eastern elevation's hip. External walls are of rendered and painted white and in good conditions, lacking any holes or crevices.

The two roof voids have A-frame design and are both lined with bitumen felt and have insulation material along the deck which is boarded in both voids. A few wasp's nests are present.

1.2 Proposed Works

There is a proposal to demolish the building and to redevelop the site.

1.3 Background

An Initial Bat Survey (daytime building inspection) and Preliminary Roost Assessment (PRA) were undertaken on 14th October 2020 by Acer Ecology Ltd (Acer Ecology Ltd, 2020). Less than 20 bat droppings were found within each of the loft spaces, indicative of brown long-eared bats *Plecotus auritus*.

In addition to this, 1015 Oxford Road was assessed as having 'moderate' potential (Collins, 2016) to offer shelter to roosting bats due to various potential roosting sites such as the gaps beneath the edge tiles, under the raised tiles and within the gaps in the soffit box.

The PRA report recommended that two bat activity (dusk/dawn) surveys were undertaken to determine the presence/likely absence of bats and to characterise any roosts that may be present.

1.4 Aims of Study

The aims of this study are to survey the dwelling of 1015 Oxford Road for bats, in accordance with the recommendations of the PRA, by undertaking two bat activity surveys, one at dusk and one at dawn. The report discusses the potential impacts of the proposed works on bats and their habitats.

The report makes recommendations for appropriate mitigation, compensation and enhancement measures, and the potential impacts are assessed in accordance with the legal protection afforded to bats under The Conservation of Habitats & Species Regulations 2017. The need for a European Protected Species (bat) Licence is also discussed in light of the impact assessment.

1.5 Bat Ecology

Bats are the only mammals to have developed the ability of true flight. At present, over 1,100 species of bat are recognised worldwide, making bats the second largest mammal group after rodents. As well as flight, bats have evolved a system of navigation and orientation using echolocation which has allowed many species to become nocturnal. There are 18 species of bat that occur within the British Isles, of which 17 are known to breed here. More species occur in the south and west of the country, with species numbers declining towards the north and into Scotland.

All bat species in the UK are nocturnal and feed exclusively on insects (they are insectivorous) which they catch in flight during their night-time activity, using echolocation to locate and home-in on their prey. Bats will roost during the daytime and seek out dark, enclosed and undisturbed places in which to do so, often using a variety of roosting sites within their home range. Different roost sites are used for different purposes (such as mating, giving birth and hibernation) and at different periods of a bat's life cycle.

During the summer, female bats will gather together in a maternity or breeding roost. In the UK, this starts to occur towards the end of May and the females will seek out a warm and undisturbed site in which to give birth. Because maternity roosts require a particular set of environmental attributes (such as location, temperature, orientation and size), breeding bats tend to return to roost and breed in the same locations year after year. Given that bats live a relatively long time (anywhere from 10-20 years), and only give birth to one pup a year, maternity colonies are crucial to the reproduction and survival of the local population and can be very sensitive to environmental change.

Relatively little is known about hibernation roosts, as tracking and locating hibernating bats is very difficult. However, many species (particularly those within the genera *Myotis* and *Rhinolophus*) have been found within underground sites such as caves, mines and cellars, where the temperature remains constant and low throughout the winter allowing the bats to remain in a state of torpor. The spring and autumn are periods of transition and bats can use a number of different locations on a temporary basis, often moving between roosts as environmental conditions change and temperatures fluctuate. In the autumn, bats will mate, and it has been shown that male and female bats will gather at particular locations (such as a building, cave or tree) to meet, socialise and copulate.

Bats choose to roost in a number of different locations, depending on the species, their activity pattern and the period of their lifecycle. Certain species, such as the pipistrelles, favour crevices and small cavities for roosting and will use features such as cracks, crevices and small rot holes in the boughs and trunks of trees and within certain features of buildings such as boxed eaves, gaps under roof tiles, hanging tiles and soffit boards. Other species favour large, uncluttered roof spaces and lofts within buildings where they can hang up on the underside of the roof and use the interior space for flying prior to emergence. Hollow trees, cellars, caves, barns, churches and cavity walls can also all be used for roosting, given suitable access. Certain species, such as the noctule, favour roosting sites within trees whilst others tend to favour buildings. Roost sites may be used by only a very small number of bats, such as solitary males, or may offer shelter to tens or hundreds of bats within maternity and hibernation roost sites.

The suitability of roosting sites is also highly influenced by the location or context of a tree, building or cave. Roost sites are most often favoured when they are within close proximity to foraging habitats and where those habitats are connected to one another within the landscape by features such as hedgerows, woodlands, rivers or sunken lanes along which bats disperse and 'commute' from place to place. Suitable foraging habitats are any places where insect

prey is diverse and abundant such as woodlands, ponds, lakes, rivers, scrub, hedgerows and unimproved grassland or pasture. Thus, the ecological context of a site is very important for determining if bats may be present within a roost and the potential for a roost to be present tends to be much higher within rural or village locations.

2 Methodology

2.1 Bat Activity Surveys

Two bat activity surveys were undertaken, one at dusk on 6th May 2022 and one at dawn on 20th May 2022.

The surveys were conducted by two surveyors and one infra-red camera (see Figure 1), to watch all elevations of the dwelling of 1015 Oxford Road. Surveyors were equipped with Echometer Touch and Echometer Touch Pro 2 bat detectors to listen to and record bats in real time. Bats were identified to species level where possible. The footage from the infra-red camera was analysed after the survey to see if any bats were recorded, and if so, whether they exited or entered the building.

The surveys were undertaken by:

- Edward Bodsworth (Natural England Bat Survey Licence No. WLM-A34 Level 3: 2020-45379-CLS-CLS and WLM-A34-Level 4: 2020 45382-CLS-CLS)
- Jan-Piet Stuursma (Natural England Bat Survey Licence No. WLM-A34 Level 2: 2018-37063-CLS-CLS)
- Reuben Hayden

Table 1. Timing and weather conditions during the bat activity surveys at 1015 Oxford Road, Reading.

Date	Timing	Sunset/sunrise	Weather
06/05/2022	20:00-22:15	20:36	10°C to 9°C, Beaufort Scale 1, dry, 10% cloud
20/05/2022	03:30-05:10	05:05	13°C to 14°C, Beaufort Scale 0, dry, 0% cloud

Weather conditions were considered to be suitable for both bat surveys. Although the first survey was undertaken during a cold spell, bats activity was seen and heard, and so the survey is considered to be robust.



Figure 1. Aerial photograph showing the location of the surveyors and infra-red camera during the bat activity surveys (surveyor and camera locations indicated by the yellow stars).

3 Results

No bats were seen to emerge from, or re-enter, 1015 Oxford Road, Reading. It is considered that roosting bats are currently absent from the building, including potential roost locations under roof tiles.

The relatively small number of bat droppings that were recorded during the PRA may indicate that a bat had entered the roof space, only to leave after a short period of time. It does not seem to indicate a day roost within the loft space.

Very low levels of bat activity were recorded during both of the surveys, with common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelles *Pipistrellus pygmaeus* occasionally flying through the gardens. Other species recorded occasionally during the surveys include:

- Noctule *Nyctalus noctula*
- Brown long-eared bat *Plecotus auritus*

4 Discussion

4.1 Legislative Guidance

As with many animal species within the UK, declines in the abundance and distribution of many bat species have been documented through recent decades. The reasons for these declines are various and complex but it is considered that the major factors are changes in land use and agriculture, the loss of woodlands and hedgerows and the loss of suitable roosting sites.

Bats are particularly sensitive to human activity due to the fact that they roost within buildings, trees and underground structures such as mines, and the availability of suitable roost sites is considered to be a key factor in the conservation of bats within the UK. As a consequence, all

species of bat and their roost sites are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and under The Conservation of Habitats and Species Regulations 2017. Taken together, these make it an offence to:

- (a) Deliberately capture or intentionally take a bat
- (b) Deliberately or intentionally kill or injure a bat
- (c) To be in possession or control of any live or dead wild bat or any part of, or anything derived from a wild bat
- (d) Damage or destroy a breeding site or resting place of such an animal or intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection
- (e) Intentionally or recklessly disturb any wild bat while it is occupying a structure or place that it uses for shelter or protection
- (f) Deliberately disturb any bat, in particular any disturbance which is likely
 - to impair their ability;
 - (i) to survive, breed, reproduce or to rear or nurture their young; or
 - (ii) in the case of hibernating or migratory species, to hibernate or migrate; or
 - to affect significantly the local distribution or abundance of the species to which they belong

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to re-use the same roost sites, current legal opinion is that a bat roost is protected whether or not the bats are present at the time.

Although the law provides strict protection to bats, it also allows this protection to be set aside (derogation) under The Conservation of Habitats and Species Regulations 2017 through the issuing of licences. Where a lawful operation is required to be carried out, but which is likely to result in one of the above offences, a licence may be obtained from Natural England (the statutory body in England with responsibility for nature conservation) to allow the operation to proceed. However, in accordance with the requirements of The Conservation of Habitats and Species Regulations 2017, a licence can only be issued where the following requirements are satisfied:

- The proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment';
- 'There is no satisfactory alternative';
- The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.

4.2 Potential Impacts

The surveys indicate that roosting bats are absent from 1015 Oxford Road, Reading. Given this, the proposed re-roofing works are unlikely to result in any significant impacts on bats or the places that they use for breeding, shelter and/or protection (roosts) and no specific compensation measures are considered necessary (Mitchell-Jones 2004).

Since no significant impacts on bats are predicted under The Conservation of Habitats and Species Regulations 2017, a European Protected Species (bat) Licence will not be required for the proposed works to proceed. Since there are no predicted impacts on bats or their habitats, it is not necessary to consider the 'three tests' of The Conservation of Habitats and Species Regulations 2017 in this instance.

5 Recommendations

5.1 Further Surveys

No further survey work is considered necessary.

5.2 Licencing

As discussed above, a European Protected Species (bat) Licence will not be required for the proposed works to proceed.

5.3 Timing

There are no timing constraints, and the proposed work can be undertaken at any time of year.

5.4 Careful Work Practices

As bats are a highly mobile species, contractors should be briefed with regard to the fact that individual bats can often exploit very small crevices as roost sites (such as gaps under roof tiles) and that bats can move between roost sites on a regular basis.

Roof tiles should be removed individually, by hand, and each tile checked for bats or evidence of bats (bat droppings).

In the unlikely event that bats or significant evidence of bats (for example large accumulations of fresh bat droppings) are encountered, works should stop immediately, and advice sought from a suitably qualified ecologist.

5.5 Enhancement

Although it is not necessary from a legal perspective, consideration should be given to the erection of a bat box on a mature garden tree.

It is recommended that a conventional bat box is installed; this could be a traditional wooden box, or longer-lasting woodcrete box (such as a Schwegler box 1FF or 2F). The box should be erected between 3-4m above ground level, on a mature tree with a clear trunk.

6 References

Altringham, J., 2003. *British Bats*. Harper Collins.

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Joint Nature Conservation Committee, 2012. *Bat Worker's Manual*. Joint Nature Conservation Committee, Peterborough, UK.