

31 Brooklyn Drive
Emmer Green
Reading
Berkshire
RG4 8SR

Preliminary Bat Roost Assessment

Ref: R3069/b

Report prepared by Meghan Porter; reviewed by John Wenman

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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by HAC Designs Limited on behalf of Deepak Rajagopal to undertake a preliminary bat roost assessment at 31 Brooklyn Drive in Emmer Green, Reading (OS grid reference: SU 71618 77006). The assessment was commissioned to accompany a planning application to be submitted to Reading Borough Council seeking consent for the conversion of the roof void, with the addition of dormer windows.
- 1.1.2** 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') (as amended). A survey of the interior and exterior of the house and garage was conducted on the 21st March 2022 by an ecologist registered under the Natural England Bat Survey Class Licence CL18 and an assistant ecologist.
- 1.1.3** The survey found approximately 100 medium-sized bat droppings within the roof void of the house, indicating the likely presence of an occasional roost by an individual or small numbers of long-eared bats (*Plecotus* sp.). Approximately three small-sized bat droppings were also found within the roof void, below tears in the bitumous roofing felt. The house had numerous external potential roost features suitable for crevice-dwelling bat species, in the form of gaps below lifted roof tiles, gaps below hip and ridge tiles.
- 1.1.4** The proposed works will lead to the conversion of the roof void and will have a direct impact on potential external roost features. Further survey is required to characterise the confirmed roost, identify all access points and to determine the presence or absence of any other bat roosts within the house.
- 1.1.5** If further survey confirms that bats will be unavoidably impacted by the proposals, a European Protected Species Mitigation Licence (EPSML) or if applicable, registration of the site under the Bat Mitigation Class Licence (BMCL) will be obtained to allow the planned works to go ahead lawfully. Avoidance, mitigation and compensation measures will be adhered to from the pre-construction stage through to the post-construction stage.

2 INTRODUCTION

2.1 Background

2.1.1 John Wenman Ecological Consultancy LLP was commissioned by HAC Designs Limited on behalf of Deepak Rajagopal to undertake a preliminary bat roost assessment at 31 Brooklyn Drive in Emmer Green in Reading, Berkshire.

2.1.2 The assessment was commissioned to accompany a planning application to be submitted to Reading Borough Council seeking consent for the conversion of the roof void, with the addition of dormer windows to the rear elevation.

2.2 Legislative Background

2.2.1 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') (as amended). 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 significantly affect the local distribution or abundance of the species; and
- Deliberately kill, injure or take any bat.

2.2.2 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species Mitigation Licences (EPSML) 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;
- **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

- **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”.

- 2.2.3** 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 an EPSML is necessary before granting planning permission.
- 2.2.4** EPSML 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.
- 2.2.5** Licensable projects affecting small numbers of seven commonly occurring species occupying roosts of low conservation importance may fall under the remit of the Bat Mitigation Class Licence (WML-CL21). The Class Licence permits ‘Registered Consultants’ or accredited agents appointed by them 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.
- 2.2.6** 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.

2.3 Site Location and Context

- 2.3.1** The detached house is located on the western side of Brooklyn Drive in Emmer Green, Reading (OS grid reference: SU 71618 77006).
- 2.3.1** There are neighbouring properties to the north and south of the house, with Reading Golf Course - consisting of open grassland and treelined fairways - present immediately behind the rear garden. Cucumber Wood – an area of ancient and semi-natural woodland – is situated within the golf course approximately 185 metres to the north-west of the house. Further ancient woodlands are present in the near vicinity of the site, with Chambers Copse approximately 425 metres to the

north and Blackhouse Wood approximately 630 metres to the east.

- 2.3.2** The woodland and open grassland in the vicinity of the house offers high quality commuting and foraging opportunities to bats.

3 SURVEY METHODOLOGY

3.1 Building Inspection

3.1.1 A survey of the interior and exterior of the house was conducted on the 21st March 2022 by John Wenman - an ecologist registered under the Natural England Bat Survey Class Licence CL18 (registration 2015-11906-CLS-CLS) – and by Meghan Porter - an assistant ecologist.

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

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

- Bat 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); and
- Bats (live or dead).

3.1.4 Residential buildings may offer potential roosting sites in a number of locations, favoured locations include:

- Under roof, ridge and hip tiles, especially when loose or lifted tiles are present, or sections of mortar are missing;
- Under sections of raised lead flashing;
- Beneath hanging tiles;
- At the eaves – gaining access via gaps between the soffits and wall; and
- Within an enclosed roof space – long-eared bats (*Plecotus* spp.) for example, will often cluster at the ridge beam.

3.2 Survey Constraints

3.2.1 There were no significant survey constraints because full internal and external access was available throughout the survey.

4 SURVEY FINDINGS

4.1 Introduction

- 4.1.1** Photographs of the house and garage 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 house and garage are described as follows:

4.1 Weather conditions

- 4.1.1** The weather on the day of the survey was clear, sunny and calm with a maximum temperature of 16°C.

4.2 External Survey

- 4.2.1** The detached house was of brick construction, with a hipped roof and a catslide roof on the southern elevation (**Photographs 1 & 2**). The roof was covered in clay roof tiles, which were uneven and lifted on the rear elevation and along the verge on the southern and eastern elevations, offering roosting opportunities for crevice-dwelling bat species (**Photographs 3 & 4; Target notes 1 & 2**). There were two rooflights on the rear elevation of the roof, which had lifted roof tiles around them (**Photograph 5; Target note 3**). There were gaps below the hip tiles across the whole roof, with gaps also below the ridge across the central section of the roof (**Photographs 6 & 7; Target notes 4 & 5**). The lead flashing was tight around the chimney on the southern elevation (**Photograph 8; Target note 6**). The wooden soffit was sealed above the windows around the house but had slight gaps visible between the soffit and the brickwork in sections on the rear and front elevations (**Photograph 9; Target notes 7 & 8**).

- 4.2.2** No signs of roosting bats were observed during the external survey of the house.

4.3 Internal Survey

- 4.3.1** The roof void covered the second storey floorplan of the house and was accessible via a first-floor loft hatch. The roof void had an approximate floor-to-ridge height of 2.5 metres and was of 'cut and pitch' roof construction, and the ridge was mostly free of cobwebs (**Photograph 10; Target note 9**). The roof was lined with bitumen-and-hessian felt, which had occasional tears where the hipped extension joined the main roof on the rear elevation and was loose around the skylights (**Photographs 11 & 12; Target notes 10 – 12**). The floor was boarded centrally within the void with fibreglass insulation present along the edges of the void, with older fibreglass

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present beneath (**Photograph 13; Target note 13**). The eaves were open into the soffits throughout the void (**Photograph 14; Target note 14**). Boarding was present at the southern end of the void, at the base of the brickwork chimney, which was cobwebbed and tight to the roofing felt (**Photograph 15; Target note 15**).

- 4.3.2** There were scattered small-sized bat droppings within the roof void, with one present below a gap in the roofing felt at the hipped join on the rear elevation (**Photograph 16**). There was a medium-sized bat dropping on the boarding near the south-western corner of the void, and two on top of the fibreglass insulation, with a further pile of 30-40 droppings present below the newer layer of fibreglass (**Photographs 17 & 18; Target note 16**). Approximately 10 medium-sized bat droppings were present on and below the newer layer of fibreglass insulation in the small, hipped gable on the front elevation (**Photograph 19; Target note 17**).

5 DISCUSSION AND RECOMMENDATIONS

5.1 Assessment of Bat Roost Potential/Status

- 5.1.1** During the survey approximately 50 medium-sized bat droppings, resembling those typically deposited by long-eared bats (*Plecotus* spp.), were found in the roof void, on top and below the newer layer of fibreglass insulation. The location of the droppings within the roof void lined up with the tears in the bitumous roofing felt along the rear elevation indicating bats were most likely to have gained access at these locations. The number of droppings observed is not indicative of the presence of a maternity roost.
- 5.1.2** Two long-eared bat species are found within the UK: brown long-eared (*Plecotus auritus*) and grey long-eared (*Plecotus austriacus*). Brown long-eared bats (*P. auritus*) are a widespread species found throughout the UK and roosts occupied by small numbers of non-breeding individuals are considered to be of low conservation importance; however, they are a species of principal importance for conservation (as defined within Section 41 of the NERC Act 2006) and any loss of roosts may have an adverse impact on the status of local populations (Mitchell-Jones 2004). The grey long-eared bat (*P. austriacus*) has a restricted distribution confined to the far south of England (Richardson 2000) and therefore it is possible, although very unlikely, that this rarer species is present.
- 5.1.3** Approximately three small-sized droppings - of a size and shape most typical of *Pipistrellus* species - were present within the roof void, with one on top of the fibreglass insulation below the tear in the roofing felt on the rear elevation. The house had numerous external potential roost features suitable for crevice-dwelling bats, such as the pipistrelles (*Pipistrellus* spp.) and small *Myotis* species, in the form of lifted roof tiles, gaps below hip and ridge tiles and gaps between the soffit and the brickwork.
- 5.1.4** Two species of pipistrelle bat, common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*), are widespread and abundant throughout the UK (Richardson 2000). Small *Myotis* species such as the Whiskered bat (*Myotis mystacinus*) and/or Brandt's bat (*Myotis brandtii*) are widespread and common but less abundant than the pipistrelle species. Roosts supporting pipistrelle (*Pipistrellus* spp.) and/or small *Myotis* bat species are of low to moderate conservation importance (subject to the type of roost present i.e., non-breeding roosts supporting individual or small numbers of bats through to maternity roosts

supporting large numbers of female bats) (Mitchell-Jones 2004).

- 5.1.5** Considering the evidence of at least two bat species, roosting features available for bats and habitats nearby, the house is considered to be of high bat roost potential.

5.2 Impact of Proposals and Recommendations

- 5.2.1** The proposals will involve the conversion of the roof void with the addition of dormer windows on the rear elevation. The proposals will directly affect the roof void and will lead to the removal of external potential roost features on the rear elevation, and may disturb and/or harm any bats present at the time of works. Further survey is required to determine if roosting bats continue to be present, and if present, to characterise the nature of the roosts.
- 5.2.2** Further survey of the house should comprise of three evening emergence and/or dawn re-entry surveys with at least two weeks separating each survey. The surveys should be undertaken in the period between May and September inclusive with at least two of the surveys carried out in the peak season for recording maternity roosts i.e., May to August (Collins 2016).
- 5.2.3** If roosting bats are present, and bats and their roosts will be unavoidably affected by the proposed works, a European Protected Species Mitigation Licence (ESPML) or if applicable, the registration of the site under the Bat Mitigation Class Licence (BMCL) will be necessary to permit the lawful damage of a confirmed bat roost(s) and/or the disturbance of bats. A licence can be issued by Natural England if the three licensing tests (detailed in **Paragraph 2.2.2**) have been met by the proposals.
- 5.2.4** To meet one of the licensing tests, it will be necessary to demonstrate that the 'favourable conservation status' of bats using the house is maintained throughout and after the completion of the work by employing mitigation measures during the work, by providing compensatory roosts in the short-term and ensuring that roosting sites are retained on site in the long-term, as summarised in the indicative measures in **Section 6** below.

6 INDICATIVE MITIGATION AND COMPENSATION REQUIREMENTS

- 6.1.1** Under the terms of the EPSML or BMCL (if applicable), the commencement of work affecting bat roost(s) will 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. **NB. Current survey information does not indicate that a maternity roost is present.**
- 6.1.2** Replacement roosting opportunities will be provided so that they are available to bats in the short-term, i.e. prior to and during the work by erecting at least two woodcrete bat boxes on a mature tree in the rear garden before the work starts.
- 6.1.3** A 'soft strip' approach to the work affecting identified roosts will be adopted, i.e. the careful removal of roof and/or hip tiles associated with the roost(s), by gloved hands and with hand-held tools under the supervision of a licensed ecologist or the Registered Consultant if working under the BMCL. In the event that bats are discovered during the course of the work, the licensed ecologist or Registered Consultant will capture the bat(s) and transfer it/them directly to one of the bat boxes erected in advance of the works.
- 6.1.4** During construction and in the long-term, replacement roosting opportunities will be required and these could be incorporated within the house in the form of crevices under replaced roof tiles or in the form of external bat boxes on the rear elevation.

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 house viewed from the east.



2. Rear of the house viewed from the west.



3. Lifted roof tiles (front elevation).



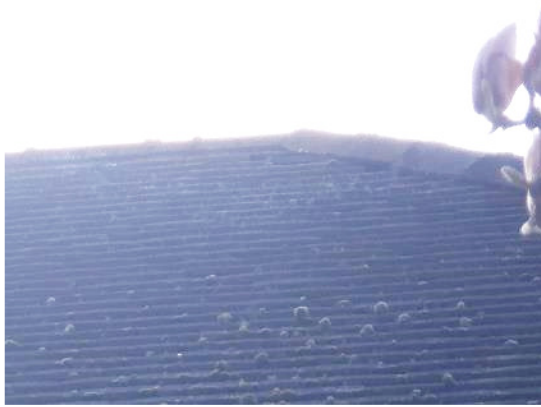
4. Lifted verge roof tiles (southern elevation).



5. Lifted roof tiles beside rooflights.



6. Gaps below hip tiles.



7. Gap below ridge tile (front elevation).



8. Tight lead flashing around chimney.



9. Gap between the soffit and brickwork (rear elevation).



10. Lightly cobwebbed ridge.



11. Gap in bituminous roofing felt (rear elevation).



12. Tear in roofing felt.



13. Boarded floor with fibreglass insulation along the edge.



14. Open soffit.



15. Boarding along the eaves on the southern elevation.



16. Small-sized bat dropping below gap in roofing felt.



17. Medium-sized bat dropping on boarding.

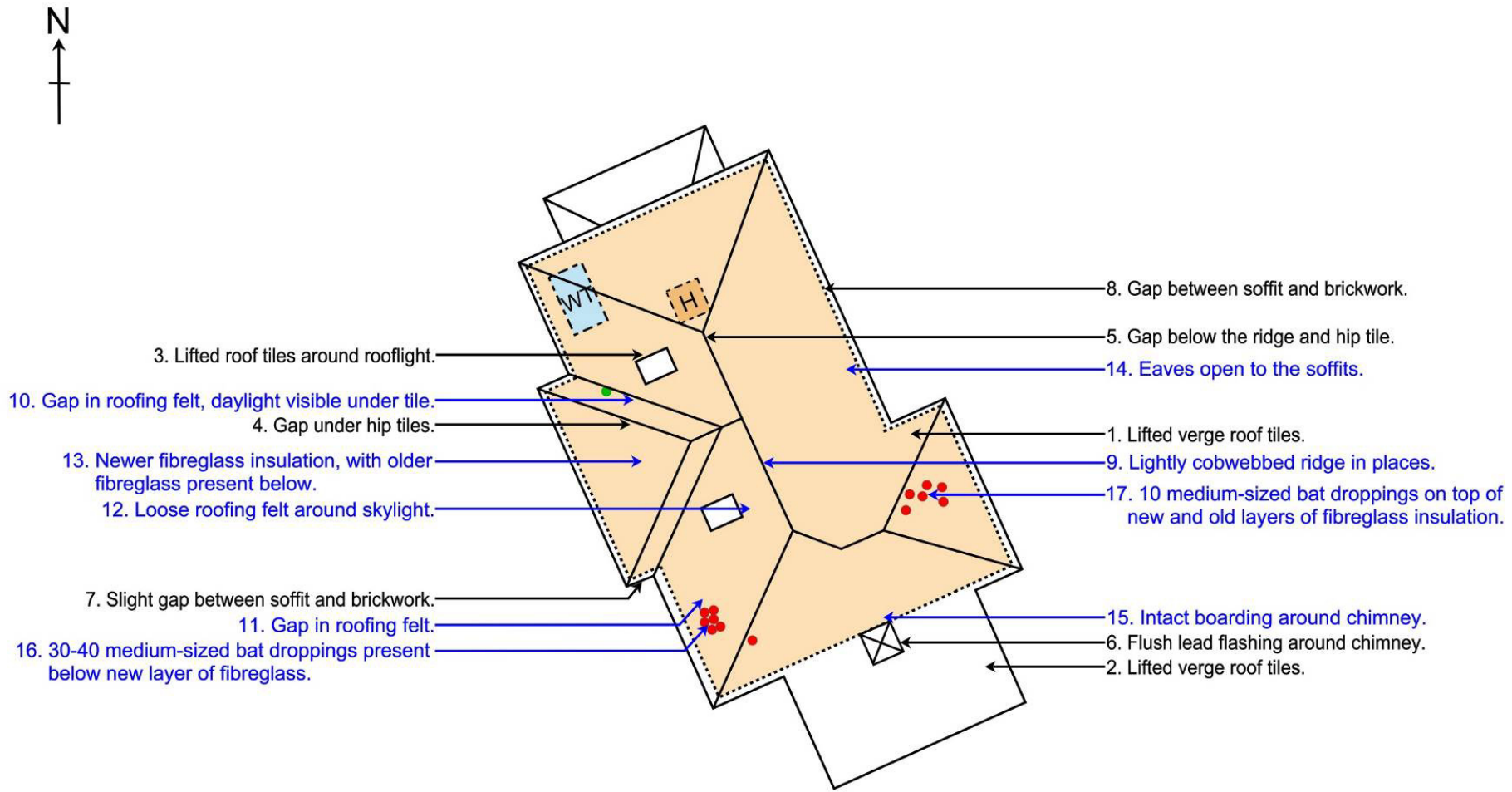


18. Pile of medium-sized bat droppings on top of old layer of fibreglass insulation



19. Medium-sized bat droppings on top of the new layer of fibreglass insulation (front side of the roof void).

APPENDIX 2 – PRELIMINARY BAT ROOST ASSESSMENT PLANS



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External target note

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Internal target note

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Medium-sized bat dropping

●

Small-sized bat dropping

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Chimney

□

Roof void

H

Loft hatch

WT

Water tank

Drawn by:	Date	Scale:	31 Brooklyn Drive, Emmer Green, RG4 8SR	JOHNWENMAN ecological consultancy
MP	March 2022	Not to scale	Preliminary Bat Roost Assessment Findings	