Preliminary bat roost assessment

Site Location	116 Mayfield Drive, Caversham, RG45JT
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Validity of data

The findings of this study are valid for a period of 24 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to allow any changes in the status of bats on site to be assessed, and to inform a review of the conclusions and recommendations made.

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Executive Summary

Chase Ecology undertook a Preliminary Roost Assessment (PRA) at the named site. The aim of the assessment was to consider the value and suitability of the structures for roosting bats & nesting birds as detailed below;

Survey Methodology	An internal & external survey was carried out by Elena Vasileva who is accredited to the Natural England class two licence 2017-28032-CLS-CLS and holds five years' experience of bat survey. The assessment is for potential roosting and usage of the structure for bats & nesting birds. See section 3 (Methodology). Additional to the visit further research has been carried out on the Magic.gov database and National Biodiversity Network
Results of Preliminary Bat Roost Inspection	SEE SECTION 6.0 Following a preliminary bat roost assessment, it has been identified that both the building and surrounding environments offer value to bats. A 2km search of previous Granted European Protected Species Applications revealed 12 granted European Protected Species applications for Soprano Pipistrelle, Common Pipistrelle, Brown Long-eared, Natterer's, Daubenton's bats. A 2km radius search has demonstrated habitats of value to bats including woodland, parkland, open fields, hedgerows and waterbodies of which support feeding & commuting. The main dwelling has evidenced roosting features of moderate value within both the upper and lower roof coverings and vertical hanging tiles which look to offer access and availability to both void & crevice dwelling bats and could not be fully ruled out during the Preliminary Roost Assessment without causing disturbance to materials which in effect may cause disturbance to possible bat roosts within. No evidence of bats was identified during the visit; however, we are unable to rule out or confirm any roosting evidence within the roof coverings or vertical hanging tiles where several accessible gaps look to offer shelter/access

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	opportunities of which habitats of value to crevice dwelling species would be available. Evidence such as droppings would always be visible externally.
Evidence of Nesting Birds	No evidence of nesting birds identified
Requirements for Additional Survey	In line with best practice survey guidelines, a structure that has demonstrated moderate value must have a further two emergence surveys to rule out or confirm activity from bats. These survey should be carried out within the recommended survey season from May to September with at least one of these visits during the optimal time of May to August. If bats are recorded to be using features of the structure where disturbance would be caused a 3rd emergence survey would be required to support the requirements for a European Protected Species mitigation licence. See Appendix 2: Bat Conservation Trust flow chart See Appendix 3: Description of the categories used to assess a building or tree's bat roost potential and the survey effort required to determine the likely presence or absence of bats
Legislation	Evidence of these additional survey requirements are placed upon all LPA's by both Part 4 (50) of The Conservation (of Natural Habitats) Regulations 1994 (as amended 2017) and section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 (which places a duty on LPA's, to have regard, so far as is consistent with the proper exercise of its functions, to the purpose of conserving biodiversity). Furthermore should an LPA approve a planning application (where Bats presence was deemed a likelihood) prior to Bat usage of the area affected by the development being fully understood (known) then should that development result in either the disturbance (including disturbance to behaviours or migration), injury or death of a Bat then the authority and developer could be considered too have acted recklessly under Part 1 (9) of the Wildlife and Countryside Act 1981 (as amended 2016); and as such be guilty of committing an offence.

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	Prior to any planning decision being made, emergence/re-entry surveys must be completed, as stated by Natural England and the Bat Conservation Trust's (BCT) Bat Surveys Good Practice Guidelines. This will enable a fuller understanding of bats usage of the building and assess the appropriateness of the level of mitigation.
Predicted Impacts of Development on Bats and Nesting Birds	Further assessment required to confirm or rule out any activity from bats and to assess any disturbance caused during development.
Mitigation and Compensation of Proposed Impacts	Not at this stage
Licensing Requirements for Bats	Not at this stage
Required Actions	See section 6.0 It is advised that no further works take place to the identified areas of value to bats at this stage as this may cause disturbance to bats and their roosts. see section 2.0 of this report

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1.0 Introduction

Brief

1.1 This report will present the findings of a preliminary bat roost assessment and nesting bird survey of the named site and further research of the area online.

Site description

1.2 An occupied two storey semi detached dwelling, see section 5.0 images.

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2.0 Legislation

2.1.1 All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017, making it an offence to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place

2.1.2 In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly Obstruct access to any structure or place which any bat uses for shelter or protection; or Disturb any bat while occupying a structure or place which it uses

2.1.3 If proposed development work is likely to destroy or disturb bats or their roosts, then a licence will need to be obtained from Natural England, which would be subject to appropriate measures to safeguard bats.

2.1.4 In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 (as amended). All wild birds, their nests and eggs are protected it an offence to: • kill, injure, or take any wild bird; • take, damage or destroy the nest of any such bird whilst it is in use or being built; or • take or destroying an egg of any such wild bird.

2.1.5 Special protection against disturbance during the breeding season is also afforded to those species listed on Schedule 1 of the Act.

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3.0 METHODOLOGY

3.1 All reporting undertaken by Mr Garry Smith who is an experienced licensed bat ecologist in England [Class 2 registration 2017-28032-CLS-CLS] with over 10 years' experience practical of professional ecological surveys.

3.2 Preliminary roost assessments can be undertaken throughout the year and can provide conclusive results, which can save expense and time for Planning Applicants. The optimum time to investigate for the presence of bats is during their active season when signs of presence can be more easily located.

3.3 A thorough interior and exterior inspection of the building for bat roosting and potential roosting features was undertaken. Signs surveyed for included droppings, dead bats, feeding remains (beetle, moth and butterfly remains), urine staining and grease marks around crevices and down walls, and any noises such as scratching and audible bat calls.

3.4 During the survey, the surrounding area was assessed in relation to suitable habitat that may be of value to bats.

3.5 Surveys were conducted following best practice guidelines (Collins, 2016)

3.6 All areas of the building internally were inspected with the aid of a 2 million c/p lamp and inspection camera. External features were also inspected where possible and observations were aided with binoculars where needed.

3.7 A desk top survey was also completed to establish the biodiversity of the area along with its habitat structures including statutory and non-statutory designations

3.8 Biological records were not obtained for this survey

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4.0 Results

Desk Study
Environmental record search

4.1 A data search from freely available resources was undertaken to assess the names species for distribution/record within a 2km study area which demonstrated records for;

- Brown Long-eared
- Common Pipistrelle
- Daubenton's
- Soprano Pipistrelle
- Natterer's

4.2 **Designated sites;**
Statutory (2km)

Site	Designation	Distance (km)	Direction
None Identified			

Priority Habitat Inventory within 2km

HABITAT	Distance (km)	DIRECTION
Deciduous Woodland		
Deciduous Woodland		
Deciduous Woodland		
Deciduous Woodland		

None of the above names sites/locations would be effected in any way from the proposed development plan for this site, including both habitats and species.

4.3 Aerial photographs of the site were consulted to determine if there are important landscape features surrounding and within vicinity of the site.

4.4 A 2km search of previous Granted European Protected Species Applications revealed 12 granted European Protected Species applications for Soprano Pipistrelle, Common Pipistrelle, Brown Long-eared, Natterer's, Daubenton's bats.

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Field study

4.5 The Preliminary Roost Assessment for bats was carried by Elena Vasileva [Class 2 registration 2017-28032-CLS-CLS] where the dwelling and surrounding areas were assessed for the possible usages of bats & birds.

External	Features of value to bats	Notes
External Brickworks	Yes	No gaps or features of value to bats observed within external brickworks or render coverings throughout.
Window/door frames	No	No gaps or features of value to bats observed within or surrounding the door/window frames to each structure.
Eaves coverings	No	No gaps or features of value to bats observed within or surrounding the eaves coverings to each structure.
Vertical Hanging tiles	Yes	The vertical hanging tiles within the front elevation of the property have demonstrated several gaps of adequate proportions to offer likely daytime roosting habitats commonly occupied by crevice dwelling species within.
Roof coverings	Yes	The roof coverings have demonstrated a number of gaps from raised tiles which look to provide both shelter and access opportunities for bats within. This was observed within both the main upper roof coverings and rear lower roof coverings.

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Internal	Features of value to bats	Notes
Membrane coverings	No	No membrane coverings observed throughout the inner roof void spaces of the property.
Floor coverings	No	Insulated/boarded coverings.
Evidence from bats	No	No evidence from bats observed both internally or externally.
Restrictions	Yes	No accessible roof void spaces within the property.

Limitations

4.6 Many species of bat in the UK are crevice dwelling, and signs of bats and bats themselves can be difficult to find within a building or within areas that are inaccessible such as the gaps within roof coverings, eves and cavities within the stonework's.

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5.0 Plans & Photographs

Image 1 – Front East facing elevation of the property which has demonstrated several gaps of accessible proportions within the vertical hanging tiles along with the main upper roof coverings

Image 2 – As per image one above

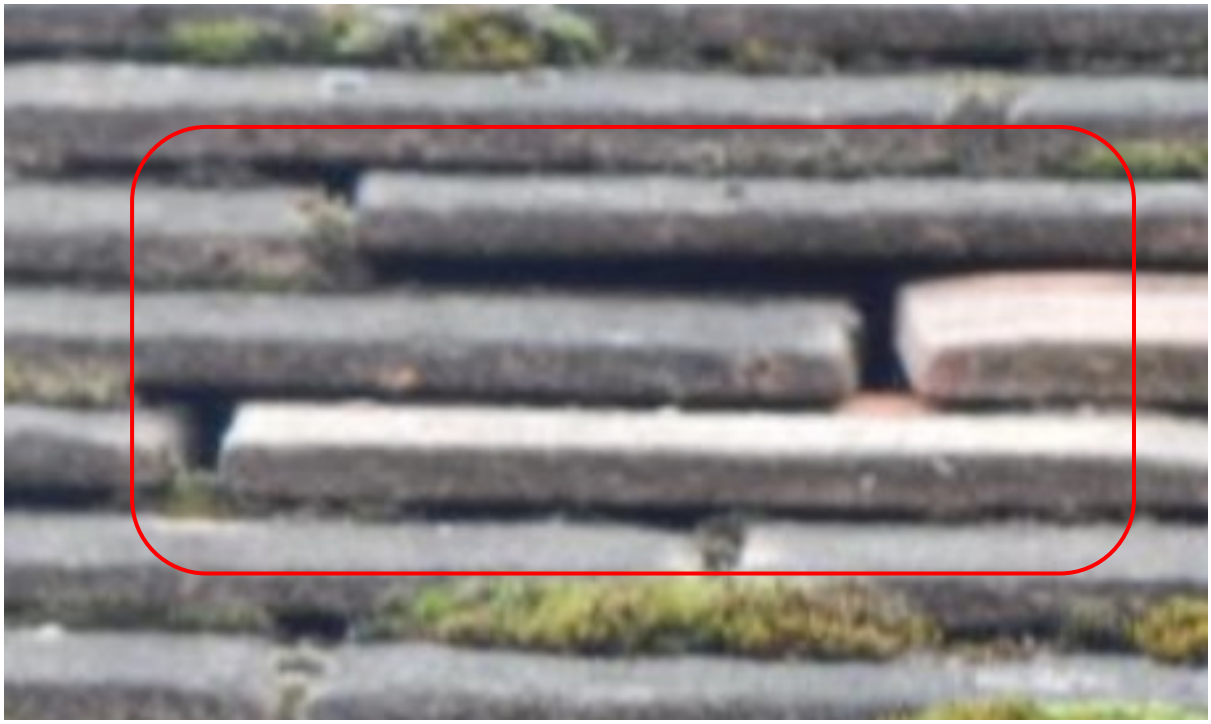

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Image 3 – As per image one on the previous page

Image 4 – South facing elevation of the property

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Image 5 – Raised tiles with gaps of accessible proportions observed within the upper South facing roof coverings

Image 6 – Rear West facing elevation of the property where gaps of accessible proportions were observed within the lower roof coverings

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Image 7 – As per image six on the previous page

Image 8 – As per image six on the previous page

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Image 9 – Internal view from within the garage section of the property

Image 10 – Internal view from within the main upper roof void spaces of the property

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Image 11 – Internal view from within the main upper roof void spaces of the property

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6.0 Conclusion and recommendations

All recommendations provided in this section shall be on Chase Ecology's current understanding of the site proposals and current planning application, correct at the time the report was compiled. Should any aspect of the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate

6.1 Following a preliminary bat roost assessment, it has been identified that both the building and surrounding environments offer value to bats.

6.2 A 2km search of previous Granted European Protected Species Applications revealed 12 granted European Protected Species applications for Soprano Pipistrelle, Common Pipistrelle, Brown Long-eared, Natterer's, Daubenton's bats.

6.3 A 2km radius search has demonstrated habitats of value to bats including woodland, parkland, open fields, hedgerows and waterbodies of which support feeding & commuting.

6.4 The main dwelling has evidenced roosting features of moderate value within both the upper and lower roof coverings and vertical hanging tiles which look to offer access and availability to both void & crevice dwelling bats and could not be fully ruled out during the Preliminary Roost Assessment without causing disturbance to materials which in effect may cause disturbance to possible bat roosts within.

6.5 No evidence of bats was identified during the visit; however, we are unable to rule out or confirm any roosting evidence within the roof coverings or vertical hanging tiles where several accessible gaps look to offer shelter/access opportunities of which habitats of value to crevice dwelling species would be available. Evidence such as droppings would always be visible externally.

6.6 In line with best practice survey guidelines, a structure that has demonstrated moderate value must have a further two emergence surveys to rule out or confirm activity from bats. These survey should be carried out within the recommended survey season from May to September with at least one of these visits during the optimal time of May to August.

6.7 If bats are recorded to be using features of the structure where disturbance would be caused a 3rd emergence survey would be required to support the requirements for a European Protected Species mitigation licence.

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6.8 It is advised that no further works take place to the identified areas of value to bats at this stage as this may cause disturbance to bats and their roosts. see section 2.0 of this report

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7.0 References

Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition

Bat Conservation Trust. 2012. Bats and Buildings. Bats and the Built Environment Series. London. Bat Conservation Trust. 2018.

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Bats and Artificial Lighting in the UK.

Bats and the Built Environment Series. London. Collins, J. (ed). 2016.

Bat Conservation Trust. Multi-Agency Geographical Information for the Countryside web http://magic.defra.gov.uk Mitchell-Jones, A.J. 2004 Bat mitigation guidelines.

English Nature, Peterborough. Mitchell-Jones, A.J. and McLeish, A.P. 1999 (revised 2004).

The Bat Workers Manual. Joint Nature Conservation Committee, Peterborough. Stone, E.L. 2013. Bats and Lighting: Overview of Current Evidence and Mitigation Guidance.

https://cieem.net/resource/uk-bat-mitigation-guidelines-2023/

https://magic.defra.gov.uk/MagicMap.aspx

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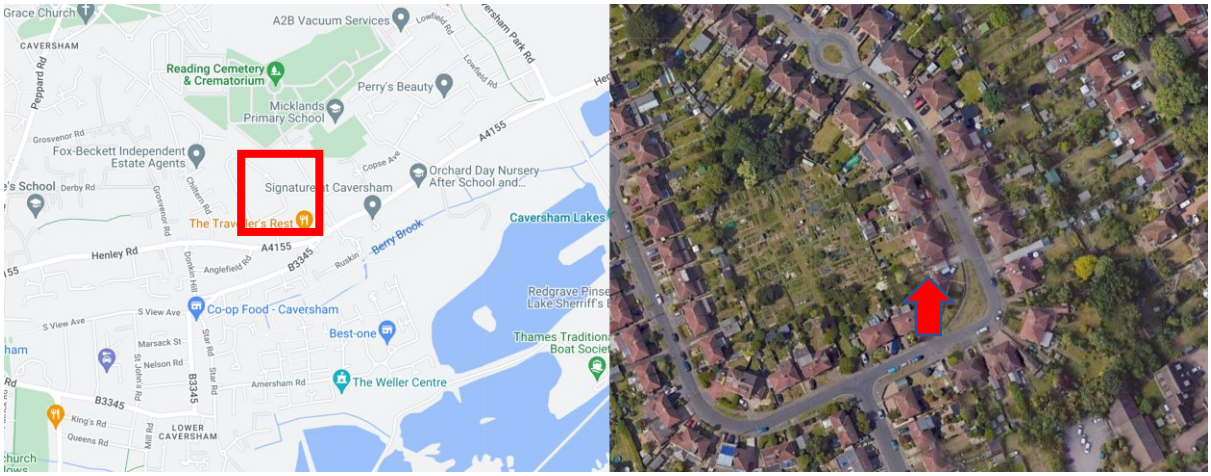
Appendix 1: Location plan



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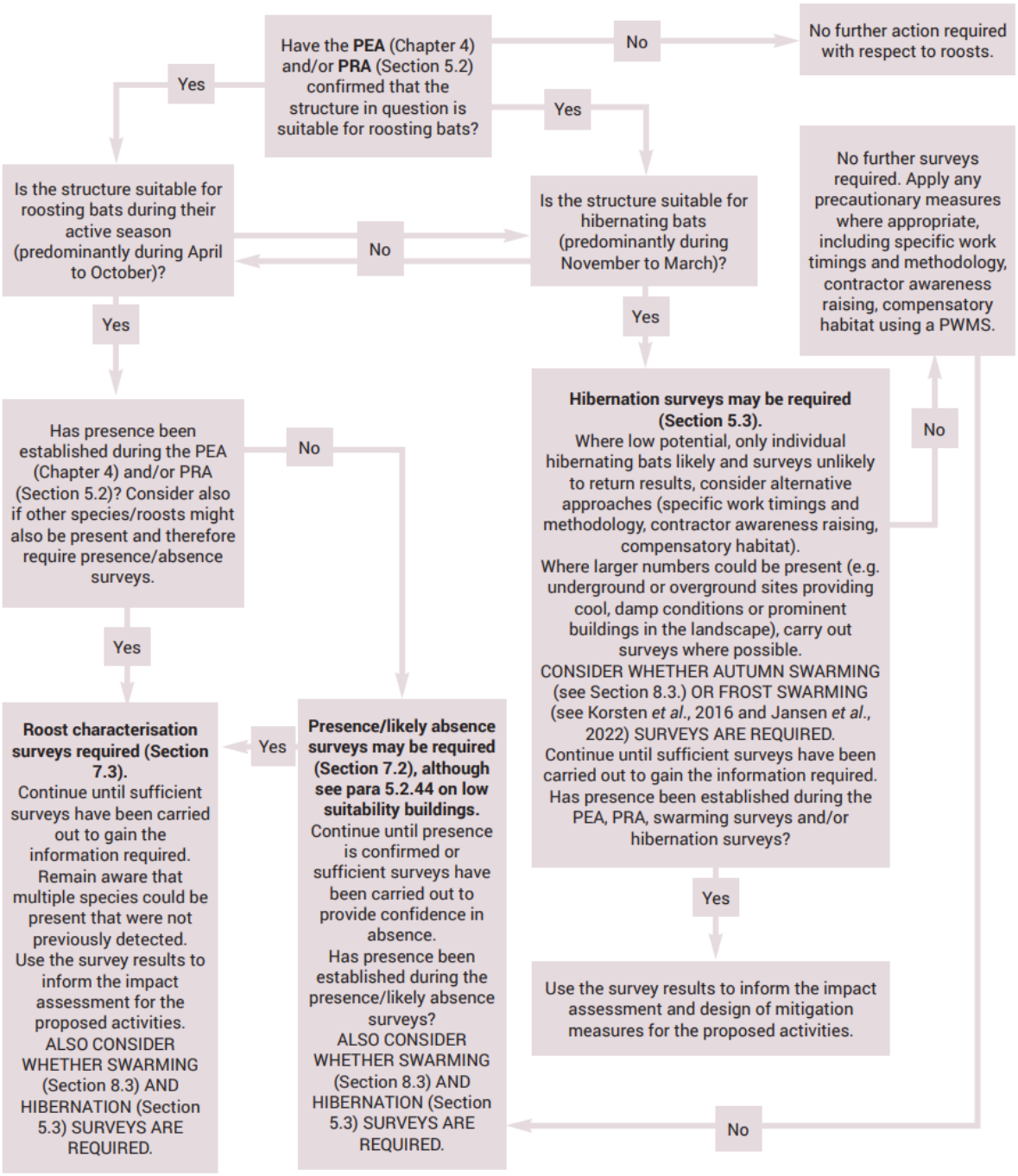
Appendix 2: Below flow chart taken from the Bat Conservation Trust, Good Practice Guidelines used when assessing the suitability of a structure and any additional survey requirements.

Figure 5.1. Flow chart illustrating the process used to establish which types of surveys are necessary for roosts in structures, to be applied using professional judgement.



Note on Figure 5.1: In some situations, bats may use the same structure throughout the year and in these situations, both arms of the flow chart need to be fully considered.

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Appendix 3: Description of the categories used to assess a building or tree's bat roost potential and the survey effort required to determine the likely presence or absence of bats

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	**Potential flight-paths and foraging habitats**
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible[a]	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[b] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats[c]).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[b] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[b] and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2016 and Jansen *et al.*, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

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Table 7.1. Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures) No further surveys required (trees)	May to September[a], with at least one of surveys between May and August[b]	May to September[a], with at least two of surveys between May and August[b]

a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may pick up mating roosts.

b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at **least three weeks apart**, preferably more. Survey timings **should consider the prevailing conditions in the year of survey, which will vary geographically**. In years with a cold spring, the surveys should not be started in early May or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the **optimum coverage includes the pre-parturition, post-parturition and mating periods**.

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Appendix 4: Emergence Survey Location Points

Below site view to show suitable surveyor location points during each emergence survey to maintain visibility of the property.

In line with best practice survey guidelines, a total of two surveyors will be required to visually cover all elevations of the structure during each emergence survey.

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