

95 Hyde End Lane
Ryeish Green
Reading
Berkshire
RG7 1ES

Preliminary Roost Assessment

Report ref.: R2640_PRA_a

<i>Report Quality Control Information</i>	
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1 EXECUTIVE SUMMARY

- 1.1.1** John Wenman Ecological Consultancy LLP was instructed by Mr Darren Clayton to undertake a Preliminary Roost Assessment (PRA) for bats at 95 Hyde End Lane in Ryeish Green, Reading.
- 1.1.2** The aim of the PRA is to determine the actual or potential presence of bats in the property and whether further survey and/or mitigation would be required for future proposed development activities.
- 1.1.3** The semi-rural farmland area surrounding the property with linear hedgerows, scattered trees and parcels of priority habitat deciduous woodland and semi-improved grassland provide continuous habitat that could be used as a flight-path connecting to high-quality foraging habitats for any bat(s) roosting in the property. Potential bat access points/crevices included a gap under lifted bitumen felt at the base of the rear chimney, behind the timber and uPVC fascias, within a damaged section of the timber soffit and under lifted slate verge tiles. Overall, the house is considered to be of moderate potential suitability for bats.
- 1.1.4** It is understood the proposed extension, will be situated at the southeastern gable and there will be associated changes to the roof to install a dormer window, which could obstruct access to and result in the damage/destruction of bats roosts and lead to direct/indirect disturbance, injury and/or death of bats, and potentially result in the permanent loss of a bat roost.
- 1.1.5** Further surveys are recommended to establish the presence or likely absence of bat roosts in the property, in order to be able to assess fully whether the development proposals will have an adverse effect on bats and design a mitigation strategy if necessary.
- 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 Mr Darren Clayton to undertake a Preliminary Roost Assessment (PRA) for bats at 95 Hyde End Lane in Ryeish Green, Reading.

2.1.2 The PRA was commissioned to accompany a householder planning application to be submitted to Wokingham Borough Council seeking consent for a two-storey side extension with associated alterations to the existing pitched roof and flat roofed sections.

2.2 Site Location and Context

2.2.1 The property is located on the northeastern side of Hyde End Land in Ryeish Green, a semi-rural hamlet southwest of Shinfield, near Reading, Berkshire (Ordnance Survey (OS) grid reference: SU72469 67436).

2.2.2 The site is bordered by neighbouring properties and their associated gardens along Hyde End Lane, divided by fencing and hedgerows with scattered trees within all gardens. Tree lines are situated along the eastern boundary of the rear garden and along Hyde End land with arable farmland behind both. Furthermore, priority deciduous woodland is situated 220m to the northwest, connecting to priority semi-improved grassland by a series of hedgerows and tree lines. The River Loddon flows approximately 1300m to the southeast.

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)(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.*'
- (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;
- DEFRA Data Services Platform and MAGIC – maps were used to locate relevant designated sites, habitats and granted European Protected Species licences; and
- 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 26th February 2024 by John Wenman MCIEEM registered under Natural England Bat Survey Class Licence CL18 (Registration no. 2016-23859-CLS-CLS) and assistant ecologist Jake Morgan (a qualifying member of CIEEM), 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** Neighbouring gardens along Hyde End Lane and semi-rural farmland area surrounding the property with hedgerows, scattered trees and tree lines provide continuous habitat that could be used as a flight-path connecting to high-quality foraging habitats for any bat(s) roosting in the property such as the parcel of priority deciduous woodland and semi-improved grassland to the northwest.
- 5.1.2** The River Loddon is situated approximately 1300m to the southeast at its closest point to the property which can be used as a high-quality commuting and foraging route for bats with further adjoining parcels of priority deciduous woodland and floodplain grazing marsh.
- 5.1.3** Bat mitigation licences that have been granted within the last 15 years inside a 2-kilometre radius of the property are 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)
2017-31574-EPS-MIT	Brown long-eared bat	04/10/2017 – 31/10/2017	Destruction of resting place	440 SW
2018-36705-EPS-MIT	Brown long-eared bat & common pipistrelle	23/07/2019 – 05/10/2028	Destruction of breeding place and damage to resting place	480 SE
2015-15972-EPS-MIT	Brown long-eared bat & common pipistrelle	04/11/2015 – 03/11/2020	Destruction of resting place	730 NW
EPSM2009-1123	Brown long-eared bat & common pipistrelle	06/10/2009 – 05/10/2011	Destruction of resting place	800 NW
2015-15306-EPS-MIT	Brown long-eared bat	07/10/2015 – 06/10/2020	Damage to and destruction of resting place	890 SW
2016-20322-EPS-MIT	Common pipistrelle & soprano pipistrelle	24/02/2016 – 23/02/2021	Destruction of resting place	1010 NE
EPSM2009-1397	Brown long-eared bat	01/04/2010 – 30/04/2011	Destruction of resting place	1030 SE
EPSM2013-6319	Common pipistrelle	04/10/2013 – 30/10/2013	Destruction of resting place	1140 SW
EPSM2012-5103	Brown long-eared bat & soprano pipistrelle	10/12/2012 – 31/12/2014	Destruction of resting place	1260 W
2015-15933-EPS-BDX	Common pipistrelle	28/09/2015 – 31/10/2015	Damage & destruction of a resting & breeding place	1700 NW
EPSM2009-1119	Common pipistrelle	06/10/2009 – 31/0/2011	Destruction of resting place	1850 N

- 5.1.4** 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

Overview

- 5.2.1** The findings from the external and internal inspections carried out for the house are described with photographs, and annotated in a plan, as follows:

External Survey

- 5.2.2** The house is a semi-detached brick building with a pitched roof, two flat roofed sections at the rear, a single-storey pitched roofed section on the southeastern elevation and a front porch (**Photographs 1 & 2**).



Photograph 1. Front of property viewed from west.



Photograph 2. Rear and southeastern side of property viewed from southeast.

- 5.2.3** The pitched roof, ridge and pitched roofed single-storey section were covered by flat slate tiles that were intact and sealed (**Photograph 3**). The flat roofed sections at the rear of the property were covered by bitumen felt that was occasionally lifted against the uPVC fascia, however, close inspection with a high-powered torch showed the resulting gaps to be superficial (**Photograph 4**). The front porch was covered by a flat felt (**Photograph 5**).



Photograph 3. Slate tiles sealed on roof and ridge (front elevation).



Photograph 4. Hessian-reinforced bitumen felt slightly lifted (southeast elevation).



Photograph 5. Porch covered by a flat felt (front elevation).

- 5.2.4** Whilst the lead flashing was flat along the pitched single-storey section, a slight gap was situated behind the bitumen felt at the base of the rear chimney (**Photograph 6; Target note 1**).



Photograph 6. Lifted bitumen felt at the base of the chimney (rear elevation).

- 5.2.5** The brickwork gable had an open gap situated behind the timber fascia and within the timber soffit on the southwest corner of the property where a section of the soffit was damaged with direct internal access (**Photographs 7 & 8; Target notes 2 & 3**). Furthermore, a slight gap was situated between the timber fascia and the slate verge tiles along the gable (**Photograph 9; Target note 4**).



Photograph 7. Gaps between timber fascia and brickwork gable (southeastern elevation).



Photograph 8. Damaged section of the timber soffit with direct internal access (southeastern elevation).

elevation).



Photograph 9. Gap between timber fascia and verge tiles (southeastern elevation).

- 5.2.6** Whilst the timber soffit was sealed to the brickwork on the front elevation, gaps were situated behind the uPVC fascia of both flat roofed sections at the rear (**Photograph 10; Target note 5**)



Photograph 10. Gap behind uPVC fascia (rear elevation).

Internal Survey

- 5.2.7** The roof void was accessible from the first floor via a ladder and was partly lined with plasterboard to form a currently undecorated living space, with an approximate floor-to-ridge height of 2.5 metres (**Photograph 11**). Two enclosed eaves spaces covering the southwestern and northeastern elevations of the pitched roof were accessible via doors with both spaces unlined (**Photograph 12**).



Photograph 11. Central roof void with plasterboard lining.



Photograph 12. Unlined roof (Southwest eaves space).

- 5.2.8** Whilst some eaves were filled by fibreglass insulation, others were open with daylight visible (**Photograph 13**).



Photograph 13. Daylight within the eaves (southwest eaves space).

- 5.2.9** The northeastern and northwestern gables of the eaves spaces were covered by insulation boards with gaps situated between the slate roof tiles and boarding (**Photograph 14**). In addition, the southwestern and southeastern brickwork gables were heavily cobwebbed with mortar sealing the edges of both (**Photograph 15**).



Photograph 14. Gaps situated between insulation boarding and slate roof tiles (northeast eave space).

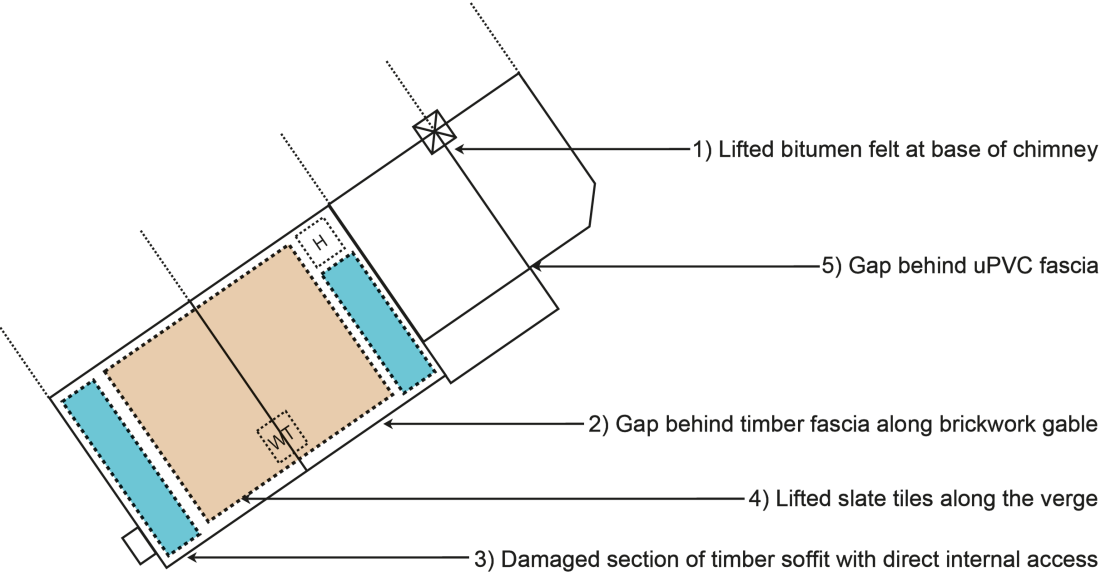


Photograph 15. Edges of the brickwork gables sealed by mortar (northeast eave space).

5.2.10 Bird droppings were observed within both eaves spaces (**Photograph 16**).



Photograph 16. Bird droppings (southwest eave space).



 Chimney

 Roof void

 Eave space

 Loft hatch

 Water tank

 External target note

Drawn by:	Date:	Scale:	95 Hyde End Lane, Ryeish Green	
JM	February 2024	Not to scale	Preliminary Roost Assessment Plan	

6 DISCUSSION

6.1 Assessment of Potential Roost Suitability

6.1.1 The semi-rural farmland area surrounding the property with hedgerows, scattered trees and parcels of priority habitat deciduous woodland and semi-improved grassland provide continuous habitat that could be used as a flight-path connecting to high-quality foraging habitats for any bat(s) roosting in the property. Furthermore, the search of granted bat mitigation licences identified two maternity colonies and three species known to be roosting within a 2km radius of the house: soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*), and brown long-eared bat (*Plecotus auritus*).

6.1.1 The house had the following suitable/potential bat access points:

- A gap under lifted bitumen felt at the base of the rear chimney (**Photograph 6; Target note 1**);
- Gaps behind the timber fascia along the southeastern brickwork gable (**Photograph 7; Target note 2**);
- A gap within a damaged section of the timber soffit at the southwestern corner of the property (**Photograph 8; Target note 3**);
- Gaps under lifted slate verge tiles along the southeastern brickwork gable (**Photograph 9; Target note 4**); and
- Gaps behind the uPVC fascia along both flat roofed sections at the rear (**Photograph 10; Target note 5**).

6.1.2 With the roof void largely comprising boarded out living space, the gaps behind the timber fascia and under the slate verge tiles along the southeastern brickwork gable were inaccessible inside the void. The damaged soffit at the southwestern corner of the roof likely leads inside the southwestern eaves space where daylight and bird droppings were observed. The eaves spaces both lacked sufficient space for internal flight and suitable conditions for supporting large numbers of void-dwelling bats, such as the locally recorded brown long-eared bat (*Plecotus auritus*).

6.1.3 The potential crevice roost locations include: under lifted bitumen felt at the base of the rear chimney; behind the timber fascia along the southeastern brickwork gable; under lifted slate verge tiles along the southeastern brickwork gable and behind the uPVC fascia along the flat-roof sections at the rear. These potential roost sites are likely to

have sufficient space, shelter, protection, conditions, and surrounding habitat for use by crevice-dwelling bats, such as the locally recorded common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*). 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 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); considering the type and extent of the features noted, the presence of a maternity roost is considered to be unlikely.

- 6.1.4** Overall, the house is considered to be of moderate potential suitability for bats (see **Appendix 1** for potential suitability categories).

7 IMPACT ASSESSMENT

7.1 Potential Impacts of Development Proposals

Overview

- 7.1.1** The development proposals consist of a two-storey side extension with associated alterations to the existing pitched and flat roofed sections. 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 require the erection of scaffolding, which could obstruct access to points of bat ingress/egress for the potential crevice roost sites associated with the southeastern gable. The proposals will involve the removal of roof tiles at the southeastern gable end, which may result in the damage and/or destruction of bat access points and roost sites. The construction activities could lead to direct/indirect disturbance, injury and/or death of bats.

Post Development

- 7.1.3** In the absence of mitigation and/or compensation, the development proposals could result in the permanent loss of bat roosts. The loss of a roost has potential to significantly affect the local distribution or abundance of a bat species, subject to its conservation status.

7.2 Conclusions

- 7.2.1** The development proposals cannot be altered to avoid the potential adverse effects on bats in the house. Therefore, further surveys are recommended to determine the presence or likely absence of bat roosts in the property, to be able to assess fully whether the development proposals will have an adverse effect on bats (see **Appendix 3** for further survey rationale). The recommended further surveys are detailed in **Section 8.1** below.

8 RECOMMENDATIONS

8.1 Further Surveys

- 8.1.1** Further surveys are recommended to determine the presence or likely absence of bat roosts in the property, in order to be able to assess fully whether the development proposals will have an adverse effect on bats.
- 8.1.2** 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.
- 8.1.3** If surveys show that roosting bats are present, an impact assessment with reference to the mitigation hierarchy will be made. In cases where the adverse effects caused by the development proposals are unavoidable, an application for a European Protected Species (EPS) mitigation licence or the registration of the site under the Bat Mitigation Class Licence (BMCL) would be required to permit the work to proceed lawfully. An EPS mitigation licence or BMCL can be issued by Natural England if the three licensing tests (detailed in **Paragraph 3.3.1**) have been satisfied by the proposals.
- 8.1.4** To satisfy one of the licensing tests, it would be necessary to demonstrate that the 'favourable conservation status' of the bat species using the house is maintained during the construction phase and post development. A mitigation strategy setting out avoidance, mitigation, compensation and enhancement measures, informed by further survey would be required to achieve this; however, indicative and provisional measures are summarised in **Section 8.2** below.

8.2 Indicative Mitigation Strategy

- 8.2.1** If further surveys and the impact assessment have demonstrated that an EPS mitigation licence or BMCL (if applicable) is required to permit lawful development, the commencement of construction activities impacting the bat roosts would be timed to avoid the periods when bats are most susceptible to disturbance, i.e. winter hibernation period if there is a reasonable likelihood of hibernating bats (mid-November to mid-March) and peak breeding season (May to August) if a maternity colony is present.
- 8.2.2** Alternative roost sites would be made available to bats prior to and throughout the construction phase by installing at least one woodcrete bat box (suitable for the type of roost/species present) on a suitable mature tree or a pole mount. The bat box should be positioned at least 4 metres from the ground, away from artificial lighting and

sheltered from strong wind while being exposed to sunshine (usually south, south east or south west facing).

- 8.2.3** Before the commencement of construction activities impacting the bat roost (i.e. the licensable works), a licensed ecologist or 'Registered Consultant' under the BMCL would provide a toolbox talk to all contractors working on site detailing how bats use buildings, legal protection, working methods (i.e. soft demolition/roof strip by hand), actual and potential roost sites, actions to be taken if a bat is found and personal safety procedures.
- 8.2.4** A soft demolition/roof strip approach to the works affecting the bat roosts would be adopted, i.e. careful removal of roof coverings by gloved hands and handheld tools under the direct supervision of a licensed ecologist or 'Registered Consultant'. In the event that a bat is found during the course of the works, the licensed ecologist or 'Registered Consultant' would capture the bat and transfer it directly to a woodcrete bat box installed in advance.
- 8.2.5** Replacement bat access points and roost sites may need to be created and/or reinstated into the house as part of an EPS mitigation licence or BMCL site registration. This compensation should aim for like-for-like roost sites with access points corresponding as closely as possible to the previous locations.
- 8.2.6** Where access is provided for bats, a bituminous roofing felt that does not contain polypropylene/polyethylene filaments (e.g. bitumen felt type 1F) or a non-bitumen coated 'breathable' membrane that has passed the snagging propensity test (e.g. TLX 'Bat Safe') should be used; other non-bitumen coated membranes are harmful to bats and must be avoided.

9 REFERENCES

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Collins, J (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

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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 1. 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 2. 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.