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**Dusk emergence survey of
house and attached barn,
Langley Lane Farm,
Langley Lane,
Middleton,
M24 5LJ**

OS grid reference:
SD 8594 0766

Commissioned-by:
Keith Broome

Survey Date: 30/5/24
Previous surveys: day-time - 16/4/24 (UES)

Report Date: 7/6/24
Previous reports: day-time - 2/5/24 (UES)

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N.b. Copywrite applies to all my reports and they must not be altered in any way whatsoever by anyone other than myself, or combined with any other report/s, irrespective of who wrote them, without the proposed changes being submitted to me in writing and agreed by me in writing.

Summary.

(This summary should be read in conjunction with the conclusions and recommendations.)

I was engaged to undertake a dusk emergence survey of this old farmhouse and attached, two-storey barn; further to day-time survey work by UES in April 2024.

No bats emerged on this occasion but there was almost continuous feeding activity taking place by one to two bats, especially in the garden area in the south-west of the site.

As previously recommended by UES, a second dusk-emergence-survey is necessary to accord with good practice. This should be in the second half of the main bat activity survey period of May to August inclusive.

Further advice will be given as necessary.

I understand the client is amenable to making roosting provision for bats in the course of this development, as well as intending to potentially manage the land in a favourable way for wildlife. This is highly commendable and accords with principles of the biodiversity objectives of the National Planning Policy Framework, to maintain or enhance biodiversity where possible, and the more recent Biodiversity Net Gain initiative.

Provision for common pipistrelle bats is best made via integrated bat boxes in the external walls.

Care should be taken when planning any lighting on the site, to ensure any potential roosting features provided are appropriately shielded. (2)

It appeared a pair of swallows was trying to gain entry to the barn, but no mention was made by UES of old swallows' nests inside the barn.

The potential impact of any proposed external lighting on bats and other wildlife should be given due consideration.

Introduction.

I was engaged to undertake a dusk emergence survey of this old farmhouse and attached, two-storey barn; further to day-time survey work by UES in April 2024. They found no evidence of roosting in association with the buildings but assessed the potential for roosting as moderate. They therefore recommended two bat activity surveys to accord with accepted good practice.

Having been involved with bat survey work for over 30 years and consultancy work for 25years, it is always my objective to carry-out my work in a manner consistent with accepted Good Practice Guidelines (1) and consistent with the code of practice of the CIEEM. I hold Natural England Class Licences CL21 (Annex B) and 18. Amongst other things these cover me to apply for Low Impact Licences for clients and undertake bat survey work. I also have a CL29 Barn Owl Class Licence. My credentials are expanded-upon in Appendix 1.

This report should be read in conjunction with the UES report of May 2024.

Survey.

I visited site briefly on 24/5/24 to check on the number of surveyors and amount of equipment needed for a dusk-emergence-survey. This assessment also included a separate single-storey barn, which UES had assessed as being at low risk of use by bats and in need of a single dusk-emergence-survey.

Three survey positions and an additional infrared camcorder were considered satisfactory for the house and attached barn. It was decided that the single-storey barn should be the subject of a separate bat emergence survey.

I returned on **30/5/24** to carry out the dusk emergence survey of the farmhouse and attached barn. I had 2 assistants with me - Gareth Jones and Chloe Quinn - and a trainee, Peter Campbell.

We took up fixed positions to watch for bats leaving the building. See Fig 1 below. We all had the use of heterodyne "bat detectors" to help alert us to the presence of bats and to help us distinguish the species present, and synchronised watches to help us piece together the flight paths followed by bats.

Watches are checked as quickly as possible after sighting a bat and times are recorded to the second.

The usual aim of the survey is to position surveyors so that even if areas of roof cannot be seen directly, the building is covered well enough that, by a process of elimination, it can be worked-out whether or not bats emerged or arrived from off-site. This becomes more difficult when conditions darken as the survey progresses.

In addition I placed Anabat Swift x 2, Anabat Express and Anabat SD1 detectors around the building. See Fig 1 below. These record bat calls for analysis on computer later. They are extra tools for helping to confirm the species present.

I also employed four Canon XA10 camcorders with supplementary infra-red lighting to assist with observations in poor light conditions. See Fig. 1 below. Simple heterodyne bat detectors were used alongside the cameras at low volume to provide basic sound recordings of bat activity.



Fig. 1.

Key: Approximate locations of surveyors shown by red stars (numbered 1 to 4),
 approximate locations of recording devices shown by yellow crosses (1 to 4),
 approximate location of infra-red camcorders shown by orange diamonds (1 to 4).
 1A – position until around 40 minutes after sunset when surveyors moved to position 1B

It was noted that single-storey structures attached to the northern end of the two-storey barn had not been formally covered in the day-survey report and had not been highlighted as needing a bat activity survey work. Some bat roosting potential was clearly present, so these were covered as well as possible also.

The surveyors at point 1 stood back from the two-storey barn at position 1A in Fig. 1, until light conditions deteriorated about 40 minutes after sunset. They then moved to position 1B to focus more on the two-storey barn. There was a reasonable likelihood any emergence from the west side of the single-storey elements would be apparent at least until then.

The surveyor at position 3 was able to see all the way along the eastern line of buildings, at least until a similar time. The highest-risk single-storey element was closest to the barn so relatively easy for him to see. This had some uneven roof-slates. The surveyor was also in view of camcorder 4 so he could flag-up whether any footage needed to be reviewed on either camera 3 or 4.

Findings.

The main results are shown in Table 1 below:

Table 1. Summary of survey and significant findings

Date	Survey type	Sunset / sunrise time	Time of survey	Conditions °C/weather	Comments
30/5/24	dusk	21.26	21.05 to 23.00	14.4°C at start, cloudy, slight breeze, clearing, 12.7 °C at end	Although some bats were recorded flying quite near the buildings, there was no question of any having emerged. All bats recorded were common pipistrelles. The first was recorded at 21.56 at the southern end of the house. This timing suggests the roost was not particularly close. There was frequent feeding activity thereafter by 1 to 2 bats mainly in the unkempt garden area in the south-west of the site, divided from the road by a tall hedge.

Survey type key: **dusk** = dusk emergence survey, **dawn** = dawn re-entry survey

Incidentally two swallows (*Hirundo rustica*) were seen showing a lot of interest in the two-storey barn, frequently landing on the edge of the roof. There did not appear to be any access available for them into the barn. Even the owl hole was blocked with mesh. The strong impression gained, was that the intention of the birds was to enter the barn if possible, presumably to nest. No other swallows were seen and this pair was not obviously showing interest in any other building.

Conclusions/Discussion

No bats emerged on this occasion but there was almost continuous feeding activity taking place from half an hour after sunset by one to two bats, especially in the garden area in the south-west of the site.

The surrounding area has been subjected to massive development for housing in recent years, with the inevitable loss of bat feeding habitat. This site as a whole, which still supports habitat features beyond the buildings that will be of benefit to feeding bats, now constitutes something of an oasis in a wildlife desert. It is now relatively unlikely that bat

species other than the common pipistrelle will easily find enough suitable feeding habitat to justify roosting in these buildings.

Unless bat roosting provision was made deliberately in the modern developments, they are unlikely to be suitable for use by roosting bats due to the unfavourable nature of modern construction techniques. Accordingly, the buildings here may provide one of the few roosting resources available for pipistrelles in close proximity to the on-site feeding habitat. This may increase the risk of roosting on site.

As previously recommended by UES, a second dusk-emergence-survey is necessary to accord with good practice. This should be in the second half of the main bat activity survey period of May to August inclusive, allowing time for a third, if necessary, if there is any ambiguity in the findings of the second. The extended survey period allows for surveys until the end of September. I always aim to separate surveys by a month or more.

I understand the client is amenable to making roosting provision for bats in the course of this development, as well as intending to potentially manage the land in a favourable way for wildlife. This is highly commendable and accords with principles of the biodiversity objectives of the National Planning Policy Framework, to maintain or enhance biodiversity where possible, and the more recent Biodiversity Net Gain initiative.

Provision for common pipistrelle bats is best made via integrated bat boxes in the external walls. See Appendix 2.

Care should be taken when planning any lighting on the site, to ensure any potential roosting features provided are appropriately shielded. (2)

No mention was made by UES of old swallows' nests in the two-storey barn.

The client believes swallows are nesting successfully in other buildings on site, but I understand a new, open-sided, storage structure is to be provided which, if designed appropriately, could potentially provide an additional nesting site. This too is to be commended as swallows are dependent for nesting on appropriately placed ledges inside a covered structure.

Unfortunately, the feeding resources for swallows will also have been massively depleted by recent housing developments. It is currently not listed as a bird of conservation concern (3), but it seems inevitable that it soon will be.

Recommendations.

These recommendations should be read in conjunction with the conclusions above.

Have a second dusk-emergence-survey on the house and two-storey barn. This should be in the second half of the main bat activity survey period of May to August inclusive.

Further advice will be given as necessary.

Aim to provide for roosting bats in the course of the development and supplement these efforts with land management appropriate to maintaining or enhancing the existing bat feeding potential.

Aim also to provide for nesting swallows in a new, open-sided storage structure.

The potential impact of any proposed external lighting on bats and other wildlife should be given due consideration.

References.

1. Ed. by Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines - Third Edition. Bat Conservation Trust.
2. Bat Conservation Trust (2018). Guidance Note 8/18: Bats and Artificial Lighting in the UK.
3. Eaton, M. A. et al. (2021). Birds of Conservation Concern 5: the status of all regularly occurring birds in the UK, Channel Islands and Isle of Man. British Birds 114: 723-747.

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Appendix 1 - Angela Graham's Experience.

- I hold Natural England Class Licences CL21 (Annex B) - Registered Consultant 163 - and CL18 (CL18 (2015 11871 - CLS-CLS). CL21 covers me to apply for Low Impact Class Licences for clients - a more stream-lined system for quickly obtaining a licence from Natural England when a roost of a small number of common bat species will be impacted-upon by the development. CL18 covers me for survey/consultancy/scientific work. I have a supplementary licence to possess up to 10 live/dead bat specimens (20123429). I have a CL29 licence to disturb barn owls.
- I'm a member of The Chartered Institute of Ecology and Environmental Management.
- I undertake my work in accordance with the principles outlined in the Bat Conservation Trust's "Good Practice Guidelines".
- I have been involved in bat conservation for over 30 years, initially as a member of the South Lancashire Bat Group from its inception in 1987 and as a volunteer with the Nature Conservancy Council (NCC) - first licenced in 1989. Later, and for many years, I was Co-ordinator/Chair and Trainer for the South Lancashire Bat Group. I trained the people who currently run the group, one of whom has been a Trustee for the Bat Conservation Trust. I was a founder member of the Greater Manchester Bat Group in 2002 and ran the group for 4 years.
- Over the last 27 years I have done increasing numbers of bat surveys on a consultancy basis, firstly part-time then full time from December 2003.
- My experience in applying-for European Protected Species Licences with respect to bats spans over 20 years.
- From 2003 to 2008 I represented the bat groups of the north-west region at national bat worker meetings, hosted by the Bat Conservation Trust.

Other experience includes:

- Attending bat-worker conferences every year since 1988 (mainly England, some in Wales) plus additional symposia on specific topics such as mitigation and woodland bats.
- Helping with winter surveys of underground hibernation sites in Clwyd and north Lancashire.
- Participating in "Bat Detector Workshops" during the 1990s in different areas of the country, concerned with locating bat roosts and feeding sites/commuting routes.
- Sitting on local council "Wildlife Advisory Groups" (WAGs) in the Greater Manchester area from the early 1990s until around 2005.
- Helping local authorities and the Greater Manchester Ecology Unit formulate their Biodiversity Action Plans for bats.
- Administering the bat casework for English Nature (now Natural England) in the South Lancashire and Greater Manchester areas over 1998-2000.
- Assisting with research involving mist netting, harp trapping and radio-tracking.
- Continuing to attend courses run by recognised experts to ensure I stay up-to date both with respect to bat survey-work and conservation, and issues such as health and safety.
- Re-passing the Construction Site (CITB) Operatives test in June 2017.
- Contributing to the Bat Conservation Trust's survey standards guidelines.

Other ecological experience includes:

- Bird watching for fun since 1982 with a general interest in wildlife, ecology and conservation for a similar period.
- Attending short courses and field training with respect to grasses, flowering plants, British mammals including water voles, reptiles and amphibians, non-native invasive

plant species, Extended Phase 1 Habitat Surveying, National Vegetation Classification, Environmental Impact Assessment and use of GIS.

- Taking part in British Trust for Ornithology breeding bird surveys annually.
- A year-long sandwich placement assisting with badger research, including radio-tracking.
- Short periods of voluntary work with the Lancashire Wildlife Trust and Royal Society for Protection of Birds.

Appendix 2 – examples of available integrated bat boxes

N.b. An internet search for "integrated bat boxes" will bring up types and suppliers of these boxes but advice from the bat consultant should be sought before they are ordered.

EcoSurv Habibat

<http://www.habibat.co.uk/category/bat-boxes>

“Designed to be built into an exterior wall and is available in a variety of faces to match the building. Standard facings of red or blue brick - ideal for new builds - are normally available from stock, or boxes can be made to your specific requirements with a face of brick, stone, timber, or plain (for rendering). Supplied un-pointed.”



Example of Habibat boxes Can also be faced with stone.

Ibstock Ecozone

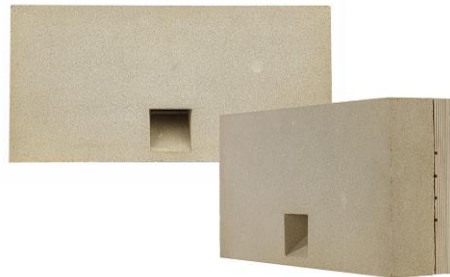
<https://www.ibstock.co.uk/product/ecohabitats/bat-box?page=1&>





Above: typical unit in situ. Photo © Angela Graham

Bat Box - Concrete



Cast Stone.

<https://www.clickcaststone.co.uk/products/cast-stone-ecohabitats/shop/cast-stone-bat-box/>



Dimensions: 440 x 100 x 215mm, with a 60 x 55mm aperture.



Above: typical unit of this design in situ. Photo © Angela Graham

Green and Blue Bat Block/Brick

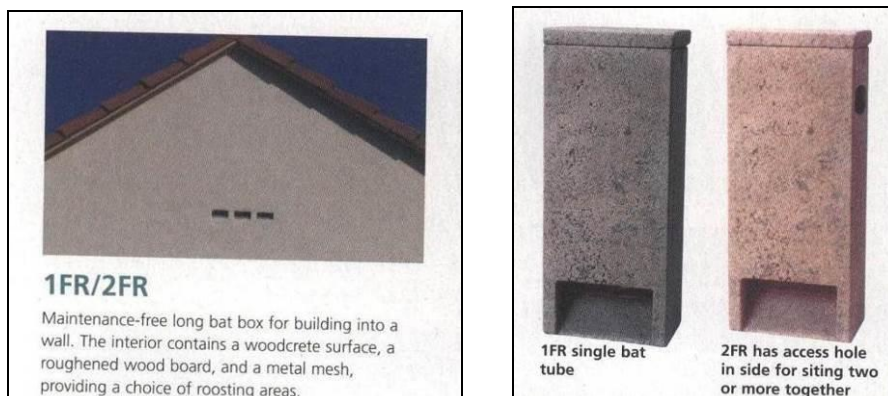
<https://www.greenandblue.co.uk/products/bat-block-bat-brick>



Green and Blue Bat Block/Brick in situ

Schwegler 1FR/2FR

An internet search for Schwegler bat boxes will readily bring up suppliers of these boxes



Schwegler 1FR/2FR