



Preliminary bat roost assessment & Emergence Survey

Site Location	167 Upper Woodcote Road, Caversham Heights, Reading, RG4 7JR
Document reference	CE1422
Date of Site visit	PRA: 11 th March 2020 Emergence Survey: 9 th May 2020 (Dawn), 27 th May 2020 (Dusk), 15 th June 2020 (Dusk).
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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.

Executive Summary

Chase Ecology undertook a Preliminary Roost Assessment (PRA) at the named site on the 11th March 2020 followed by three emergence surveys on the 9th May 2020 (Dawn), 27th May 2020 (Dusk), 15th June 2020 (Dusk). 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 Garry Smith for the 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. The building has evidenced several key roosting features of Moderate value within the roof coverings which 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. A section of the internal roof void space was also restricted from access due to the position of the water tank. The accessible areas of the roof void have been covered with timber cladding. No internal evidence of bat was identified within the roof void areas which were accessible; however, we are unable to confirm or rule out any roosting evidence within the spaces between the roof coverings, felt membrane and timber claddings below. A desktop search of previous mitigation works has demonstrated 8 recorded mitigation licences which have been granted for Common Pipistrelle, Brown Long-eared and Soprano Pipistrelle 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.

Evidence of Nesting Birds	No evidence of nesting birds identified
Requirements for Additional Survey	In line with current recommended guidelines a total of three emergence surveys were carried out on the 9th May 2020 (Dawn), 27th May 2020 (Dusk), 15th June 2020 (Dusk) A single Common Pipistrelle was recorded to be using the vertical hanging tiles within the East facing elevation as a day time roost. Appendix 4: Results of Phase 2 Activity Surveys In addition, several further bats were observed to be using the site and surrounding habitats for both commuting and feeding so a level of protection must be implemented during development to limit any further disturbance. Appendix 5: Mitigation, Protection & Enhancement.
Predicted Impacts of Development on Bats and Nesting Birds	Further assessment required to confirm any impacts offered to protected species during the proposed development works.
Mitigation and Compensation of Proposed Impacts	It has been confirmed that the proposed development works offers total destruction of the roost location so a Protected Species Mitigation Licence from Natural England will need to be implemented before the works are carried out along with agreed mitigation methods which have been noted within appendix 5 of this report. Appendix 5: Mitigation, Protection & Enhancement.
Licensing Requirements for Bats	Protected Species Mitigation Licence for 1 x Common Pipistrelle daytime roost. Appendix 5: Mitigation, Protection & Enhancement.

Required Actions

See section 6.0

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1.0 Introduction

Brief

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

Site description

- 1.2** A detached two storey occupied dwelling, see section 5.0 images.

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.

3.0 METHODOLOGY

- 3.1** All survey and reporting undertaken by Mr Garry Smith who is an experienced licensed bat ecologist in England [Class 2 registration 2017-28032-CLS-CLS] with over 9 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 "The Bat Workers Manual "(JNCC 2004), "The Bat Mitigation Guidelines" (EN 2004) and the Bat Conservation Trust 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (2016) recommendations.
- 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

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

4.2 Designated sites; Statutory (5km)

Site	Designation	Distance (km)	Direction
MCILROY PARK	LNR	2.50	SW
LOUSEHILL COPSE	LNR	2.60	SW
CLAYFIELD COPSE	LNR	2.70	NE
BLUNDELLS COPSE	LNR	3.00	SW
ROUND COPSE	LNR	3.30	SW

Non-Statutory (2km)

Site	Designation	Distance (km)	Direction
NON-IDENTIFIED			

Priority Habitat Inventory within 2km

HABITAT	Distance (km)	DIRECTION
DECIDUOUS WOODLAND	0.45	SE
DECIDUOUS WOODLAND	0.70	W
DECIDUOUS WOODLAND	0.80	S
DECIDUOUS WOODLAND	0.85	N
DECIDUOUS WOODLAND	1.10	E
DECIDUOUS WOODLAND	1.40	W
DECIDUOUS WOODLAND	1.50	N

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 search of previous Granted European Protected Species Applications revealed eight granted European Protected Species applications for Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared bats.

Field study

4.5 The Preliminary Roost Assessment for bats was carried by Garry Smith [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 Stonework	No	The external areas of the brickworks & render coverings have demonstrated a fair condition with no features of value to bats observed throughout.
Window/door frames	No	No gaps or features of value to bats observed within or surrounding the door/window frames.
Eaves coverings	No	The sections of eaves throughout the property looked to be sealed with no observed gaps or features of value to bats observed.

Roof coverings	Yes	The roof coverings to the property have demonstrated moderate value to bats with several available features for access & roosting. The ridge tiles have demonstrated a number of gaps below which commonly crevice dwelling bats would favour for daytime roosting, also offering possible access through into the roof void spaces. See image 6, 8. Due to the style of tile used across the roof we observed several gaps of adequate proportion to offer further value to both crevice & void dwelling bats. See image 5, 7, 9.
Other	Yes	A section of vertical hanging tiles within the East facing elevation have demonstrated gaps of adequate proportion to offer access to crevice dwelling bats which may favour the crevice spaces beyond for daytime roosting. See image 2.

Internal	Features of value to bats	Notes
Membrane coverings	Yes	A felt membrane covering has been demonstrated within the roof void spaces below the tiles. Use of a felt membrane would offer a suitable daytime roosting environment for bats between the two surfaces. See image 11. There is also a covering from timber cladding within the accessible areas of the roof void which would again offer further daytime roosting features contained within the roof coverings. See image 10.
Floor coverings	No	Timber boarding's throughout the accessible areas, insulation within the inaccessible void spaces. See image 10, 11.
Protruding daylight	Unconfirmed	We are unable to confirm or rule out any areas of daylight within the inaccessible areas of the roof void spaces.
Evidence from bats	No	No internal evidence from bats including droppings, urine stains or feeding remains were observed within the accessible cladded areas of the roof void. However, we are unable to rule out evidence from within the inaccessible areas of the roof void spaces.

Restrictions	Yes	Due to the position of a water tank a section of the roof void was inaccessible, and no assessment was conducted within this void spaces other than a narrow gap which gave access to take a photo. See image 11.
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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, eaves and cavities within the stonework's.

5.0 Plans & Photographs

Image 1 – Front East facing elevation of the property



Image 2 – Gaps within the vertical tiles to the East facing elevation which offer access value to bats within



Image 3 North facing roof coverings



Image 4 – Rear West facing elevation of the property



Image 5 Gaps within the roof coverings of proportion to offer daytime roosting value to crevice dwelling bats



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Image 6 – Gaps below the ridge tiles which offer roosting value to bats within



Image 7 Gaps within the West facing roof coverings which offer access values to both crevice & void dwelling bats



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Image 8 – Gaps below the ridge tiles which offer roosting value to bats within



Image 9 Gaps within the South facing roof coverings which offer access values to both crevice & void dwelling bats



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Image 10 – Internal view from within the accessible section of the roof void space which has been cladded internally with timbers below the felt membrane coverings



Image 11 – Section of the roof void which was restricted from access for inspection due to the position of the water tank. It was confirmed that a felt membrane covering was in place below the roof tiles



6.0 Conclusion and recommendations

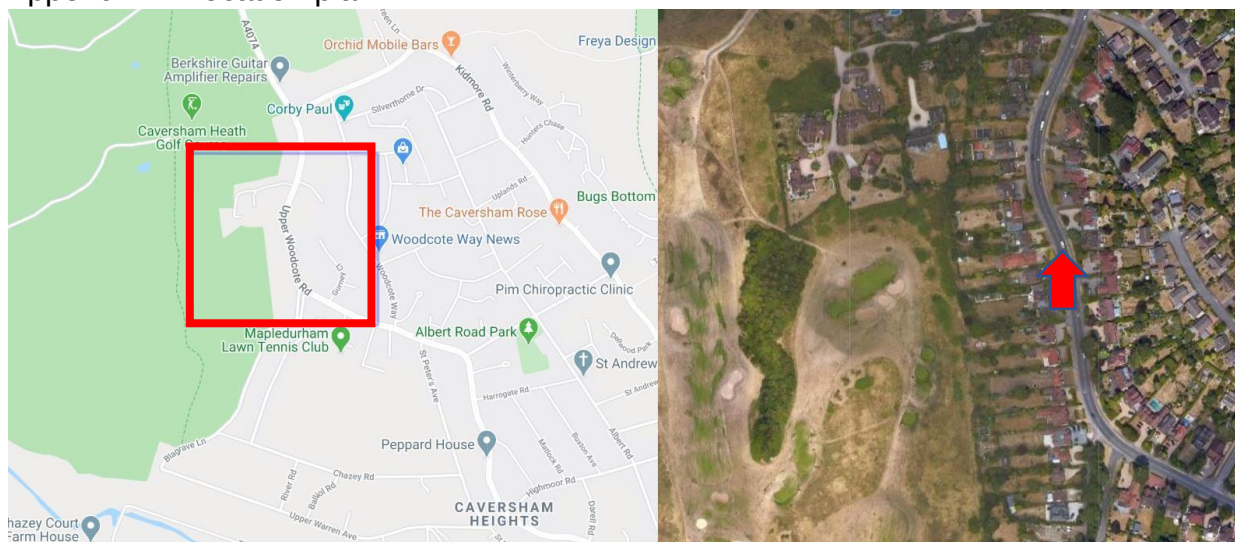
All recommendations provided in this section shall be on Chase Ecology's current understanding of the site proposals and current planning application, correct at the time the report was compiled. Should any aspect of the proposals alter, the conclusions and recommendations made in the report should be 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** The building has evidenced several key roosting features of Moderate value within the roof coverings which 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.
- 6.3** A section of the internal roof void space was also restricted from access due to the position of the water tank. The accessible areas of the roof void have been covered with timber cladding.
- 6.4** No internal evidence of bat was identified within the roof void areas which were accessible; however, we are unable to confirm or rule out any roosting evidence within the spaces between the roof coverings, felt membrane and timber claddings below.
- 6.5** A desktop search of previous mitigation works has demonstrated 8 recorded mitigation licences which have been granted for Common Pipistrelle, Brown Long-eared and Soprano Pipistrelle bats.
- 6.6** A 2km radius search has demonstrated habitats of value to bats including woodland, parkland, open fields, hedgerows and waterbodies of which support feeding & commuting.
- 6.7** In line with current recommended guidelines a total of three emergence surveys were carried out on the 9th May 2020 (Dawn), 27th May 2020 (Dusk), 15th June 2020 (Dusk) where a single Common Pipistrelle was recorded to be using the vertical hanging tiles within the East facing elevation as a day time roost.
- 6.8** It has been confirmed that the proposed development works offers total destruction of the roost location so a Protected Species Mitigation Licence from Natural England will need to be implemented before the works are carried out along with agreed mitigation methods which have been noted within appendix 5 of this report.

7.0 References

- Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004) 3rd Edition Bat Workers' Manual. Joint Nature Conservation Committee, Peterborough.
- Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Mitchell-Jones, A.J. (2004) Bat Mitigation Guidelines. Natural England, Peterborough.
- British Trust for Ornithology (2016) www.bto.org/
- Magic database (2017) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 08/03/2017.
- Google Earth (2017)

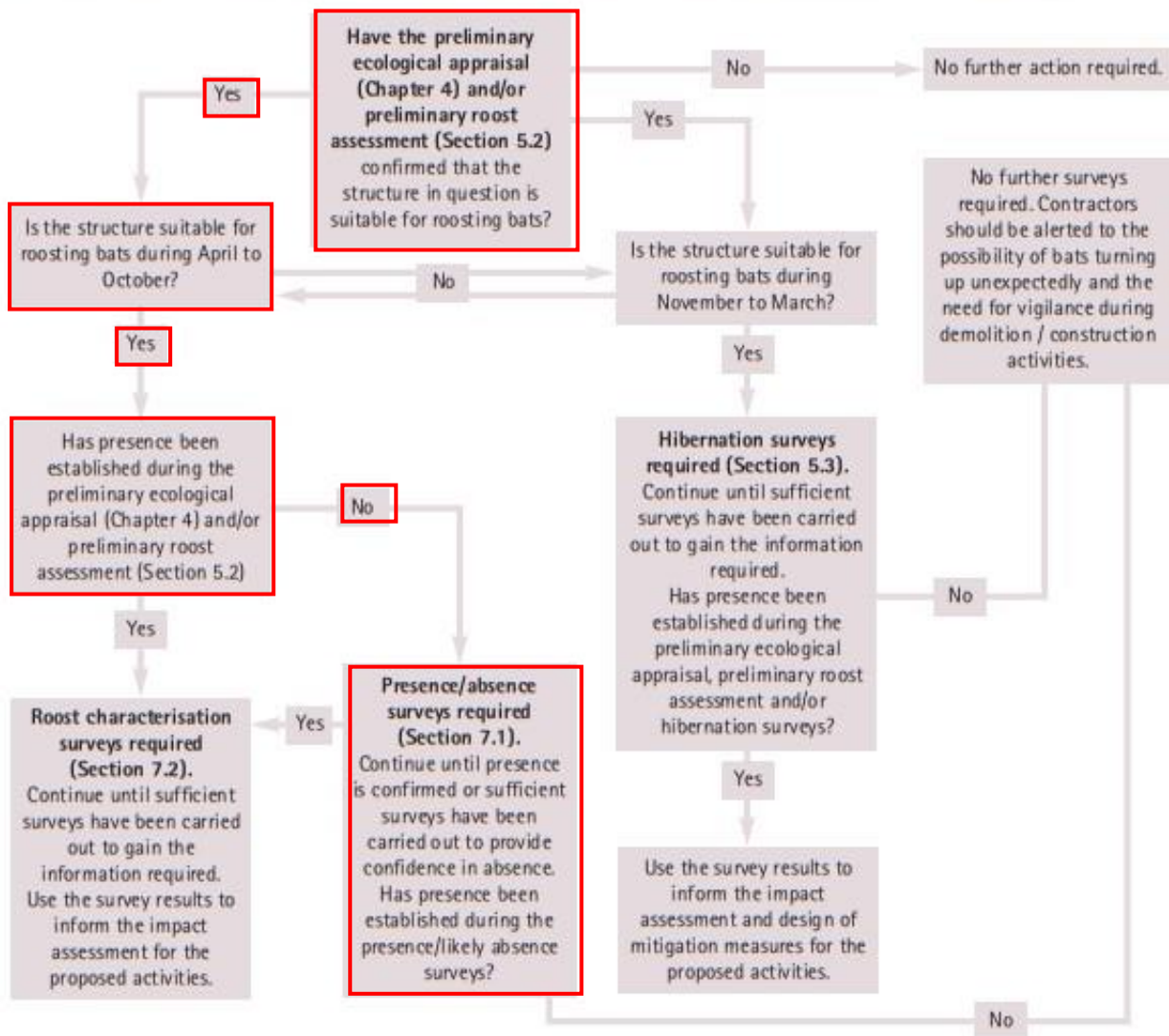
Appendix 1: Location plan



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.

Bat Conservation Trust

Figure 5.1 Flow chart illustrating the process used to establish which types of surveys are necessary for roosts in structures.

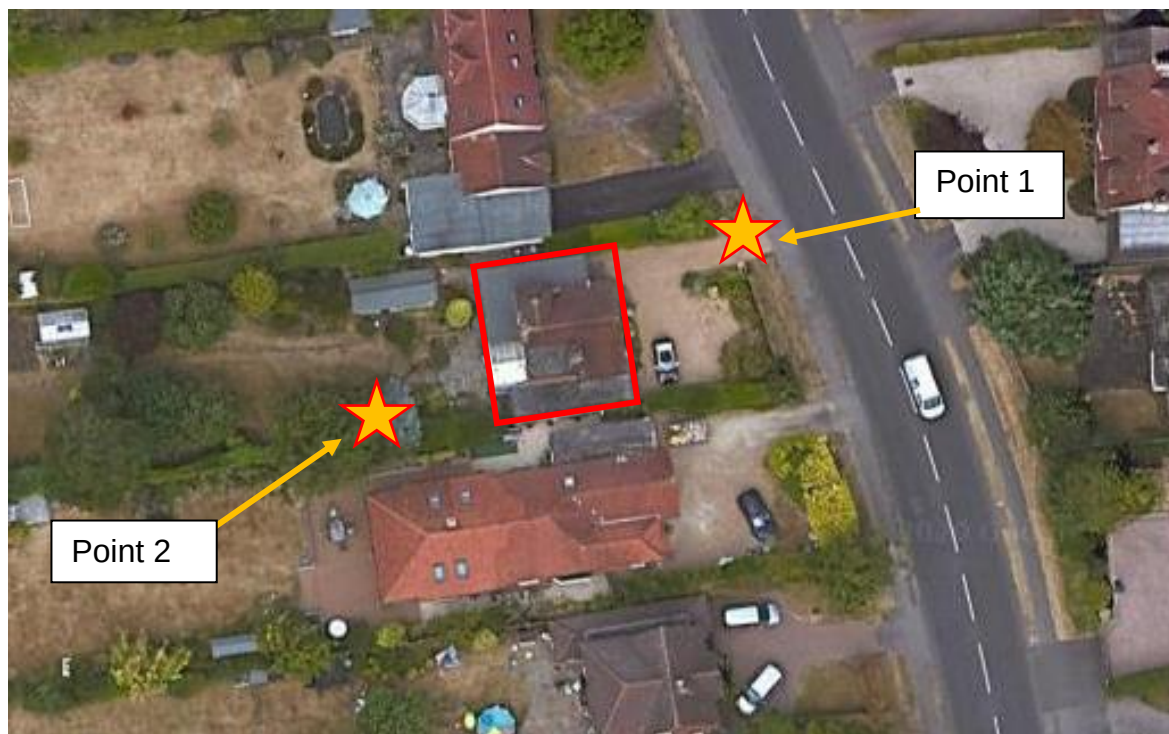


Appendix 3: Description of the categories used to assess a building or tree's bat roost potential and the survey effort required to determine the likely presence or absence of bats

Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further surveys required.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions 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 or hibernation) A tree of sufficient size and age to contain features but with none seen from the ground or features seen	One dusk emergence or predawn re-entry surveys between May and August.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only i.e. irrespective of species conservation status, which is established after presence is confirmed).	Two surveys, comprising one dusk emergence and a separate pre-dawn re-entry surveys between May and September with at least on between May and August.
High	A structure or tree 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 and surrounding habitat.	Three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August. Two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey
Confirmed	Bats or evidence of bats found.	Surveys would be required to establish the status of the roost. Generally, three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August (two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey).

Appendix 4: Results of Phase 2 Activity Surveys

Below plan of survey positions for all emergence survey



Date: 9th May 2020

Lead Surveyor: Garry Smith (Point 1)

Assistant Surveyor: Scott Latham (Point 2)

Sunrise	Start Time	Finish Time	Temperature	Wind Beaufort Scale	Cloud Cover
05:21	03:45	05:36	10 Start – 10 End	1	0

Emergence/Re-Entry Data

Point	Time	Species	Activity
			NO BATS RECORDED ROOSTING WITHIN PROPERTY

Activity from Bats during survey;

Species	Activity
Common Pipistrelle	Single Common Pipistrelle observed foraging across front garden spaces to property and neighbouring properties to the North & South at 04:58.
Noctule	2 individual passes, no visual

Soprano Pipistrelle	Single pass, no visual
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Date: 27th May 2020

Lead Surveyor: Garry Smith (Point 1)

Assistant Surveyor: Scott Latham (Point 2)

Sunset	Start Time	Finish Time	Temperature	Wind Beaufort Scale	Cloud Cover
21:07	20:52	22:37	18 Start – 16 End	2	0

Emergence/Re-Entry Data

Point	Time	Species	Activity
1	21:36	Common Pipistrelle	Emerged from within the vertical hanging tiles to the East facing elevation of the property before passing into the rear garden spaces where it was recorded to have foraged for just over 5 minutes.

Activity from Bats during survey;

Species	Activity
Common Pipistrelle	Single Common Pipistrelle recorded to feed across rear garden spaces following emergence at 21:36. Single pass across rear elevation of property Small number of passes towards the end of the survey
Daubenton's	Single pass mid survey to rear
Soprano Pipistrelle	Single pass, no visual

Emergence point 27th May 2020



Date: 15th June 2020

Lead Surveyor: Garry Smith (Point 1)

Assistant Surveyor: Scott Latham (Point 2)

Sunset	Start Time	Finish Time	Temperature	Wind Beaufort Scale	Cloud Cover
21:23	21:08	22:55	16 Start – 15 End	2	25%

Emergence/Re-Entry Data

Point	Time	Species	Activity
1	21:49	Common Pipistrelle	Emerged from within the vertical hanging tiles to the East facing elevation of the property before passing away to the West

Activity from Bats during survey;

Species	Activity
Common Pipistrelle	5 x Common Pipistrelle observed emerging from the neighbouring property to the South from the front East facing vertical hanging tiles and passed away to the West. Small number (<5) CP commuting pass East to West from the road opposite the dwelling.
Soprano Pipistrelle	Brief foraging around front areas of the site and neighbouring sites mid way through the survey.
Noctule	Single pass, no visual

Emergence point 15th June 2020



Appendix 5: Mitigation, Protection & Enhancement.

This document must be available to all involved in the planned development. All contractors must be aware of the potential of protected & priority species being found on site and care should be taken during works to avoid harm (including during any tree works).

If any protected species are identified other than the species documented within this report which form part of the Mitigation at any point within the proposed development the client must stop works and contact a suitably qualified ecologist to assist further where further surveys/licences may be required before works can continue.

Mitigation

Bats

It has been observed that the building has one confirmed roost for a single Common Pipistrelle within the vertical hanging tiles to the front East facing elevation.

The proposed development works will offer total loss to the bat roosts during works so a Protected Species Mitigation Licence from Natural England must be in place before any works/disturbance is implemented.

During mitigation, a named licenced bat worker will supervise a soft strip of the area by hand along with moving the bat depending on the time of year into suitable bat boxes which shall be situated within the rear garden spaces of the property.

To support both mitigation & enhancement two suitable bat boxes will be installed to the rear garden spaces within mature trees and will remain as permanent fixtures.

Below location for two bat boxes to be used as mitigation



The building has demonstrated no suitable winter roosting value for bats so it is advised that mitigation works should take place at any point during they year with no restrictions.

Lighting

It is recommended that during the development process the levels of lighting such as security floodlighting and lighting around working platforms if required should be limited to reduce the level of disturbance caused to bats which have been recorded locally any may use the site for both commuting and feeding.

Disturbance caused by high power lighting can cause disturbance to common commuting and foraging areas currently used by bats.

It is recommended that all external works are carried out during the hours of daylight only.

Nesting Birds

Consideration must be given for nesting birds between March & September if any of the trees/scrub areas are to be removed or altered in anyway. A suitably experienced ecologist should be consulted and where appropriate a nesting bid survey must take place.

Protection of Wildlife During the development stage

All excavations if any should be closed where possible during the hours of darkness to prevent entrapment of wildlife such as mammals which may use the site during the hours of darkness for commuting & foraging.

For excavations which require to be left open a shallow slope should be in place to aid escape.

Any pipes over 200mm in diameter should be capped off at night to prevent animals entering.

The site should remain in a tidy fashion with waste materials removed daily to prevent any use from wildlife as an artificial refugia.

Site setup & clearance

When setting up the site including areas where waste and materials are to be loaded out considerations must be given during October to March to prevent any wildlife using such features for refugia/hibernation.

Enhancement

Based on the existing ecological value of the site and information available about the proposed development, consideration should be given to the use of native species or those with recognised benefit to wildlife in areas of soft landscaping to enhance the value of the site for wildlife.

Sustainability Consideration should be given to energy efficiency, water sustainability, management of waste during and post construction and the use of recycled materials and sustainable building methods and sustainable transportation.