



Preliminary bat roost assessment & Emergence Surveys

Site Location	Brookley Meadows Farm, Thurvaston, Ashbourne, DE6 5BL
Document reference	CE1247-01
Date of Survey	PRA: 29th March 2019 Emergence 1 – 31 st May – Dusk Survey Emergence 2 – 18 th June 2019 – Dawn Survey Emergence 3 – 19 th July 2019 – Dawn Survey
Surveyed by	Garry Smith [Class 2 registration 2017-28032-CLS-CLS]

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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 Ltd. undertook a Preliminary Roost Assessment (PRA) at the named site on the 29th March 2019 followed by three additional emergence surveys. The aim of the assessment was to consider the value and suitability of the structures for roosting bats & nesting birds as detailed below;

Site Location	Brookley Meadows Farm, Thurvaston, Ashbourne, DE6 5BL
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 the preliminary bat roost assessment carried out on the 29th March 2019 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 areas 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 small number of potential feeding remains from Brown Long-eared bats were observed within the 1st floor areas of the building but not confirmed. No evidence of bat droppings were noted. A desktop search of previous mitigation works has demonstrated 3 recorded mitigation licences which have been granted for Common Pipistrelle, Brown Long-eared and Whiskered 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	Evidence of historical nesting birds within the ground and 1st floor areas. No evidence of any current nesting activity. Client would need to be mindful of any planned development during the nesting bird season of March – September inclusive where possible nesting bird surveys

	may be required during this time to reduce the levels of disturbance caused.
Requirements for Additional Survey	An additional three emergence surveys have been carried out as below during optimal survey conditions; Emergence 1 – 31st May – Dusk Survey Emergence 2 – 18th June 2019 – Dawn Survey Emergence 3 – 19th July 2019 – Dawn Survey During these surveys a total of two Common Pipistrelle day roosts were observed with a total count of 1 bat per roost. See Appendix 4: Emergence Survey Data In addition, several bats were observed to be using the site and surrounding environments for both feeding & computing which will require a level of protection to limit disturbance during development works. See Appendix 5: Protection, Mitigation & Enhancement
Predicted Impacts of Development on Bats and Nesting Birds	Low if all requirements and guidance within appendix five are implemented during development. See Appendix 5: Protection, Mitigation & Enhancement
Mitigation and Compensation of Proposed Impacts	EPS Mitigation Licence requirements identified for two daytime roosts for Common Pipistrelle bats. See Appendix 5: Protection, Mitigation & Enhancement
Licensing Requirements for Bats	EPS Mitigation Licence requirements identified for two daytime roosts for Common Pipistrelle bats. See Appendix 5: Protection, Mitigation & Enhancement
Required Actions	See section 6.0 See Appendix 5: Protection, Mitigation & Enhancement

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1.0 Introduction

Brief

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

Site description

- 1.2** A detached two storey stone barn located within the site of Brookley Meadows Farm, Thurvaston, Ashbourne, DE6 5BL.

The site is situated close to habitats of value to bats including open fields, parkland, hedgerows, woodland and waterbodies of which each support feeding & commuting.

Proposed works

- 1.3** For the renovation of the current structure into a living space/dwelling

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;

- Common Pipistrelle
- Whiskered
- Daubenton's
- Brown Long-eared

4.2 Designated sites; Statutory (5km)

Site	Designation	Distance (km)	Direction
NON-IDENTIFIED			

Non-Statutory (2km)

Site	Designation	Distance (km)	Direction
NON-IDENTIFIED			

Priority Habitat Inventory within 2km

HABITAT	Distance (km)	DIRECTION
TRADITIONAL ORCHARDS	0.25	E
TRADITIONAL ORCHARDS	0.45	NE
DECIDUOUS WOODLAND	0.60	NE
TRADITIONAL ORCHARDS	0.85	SW
DECIDUOUS WOODLAND	0.85	SW
DECIDUOUS WOODLAND	1.00	SE
DECIDUOUS WOODLAND	1.00	N
DECIDUOUS WOODLAND	1.40	S
DECIDUOUS WOODLAND	1.55	N
DECIDUOUS WOODLAND	1.75	NW
DECIDUOUS WOODLAND	1.85	SW

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 three granted European Protected Species applications for bats;

- 1.40km – SE – Natterer's, Common Pipistrelle, Brown Long-eared
- 1.60km – NE – Natterer's, Common Pipistrelle, Brown Long-eared
- 1.75km – NW – Common Pipistrelle, Brown Long-eared

Field study

4.5 A site visit was completed on the 29th March 2019 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

4.6 A full external assessment was carried out visually around the property including checks to the stonework's & roof structures where accessible.

The stonework's to the building have demonstrated a fair level of condition across each facing elevation with limited value to bats identified.

Several crevices around the door/window frames were evidenced which offer value to crevice dwelling bats which the use of an inspection camera to the ground floor frames demonstrated no evidence of bats.

Several un glazed opening (Image 1, 5) across the ground and 1st floor areas offer access value to both bats and birds into the internal features of the building.

Several gaps between the stonework's and roof tiles could be seen within the North & South facing elevations (Image 2) which offer possible roosting values to crevice dwelling bats.

The roof coverings have demonstrated a level of movement & deterioration with multiple gaps throughout the North & South facing elevations (Image 3, 4, 6), in addition several gaps below the ridge tiles were observed which offer further roosting values to crevice dwelling bats.

The East facing gable (Image 4) has demonstrated several gaps of moderated value between the stonework's and roof coverings including the ridge tiles.

Internal

4.7 Internally the ground floor areas looked to offer limited features of value to bats and currently occupied by cattle with bedding to a large proportion of the floor areas which would be maintained on a regular rotation which would remove any evidence such as droppings from bats.

Several historical birds' nests were observed (Image 7) within the timbers to the ceiling when assessing the ground floor spaces, however no current activities from birds was noted.

A lack of glazed panels within the windows to the ground floor offer a good level of protruding daylight which limits the value of roosting within for void dwelling bats.

The 1st floor is accessible from an external staircase to the East elevation with no restrictions.

On entering the 1st floor areas it was noted that no membrane coverings are in place below the roof tiles (Image 9, 10) which offer several gaps with a good level of protruding daylight throughout.

An opening within the North facing elevation also offers a good level of natural light within the 1st floor which has reduced the value within for roosting of void dwelling bats.

Several gaps between the stonework's and roof coverings of suitable value for roosting crevice dwelling bats (Image 10, 11) was noted throughout the 1st floor areas, where possible the use of an inspection camera was used where no further evidence of bats was noted, however due to access it was not possible to fully rule out.

A small number of butterfly wings (Image 12) were identified across the 1st floor which can demonstrate possible feeding remains from Brown Long-eared bats.

Limitations

4.8 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 – North facing elevation of the building which has demonstrated an opening within the 1st floor areas giving access to both bats & birds internally



Image 2 – Gaps within the stonework's below the roof coverings which look to offer value to crevice dwelling bats as a suitable roosting habitat within



Image 3 – North facing roof coverings which have demonstrated moderate levels of movement/deterioration which may offer access & roosting values to bats within. Also gaps below the ridge tiles which offers a suitable roost environment for crevice dwelling bats



Image 4 – East facing elevation which offers a number of accessible crevices between the stonework's and roof coverings



Image 5 – South & West facing elevations with several un glazed opening with access value to bats & birds



Image 6 – Gap below the ridge tiles within the South facing elevation which offers value to crevice dwelling bats within for roosting



Image 7 – Internal view from within the ground floor space where evidence of historical nesting birds has been identified



Image 8 – Internal stonework with a gap which offers access into a cavity areas of value to crevice dwelling bats



Image 9 – View from within the 1st floor space which has demonstrated no membrane coverings below the roof tiles where several sections of protruding daylight was observed



Image 10 – View from within the 1st floor area to the far West of the building which has evidenced gaps between the roof coverings and stonework's which offers further value to crevice dwelling bats for roosting



Image 11 – As image 10, gaps between the roof coverings and stonework's of value to crevice dwelling bats for roosting



Image 12 – Small number of butterfly wings located on the 1st floor area of the building which can be a common sign of feeding remains from Brown Long-eared bats



Image 13 – Surrounding environments close to the building



6.0 Conclusion and recommendations

All recommendations provided in this section shall be on Chase Ecology Ltd'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 the preliminary bat roost assessment carried out on the 29th March 2019 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 areas 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 small number of potential feeding remains from Brown Long-eared bats were observed within the 1st floor areas of the building but not confirmed. No evidence of bat droppings were noted.
- 6.4** A desktop search of previous mitigation works has demonstrated 3 recorded mitigation licences which have been granted for Common Pipistrelle, Brown Long-eared and Whiskered bats.
- 6.5** A 2km radius search has demonstrated habitats of value to bats including woodland, parkland, open fields, hedgerows and waterbodies of which support feeding & commuting.
- 6.6** It An additional three emergence surveys have been carried out as below during optimal survey conditions;

Emergence 1 – 31st May – Dusk Survey
Emergence 2 – 18th June 2019 – Dawn Survey
Emergence 3 – 19th July 2019 – Dawn Survey

During these surveys a total of two Common Pipistrelle day roosts were observed with a total count of 1 bat per roost.

See Appendix 4: Emergence Survey Data

In addition, several bats were observed to be using the site and surrounding environments for both feeding & commuting which will require a level of protection to limit disturbance during development works.

See Appendix 5: Protection, Mitigation & Enhancement

6.7 EPS Mitigation Licence requirements identified for two daytime roosts for Common Pipistrelle bats.

See Appendix 5: Protection, Mitigation & Enhancement

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)

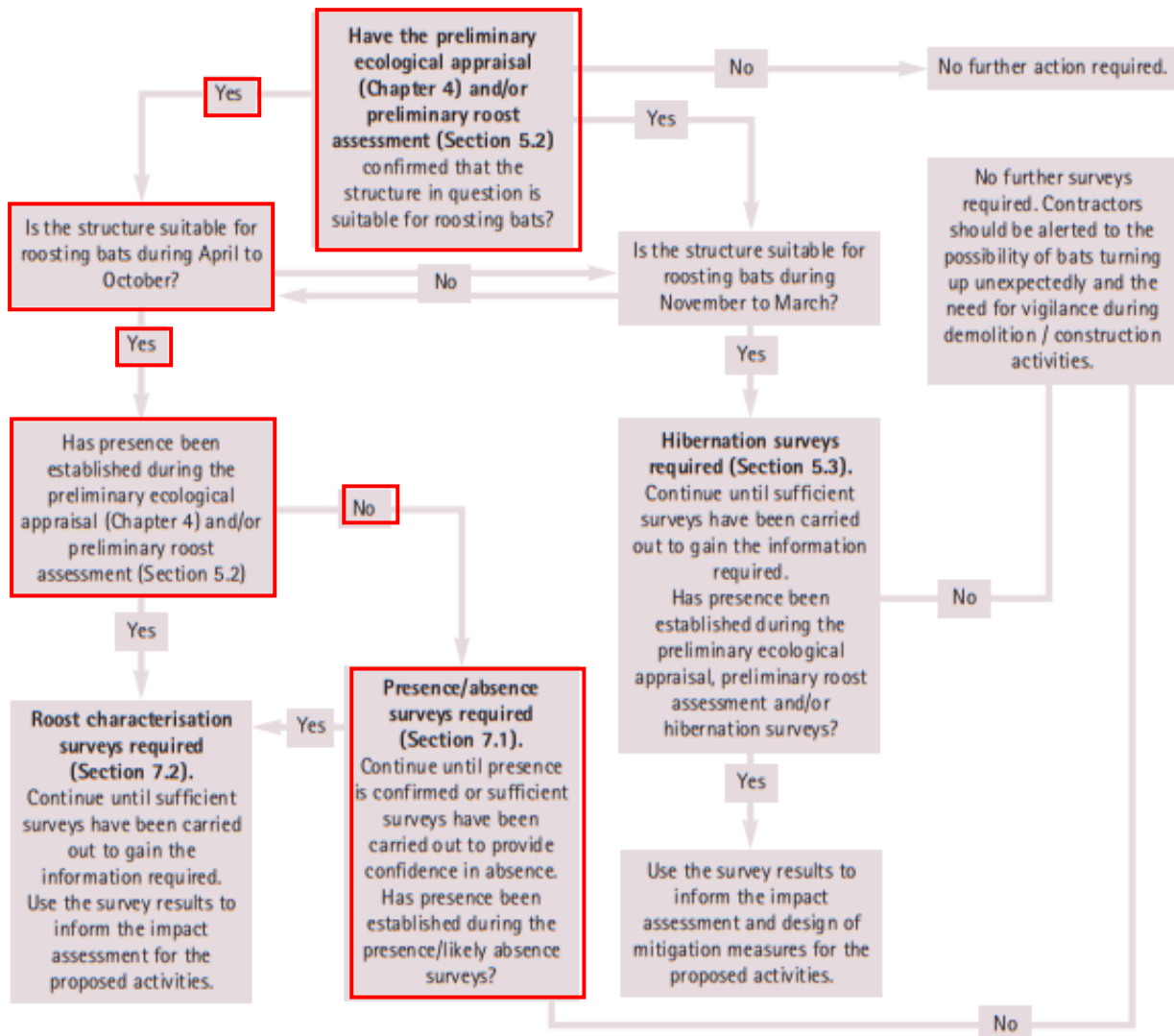
Appendix 1: Location plan



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.

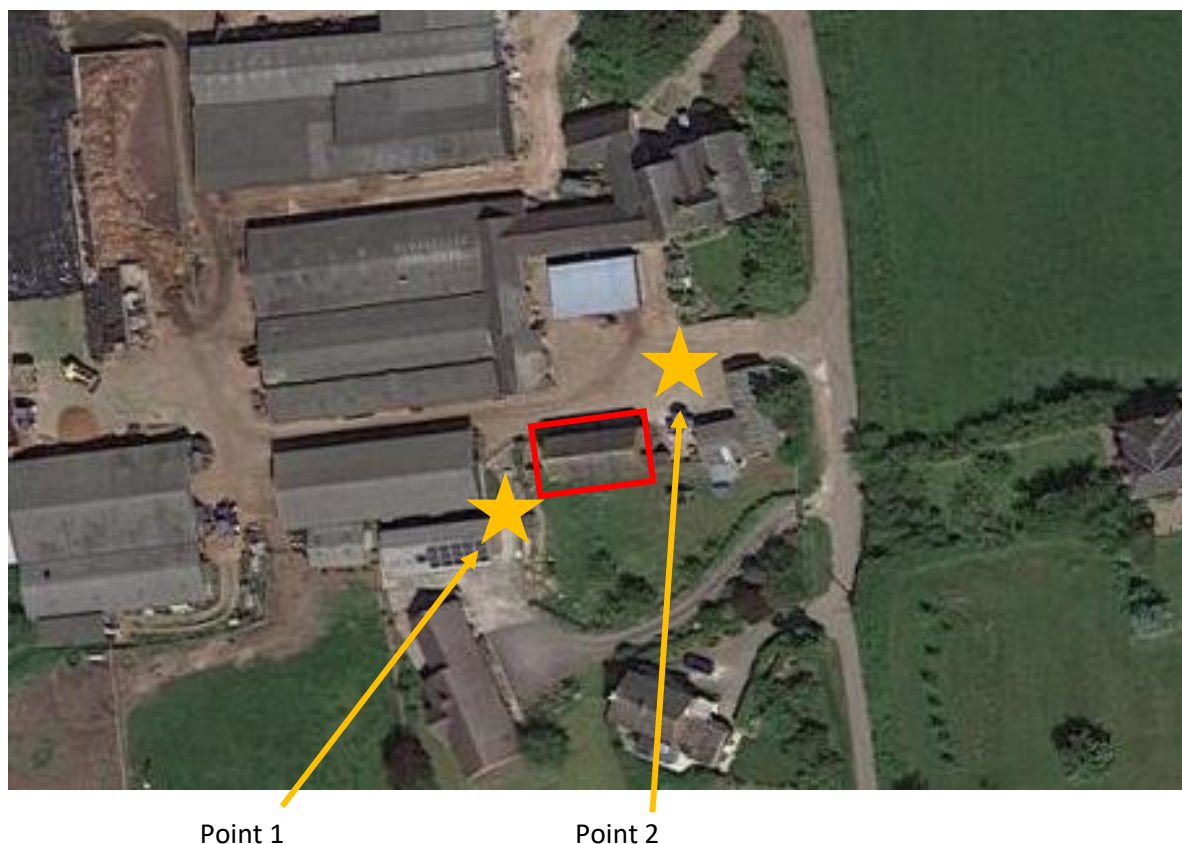


Appendix 3: Description of the categories used to assess a building or tree's bat roost potential and the survey effort required to determine the likely presence or absence of bats

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 pre-dawn 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: 31st May 2019

Sunset	Start Time	Finish Time	Temperature	Wind Beaufort Scale	Cloud Cover
21:20	21:05	22:55	Start 17, End 14	1	50%

Point 1 – Scott Latham

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
22:01	C Pip	Emerged from ridge tile approx. 3 tiles across from West facing elevation. See image below	Audio/Visual
22:04	C Pip	Foraging around South & West areas of the land behind the building	Audio/Visual
22:07	C P x 2	Foraging around South & West areas of the land behind the building along with social calls	Audio/Visual
22:10	C Pip x 2	Continuation from 22:07	Audio/Visual
22:16	Noctule	Single pass	Audio

22:22	Noctule	Single pass	Audio
22:23	C Pip	Single pass	Audio
22:28	C Pip	Brief foraging/social calls	Audio
22:49	C Pip	Single pass	Audio

Point 2 – Garry Smith

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
21:43	C Pip	Single pass from main house to the North of the building and passed across East elevation of the building	Audio/Visual
21:55	C Pip	Single pass	Audio
21:56	C Pip	Emerged from 1 st floor door within the East facing elevation. See below image	Audio/Visual
21:56	C Pip	As emerged, foraging around courtyard areas to the North of the building	Audio/Visual
22:03	C Pip	Continuation from 21:56. Also passing in and out of 1 st floor window within North facing elevation	Audio/Visual
22:10	C Pip	Continuation from 21:56. Also passing in and out of 1 st floor window within North facing elevation	Audio/Visual
22:13	C Pip x 2	Brief intervals of foraging from South facing elevation and around to North facing elevation	Audio/Visual
22:22	Noctule	Single pass	Audio
22:31	C Pip	Social ca;;s	Audio

Date: 18th June 2019

Sunrise	Start Time	Finish Time	Temperature	Wind Beaufort Scale	Cloud Cover
04:40	03:00	04:55	Start 13, End 13	1	50%

Point 1 – Scott Latham

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
03:31	S Pip	Single pass	Audio
03:47	Noctule	Single pass	Audio
04:06	Whiskered	Singla pass	Audio
04:09	Noctule	Single pass	Audio
04:16	C Pip	Brief intervals of foraging	Audio

Point 2 – Garry Smith

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
03:16	C Pip	Single pass	Audio
03:44	C Pip	Single pass	Audio
03:47	Noctule	Single pass	Audio
03:54	C Pip	Single pass	Audio
03:59	C Pip	Single pass across North elevation, West to East	Audio/Visual
04:00	Swallows	Emerging from 1 st floor window within North facing elevation	Visual
04:04	Noctule	Single pass	Audio
04:09	C Pip	Foraging around courtyard areas to the North of the building and across towards the main house	Audio/Visual
04:15	C Pip	Foraging around North facing elevation of building and lower roof coverings	Audio/Visual
04:16	C Pip	Emerged into 1 st floor window within North facing elevation	Audio/Visual

Date: 19th July 2019

Sunset	Start Time	Finish Time	Temperature	Wind Beaufort Scale	Cloud Cover
21:21	21:05	23:00	16 Start, 15 End	2	90%

Point 1 – Scott Latham

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
21:47	C Pip	Single pass across South facing elevation East to West	Audio/Visual
21:52	C Pip	Single pass	Audio
22:05	C Pip	Brief intervals of foraging	Audio
22:10	C Pip	Continuation from 22:05	Audio
22:13	Noctule	Single pass	Audio
22:33	S Pip	Single pass across West elevation, South to North	Audio/Visual
22:39	C Pip	Single pass	Audio
22:44	C Pip	Single pass	Audio
22:45	C Pip	Single pass	Audio
22:56	C Pip	Single pass	Audio

Point 2 – Garry Smith

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
21:36	C Pip	Emerged from 1 st floor window within North facing elevation. See image below	Audio
21:37	C Pip	As above, brief foraging around the North areas of the building before re emerging back into the 1 st floor window of North facing elevation, passed back out via 1 st floor door opening to East facing elevation	Audio/Visual
21:37	C Pip	Continuation of foraging around the areas North of the building before emerging into the building and straight back out several times via 1 st floor window, North facing elevation	Audio/Visual
21:49	C Pip	Single pass	Audio
21:55	C Pip	Single pass	Audio
22:13	Noctule	Single pass	Audio
22:44	C Pip	Single pass	Audio
22:48	Noctule	Single pass	Audio

Point 3 – Craig Davies – Internal position within 1st floor close to West section of building.

Equipment – Anabat Walkabout

Time	Species	Activity	Audio/Visual
21:05	Swallow	Single juvenile roosting within nest to inner gable wall between roof across 1 st floor	Visual
21:36	C Pip	Emerged from gap between stoneworks and roof tiles internally within the West gable and passed through the window within the North facing elevation	Audio/Visual
21:37	C Pip	Single pass into building via North facing window within 1 st floor, passed through doorway to inner gable wall	Audio/Visual
21:37	C Pip	Single pass	Audio
21:39	C Pip	Single pass	Audio

Emergence point – 31st May 2019 - Common Pipistrelle x 1



Emergence point – 31st May 2019 - Common Pipistrelle x 1



Emergence point – 18th June 2019 - Common Pipistrelle x 1



Emergence point – 19th July 2019 - Common Pipistrelle x 1



Internal location where single Common Pipistrelle emerged from on the 19th July which was observed emerging via window



Appendix 5: Protection, Mitigations & Enhancement

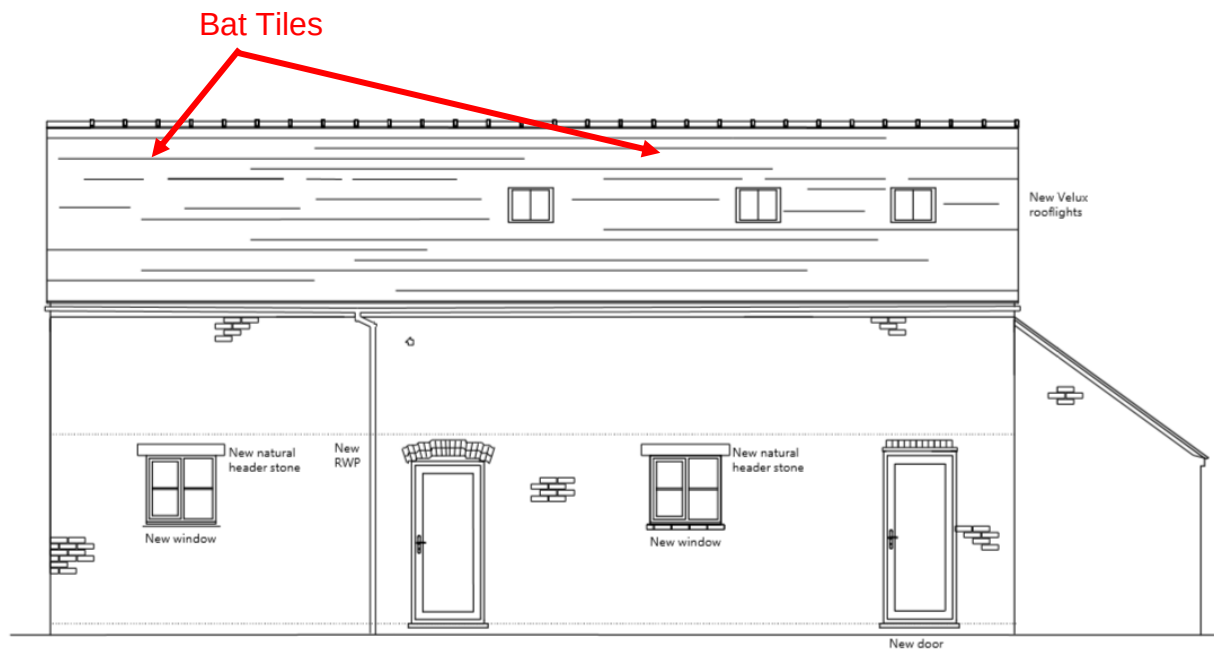
This document must be available to all involved in the planned development. All contractors must be aware of the potential of protected & priority species being found on site and care should be taken during works to avoid harm (including during any tree works), if protected species are found then all work should cease and an ecologist should be consulted immediately.

If any protected species are identified during development the client must contact an experienced ecologist and all works must stop until a full assessment has been carried out.

Mitigation Requirements

- During three emergence surveys carried out on the building we have observed two day roosts for Common Pipistrelle. See images within appendix four and require an EPS Mitigation Licence to be implemented before all works progress.
- An EPS Mitigation Licence from Natural England will need to be applied for when planning has been granted and before any disturbance is offered to the roof coverings to the main house.
- During all mitigation works a licenced ecologist will supervise both destruction and disturbance to each roost under the mitigation licence.
- As part of mitigation works suitable compensation and reinstatement of roost will be required. *See Below*
- Bat boxes – two small Woodstone bat boxes will be installed as part of the mitigation works to a permanent position within the site.
- Works to the building & Mitigation will be carried out during May to September inclusive to limit any disturbance to bats using the building for Winter roosting.
- As part of the mitigation process a further level of monitoring may take place if it is required as part of mitigation, usually 2 years.
- The use of breathable roof membranes would be prohibited from use as these have been proven to cause entrapment to bats and not recommended by The Bat Conservation Trust or Natural England. We would only recommend the use of felt membranes.

Below detail of two bat tiles to be installed to the South facing elevation to offer enhancement following loss of current roost habitats.



Lighting

It is recommended that during the development process the levels of lighting such as security floodlighting and lighting around working platforms should be limited to reduce the level of disturbance caused to bats which have been recorded to be using 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 advised that all works should be carried out during the hours of daylight to further reduce the levels of disturbance caused to bats and other nocturnal wildlife in the surrounding environment.

Protection of Wildlife

During the development stage all excavations if any should be closed where possible to prevent entrapment of wildlife such as mammals which may use the site during the hours of darkness for commuting.

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.

Consideration should be given to longstanding storage of materials on site and where possible use the hardstanding areas to limit the disturbance to the surrounding environments. Plant and storage consideration must be given where works are close to the hedgerow North/West of the building & mature tree directly behind by making any exposed roots are covered with timber sheets to limit any damage.

Nesting Birds

Although no nesting activities were demonstrated within the building where development will take place consideration and protection must be implemented during March to September to prevent disturbance

If nesting birds are identified during this time which may face disturbance from any planned works the client should seek advice from an experienced ecologist.

General Recommendations for Enhancement

In addition to any specific required to compensate for impacts on protected species or habitats, both national and local planning policy encourages ecological enhancement in all development.

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 if suitable to the development.