The Bay Tree Hotel, 12 Sheep Street, Burford, Oxfordshire OX18 4LW

Protected Species Survey Report

August 2023

on behalf of **Keith Quantrill**

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Client	Keith Quantrill
Job name	The Bay Tree Hotel, 12 Sheep Street, Burford, Oxfordshire OX18 4LW
Survey dates	4th July 2023 & 15th August 2023
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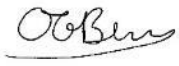
	Signed	**Name**	**Position**	**Date**
Prepared by		Oliver Bevan *MEnvSci*	Senior Ecologist	16/08/2023
Reviewed by		Edward Bodsworth *MA (Cantab) PhD MCIEEM*	Director	17/08/2023

Report Contents

1 Introduction

1.1 Site Description & Context

The Bay Tree Hotel, referred to as the 'site' for the purposes of this report, comprises a number of buildings located at 12 Sheep Street, Burford, Oxfordshire OX18 4LW. The approximate Ordnance Survey grid reference for the site is SP 2502 1220.

The focus of this report is a staff accommodation building located approximately 70m to the east of the main hotel buildings. This building, referred to as the 'staff accommodation building' within this report, is an attached three-storey building, with stone and rendered walls and a pitched roof of traditional cut-stone tiles. There is one loft space within the roof of the building.

The site is bordered to all sides by the dwellings and gardens of Burford. These buildings are largely terraces, with relatively small gardens of amenity grassland and shrubs. Habitats of greater value to bats are relatively limited in the immediate locality. Such habitats include a group of garden trees located approximately 60m north of the site and a larger woodland and lake located approximately 250m north-west of the site.

1.2 Proposed Works

There is a proposal to re-roof the staff accommodation building.

1.3 Aims of Study

The aims of this study are to survey the staff accommodation building at The Bay Tree Hotel, Burford for bats and/or evidence of bats. The study assesses the overall potential of the building to support roosting bats, and discusses the likely impact of the proposed re-roofing 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.

1.4 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 mate.

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 Initial Bat Survey & Preliminary Roost Assessment (PRA)

An initial bat survey (daytime building inspection) and preliminary roost assessment (PRA) were undertaken on 4th July 2023 by Jan-Piet Stuursma on behalf of Windrush Ecology Ltd. Mr Stuursma holds a licence to survey for bats in all counties of England (Natural England Bat Survey Licence No. WLM-A34 Level 2: 2018-37063-CLS-CLS).

A detailed external survey of the staff accommodation building at The Bay Tree Hotel was undertaken using a 1 million candle-power torch in order to look for bats and/or evidence of bats and to assess the potential of the building to support roosting bats. External elevations were inspected for evidence of bats including, bat droppings, urine stains, feeding remains (such as moth wings) and characteristic fur staining around access points.

The bat survey was undertaken according to best practice guidelines published by the Bat Conservation Trust (Collins, 2016) and the *Bat Workers Manual* (JNCC, 2010).

The study also takes into account the nature of the building and the ecological context of the site, including the following factors which may increase the likelihood of roosting bats being present (Collins, 2016):

- Age of the building (pre-20th Century or early 20th Century construction)
- Nature of construction; traditional brick, stone or timber construction
- Large and complicated roof void with unobstructed flying spaces
- Large (>20 cm) roof timbers with mortise joints, cracks and holes
- Entrances and gaps for bats to fly and crawl through
- Poorly maintained fabric providing ready access points for bats into roofs, walls; but at the same time not being too draughty and cool
- Roof warmed by the sun, south-facing roofs in particular
- Weatherboarding and/or hanging tiles with gaps
- Undisturbed roof voids
- Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year
- Buildings or built structures close to good foraging habitat, in particular mature trees, parkland, woodland or wetland, especially in a rural setting

The following criteria are used to determine the level of 'bat roost potential' within buildings (Collins, 2016):

- **Negligible:** Negligible habitat features on site likely to be used by roosting bats.

- **Low:** A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).

- **Moderate:** A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.

- **High:** A structure with one or potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats.

2.2 Bat Activity Survey (dusk emergence watch)

Following the results of the initial bat survey (which assessed the building as having 'low' potential suitability for bats), one bat activity (emergence) survey was commissioned and undertaken at The Bay Tree Hotel to look for bats emerging from the building at dusk. This survey was undertaken on 15th August 2023.

The survey was undertaken by three surveyors and one night vision aid (Nightfox Whisker binocular) to grant full visual coverage of the building (see Figure 1).

The surveyors were equipped with Echometer Touch bat detectors to listen to and record bats in real time. Bats were identified to species where possible.

The survey was undertaken by Edward Bodsworth *MA (Cantab) PhD MCIEEM*, Jan-Piet Stuursma and Stephen Davies (an assistant). Dr Bodsworth and Mr Stuursma both hold licences from Natural England to survey for bats in all counties of England (Bat Survey Licence No. WLM-A34 Level 3: 2020-45379-CLS-CLS & WLM-A34 Level 4: 2020 45382-CLS-CLS and Natural England WLM-A34 Level 2 Licence 2019-44120-CLS-CLS, respectively).

Table 1. Timing, weather conditions and personnel during the bat activity survey.

Date	Timing	Sunset	Weather	Personnel
15/08/2023 DUSK	20:00-22:30	20:30	18°C to 17°C, Beaufort Scale 1, 10% cloud, dry	Edward Bodsworth *MA (Cantab) PhD MCIEEM* Jan-Piet Stuursma Stephen Davies (assistant)

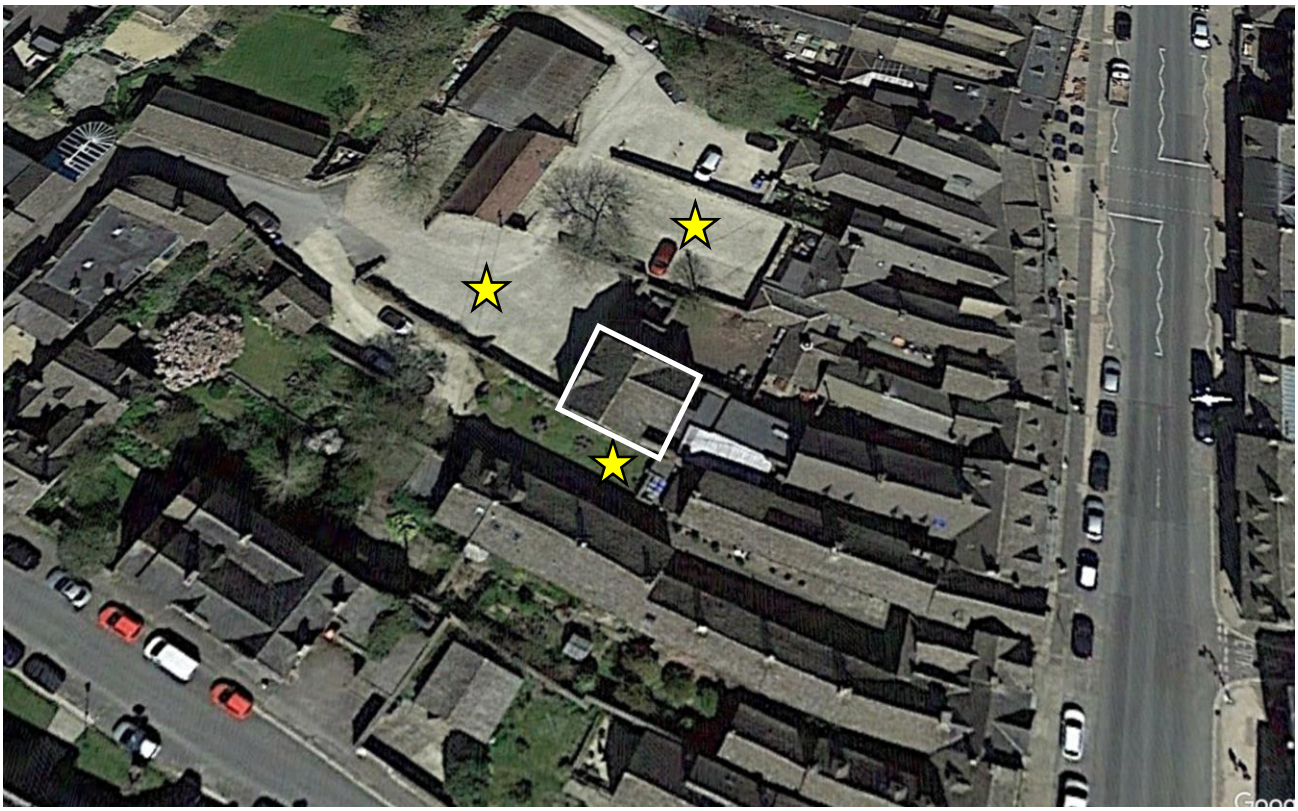


Figure 1. Aerial photograph showing the location of the surveyors during the bat activity survey at the staff accommodation building (outlined in white) at The Bay Tree Hotel. Surveyor locations are indicated by the yellow stars.

2.3 Limitations on Survey Data

There are considered to be no limitations on the survey data.

3 Results

3.1 Description of Building

The staff accommodation building at the Bay Tree Hotel is an attached, three-storey building that occupies a roughly square footprint. The building is of stone construction, with external render to the western and eastern elevations. The roof comprises open-gabled pitches, with traditional cut-stone (Cotswold) tiles. The building is attached at single-storey level to other buildings to the east.

There is one loft space within the building, with an approximate floor to ridge height of 2m and a simple timber truss structure. The loft has a bitumen underlay and brick walls to the gables.

The external walls, both stonework and render, are in a good state of repair, and no gaps, cracks or crevices were noted within the external fabric of the building. The roof is in a relatively poor state of repair, with some missing tiles and gaps under roof tiles.

The building is assessed as having 'low' potential (Collins, 2016) to offer shelter to roosting bats. This is due to the presence of gaps under roof tiles and on account of missing roof tiles.

3.2 Evidence of Bats

No bats or evidence of bats (such as bat droppings) were found during the initial bat survey. In particular, no bat droppings were found within the loft space.

3.3 Bat Activity (Emergence)

No bats were seen to emerge from the staff accommodation building at The Bay Tree Hotel during the bat activity (emergence) survey on 15th August 2023.

Bat activity was low during the survey, with only a few bat passes noted. Recorded species appeared to be commuting past the site and included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, and noctule *Nyctalus noctula*.

3.4 Nesting Birds

There is no evidence of nesting birds inside or outside of the building.

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 landuse 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'.

These three criteria are often referred to as the 'three tests' of the Regulations. All three must be satisfied in order for a licence to be granted.

4.2 Impact Assessment

4.2.1 *Bats*

There is no evidence to suggest that the staff accommodation building at The Bay Tree Hotel is being used as a place of shelter/protection by roosting bats. No bats were seen to emerge from the building during the bat activity survey and roosting bats are considered to be absent.

As a result of this conclusion, the proposed works to the roof are unlikely to result in any significant impacts on bats or the places that they use for breeding, shelter and/or protection (roosts).

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 re-roofing 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.

4.2.2 *Birds*

There are no foreseeable impacts on nesting birds.

5 Recommendations

5.1 Further Surveys

No further surveys are considered necessary at present.

5.2 Bats

5.2.1 *Licensing*

A European Protected Species (bat) Licence will not be required for the proposed works to proceed.

5.2.2 *Timing*

There are no timing constraints.

5.2.3 *Careful Work Practices*

Works should proceed in a careful and controlled manner. Contractors should be briefed with regard to the fact that individual bats can often exploit very small crevices as roost sites and that bats can move between roost sites on a regular basis.

In the very 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 qualified ecologist.

6 References

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

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

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

Mitchell-Jones, A., 2004. *Bat Mitigation Guidelines*. English Nature.

7 Appendix 1. Photographs

Photograph 1. The staff accommodation building at The Bay Tree Hotel, viewed from the west.

Photograph 2. The building viewed from the south-east.

Photograph 3. The northern elevation of the building.

Photograph 4. Detail of the roof showing missing roof tiles.

Photograph 5. Detail of roof tiles showing gaps under roof tiles.

Photograph 6. Detail of the loft space.

8 Appendix 2. Site Location Plans

Ordnance Survey map showing the approximate location of the staff accommodation building at The Bay Tree Hotel (indicated by the red arrow) within the local area.

Aerial photograph showing the location of the staff accommodation building at The Bay Tree Hotel (indicated by the red arrow).