

BAT EMERGENCE SURVEY

THARBIES FARM,
SAWBRIDGEWORTH, HERTFORDSHIRE



Commissioned by: **Ashdown Developments**

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EXECUTIVE SUMMARY

1. Two bat species were recorded at Tharbies Farm during this follow-up bat emergence survey and these were common pipistrelle (*Pipistrellus pipistrellus*) and Leisler's bat (*Nyctalus leisleri*).
2. A single common pipistrelle emerged from within the Listed Barn during this bat dusk survey. This shows that an active bat roost is present at this barn.
3. The two bat roosts present at the Listed Barn are clearly a common pipistrelle daytime roost and a brown long-eared bat daytime roost.
4. The key aim will now be to ensure that no bats are injured or killed at any time during the barn conversion works at the Listed Barn.
5. A European Protected Species Mitigation Licence (EPS) (under the 2017 and 2019 Regulations) for Bats in respect of development will be required from Natural England to permit the disturbance, damage and potential loss of a two daytime bat roosts at the Listed Barn during the future building works, as bats are fully protected by UK and European law.
6. Consequently, Natural England will require appropriate mitigation measures and compensation to be put into place in order to prevent the complete loss of roosting bats at the overall site as a result of the stated works, through the use of suitable high quality bat boxes at this site for bats to use for long-term roosting purposes.
7. The appropriate timing of the building work and the use of appropriate bat boxes, allowing for different microclimates at the overall site, will ensure that bats have roosting options, during the stated works.

1. INTRODUCTION

- A Bat Emergence Survey was undertaken at Tharbies Farm, Sawbridgeworth, Hertfordshire CM21 0LL, during July to September 2022, for the client: Ashdown Developments.
- The grid reference for this site is: TL471161.
- This bat assessment was required due to the future demolition and conversion of the various buildings at the application site.
- This is a follow-up report to the Preliminary Bat Roost Assessment by ASW Ecology Ltd in July 2022 and the previous bat report in 2012 by Greenwillows Associates Ltd.
- The main method used for this bat emergence survey, as well as the full results and the final recommendations can be found within this report.
- Both this survey and the report were undertaken and compiled by Mr Andrew S. Waller, Consultant Ecologist, ASW Ecology Ltd, with the help from assistant ecologists.
- Mr Andrew S. Waller MSc BSc (Hons) MCIEEM, Director of ASW Ecology Ltd - has been a Consultant Ecologist since 1997, and has very extensive experience and knowledge of protected wildlife species including bats, for which he is fully licensed to survey throughout England by Natural England for consultancy purposes (Bat Class 2 Licence Registration Number: 2015-15703-CLS-CLS). He also has Natural England survey licences for great crested newts and barn owls. He has been studying bats for 29 years and wildlife in general for 40 years. He is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and meets the requirements of being a Suitably Qualified Ecologist.

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2. METHODOLOGY

2.1 Bat emergence survey

- During June to September 2022, a Bat Emergence Survey was undertaken at two of the buildings at Tharbies Farm, the Listed Barn and the Barn associated with the Cricket School.
- Three bat emergence survey visits were undertaken at the Listed Barn as it is a known bat roost already and with just a single bat survey visit required at the Barn associated with the Cricket School.
- A total of four bat surveyors using Bat Box Duet bat detectors and also Echo Meter Touch bat detectors were present during the bat dusk survey visits. The main aim was to determine the range of bat species present; the presence of any roosts during the survey period; and the presence of any key foraging areas and bat commuting routes.
- Night vision aids (NVA), mounted on tripods, mainly a SiOnyx Aurora night digital camera, a Nightfox RED IR night vision digital camera, a Nightfox Vulpes IR night vision digital camera and an additional Night Vision Camera, were used on the key features at the two buildings, so to ensure that they were covered robustly for this survey and following current best practice guidance.
- The dusk based visits were undertaken in suitable weather conditions only, so there was the best chance of finding any possible emerging bats. The dusk visits started before sunset and lasted for up to 2 hours after sunset.
- All results can be found in the next chapter of this report and a map showing all bat sightings plus the bat roost locations are shown in Appendix 2.

2.2 Constraints

- Due to the timing of this bat survey, only the July to September 2022 period could be covered for this study. This though is a standard constraint for any bat survey which can only investigate part of any year.
- The June to August period is important to bats since this is when maternity roosts are present and young bats will be born. Large roosts are sometimes present within structures, and can be very visible during bat emergence surveys. This survey was commissioned when such roosts would have formed, so was timed at the key period of the year for bats.
- As always though, without taking into account any further active surveying or monitoring, this study can only provide a “snapshot” of the presence of bats at the site during the period of this study.
- Please also note that any bat survey report is valid for one year only, as stated in the BCT bat survey guidelines (BCT, 2016).

3. BAT SURVEY RESULTS

3.1 Bat emergence survey

Bat emergence survey - visit 1 – 27/7/2022

Sunset time: 8.57pm

Weather: dry, mild, light breeze, cloudy (8/8CC)

Temperature (sunset): 17°C (end: 16°C)

Windspeed (max): 4mph

RH: 60%

Inverts present: flies, moths

Bat Species	Time Noted	Location
Common Pipistrelle	9.13pm	1 bat emerged into the Listed Barn from the eastern end. ROOST
Common Pipistrelle	9.44pm	Near trees
Common Pipistrelle	9.48pm	As trees
Common Pipistrelle	9.51pm	Near field edge
Common Pipistrelle	9.56pm	Near field edge
Leisler's Bat	10.03pm	Over site
Leisler's Bat	10.07pm	Over site
Common Pipistrelle	10.18pm	Along lane
Common Pipistrelle	10.25pm	Heard near to the trees. No further bats after this

		time to end of the survey visit
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Bat emergence survey - visit 2 – 31/8/2022

Sunset time: 7.48pm

Weather: dry, warm, light wind, clear (0/8CC)

Temperature (sunset): 19°C (end: 17°C)

Windspeed (max): 7mph

RH: 54%

Inverts present: moths, small flies, spiders

Bat Species	Time Noted	Location
Common Pipistrelle	8.11pm	Heard near trees close to pond
Common Pipistrelle	8.22pm	Heard near trees
Common Pipistrelle	8.26pm	Flew from trees then past barn
Common Pipistrelle	8.33pm	Near trees
Common Pipistrelle	8.48pm	Heard briefly near trees
Common Pipistrelle	9.15pm	Brief contact near trees. No further bat contacts after this time to end of survey visit

Bat emergence survey - visit 3 – 30/9/2022

Sunset time: 6.40pm

Weather: occasional shower, mild, light wind, cloudy (8/8CC)

Temperature (sunset): 13°C (end: 13°C)

Windspeed (max): 7mph

RH: 80%

Inverts present: flying insects seen

Bat Species	Time Noted	Location
Common Pipistrelle	7.19pm	Briefly heard near trees
Common Pipistrelle	7.38pm	As above
Common Pipistrelle	7.55pm	As above
Common Pipistrelle	8.08pm	Brief contact near Listed Barn
Common Pipistrelle	8.15pm	Contact near trees. No further bat contacts after this time to end of the survey visit

4. CONCLUSIONS

4.1 Significance of the bat emergence survey results

- In summary, two bat species were recorded at Tharbies Farm during this follow-up bat emergence survey and these were common pipistrelle and Leisler's bat.
- A single common pipistrelle emerged from within the Listed Barn during this bat dusk survey. This shows that an active bat roost is present at this barn.
- The Leisler's bat only flew over the site on two occasions and was not roosting here.
- The two bat roosts present at the Listed Barn are clearly a common pipistrelle daytime roost and a brown long-eared bat daytime roost.
- The key aim will now be to ensure that no bats are injured or killed at any time during the barn conversion works at the Listed Barn.
- A European Protected Species Mitigation Licence (EPS) (under the 2017 and 2019 Regulations) for Bats in respect of development will be required from Natural England to permit the disturbance, damage and potential loss of a two daytime bat roosts at the Listed Barn during the future building works, as bats are fully protected by UK and European law.
- Consequently, Natural England will require appropriate mitigation measures and compensation to be put into place in order to prevent the complete loss of roosting bats at the overall site as a result of the stated works, through the use of suitable high quality bat boxes at this site for bats to use for long-term roosting purposes.
- The appropriate timing of the building work and the use of appropriate bat boxes, allowing for different microclimates at the overall site, will ensure that bats have roosting options, during the stated works.
- Please see the next chapter of this report, for the recommendations in regards to the bat licence that must be applied for, as well as details on the proposed bat mitigation and compensation strategy.

4.2 Impact assessment

In the absence of any mitigation measures or precautions, the following direct or indirect impacts from the proposed building related works on bats at Tharbies Farm, would be predicted as:

- **DIRECT:** Since there are bat roosts at the Listed Barn, there is a risk that without mitigation, bats would be disturbed by the proposed works, injured or killed and bat roosts damaged or lost. **Impact magnitude predicted: High**
- **INDIRECT:** No high quality natural bat habitat is to be removed from the site, with no damage to take place on linear corridors such as tree lines or on wetland features for bats. **Impact magnitude predicted: NIL**

4.3 Summary of the legal protection of bats in the UK (Simplified summary only of the legislation – please see other texts for full details)

4.3.1 THE LEGAL PROTECTION OF BATS IN ENGLAND AND WALES

Introduction

All species of bats in England and Wales are protected by law. Their legal protection derives from two sources:

- the strict species protection provisions of the EU Habitats Directive as implemented in England and Wales by Part 3 of the Conservation of Habitats and Species Regulations 2017 (the “**2017 Regulations, amended by the 2019 Regulations due to Britain leaving the EU**”); and
- Part 1 of the Wildlife and Countryside Act 1981 (as amended).

Conservation of Habitats and Species Regulations 2017 (“2017 Regulations”, as amended by the 2019 Regulations)

The 2017 Regulations came into force on 30th November 2017, amended by the 2019 Regulations. They replace the previously applicable regulations (Conservation (Natural Habitats, &c) Regulations 1994 and the 2010 Regulations) in relation to England and Wales. The 2017 Regulations are the principal means by which the EU Habitats Directive is transposed in England and Wales.

The Regulations contain a number of Parts which set out the protection to be afforded to “European Protected Species” (“EPS”), which includes all species of British bats. The list also includes other species which are rare on a European scale, such as great crested newts, otters and dormice.

Under the 2017 Regulations both bats themselves and their “breeding sites and resting places” (most commonly their roosts) are protected.

It is a criminal offence to do the following (note that this is not an exhaustive list of all offences but rather a list of offences which will be of most relevance to developers):

- a. to damage or destroy a breeding site or resting place of a bat (even if bats are not present at the time);
- b. to deliberately capture, injure or kill a wild bat;
- c. to intentionally or recklessly disturb a bat in its roost or to deliberately disturb a group of bats, in particular:
 - i. any disturbance of bats which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or

- ii. any disturbance of bats which is likely to impair their ability to hibernate or migrate; or
- iii. any disturbance of bats which is likely to affect significantly the local distribution or abundance of the species to which they belong;
- d. to have in one's possession or to control or to transport or to sell or exchange or offer to sell or exchange any live or dead bat or part of a bat which has been taken from the wild; or any part of, or anything derived from, a bat or any part of a bat; and
- e. to intentionally or recklessly obstruct access to a bat roost.

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of the company may also be prosecuted if the offence has been committed with their consent or connivance, or is attributable to their neglect.

Wildlife and Countryside Act 1981 ("WCA 1981")

The WCA 1981 protects a wide range of animals, plants and habitats in the UK. All British bat species are afforded protection under Part 1 of the WCA 1981, in addition to the protection they have under the 2019 Regulations.

As regards England and Wales the following offences apply to protect bats under the W&CA 1981:

- a. to intentionally or recklessly disturb any bat while it is occupying a structure or place which it uses for shelter or protection (s9(4)(b) WCA 1981);
- b. to intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection (s9(4)(c) WCA 1981);
- c. attempting either of the above (s18(1) WCA 1981).

The maximum penalty that can be imposed for the above offences is (as at May 2010) a fine of up to £5,000, and/or up to six months imprisonment. The offences can be committed by individuals or by bodies corporate. Where a body corporate has committed the offence, the directors or officers of that company may also be prosecuted if the offence has been committed with their consent or connivance or is attributable to their neglect (s69(1) WCA 1981).

5. RECOMMENDATIONS

5.1 Bat EPS Mitigation Licence requirement

- **A European Protected Species Mitigation Licence (EPS) (under the 2017 and 2019 Regulations) for Bats in respect of development** will be required from Natural England to permit the predicted disturbance, damage and loss of two bat daytime roosts at the Listed Barn, during the proposed building works, as bats are fully protected by UK and European law. **It will be proposed that the licence is required for “overriding public interest”, that there is indeed no satisfactory alternative to what is being proposed and that the stated works will not be detrimental to maintaining the bat species present at a Favourable Conservation Status.**
- The Wildlife Licensing Unit of Natural England is the appropriate authority for determining licence applications for works associated with development such as building/demolition related works, barn conversions, reroofing works, culvert removal/repair and tree felling where bat roosts are present. Natural England will have to be satisfied that the local bat populations will not be detrimentally affected by the demolition work. Consequently, they will require suitable mitigation measures to be put in place in order to prevent the complete loss of the bat roost at the overall property as a result of the planned works.
- The EPS licence forms include five separate parts: an Application Form, Method Statement, Reasoned Statement, Work Schedule and Supporting Documents. The applicant e.g. the client will be the licence holder, supported by the licensed bat consultant being used.
- For the prompt processing of the licence application, it is always advised that the client ensure that the planning position in respect to their proposal has been resolved in advance of submitting the licence application and all mitigation options agreed on. In exceptional circumstances, it may be possible to submit an application whilst planning permission is being sought. **For most applications, planning consent is therefore required before the Bats EPS Mitigation Licence is applied for from Natural England.**
- Bat EPS Mitigation Licence applications are stated to be processed within thirty days by Natural England, although it could be longer than this, should further information be required by the Wildlife Advisor or due to any backlog of cases.
- The client will need to consult an experienced licensed bat consultant for advice on how to proceed with the required Natural England Bats EPS Mitigation Licence application, as it is clear that the future outlined works would trigger offences under the law, and such offences cannot be avoided by the timing of such works when bats are not present e.g. the hypothetical scenario where no bats are to be disturbed, no roost is to be damaged or lost and with no bat roost access points obstructed.

5.2 Bat Impact Mitigation and Compensation Scheme

- The main mitigation and compensation scheme is detailed below in regards to the bat roost present, so the future building works are to proceed under the proposed Bat Licence at the Listed Barn. The scheme below will compensate bats during and after the stated works and that they will not be without available roosting sites during these works. The aim will be to provide a net gain in the number of roosting sites available for the bats, but critically provide like-for-like mitigation which is the key aspect, and this will all be stated in the Bats EPS Licence Method Statement.

5.2.1 Provision of high quality bat boxes in the rear garden

- **Installation of 6x 2F Schwegler Bat Boxes and 1x Large Multi Chamber Woodstone Bat Box on adjacent mature trees** - Bat boxes will be used by various bat species, and these high quality bat boxes will be installed in suitable high locations facing appropriate aspects, close to clutter, so to have a chance of success. Common pipistrelle, brown long-eared bat as well as other bat species will use these bat boxes for roosting purposes and are appropriate mitigation for the roost type present. 7x such boxes will be installed before the works begin, which will be secure and undamaged during all of the proposed works eg the bat boxes to compensate for the potential disturbance and loss of the bat roost. All 7x bat boxes will be installed at least 6 metres above ground level on mature trees. The bat boxes will provide a wide range of bat roosting sites which will be available during and after the period of the works. The bat boxes will be mainly South-east or South-west facing but with 3x 2F bat boxes to be North or West facing so there are a variety of microclimates available especially in hot weather. The larger Woodstone Bat Box should face SE or SW, so it can be used as a bat maternity box or at other times of the year. Branches will be cleared around the bat boxes so access is easy for the bats and there must be no artificial lighting of any type illuminating the bat boxes at night.

5.3 Timing of the future development works

- Usually, late summer/early autumn e.g. September/October or early spring e.g. April/early May, are ideally the best times for works affecting bats, as this avoids the main bat breeding season as well as the bat hibernation period.
- This will then reduce any risk of bats being disturbed, injured or killed by accident during any of the proposed building works, which will be the critical objective of the mitigation works.

5.4 Post development bat monitoring

- This post development monitoring is not compulsory for a more common species, and with roosts of lower nature conservation significance.
- However, it is suggested that some optional monitoring is still kindly permitted by the client so to ensure that the bat boxes, for example, are being used by bats or have the best chance of being utilised in the near future.
- For the type of roost present and the compensation, between one to three dusk based bat survey visits can be undertaken at the site in the year after completion of the new dwelling. Even just one single bat dusk monitoring visit would prove invaluable. This monitoring would be inexpensive and would be highly useful in determining if the stated compensation has been successful or not.

5.5 Best practice guidance – bats and development works

- Within the future Bats EPS Mitigation Licence method statement to be written, it will be stated that it will be necessary to undertake a final re-check of the Listed Barn, before the building work commences, after the licence is gained from Natural England.
- If for any reason, an injured bat or grounded bat is found during any of the works then this will need to be rescued by the Licensed Bat Consultant and very carefully, using suitable gloves and cloth bags, moved to the new bat boxes nearby.
- A formal toolbox talk from the bat ecologist about the bat roost and what actions are not permitted must be undertaken at the start of the licensed works.
- **The main objective of the above, is to do all possible to ensure that no bats are injured or killed at all during the proposed building works at this property. And to ensure that the local bat populations at the site remain at a Favourable Conservation Status.**

6. REFERENCES

- (1) Altringham, J.D. (2003) *British Bats*. HarperCollins *Publishers*, London.
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- (7) Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature.
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APPENDIX 1:

Photographs A-D

(Photos A-B are dated 27/7/2022, Photos C-D are dated 31/8/2022)



Photograph A

Example photograph using a night vision aid (NVA) of the Listed Barn interior, where the two bat roosts are present – this picture was taken with the SiOnyx Aurora digital colour night vision camera, mounted on a tripod



Photograph B

A common pipistrelle emerged into the Listed Barn during this bat dusk survey, showing that the roost is still active here



Photograph C

Example photograph using a night vision aid (NVA) of the Listed Barn exterior, where damage is present for possible bat access – this picture was taken with a digital night vision camera, mounted on a tripod

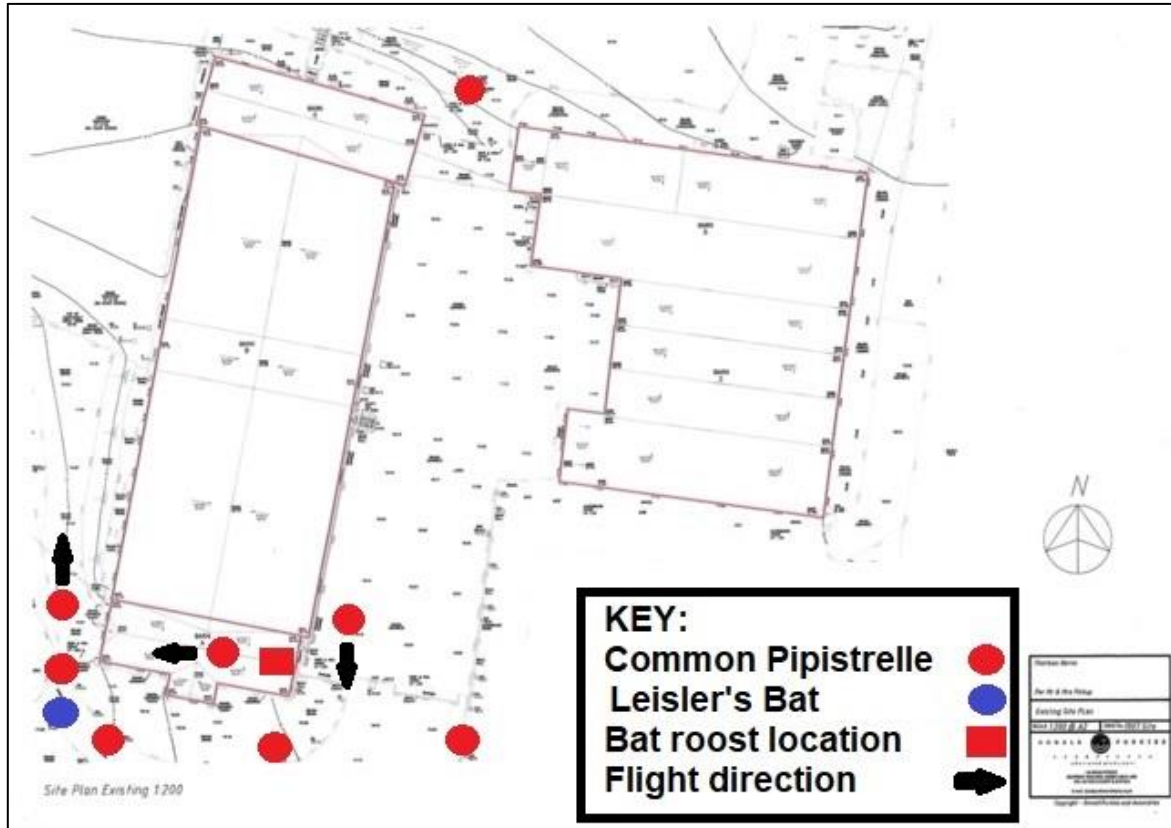


Photograph D

Example photograph using a night vision aid (NVA) of the barn associated with the cricket school – this picture was taken with the Nightfox Vulpes digital night vision camera, mounted on a tripod

APPENDIX 2:

Map A – Location of the bat sightings and bat roost location - 2022



APPENDIX 3:

Selected bat sonogram for the bat emergence survey

Figure 1 – Bat sonogram of a Common Pipistrelle – foraging near the Listed Barn

