

28 Holmbury Avenue
Crowthorne
Berkshire
RG45 6TQ

Preliminary Roost Assessment

Report ref.: R2744_PRA_a

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CONTENTS PAGE

1	EXECUTIVE SUMMARY	3
2	INTRODUCTION.....	5
2.1	Project Background.....	5
2.2	Site Location and Context.....	5
2.3	Report Objectives	5
3	LEGISLATIVE AND POLICY BACKGROUND.....	6
3.1	Relevant Legislation.....	6
3.2	Planning Policy	6
3.3	Mitigation Licensing	7
4	SURVEY METHODOLOGY.....	8
4.1	Desk Study	8
4.2	Building Inspection.....	8
5	SURVEY RESULTS.....	11
5.1	Desk Study	11
5.2	Building Inspection.....	11
6	DISCUSSION.....	19
6.1	Assessment of Potential Roost Suitability.....	19
6.2	Assessment of Roost Status.....	20
7	IMPACT ASSESSMENT	21
7.1	Potential Impacts of Development Proposals	21
7.2	Recommended Actions.....	21
8	REFERENCES.....	23
	APPENDIX 1 – POTENTIAL SUITABILITY CATEGORIES FOR ROOSTING BATS.....	24
	APPENDIX 2 – DEFINITION OF BAT ROOST TYPES	25
	APPENDIX 3 – FURTHER SURVEY RATIONALE	26

1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Simon Whatley to undertake a Preliminary Roost Assessment (PRA) for bats at 28 Holmbury Avenue in Crowthorne, to accompany a planning application to be submitted to Wokingham Borough Council seeking consent for a proposed conversion of the garage which includes the addition of a dormer window.
- 1.1.2** Several hundred small bat droppings were found in the main roof void, with the largest concentration at the east facing gable end and a smaller concentration at the west facing gable end. Access points are likely behind a gap in the timber soffit at the eastern gable end, and gaps under lifted lead flashing by the chimney and between the timber and chimney breast at the western gable end. The droppings were typical of crevice dwelling bats, such as common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats. There was no evidence of void-dwelling species such as the long-eared bats (*Plecotus* spp.) within the property. The property has been assigned high potential suitability for bats.
- 1.1.3** One old bat dropping was found on the internal wall of the garage and the survey identified the garage had crevice features of limited extent, comprising gaps beneath the uPVC soffits on the eastern elevation. The feature was closely inspected with a high-powered torch and was heavily cobwebbed with no evidence of roosting bats. The dropping had not been deposited recently and the feature was considered likely to have been used opportunistically by a bat in the past. The garage was assigned low potential suitability for bats.
- 1.1.4** The development proposals will avoid directly impacting the main roof space and therefore the confirmed roosting locations identified at the gable ends will be unaffected throughout the construction activities. The section of roof to be impacted by the proposals possesses no potential roosting opportunities for bats so the removal of roof coverings, such as tiles and soffits, is considered highly unlikely to contravene the legislation protecting bats and their roosts.
- 1.1.5** The development proposals are considered highly unlikely to result in the death, injury or disturbance of bats; the damage or destruction of a bat roost; or the obstruction of access to a bat roost. As such, a European Protected Species (EPS) mitigation licence would not be required for the planned works to go ahead lawfully. In the unlikely event that bats are encountered during the construction activities, the works must stop immediately, and a licensed ecologist should be called to site to attend to the bat and provide advice on how to proceed. A precautionary non-licensed approach will be

adopted to ensure that bats using the main house will not be disturbed and that there are no indirect impacts.

- 1.1.6** This report contains information regarding a mobile species so it will likely be valid for less than 12 months (CIEEM 2019b).

2 INTRODUCTION

2.1 Project Background

- 2.1.1** John Wenman Ecological Consultancy LLP was instructed by Simon Whatley to undertake a Preliminary Roost Assessment (PRA) for bats at 28 Holmbury Avenue in Crowthorne.
- 2.1.2** The survey was commissioned to accompany a planning application to be submitted to Wokingham Borough Council seeking consent for a proposed conversion of the garage which includes the addition of a dormer window.

2.2 Site Location and Context

- 2.2.1** The detached property is located on the northern side of Holmbury Avenue, to the north of Crowthorne in Berkshire (central OS grid reference: SU 83246 65480).
- 2.2.2** The property is situated in a residential area bordered by further properties on all sides. Hatch Ride to the north is tree-lined and connects to woodland at Heath Lake Nature Reserve and Site of Special Science Interest (SSSI) situated approximately 60m to the west. The SSSI comprises a lake which is situated approximately 250m to the west surrounded by woodland and heathland. Further patches of woodland are situated along Nine Mile Ride just over 100m to the north. These local habitats offer high quality foraging and commuting opportunities for bats.

2.3 Report Objectives

- 2.3.1** The aim of the PRA is to ascertain if there is evidence of the presence of bats and/or potential for roosting bats to be present, and therefore whether further survey and/or mitigation would be required for future proposed development activities.

3 LEGISLATIVE AND POLICY BACKGROUND

3.1 Relevant Legislation

3.1.1 In England and Wales, all bat species found in the wild are fully protected under the Wildlife & Countryside Act 1981 (as amended) (WCA) and Conservation of Habitats and Species Regulations 2017 (as amended); the regulations are commonly referred to as the Habitat Regulations and hereafter referred to as such. The Habitat Regulations refer to European Protected Species (EPS) and all species of bats in the United Kingdom (UK) are EPS. Although the UK left the European Union on the 31st January 2020 and is therefore no longer tied to European legislation, the Habitat Regulations have been retained in their current format.

3.1.2 The legal framework underpinned by the WCA and Habitat Regulations makes these specific actions an offence as follows:

- Deliberately kill, injure, capture or take a wild bat;
- Deliberately, intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or to significantly affect local distribution or abundance;
- Damage or destroy a place used by a bat for breeding or resting; and
- Intentionally or recklessly obstruct access to any place used by a bat for shelter or protection.

3.2 Planning Policy

3.2.1 The biodiversity duty imposed through the Environment Act 2021 states that Local Planning Authorities (LPAs) must consider what action they can take to conserve and enhance biodiversity in England. Government planning policy, such as the ODPM Circular 06/2005, requires LPAs to account for the conservation of protected species when considering and determining planning applications.

3.2.2 The ODPM Circular 06/2005 states that 'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.' This policy means that in instances where there is a reasonable likelihood of bats being present and affected by a development, surveys must be undertaken to inform a mitigation strategy to be agreed prior to granting planning permission.

3.3 Mitigation Licensing

3.3.1 The government's statutory nature conservation body, Natural England, is responsible for issuing European Protected Species (EPS) mitigation licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. An EPS mitigation licence can be issued if the following three tests derived from Regulation 55 have been satisfied:

- (2)I – 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.'*
- (9)(a) – there is *'no satisfactory alternative'* to the derogation; and
- (9)(b) – *'the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'*

3.3.2 LPAs have a statutory duty under Regulation 7(3)(e) of the Habitat Regulations to consider and determine whether these three tests are likely to be satisfied by planning proposals affecting EPS before granting planning permission. If an EPS mitigation licence is necessary, a licence can be sought once all the necessary planning consents have been granted. Natural England aims to issue a decision on licence applications within 30 working days of submission.

3.3.3 The Bat Mitigation Class Licence (BMCL) scheme allows ecologists to apply to become Registered Consultants to use this licence for low conservation status roosts, i.e. roosts comprising small numbers of seven commonly occurring species. A site registration form must be completed as a condition of the licence and submitted to Natural England at least three weeks before the licensable activities are due to start; Natural England aims to register sites within two weeks of submission.

3.3.4 Baseline survey information supporting EPS mitigation licence applications or BMCL site registrations must be up-to-date and have been completed within the current or most recent optimal season. A suitably experienced ecologist will be required to undertake a site walkover/check within three months prior to application/registration submission to confirm that conditions have not changed since the most recent survey.

4 SURVEY METHODOLOGY

4.1 Desk Study

4.1.1 A desk-based study for bats was undertaken to collate and review existing information about the site and the surrounding land. The study utilised the following open access resources:

- OS maps and Google Earth – maps and satellite imagery were used to identify potential flight-paths and foraging habitats for bats;
- MAGIC – examined to locate granted European Protected Species licences; and
- pre-existing bat survey reports – any available reports were obtained from the client or relevant planning portal.

4.2 Building Inspection

Survey Details

4.2.1 A detailed inspection of the exterior and interior of the property was undertaken on the 7th August 2024 by Vicky Potts MCIEEM registered under Natural England Bat Survey Class Licence CL18 (Registration no.:2016-27162-CLS-CLS) and Sam Wenman, in accordance with good practice guidance (Collins 2023). The equipment used during the inspection comprised binoculars, a high-power (1 million candlepower) LED torch, a headtorch, ladder and PPE (facemask, gloves etc.). The inspection involved a systematic search of the exterior and interior of the structure during daylight hours to compile information on potential and actual bat access points; potential and actual bat roost sites; and any evidence of bat presence.

External Survey

4.2.2 Frequently used bat access points and/or roost sites include (but are not limited to) spaces:

- behind hanging tiles, weatherboarding, soffit boxes and barge boards;
- under lead flashing (particularly around chimneys) and roof tiles/slates; and
- in existing bat boxes.

4.2.3 It is important to note that the two most abundant and widespread bat species, common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*), typically only require gaps measuring 15mm by 20mm to gain access to a roost inside a

building.

4.2.4 The external survey involved a systematic search for evidence of bats including:

- live or dead specimens;
- droppings;
- urine marks;
- fur-oil staining; and
- squeaking noises.

4.2.5 It should be noted that bats can be present in a building while leaving no visible signs externally and wet weather has the potential to wash any evidence away. The search for evidence was focused on (but was not limited to) the ground, windowsills, windowpanes and walls (including cladding and hanging tiles); particularly in places near to potential bat access points and/or roost sites.

Internal Survey

4.2.6 The internal survey comprised a systematic search for evidence of bats on the upper floors of the building (i.e. checking the exterior from windows) and inside the roof and eave spaces. Evidence of bats found during an internal inspection can include:

- live or dead specimens;
- droppings;
- urine marks;
- fur-oil staining;
- feeding remains (i.e. moth wings);
- squeaking noises;
- bat-fly (Nycteribiid) pupal cases; and
- odour.

4.2.7 It should be noted that only specimens or droppings can be relied upon in isolation to confirm the presence of a bat roost.

4.2.8 Frequently used roosting locations within the roof include (but are not limited to):

- the apex of the gable end or dividing walls;

- the top of chimney breasts;
- ridge and hip beams;
- mortise and tenon joints;
- behind purlins; and
- between tiles and roof lining.

Survey Limitations and Validity

- 4.2.9** There were no significant survey limitations because PRAs can be carried out at any time of year under any weather conditions and the building was fully accessible.
- 4.2.10** It should be noted that it is not always possible to inspect all potential roost sites during a survey, particularly for bat species which typically roost in hidden crevices. Therefore, an absence of bat evidence found during a survey does not necessarily equate to evidence of bat absence in a building.
- 4.2.11** This report contains information regarding a mobile species so it will likely be valid for less than 12 months (CIEEM 2019b).

5 SURVEY RESULTS

5.1 Desk Study

5.1.1 The linked private gardens with wooded habitats and mature trees in the suburban setting resembles continuous habitat that could be used as flight paths connecting to high-quality foraging habitats in the nearby countryside for any bats roosting locally.

5.1.2 Eight bat mitigation licences have been granted within the last 10 years inside a 2-kilometre radius of the property as detailed in Table 1 below.

Table 1. Bat mitigation licences granted within a 2km radius of the property (Source: MAGIC).

Case Reference of Granted Licence	Species on the Licence	Licensable Period	Licensable Works	Distance (m)
2014-4527-EPS-MIT	Brandts bat, Brown long-eared, Common pipistrelle, Soprano pipistrelle, Whiskered bat	18/12/2014 - 30/03/2025	Destruction of a breeding stie and resting site	838 m north
2016-25037-EPS-MIT	Brown long-eared, Soprano pipistrelle	06/09/2016 - 06/09/2021	Destruction of a resting site	1343 m se
2016-24162-EPS-MIT	Common pipistrelle	18/07/2016 - 18/07/2021	Destruction of a resting site	1483 m s
2015-7775-EPS-MIT	Common pipistrelle	11/03/2015 - 31/03/2020	Destruction of a resting site	1567 m s
2017-31130-EPS-MIT	Whiskered bat	06/09/2017 - 30/09/2022	Destruction of a breeding site	1696 m s
2017-31789-EPS-MIT	Soprano pipistrelle	19/10/2017 - 31/10/2018	Destruction of a resting site	1732 m sw
2015-8440-EPS-MIT	Brown long-eared	28/04/2015 - 30/04/2020	Damage to a resting place	1761 m sw
2018-33861-EPS-MIT	Brown long-eared	14/03/2018 - 30/11/2018	Destruction of a resting site	1924 m sw

5.1.3 The client had no existing bat survey reports in their possession and none had been published on the Local Planning Authority's (LPA) online planning portal.

5.2 Building Inspection

5.2.1 The findings from the external and internal inspections carried out for the property are

described with photographs and annotated in a plan, as follows:

External Survey

- 5.2.2** The property was a cavity wall built two-storey dwelling, with a pitched roof covered in interlocking clay roof tiles and a sloped-roofed porch and garage to the front and eastern side of the house and a glassed roof conservatory to the rear northern side of the house (**Photographs 1 & 2**).



Photograph 1. Front of property viewed from southwest.



Photograph 2. Rear of property viewed from north.

- 5.2.3** The interlocking roof tiles were flat and intact across the roof and the ridge mortar was all in place (**Photographs 3 & 4**). The front (western) side of the house was covered with painted render and decorative timber. A gap was present between the timber and chimney breast on the western side of the house (**Photograph 5; Target note 1**). Lead flashing was lifted around the chimney at the western side of the house (**Photograph 6; Target note 2**). Sealant was present along the timber soffit at the western side of the house (**Photograph 7**). A gap was present between the uPVC soffit and wall on the eastern side of the house and a few small bat droppings were visible on the wall (**Photograph 8; Target note 3**). The verge mortar was fully intact at the gable ends (**Photograph 9**).



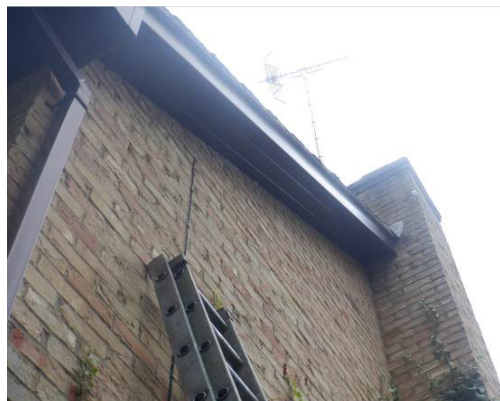
Photograph 3. Intact interlocking tiles.



Photograph 4. Ridge mortar intact.



Photograph 5. Gap between timber and chimney breast (western elevation).



Photograph 6. Lead flashing lifted around the chimney (western elevation).



Photograph 7. Sealant present under the soffits (western elevation).



Photograph 8. Gap between the soffit and wall (eastern elevation).



Photograph 9. Verge mortar intact (eastern elevation).

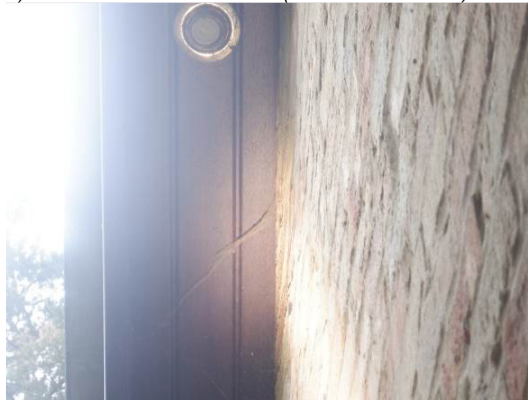
5.2.4 The roof of the porch and garage was tight with interlocking roof tiles with mesh at the eaves (**Photograph 10**). The uPVC soffits were partly sealed with sealant (**Photograph 11**). A gap was present towards the front elevation, which was able to be closely inspected with a high powered torch, and was shown to be heavily cobwebbed and lacked any evidence of use by roosting bats (**Photograph 12**; **Target note 4**).



Photograph 10. Intact interlocking tiles and mesh at the eaves (southern elevation).



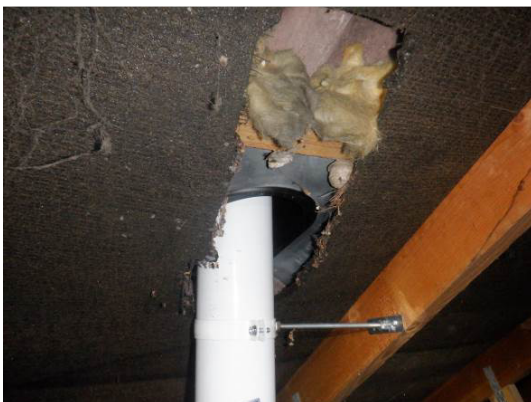
Photograph 11. Sealant filling part of the eaves (eastern elevation).



Photograph 12. Cobwebbed gap at the eaves, no evidence of bats (southern elevation).

Internal Survey

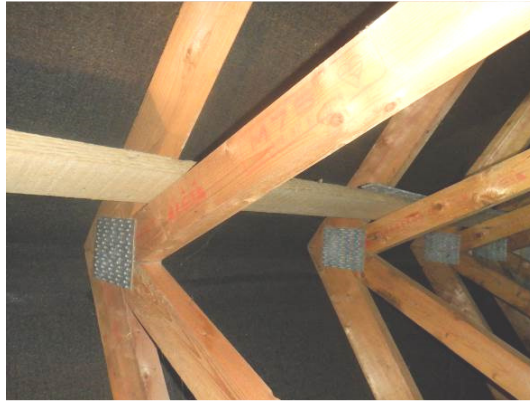
- 5.2.5** The roof space in the dwelling, was accessed via a loft hatch and ladder on the first floor. The space had a maximum height of 2¼m and was used for storage. The roof was of trussed rafter construction and lined with a bitumen roofing felt. Gaps were present around three pipes (**Photograph 13; Target notes 5, 6 & 7**) and plastic ventilation was present at the eaves (**Photograph 14**). The ridge was lightly cobwebbed throughout, which can indicate a lack of recent void-dwelling bat activity (**Photograph 15**).



Photograph 13 .Gap in roofing felt (roof void).



Photograph 14. Plastic ventilation at the eaves.



Photograph 15. Lightly cobwebbed ridge (roof void).

- 5.2.6** The floor was partly boarded, with fibreglass insulation below and around the boarding. The eaves were filled with insulation (**Photograph 16**). Blockwork was present at the eaves and a large wasp nest was present (**Photograph 17; Target note 8**).



Photograph 16. Eaves filled with fibreglass (roof void).



Photograph 17. Blockwork at eaves and wasps nest present (roof void).

- 5.2.7** The gable ends were of blockwork construction with ventilation bricks present at both ends, which went through the cavity wall and were heavily cobwebbed (**Photograph 18**). Gaps were present between the block work and bitumen roofing felt (**Photograph 19; Target note 9**). An accumulation of a couple of hundred small bat droppings were present on the fibreglass at the eastern gable end and approximately 30 were stuck on the wall, and a further 30 were on the floor at the western gable end with a couple on the wall (**Photographs 20, 21 & 22**).



Photograph 18. Heavily cobwebbed ventilation brick in the gable end.



Photograph 19. Gaps between the block work at bitumen roofing felt.



Photograph 20. Accumulation of small sized bat droppings at the east facing gable end.



Photograph 21. Small bat droppings stuck on the east facing gable end wall.



Photograph 22. Small bat droppings stuck on the west facing gable end wall.

5.2.8 The interior of the garage was lined tightly with bitumen roofing felt with block work at the eaves (**Photograph 23**). The internal wall was of blockwork construction and was heavily cobwebbed (**Photograph 24**). The exterior eastern gable end wall was of brick construction and was single skinned. Gaps were present around the brickwork, which were heavily cobwebbed (**Photograph 25; Target note 10**). One small sized bat dropping, which was not recently deposited, was caught up in a cobwebbed (**Photograph 26**).



Photograph 23. Garage lined with bitumen roofing felt with block work at the eaves.



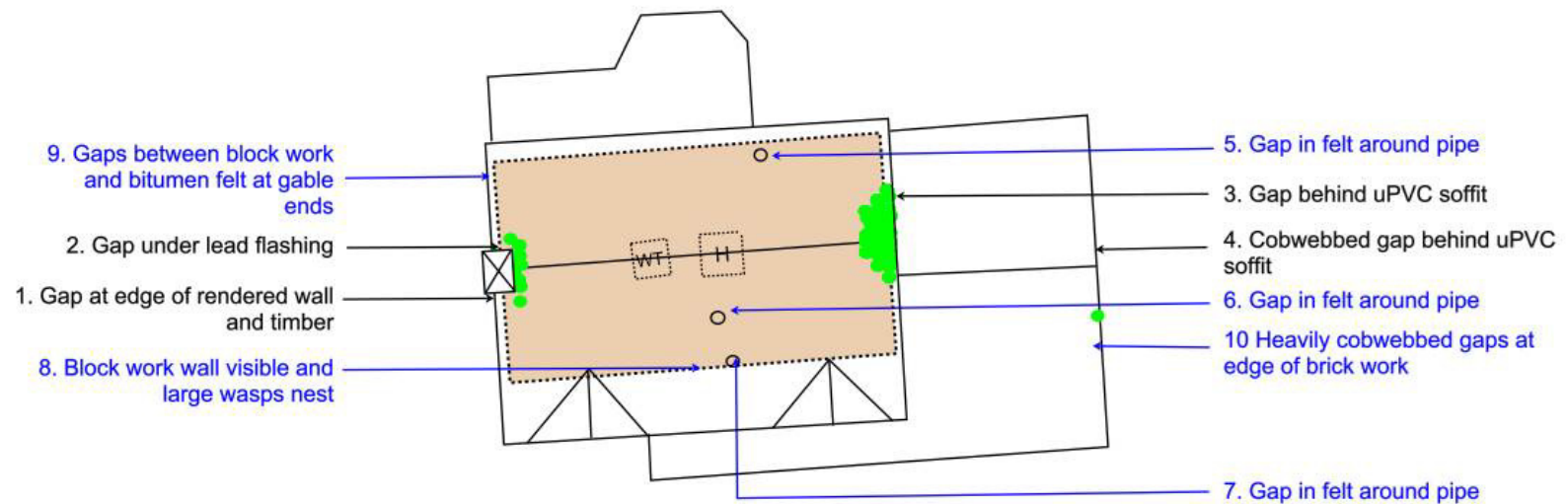
Photograph 24. Internal wall of block work construction (western elevation).



Photograph 25. Heavily cobwebbed external gable end wall (eastern elevation)



26. Small bat dropping caught in cobweb at eastern end of the garage.



n. External target note **n.** Internal target note Chimney Water Tank Roof void Loft hatch Small bat dropping distribution

Drawn by:	Date:	Scale:	28 Holmbury Avenue Crowthorne	
VP	August 2024	Not to scale	Preliminary Roost Assessment Plan	

6 DISCUSSION

6.1 Assessment of Potential Roost Suitability

- 6.1.1** The woodland in the suburban setting resembles high-quality foraging habitats for any bats roosting locally. The search of granted bat mitigation licences identified five species known to be roosting within a 2km radius of the property: Brandt's (*Myotis brandtii*), brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and whiskered (*Myotis mystacinus*).
- 6.1.2** The property had potential bat access points in the form of a gap between the timber and chimney breast at the western end and under the lead flashing at the western end (**Photographs 5 & 6; Target notes 1 & 2**), and gaps under the uPVC soffit on the eastern elevation (**Photograph 8; Target note 3**).
- 6.1.3** The house's roof void was quite open and had sufficient space for internal flight and for supporting individual or small numbers of void-dwelling bats, such as the locally recorded brown long-eared bat (*Plecotus auritus*). However, no bat droppings typical of long-eared bats were found, and the ridge was cobwebbed throughout, so the presence of void-dwelling bats is considered to be highly unlikely.
- 6.1.4** Several hundred small bat droppings were found in the house's main roof void, with the largest concentration at the east facing gable end and a smaller concentration at the west facing gable end. The droppings were typical of crevice dwelling bats, such as the locally recorded common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats. The house has been assigned high potential suitability for bats (see **Appendix 1** for potential suitability categories).
- 6.1.5** One old bat dropping was found on the internal wall of the garage and the garage had crevice features of limited extent, comprising gaps beneath the uPVC soffits on the eastern elevation (**Photograph 12; Target note 4**). The low level feature was able to be closely inspected with a high-powered torch and was heavily cobwebbed with no evidence of current use by bats were observed. The dropping had not been deposited recently and the feature was considered likely to have been used opportunistically by a bat in the past. The garage was assigned low potential suitability for bats (see **Appendix 1** for potential suitability categories).

6.2 Assessment of Roost Status

- 6.2.1** The house is confirmed to support roosting bats and the evidence suggest it likely supports crevice-dwelling bat species, most likely to be the abundant and widespread soprano pipistrelle (*Pipistrellus pygmaeus*) and/or common pipistrelle (*P. pipistrellus*). The roost is most likely to be a day and/or transitional roost; the presence of a maternity colony is considered unlikely based on the dropping evidence, however, droppings can be hidden out of view, i.e. within the cavity wall, so the possibility of a maternity roost cannot be ruled out.
- 6.2.2** Common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*) are the most abundant and widespread bats in Great Britain. These species occur in almost any habitat type and are well adapted to the built environments; they are the species most regularly reported roosting in houses and churches (Mathews *et al.* 2018). Roosts supporting these species hold site to district/county level conservation importance subject to the roost type, i.e. non-breeding roosts supporting individual bat or small groups through to maternity roosts supporting large numbers of female bats (Reason & Wray 2023).

7 IMPACT ASSESSMENT

7.1 Potential Impacts of Development Proposals

Overview

- 7.1.1** The planning application to be submitted to Wokingham Borough Council seeks consent for a proposed extension to the garage with the addition of a pitched roofed dormer window. The impacts of the proposals have been assessed in accordance with the mitigation hierarchy during construction and post development, as follows:

Construction Phase

- 7.1.2** The development proposals will avoid directly impacting the main roof space and therefore the confirmed roosting locations and access identified at the gable ends will be unaffected throughout the construction activities. The work is unlikely to lead to indirect impacts, such as disturbance, to the roosts in the main roof, particularly disturbance that will affect the ability of bats to survive, reproduce, nurture young or hibernate. The section of garage roof to be impacted by the proposals possesses no potential roosting opportunities for bats so the removal of roof coverings, such as tiles and soffits, is considered highly unlikely to contravene the legislation protecting bats and their roosts. A precautionary approach will be adopted (See **Section 7.2**).

Post Development

- 7.1.3** The development proposals avoid directly impacting the main roof space and therefore the confirmed roosting locations identified in these will be retained and continue to be available to roosting bats in the long-term.

7.2 Recommended Actions

- 7.2.1** Non-licensed avoidance measures will be adopted to ensure that bats using the main house will not be disturbed and that there are no indirect impacts from noise, dust and vibrations to the pipistrelle bat (*Pipistrellus* sp.) roost (taking into account the possible presence of a maternity colony in the unlikely event that one was present). The avoidance measures are as follows:

- A toolbox talk to the contractors working on site detailing the location of the confirmed roost site, the legislation that protects bats and their roosts, good working practices, the measures that are required to protect bats during the work and what to do if bats are found;

- The scaffold will be designed to ensure that it does not block access to the roost thereby allowing bats a clear flight path into and out of the roost. The scaffold design will be inspected and verified by the licenced ecologist during a site visit, and,
- A pre-work check of the roof void in the garage by a licenced ecologist prior to the opening of the void to confirm that the pipistrelle bat (*Pipistrellus* sp.) roost remains historic.

7.2.2 If these non-licensed avoidance measures are adhered to, the proposals are considered highly unlikely to impair the ability of bats to survive, breed or reproduce or nurture their young, or lead to the loss of a bat roost. Therefore, a European Protected Species (EPS) mitigation licence is not required to allow the works to go ahead lawfully.

7.2.3 In the unlikely event that bats are encountered during the course of the construction when an ecologist is not present, the work must stop immediately and a licensed ecologist should be called to site to attend to the bat(s) and provide further advice on how to proceed; work must continue only once further written advice has been received. At this point, an EPS mitigation licence may be required to permit the work to continue lawfully.

7.2.4

8 REFERENCES

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

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APPENDIX 1 – POTENTIAL SUITABILITY CATEGORIES FOR ROOSTING BATS

The categories detailed in **Table 2** below are derived from the '*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*' (Collins 2023) and provide guidance for assessing the potential suitability of buildings (and other structures) for roosting bats. These categories are applied using professional judgement and irrespective of whether the presence of a bat roost has been confirmed during a survey, as additional bat roosts could be present which have not yet been discovered.

Table 2. Categories for potential suitability of buildings (and other structures) for roosting bats.

Potential Suitability	Category Justification
None	A building (or structure) that has no features likely to be used by any roosting bats at any time of the year (i.e. a complete absence of cracks, crevices or voids that could provide suitable shelter).
Negligible	A building (or structure) that has no obvious features likely to be used by roosting bats, but in this case a small element of uncertainty remains as bats will occasionally use small and apparently unsuitable features. This category may also be used where a bat could potentially roost due to one attribute, but it is considered unlikely due to another attribute (e.g. a feature that is subject to constant illumination from artificial lighting).
Low	A building (or structure) that has one or more potential roost sites suitable for opportunistic use by individual bats at any time of the year. However, these potential roost sites for bats do not provide sufficient space, shelter, protection, conditions and/or surrounding suitable habitat to be used regularly or by large numbers (i.e. unlikely to be suitable for a maternity colony and not a classic hibernation site).
Moderate	A building (or structure) that has one or more potential roost sites suitable for regular use by individual bats, or small non-breeding groups, due to sufficient space, shelter, protection, conditions and surrounding habitat. However, these potential roost sites for bats are unlikely to support a roost of high conservation status with regards to the type of roost only (i.e. maternity colonies and classic hibernation sites).
High	A building (or structure) that has one or more potential roost sites suitable for use by large numbers of bats more regularly and for longer periods of time due to sufficient space, shelter, protection, conditions and surrounding habitat. These potential roost sites for bats are capable of supporting high conservation status roosts (i.e. maternity colonies and classic hibernation sites).

APPENDIX 2 – DEFINITION OF BAT ROOST TYPES

The potential suitability of a building in conjunction with any evidence of bat presence is used to provide an initial assessment of likely roost type and importance. The types of roost considered are based on the following Natural England definitions:

- Day roost – a summer resting place used by individual bats, or small non-breeding groups, during the day;
- Night roost – a resting place used by individual bats on occasion, or by a whole colony regularly, during the night;
- Feeding perch – a resting place used by individual bats, or a few individuals, primarily for short periods of feeding during the night;
- Transitional roost – a place used by a few individual bats, or occasionally small groups, for a short period of time upon waking from hibernation or in the period prior to hibernation;
- Maternity roost – a place used by small to large groups of female bats to give birth and raise their young to independence;
- Hibernation roost – a place used by individual bats, or in groups, during winter where there is a constant cool temperature and high humidity; and
- Satellite roost – a place used by a few individuals to small groups of breeding female bats found in close proximity to the main nursery colony throughout the breeding season.

The importance of a bat roost is underpinned by the conservation status of the suspected species (i.e. the distribution/rarity of a species in a specific geographic location) and the type of roost (i.e. not all roosts have the same level of importance in supporting the local bat population). Further roost characterisation surveys may be required to fully determine the importance of a confirmed roost to allow for a robust impact assessment.

APPENDIX 3 – FURTHER SURVEY RATIONALE

In cases where no evidence of use by bats is found during a building inspection but the possibility of their presence cannot be ruled out, further presence/likely absence survey is likely to be required if the development proposals will impact potential roost sites. Emergence surveys are carried out to establish the presence or likely absence of roosting bats in buildings (and other structures) and these are designed in accordance with the '*Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*' (Collins 2023) detailed in **Table 3** below.

Table 3. Recommended further survey for establishing presence/likely absence of roosting bats in buildings (and other structures).

Potential Suitability	Further Survey
None	No further surveys are required.
Negligible	No further surveys are required.
Low	A minimum of one dusk emergence survey visit should be undertaken in the period of May to August. However, if all areas (including cracks, crevices and voids) can be thoroughly inspected and no evidence of use by bats is found, then emergence surveys may not be required. In cases where a complete inspection cannot be carried out, professional judgement and proportionality should be applied when assessing the impacts of the development proposals.
Moderate	A minimum of two dusk emergence survey visits should be undertaken in the period of May to September, with at least one of the surveys between May and August; the survey visits should be spaced at least three weeks apart.
High	A minimum of three separate dusk emergence survey visits should be undertaken in the period of May to September (inclusive), with at least two of the surveys between May and August; the survey visits should be spaced at least three weeks apart.

In cases where the PRA and/or further survey establishes the presence of roosting bats in a building (or structure), this will likely trigger the need for roost characterisation to collect sufficient information to inform the impact assessment and mitigation strategy. The roost characterisation comprises information collected during the PRA, emergence surveys and by other methods, such as DNA analysis of bat droppings, and ultimately aims to determine the bat species roosting; the number of bats the roosts support; the roost access points; the locations of the roosts and the types of roost present. This information is crucial when applying for planning permission and/or a European Protected Species mitigation licence.