

**5 St Peter's Avenue
Caversham
Reading
Berkshire
RG4 7DD**

Preliminary Bat Roost Assessment

Ref: R2159/b

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1 INTRODUCTION

1.1 Background

1.1.1 John Wenman Ecological Consultancy LLP was commissioned by BDS Surveyors Ltd to undertake a survey for the presence of bats within the detached bungalow at 5 St Peter's Avenue in Caversham, Berkshire.

1.1.2 The survey was commissioned in connection with planning proposals to be lodged with Reading Borough Council seeking consent for the demolition of the existing bungalow followed by the construction of a replacement dwelling.

1.2 Legislative Background

1.2.1 All British bat species are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a bat;
- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species;
- Deliberately kill, injure or take any bat.

1.2.2 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. A licence can be issued if the following three tests have been met:

- **Regulation 55(9)(a)** - there is "no satisfactory alternative" to the derogation, and;
- **Regulation 55(9)(b)** - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" and;

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- **Regulation 55(2)(e)** - the derogation is for the purposes of “preserving 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”.

1.2.3 Local authorities have a statutory duty under Regulation 7(3e) of the Habitat Regulations to have regard to requirements of the Habitats Directive in the exercise of their functions. The Council must therefore consider and determine whether these three tests are likely to be satisfied by applications where survey findings show that European Protected Species licensing is necessary before granting planning permission.

1.2.4 European Protected Species mitigation licence applications can be submitted once all necessary planning consents have been granted and Natural England aim to issue a licence decision within 30 working days of a full mitigation licence application.

1.2.5 Licensable projects affecting small numbers of seven commonly occurring bat species may fall under the remit of the Bat Mitigation Class Licence (WML-CL21). The Class Licence permits ‘Registered Consultants’ to carry out licensable operations on site on behalf of clients following the registration of sites with Natural England at least 15 working days before the work is due to start.

1.2.6 Survey data supporting EPS licence applications or the registration of the site under the Bat Mitigation Class Licence (WML-CL21) must be up to date i.e. have been conducted within the current or most recent optimal survey season i.e. May to August. Therefore, if surveys show bats are present and licensable work is delayed until during or after the next survey season, updated surveys will be required to support an application or site registration.

1.3 Site Location and Context

1.3.1 The detached bungalow is situated at the eastern end of St Peter’s Avenue in the Reading suburb of Caversham, Berkshire (OS grid reference: SU 70778 74910).

- 1.3.2** The property is situated on an elevated road to the north of the River Thames amongst other residential properties with plots comprising scattered trees, shrubs and closely mown lawns. St Peter's Avenue is a wooded road that leads down to the Grass Hill and Warren Court Wood section of The Warren Woodlands Complex Local Wildlife Site (LWS) which consists of mixed deciduous woodland (UK Priority Habitat as defined under the NERC Act 2006) upon a chalk scarp. The River Thames lies less than 100 metres to the south of the property and there are open fields along the south of the river to the west.
- 1.3.3** Overall, the setting provides high quality commuting and foraging habitat for bats adapted to suburban environments.

2 SURVEY METHOD

2.1 Bat Survey

2.1.1 A survey of the interior and exterior of the bungalow was undertaken by an ecologist registered under Natural England Bat Survey Class Licence CL18 and an assistant ecologist on 30th January 2019.

2.1.2 The survey was undertaken with the aid of binoculars, and a high power (1 million candle power) torch and looked for any signs of occupation by bats, and for features that could offer potential roosting sites following standard survey guidelines (Collins 2016; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004).

2.1.3 The following may indicate the presence of a bat roost within a building:

- Droppings (these can be found externally, especially in sheltered areas such as window sills, underneath roost entrances or internally within a roof space);
- Piles of insect remains e.g. moth wings (these may be indicative of regular feeding sites used by species such as brown long eared bat);
- Staining at roost entrances or within the roost (urine and oil from fur can leave stains on timbers when bats are gathered for long periods);
- Bats (live or dead).

2.1.4 Residential properties may offer potential roosting sites in a number of locations, favoured locations include:

- Under roof and ridge tiles, especially when loose or missing tiles are present or sections of mortar are missing;
- At the eaves – gaining access via gaps between the soffits and wall;
- At the gable ends – access is typically gained at the roof apex via gaps in the soffits or under roof tiles;
- Within an enclosed roof space – long-eared bats (*Plecotus* sp.) for example, will often cluster at the ridge beam.

2.2 Survey Constraints

2.2.1 There was full access available to the exterior and interior of the property, thus there were no significant constraints to the survey.

3 SURVEY FINDINGS

3.1 Building Inspection

3.1.1 Photographs of the site are presented in **Appendix 1** and a plan of the external and internal survey findings with associated target notes is shown in **Appendix 2**. The survey findings from the exterior and interior of the bungalow are described as follows:

3.2 External Survey

3.2.1 The detached bungalow had two main pitched roofs and a rear terrace with stairs leading down to the garden and undercrofts. The garage was joined to the front of the bungalow and had a flat roof with brick parapets (**Photographs 1 & 2**).

3.2.2 The pitched roofs were covered with interlocking tiles that were intact and mostly tightly fitted; however, there were a few gaps under lifted tiles offering potential access and roosting opportunities to bats. On the rear elevation, there were several lifted roof tiles in proximity to the verge and ridge at the northwestern gable end and there were occasional small gaps under roof tiles on the slightly lower southeastern pitched roof (**Photographs 3 & 4; Target notes 1 & 2**). There were gaps under the bottom row of tiles but these were unsuitable for bats to access by the position of the guttering (**Target note 3**). Although ridgelines were uneven at the gable ends, the tiles were tightly fitted and the mortar was intact (**Photograph 5; Target note 4**). A roof tile was raised at the base of the chimney on the rear elevation offering a potential access opportunity for roosting bats but the lead flashing was tightly fitted to the roof tiles (**Photographs 6 & 7; Target notes 5 & 6**).

3.2.3 On the rear elevation, there were narrow gaps between the overhanging eaves and the external wall (**Photograph 8; Target note 7**). A small open-ended cavity was formed between the window and eaves on the front elevation (**Photograph 9; Target note 8**). There was a gap behind the barge board on the southeastern gable end and multiple gaps under the barge board on the northwestern gable end, offering a number of roosting opportunities to bats that typically occupy crevices (**Photographs 10 & 11; Target notes 9 & 10**). The western corner of the house, behind the terrace,

had missing bricks as a design feature which offered no suitable crevices for bats (**Photograph 12**).

- 3.2.4** The attached garage had a flat roof bordered by brick parapets and lacked any features suitable for roosting bats (**Target note 11**). No evidence of bats was visible on the exterior of the bungalow at the time of the survey.

3.3 Internal Survey

- 3.3.1** The property had one roof void covering the entire footprint, and this was accessible via a loft hatch located on the eastern side of the bungalow (**Photograph 13**). The void was split into two sections by an old external part-brick, part-blockwork wall with a central area removed to allow access throughout (**Photograph 14; Target note 12**). The void had an approximate floor-to-ridge height of 3 metres and both roofs were of 'cut and pitch' construction. The roofs were lined with a plastic sheeting which covered the original, and now disintegrating, bitumen-and-hessian style roofing felt (**Photograph 15; Target note 13**). The plastic sheeting stopped short at the eaves and exposed the original roofing felt and the underside of roof tiles with daylight visible (**Photograph 16; Target note 14**).

- 3.3.2** In the eastern section, the floor was boarded centrally and with fibreglass insulation (installed in 2009) at the sides; the western section had fewer boards and more fibreglass insulation (**Photograph 17; Target note 15**). The chimney brickwork was rendered and an old wasps' nest was present on its western side where tiles were exposed by the old roofing felt; a raised water tank was situated on the eastern side of the chimney and a large covered water tank sat adjacent (**Photographs 18, 19 & 20; Target notes 16 & 17**). The gable ends were of blockwork construction with a cavity wall that had been insulated with old paper. The southeastern gable end had gaps behind rafters that were filled with paper insulation; daylight was visible through gaps in the paper at the northwestern gable end (**Photographs 21 & 22; Target note 18 & 19**). Rat droppings were scattered throughout the roof void.

- 3.3.3** The garage was of single-skin brick construction with a corrugated asbestos roof visible from the internal space (**Photograph 23; Target note 20**). There were two windows and a lack of features suitable for roosting bats (**Target note 21**). The two undercrofts were built into the terrace and lacked features suitable for roosting bats (**Photographs 24 & 25**).

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- 3.3.4** No signs of roosting bats were found during the internal inspection of the property.

4 DISCUSSION AND RECOMMENDATIONS

4.1 Assessment of Bat Roost Potential

- 4.1.1** No evidence of roosting bats was found during the roost assessment. However, the property possessed a few external features suitable for crevice-dwelling bat species such as gaps under occasionally lifted roof tiles and gaps behind barge boards at the gable ends. The most abundantly encountered crevice-roosting species are the pipistrelles (*Pipistrellus* spp.) and the smaller *Myotis* species such as the whiskered bat (*Myotis mystacinus*) and Brandt's bat (*Myotis brandt*). Roosts supporting a small number of non-breeding, commonly occurring species such as common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are considered to be of low conservation importance (Mitchell-Jones 2004).
- 4.1.2** Internally, no bat droppings were found during the survey indicating the likely absence of primarily void-dwelling bat species such as the long-eared (*Plecotus* spp.) bats. Taking into account the absence of bat evidence, the foraging habitat within close proximity and the number of external features identified across the roof of the property, the bungalow is considered to be of low bat roosting potential for crevice-dwelling species.
- 4.2 Further Survey**
- 4.2.1** Further survey of the property should be carried out to determine if bats are present or are likely to be absent and should comprise at least one emergence and/or re-entry survey; two further surveys will be required if bats are shown to be present in order to characterise the roost. The survey should be completed within the period between May and September inclusive with additional surveys (if necessary) carried out in the peak season for recording maternity roosts i.e. mid-May to August, and at least two weeks should separate the surveys (Collins 2016).

4.3 Impact of Proposals and Recommendations

- 4.3.1** The survey findings show that the proposed demolition of the existing bungalow would result in the loss of features with potential for crevice-roosting bats. Further survey will determine if bat roosts are present or likely to be absent, and therefore determine whether the demolition will result in the loss of roosts, or if any bat(s) present at the time of the works could be harmed and/or disturbed.
- 4.3.2** If bats are shown to be present, a European Protected Species (EPS) mitigation licence or registration of the site under the Bat Mitigation Class Licence (if applicable) would be required to allow the planned demolition to go ahead lawfully. An EPS licence or confirmation of the registration of the site under the Bat Mitigation Class Licence can be issued by Natural England if the three licensing tests (detailed in 1.2.2) have been met by the proposed work and can be sought once all necessary planning consents for the proposals have been granted and any wildlife related conditions discharged.
- 4.3.3** To secure a licence or site registration, it would be necessary to demonstrate that the 'favourable conservation status' of the local bat population would be maintained by mitigating the impact of the building work on bats, and by maintaining bat roosts during the course of the work, and following its completion. There would be scope to mitigate the impacts during the work, and retain roosts in the longer term, and as such it is considered that the proposals will retain the 'favourable conservation status' of the bat population as long as the mitigation and compensation proposals detailed in section 4.4 below are followed.

4.4 Indicative Mitigation Proposals

- 4.4.1** If further survey shows a EPS licence is required, under the terms of the licence or Bat Mitigation Class Licence (if applicable), the demolition work should be timed to avoid the periods when bats are most susceptible to disturbance i.e. winter hibernation season for all roosts (mid-November to February) to avoid disturbing torpid bats, and outside of the peak summer breeding season (May to mid-September) where evidence of a maternity roost is recorded.
- 4.4.2** Replacement roosting opportunities should be provided so that they are

available to bats in the short-term i.e. prior to and during the work by erecting woodcrete bat boxes suitable for the species present on nearby mature trees or poles before the work starts.

4.4.3 A 'soft strip' approach to the demolition should be adopted i.e. the careful removal of the roosting features by gloved hands and with hand-held tools under the supervision of a licensed ecologist, or the Registered Consultant if working under the Bat Mitigation Class Licence. In the event that bats are discovered during the course of the work, the licensed ecologist or Registered Consultant would capture the bat(s) and transfer it/them directly to one of the bat boxes erected in advance of the works.

4.4.4 In the longer term, as part of the licence, replacement roosting opportunities may need to be incorporated into the new dwelling. Roost features could be created by installing integral roosting boxes in new external walls or creating gaps under roof and/or ridge tiles to recreate those features lost. If any roost features are to be incorporated into the property, the roof should **not** be lined with a breathable roofing membrane because they have been found to be harmful to bats and a bitumen-based Type 1 roofing felt or wooden sarking should be used.

5 REFERENCES

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition*. Bat Conservation Trust, London.

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). *Bat Workers' Manual (3rd Edition)*. JNCC, Peterborough.

Richardson, P. (2000). *Distribution Atlas of Bats in Britain and Ireland 1980 – 1999*. Bat Conservation Trust, London.

APPENDIX 1 - SITE PHOTOGRAPHS



1. Front of the bungalow viewed from the northeast.



2. Rear of the bungalow viewed from the southwest.



3. Gaps under tiles in proximity to the verge and ridge at the northwestern gable end (rear elevation).



4. Occasional gaps under roof tiles on the southeastern pitched roof (rear elevation).



5. Ridge tiles tightly fitted with mortar intact (rear elevation).



6. Lifted roof tile at the base of the chimney (rear elevation).



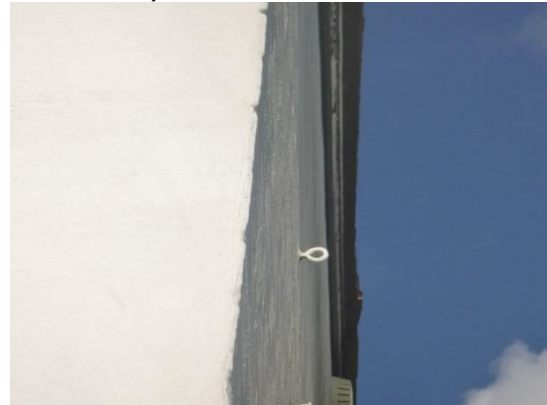
7. Lead flashing tight around chimney (front elevation).



8. Narrow gap behind overhanging eaves (rear elevation).



9. Small open cavity between the window and eaves (front elevation).



10. Gap under barge board on the southeastern gable end.



11. Multiple gaps behind barge board on northwestern gable end.



12. Missing bricks on western corner of house.



13. Eastern section of roof void viewed from the old external wall.



14. Old external wall in the centre of the roof void.



15. Plastic sheeting covering the old bitumen style roofing felt.



16. Old bitumen roofing felt exposed near the eaves.



17. Fibreglass insulation in the western section of roof void.



18. Wasps' nest on the western side of the chimney.



19. Chimney in the western section of the roof void with two water tanks.



20. Exposed roof tiles west of the chimney.



21. Blockwork wall at northwest gable end – cavity insulated with paper but daylight visible through gaps.



22. Edge of wall behind timber rafters insulated with paper.



23. Internal garage space.

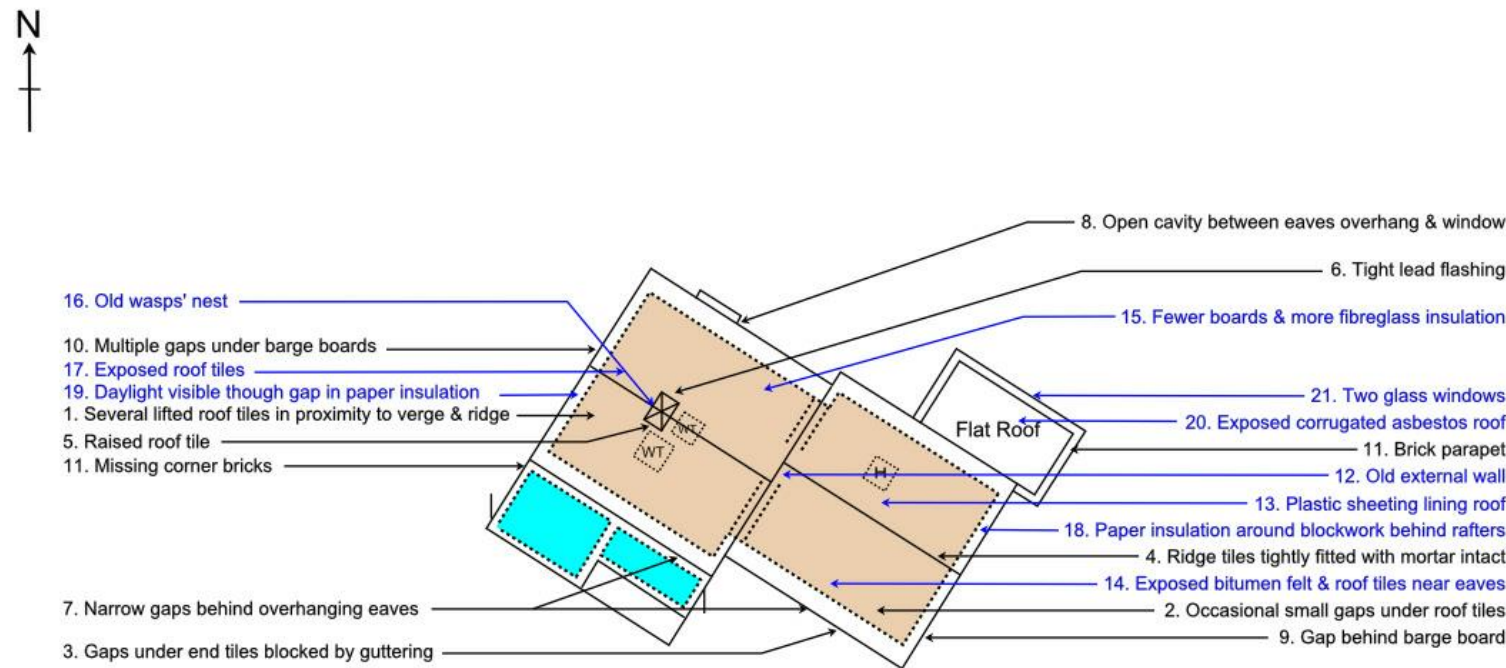


24. Eastern undercroft.



25. Western undercroft.

APPENDIX 2 – PRELIMINARY BAT ROOST ASSESSMENT FINDINGS





Chimney



Loft Hatch



Roof Void



WT Water Tank



Undercroft



External Target Note



Internal Target Note

Drawn by:	Date	Scale:	5 St Peters Avenue Caversham	
CW	Feb 2019	Not to scale	Preliminary Bat Roost Assessment	