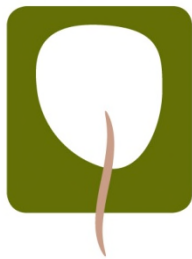


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ALDER ECOLOGY UK LTD

Working for the Client - Working with Wildlife

3 Bears Cottage, Blackland, Calne, Wiltshire,
SN11 8PS

AEUK 1775

Bat Emergence & Bird Survey and Assessment

Roger Martindale

3rd August 2026



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Introduction

The site, 3 Bears Cottage, Blackland, Calne, Wiltshire SN11 8PS National Grid reference SU 01464 68593 (what3words delay.newlyweds.debt) (hereafter referred to as the “site”) has been assessed for breeding birds and roosting bats based on the assessment criteria within the Bat survey guidelines 2023 and from undertaking a visual daytime inspection on 7th July 2026 and further inspection prior to a single emergence survey on 30th July 2026. The total site size (not redline, but survey area) is approximately 0.571 acres 0.231 ha which includes buildings with additional areas of residential gardens with paving, gravel shingle and a mix of native and non-native plant species.

Proposed works

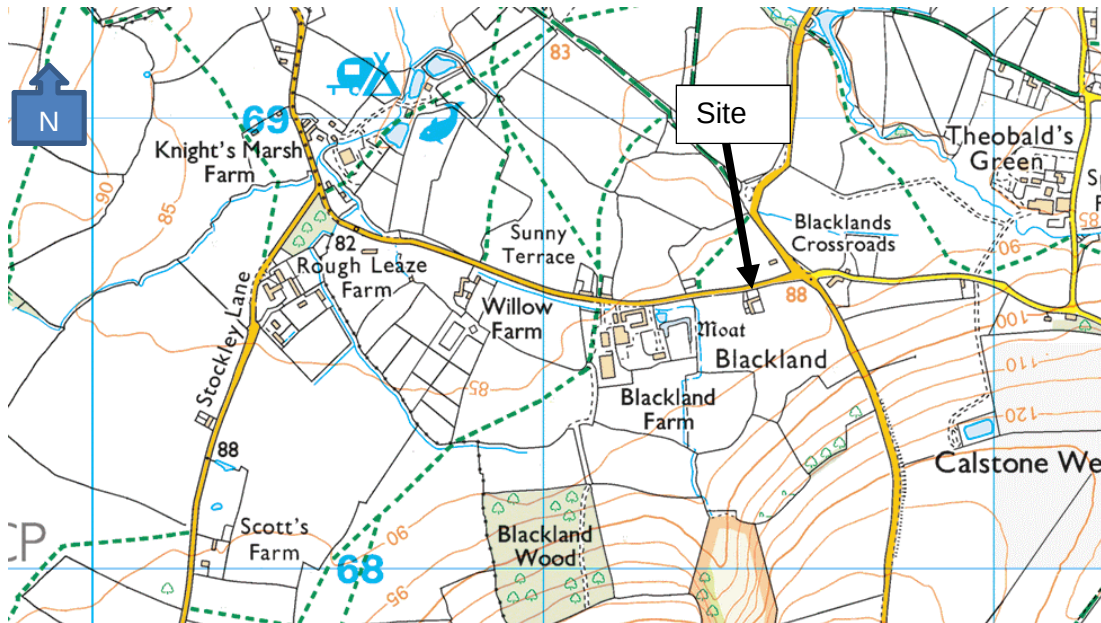
The proposal is to replace the existing kitchen wing to the west of the cottage and remove the long barn outbuilding with a corrugated roof, and replace with a new single storey barn-type timber framed building which incorporates the new kitchen, entrance hall, utility space and car ports. The final work is to replace the roof and repair the stonework on the smaller stone barn to the south perimeter. No change is proposed to the main cottage and thatched roof.

Objectives

The objectives of the ecological assessment were to:

- Identify if bats/bird are roosting on site or have potential to roost/breed on site;
- Identify the presence or potential presence of bats a protected species whose disturbance may require consent under The Conservation of Habitats and Species Regulations, 2010;
- Identify the need for further targeted surveys on site;
- Identify any bat/bird species which may require special mitigation during the works; and
- Identify any areas that may require special protection during the development.

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Map 1 Site location 26 Sion Road, Bath



Map 2 showing the building and site footprint with the impact areas outlined in red

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Plan 1 showing site layout impact areas shown in green

Methodology

Building Inspection bats

The methodology, surveys and equipment used were undertaken in accordance with and guided by the BCT bat survey guidelines 4th edition 2023.

Physical external/internal site inspection of the building was undertaken by the lead surveyor.

The surveyor conducted this inspection using the equipment described below to assist the inspection, and approximately a half day of search effort was expended. A 3.8m telescopic ladder was used to gain access to various points and a Led Lenser (2 million candlepower) searchlight fitted with a red filter was used to search dark areas for signs of bats. A Pro Vision

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2100 Endoscope was utilised to assist inspection of internal spaces. Pentax 0.5m Papilio (8.5x21) close focusing binoculars were used to view areas inaccessible on foot. A telescopic inspection mirror was used to look on top of structures for evidence of bats.

The physical search includes a search for live animals and a search for other signs that give an indication of past or present occupancy as outlined below.

In the case of bats, typical indicators include droppings (which are characteristic and can often be speciated or at least be indicative of species type), signs of staining, urine splashing, characteristic odours, and accumulations of discarded prey remains.

Breeding birds

A check was undertaken at the same time for breeding birds within the property or in close proximity to the property. Using standard techniques to search for breeding birds; looking for historic use of the property (old nests), current use of the property or gardens and birds calling or holding territory.

Assessment of the Building for Bat Roosting Potential

The site was visited during the daytime on 7th July 2026 during which the assessment of the building for bat potential was undertaken.

The surveyor conducted a visual inspection. This consists of two parts. The first part (building assessment) was undertaken during this survey. The second part (emergence and activity survey) was undertaken at the end of July 2026.

A DJI Mavic mini 2 drone was used to aid the survey of the roof of the property and areas around the building.

- Use of close focusing binoculars to inspect the building from the ground to the roof inside and outside.
- Inspection of all aspects of the building.
- Look for features indicative of bat roosts cracks and crevices inside and outside building.
- Looking for signs of bat occupation both inside and outside the building and areas in close proximity.

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- Use of a high powered torch to highlight cavities and shady areas of the building.

An assessment of breeding birds was undertaken looking for historic or recent nests on 7th July 2026.

Evening emergence/activity bat detector surveys

Prior to the commencement of the acoustic survey the surveyors visually inspected the buildings for bats in known favoured roosting areas. On completion of this task the surveyors positioned themselves to allow for inspection of bats exiting/re-entering the buildings. Surveyors also positioned themselves to be able to see bat emerge inside the buildings prior to exiting the building to forage externally.

An Anabat SD1 detector with PDA attachment and a time expansion bat detector (Pettersson D240x) were used by both the lead surveyor and assistant. The time expansion bat detector was linked to a digital recorder (Roland Edirol R09) for subsequent sonogram analysis in the using 'Bat Sound V3.31' software to further increase the chance of accurate species identification. The Anabat detector with PDA records information directly into the device for computer analysis later using AnalookW bespoke software. The surveyors supplemented this active detector work with the use of passive Anabat SD1 remote detectors placed strategically around the site. The detectors were deployed in different locations during each survey. The data collected was analysed using AnalookW bespoke software to identify species recorded. All calls for both detector types were cross referenced to a call reference collection library of known bat species to confirm species presence

Building inspection

The Building inspection survey was carried out on 7th July 2026 and further inspections prior to a single emergence survey on 30th July 2026 in suitable weather conditions in accordance with Bat Conservation Trust (BCT) survey guidelines for building inspections and emergence surveys.

An assessment of breeding birds was undertaken looking for historic or recent nests on the 7th July 2026 and 30th July 2026. Three old nests were recorded for historic evidence of breeding birds but no new evidence was recorded associated with the structures.

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Environmental variables

Table 1 Environmental variables

	Temp start	Temp end	Wind speed max	Wind speed ave	Cloud cover start	Cloud cover end	Relative Humidity	Precipitation
7th July	23.1°C	24.3°C	1.0mph	0.2mph	0/8	0/8	81.0%	None
2026					oktas	oktas		
30th	20.0°C	19.5°C	0.1mph	0.1mph	7/8	6/8	82.0%	None
July					oktas	oktas		
2026								

Limitations

The survey was carried out at an optimal time of year for a building assessment and emergence surveys following the Bat Conservation Trust Bat Survey good practice guidelines 2023 and a optimal time for breeding bird surveys but the survey also looked for historic nesting evidence. While no biological survey can guarantee that all cues and signs of protected or notable species will be recorded, Alder Ecology UK Ltd feel confident that all key indicators for bats and breeding birds were noted during this survey window. The survey at 3 Bears Cottage, Blackland, Calne, Wiltshire SN11 8PS was not constrained as full access was available at the site for the emergence survey. The survey followed the guidance that survey effort needs to take place during the May to August optimal survey window but surveys outside the window are accepted so long as some take place within the window.

Personnel

The survey and assessment on site was carried out and lead by Roger Martindale BA(Hons), MSc, CEnv, MCIEEM Principal Ecologist and Director of Alder Ecology UK Ltd who is a qualified and experienced professional Ecologist with over 25 years' experience, Chartered Environmentalist and full member of the Institute of Ecology and Environmental Management (CIEEM). Roger is an approved trainer for Bat Conservation Trust, Natural England and

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CIEEM and has recently ran the new Natural England Low Impact Bat Class licence training and a member of the technical review panel of the recently published 4th edition of the Bat survey guidelines. He currently holds a Natural England survey licence to legally undertake such assessments on site (licence number 2015-18372 CLS). During the surveys Roger was assisted by Rachel Whatton an experienced bat surveyors who has worked as an assistant surveyor for 20 years.

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Photographic plates



Plate 1 buildings being surveyed 3 Bears cottage



Plate 2 showing the area's that are most well used by foraging bats and the adjacent field contained cows

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Plate 3 showing kitchen roof with negligible potential for roosting bats and birds



Plate 4 showing the long barn moderate potential for birds and low potential for bats

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Plate 5 showing the stone barn with low potential for birds and bats



Plate 6 kitchen roof intact and tightly finished

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Plate 7 single skin asbestos roof of the stone barn same design as the long barn



Plate 8 single skin interior roof of the long barn

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Plate 9 old bird nest in the roof of the long barn and open ridge with no beam



Plate 10 double nailed weather boarding on the long barn reduces access potential

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Plate 11 light spill onto the kitchen area further reduces potential for bats



Plate 12 light spill from parking area light on short duration sensor

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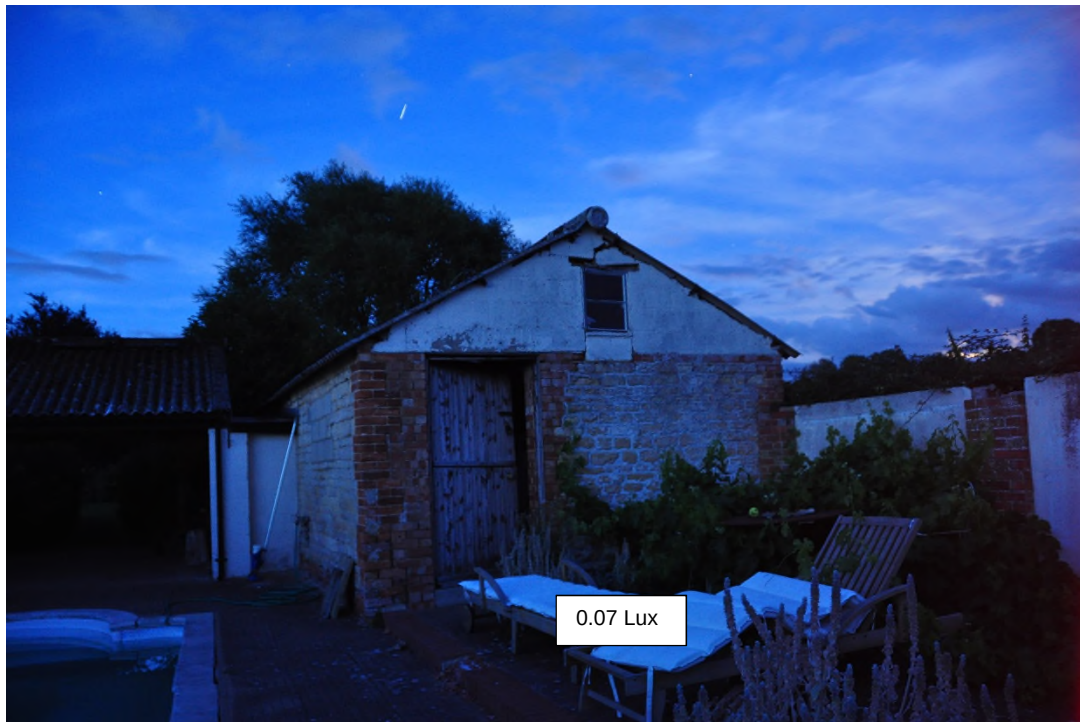


Plate 13 stone barn with low light levels



Plate 14 light spill into the interior of the long barn from security lights

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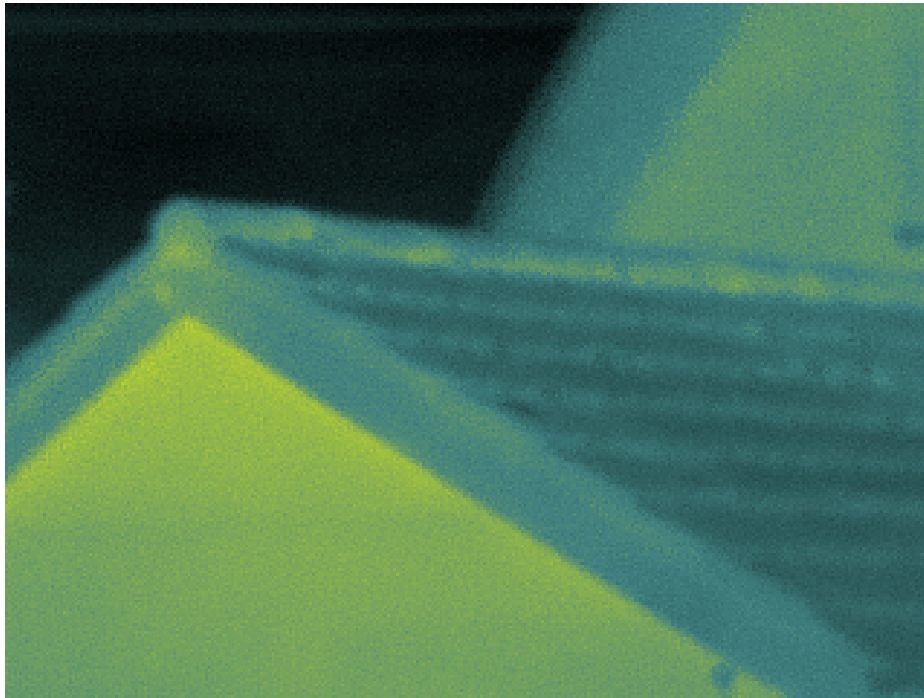


Plate 15 thermal imager (kitchen) used during survey to check for birds and bats

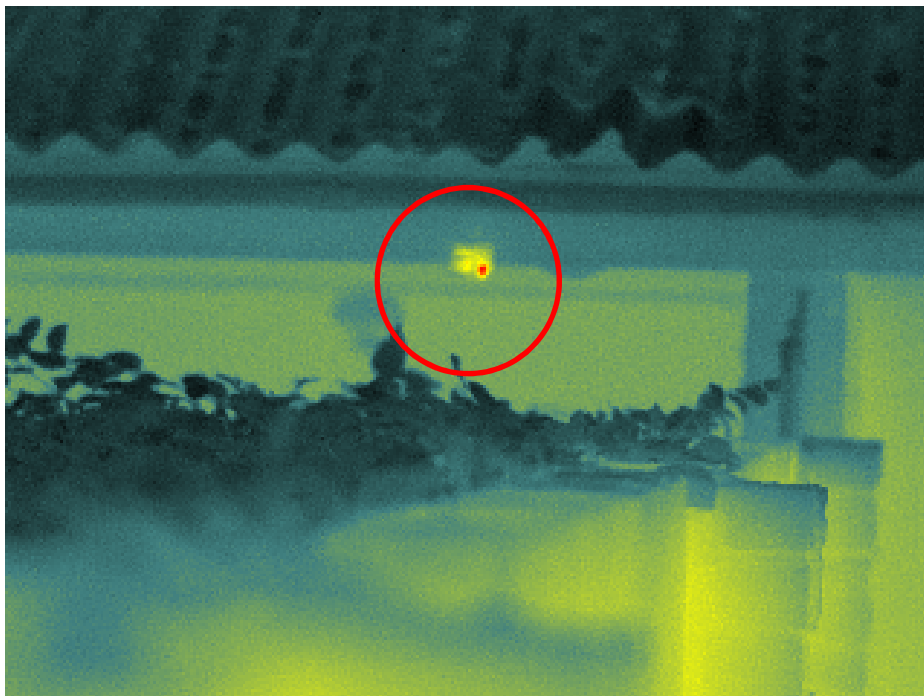


Plate 16 thermal imager long barn picked up thermal signature of the security light circled

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Results Data search

The general area has good habitats for bats and is rural with few developments. A total of 82 bat records were returned within 5km of the site which is low given the local habitats but is likely a result of under recording.

Table 2 Bat records 5km radius SN11 8PS

Bat Species	Distance from site centre (km)
Bats	< 1km
82 records returned	> 5km
Brown Long eared	> 5km
5 records	
Common Pipistrelle	> 5km
18 records	
Daubenton's bat	> 5km
4 records	
Greater Horseshoe bat	> 5km
3 records	
Lesser Horseshoe bat	> 5km
1 records	
Natterer's bat	> 5km
2 records	
Noctule bat	> 5km
14 records	
Serotine bat	> 5km
15 records	
Soprano Pipistrelle	> 5km
21 records	

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Results

Internal assessment

There are no accessible roof voids within the existing kitchen extension.

There are no enclosed roof voids in the long barn. However, the internal space is open and can be accessed by birds or bats. The Long barn is open to the metal beam frame and the roof is single skinned and provides no cavities for bat species but the space could be used by night roosting bats and therefore has low overall potential. The walls are also single skinned with no cavities for roosting bats. No evidence of bat droppings or feeding signs were recorded inside the barn. There are three old birds' nests within the long barn one swallow nest and two blue tit type nests within shelving areas of the metal beams. There are no new nests that are in use by breeding birds but the structure has moderate potential for breeding birds.

There are no enclosed roof voids in the stone barn and the space is well illuminated by daylight due to a number of window vents. The roof is single skinned and there are no cavities for roosting bats within the roof area. The walls are well maintained inside the space and access into the area is only possible if doors or windows are left open. The structure has low potential for roosting bats and breeding birds.

External assessment

The kitchen area is well maintained with a tight fitting clay tile roof with negligible opportunities for birds or bats. The gable end fascia and under eaves wall plate offered negligible potential for birds or bats as the structure is well maintained with no gaps or cracks into the property. It is assessed to be of negligible value to birds and bats.

The long barn has overlapping weather boarding which is often good for roosting bats and nesting birds but the boarding has been double nailed making access into the area difficult with only minimal gaps for access. The area was searched using an endoscope and no evidence of entry was visible and the area was heavily cobwebbed. The weather boarding has been assessed to be low potential for birds and bats. The open nature of the structure means birds and bats could use the structure for nesting and night roosting and therefore the overall assessment is low potential for bats and moderate potential for nesting birds as evidence of old nests was evident. Therefore the structure will require a single emergence survey to check the status of the structure.

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The stone barn is constructed with a brick and limestone wall exterior with a few gaps and cracks. These were examined with an endoscope and no evidence of historic or recent use was recorded. The roof is single skinned asbestos with negligible potential for use by birds or bats. The building has been assessed to be low potential for birds and bats.

Emergence survey results 30th July 2026 Sunset 2059hrs and sunrise 0530hrs

The building assessment on 7th July 2026 assessed the buildings on site negligible/low potential for roosting bats and moderate/low potential for nesting birds. One emergence survey was recommended in the optimal survey window.

The emergence survey of the building recorded no bats exiting or entering the structure during the survey period which lasted for over 1hr 30mins due to the local presence of horseshoe bats. No new nests or nests in current use by birds was recorded either on the 7th July or the 30th July 2026.

A total of seven species were observed and recorded during the survey (see map 3) briefly commuting through the site and feeding primarily on the west and south boundaries. The garden of the property is dark and well sheltered and backs onto on both the west and south side a field which was being used by grazing cattle.

The first bat recorded was a noctule bat and was recorded and observed at 2118hrs flying west to east high along the southern boundary. The second bats was a serotine bat at 2124hrs flying from south west north directly over the site and was commuting. A noctule bat then flew east to west across the north side of the property at 2132hrs closely followed by the first common pipistrelle at 2134hrs which came from off site and fed along the west boundary. A leisler's bat flew across the north of the site at 2146hrs from east to west. The final bat to fly across the property was a soprano pipistrelle bat which was observed on night vision scope from east to west briefly feeding inside the west boundary and then exiting the site at 2157hrs.

From approx. 2200hrs onwards there were two main feeding areas both on the cattle field side of the south and west boundaries. On the west boundary both common and soprano pipistrelle bats were feeding north to south on the west boundary backwards and forwards and they were joined by a Myotis species typical of whiskered/Brandt's based on sonogram. They fed there until the end of the survey period at 2237hrs. On the south boundary a similar pattern of feeding was happening with soprano pipistrelle and whiskered/Brandt's bats and they were

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briefly joined on two occasions by leisler's bats and long eared bats. This continued until the end of the survey.

The open structure of the long barn was regularly checked for night roosting and night feeding bats but no evidence was recorded: no bats, no droppings and no feeding signs.

If the baseline lux levels are maintained at current levels and security lighting is via short duration motion sensors as is currently the case, commuting routes and feeding areas for bat species will not be impacted by the proposed scheme. The proposed scheme is not located within the zone of influence of the Bath and Bradford on Avon bat SAC and therefore will not adversely impact the protected sites.

Passive detector results

Survey 1

30th July 2026 east

- common pipistrelle (feeding)
- soprano pipistrelle (feeding)
- serotine bat (commuting)
- noctule bat (commuting)
- Whiskered/Brandt's bat (commuting)
- Leisler's bat (feeding)
- Long eared bat (commuting)

30th July 2026 west

- common pipistrelle (feeding)
- soprano pipistrelle (feeding)
- serotine bat (commuting)
- noctule bat (commuting)
- Whiskered/Brandt's bat (feeding)
- Leisler's bat (commuting)

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Map 3 bat survey 1 results yellow common pip, red serotine, orange noctule, green leisler's, black wh/brandts, blue soprano pip, brown long eared bat. Surveyor position red. Passive detectors yellow triangle, surveyors red dot.

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Ecological lighting assessment method

Method

Ecological Lux level baseline for the site has been assessed taking readings 1hr 30mins after sunset. The site has been assessed using standard industry equipment the Minolta T10 Luminance meter with all readings taken in a horizontal plane.

The lighting outputs have first been recorded and mapped with all the luminaries both on and off site considered during this process including offsite light spill and light trespass.

Illuminance levels throughout the site and at the boundary have been produced so that the current site baseline is understood. The Lux levels on the map below shows current levels including light trespass from adjacent areas.

Light trespass has been assessed and the line of sight from neighbouring properties has also been considered in terms of impact on the site.

The Society of Light & Lighting guidance documents all apply a common Environmental Zoning system, which is summarised below.

Zone E1

Areas with intrinsically dark landscapes: National Parks, areas of outstanding natural beauty (where roads are usually unlit) Rural Environmental

Zone E2

Areas of 'low district brightness': outer urban and rural residential areas (where roads are lit to residential road standard) Urban Environmental

Zone E3

Areas of 'middle district brightness': generally urban residential areas (where roads are lit to traffic standard) Urban Environmental

Zone E4

Areas of 'high district brightness': generally urban areas having mixed recreational and commercial land use with night-time activity

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Results of the ecological lighting assessment

The site has a variation of light levels with short duration security lighting, but no municipal lighting and no light trespass from neighbouring properties. The site sits in zones E1 with security lights off and when security lights are on the lux levels rise significantly in the local area by the parking and long barn. However, the security lights are on short duration sensors and typically stay on for under 1 minute. Bat activity was not impacted in the adjacent fields to the west and south of the site when the security lights came on.



Map 4 showing site lux levels from ecological lighting assessment NOT A Full Professional lighting assessment

*Notes: Lux levels recorded on site 30th July 2026

Luminance meter *Lux level taken using Minolta T10 Luminance meter in horizontal plane.

Moon phase *30th July 2026 lunation Full Moon moon 100% illuminated at 6/8 oktas cloud cover

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Conclusions

The building inspection and bat emergence surveys concluded that the buildings on site are not bat roosts and the structures do not currently contain breeding birds and is therefore is not legally protected or constrained in relation to the proposed works on site.

The assessment concludes that the structures at the time of survey are not bat roosts and so the buildings have no legal protection in that respect and that work on the structures are unconstrained in relation to bats. Old evidence of nesting/breeding birds was recorded within the structure but no new evidence, therefore the building is not constrained in relation to breeding birds. Breeding birds are not using the exterior of the structure and the structure is unconstrained in relation to breeding birds.

Any work to the buildings on site will not have an impact either directly or indirectly on the integrity of the Bradford on Avon and Bath bat SAC or the designatory features of the SAC, Greater Horseshoe, Lesser horseshoe or Bechsteins bats as the site sits outside the zone of influence.

If the baseline lux levels are maintained at current levels and security lighting is via short duration motion sensors as is currently the case commuting routes and feeding areas for bat species will not be impacted by the proposed scheme. The proposed scheme is not located within the zone of influence of the Bath and Bradford on Avon bat SAC and therefore will not adversely impact the protected sites.

The site boundaries (west and south) are clearly important for foraging bat species and as these are also field boundaries are unlikely to change or be impacted by the proposed works on site. Ensure the boundaries are protected during the proposed works and not directly illuminated by a change in lighting on site. Any future works or developments on site should seek to avoid any significant increase in lux levels which could be detrimental to night-time wildlife.

The general Wiltshire area has a high biomass of bats and in some areas they are under recorded and therefore situations can change quickly with mobile species such as bats or birds, if opportunities arise particularly as the site has recorded seven species of bat during the survey. Therefore measures should be employed to prevent ingress by bats or birds into the property during any work to prevent conflict between scheduled works and roosting bats

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or breeding birds if the work is undertaken during the active season for bats April to October when they fly and forage and can utilise opportunistic roosts which have become available or breeding season for birds March to September as some bird species have multiple broods throughout the breeding season.

Therefore provided that work is undertaken according to the recommendations below and under ecological guidance if required then any impacts can be minimised and risk reduced to be proportionate with the likelihood of the presence of bats or birds within the building which is assessed to be absent within the structure according to the latest building inspection and emergence survey results.

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Recommendations

The following recommendations are provided to help prevent bats/birds opportunistically entering the building throughout the duration of the works.

- Maintain building integrity up and until the point of works to avoid occupation by bats or birds.
- While work continues on site maintain coverings on buildings to prevent free access for bat or bird species. Leave no open voids during work if it falls during at a time when bat species are active. For example it is advisable to cover openings into the roof.
- If a bat is discovered at other, unsupervised times, work will cease immediately and the ecologist will be called for advice. This advice will include leaving the bat to disperse of its own accord, or wait for the licensed handler to rescue the bat from danger and move the bat to a safe location.
- If any bats are encountered works will immediately stop. The bat expert will attempt to rescue bats if in immediate danger and hold them in accordance with the Bat Workers Manual and in a suitable handling box for release in the evening or continued roosting.
- Builders and contractors are explicitly forbidden from handling bats or disturbing breeding birds.
- If bats are present on-site maintenance/repair/ replacement works must cease until advice is sort from Natural England (NE) this may delay to the project.
- All nesting birds are protected while breeding or making a breeding attempt. Should breeding birds be discovered advice must be sought from a qualified ecologist.
- If breeding birds are discovered on site work will be delayed until the young birds have fledged (flown the nest). The area must be secured and birds left undisturbed.
- Do not illuminate the west and south boundaries of the site to help maintain bat commuting routes and feeding areas.
- Do not adversely impact bat commuting routes in the south and west with extensive vegetation removal. Vegetation can be maintained with management but features such as hedgerows and scrub habitat are important for commuting bats and should be retained.

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- Any lighting of the property should seek to operate within the baseline light levels which have been recorded with bats active in the area and therefore it has minimal impact at that level.
- Any security lighting proposed should aim to use short duration motion sensors and should aim to avoid illumination directly of the west and east boundaries.

Enhancements

In order to provide some biodiversity net gain the following is recommended for the site.

- Erect an artificial bird box on site east or north facing at over 1.5m in height for small common bird species such as wren, blue tit or robin
- Erect an artificial bat box on site at 2/3m in height south or west facing suitable for common bats species such as pipistrelle bats which have been recorded close to the site.
- Use native vegetation within the residential garden where possible to encourage insects suitable for birds and bats.

Ecologists contact details

Roger Martindale BA (Hons), MSc, CEnv, MCIEEM

Chartered Environmentalist

Director

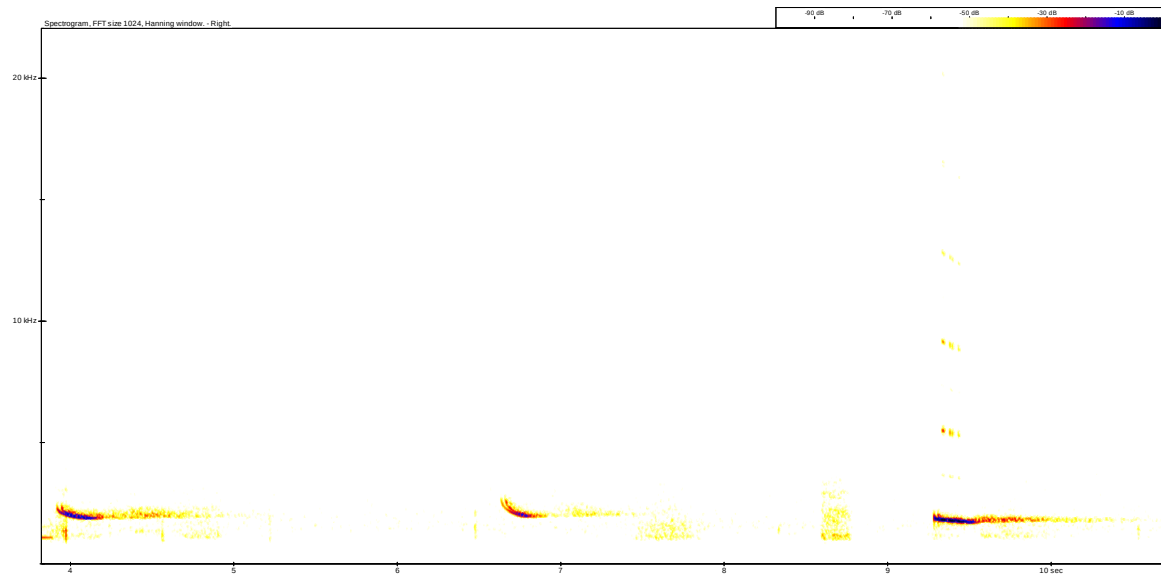
Direct Dial Tel: 01225 765604

Mobile: 07533 273939

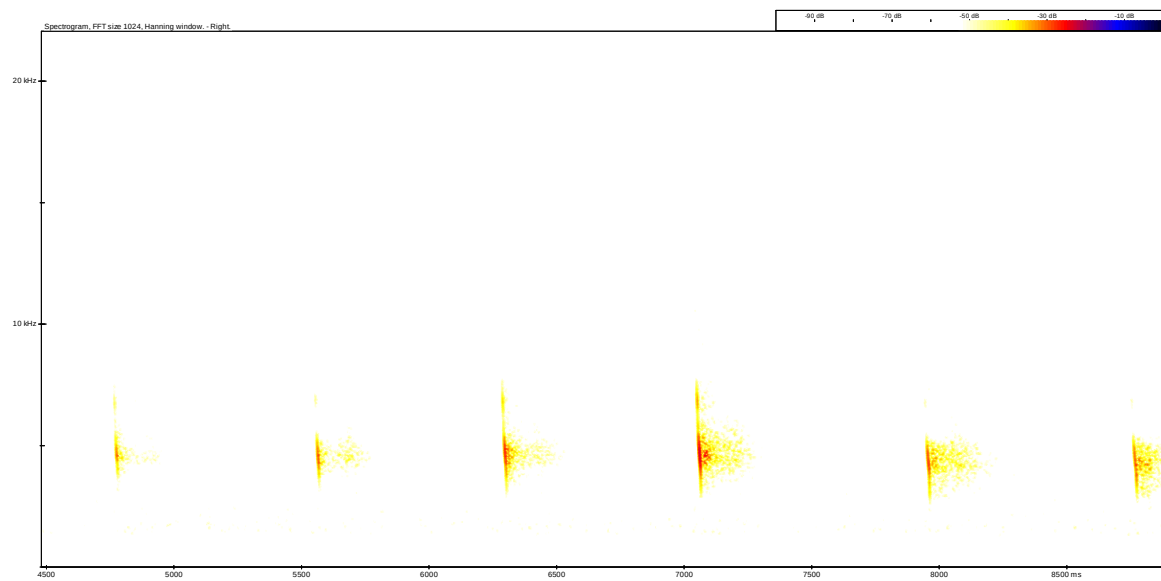
e-mail: rmartindale@btinternet.com

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Appendix 1 sonogram examples

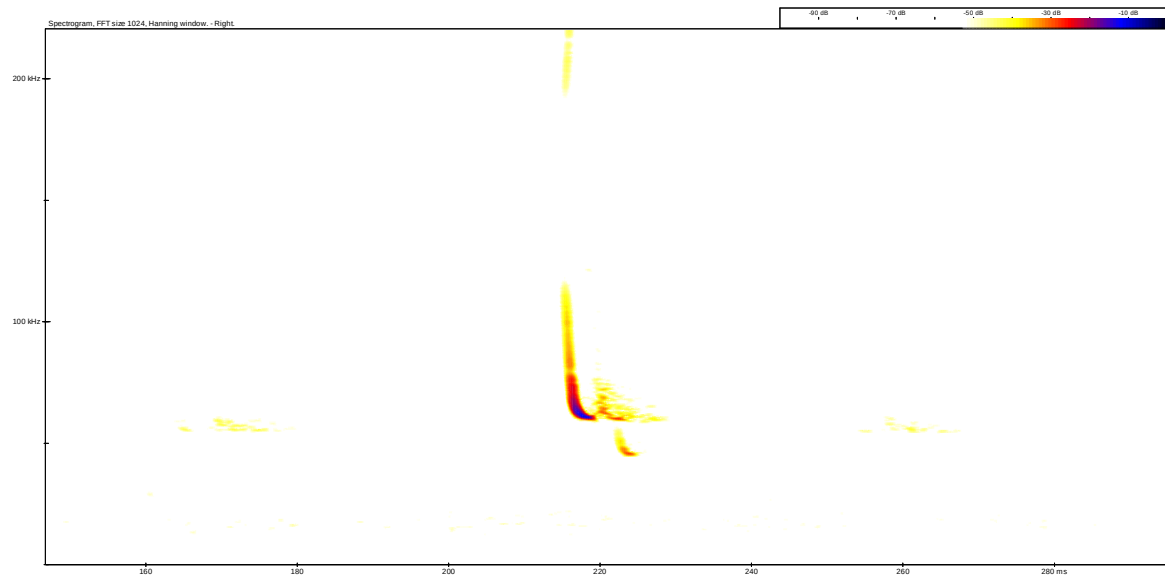


Noctule bat over flying the site west to east 30th July 2026

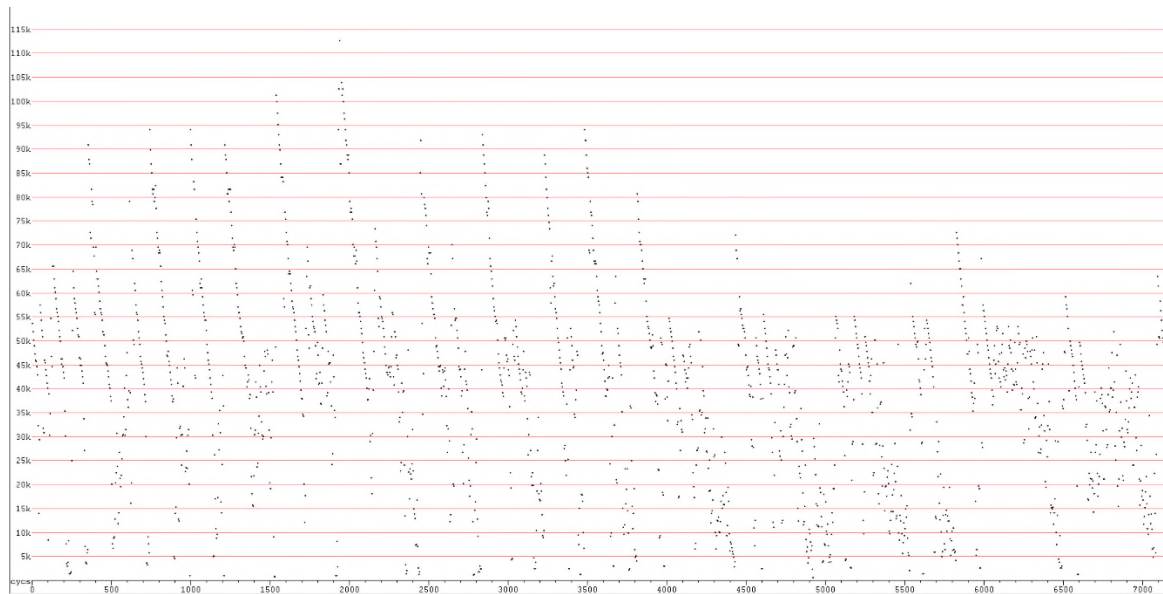


Whiskered/brandts south boundary 30th July 2026

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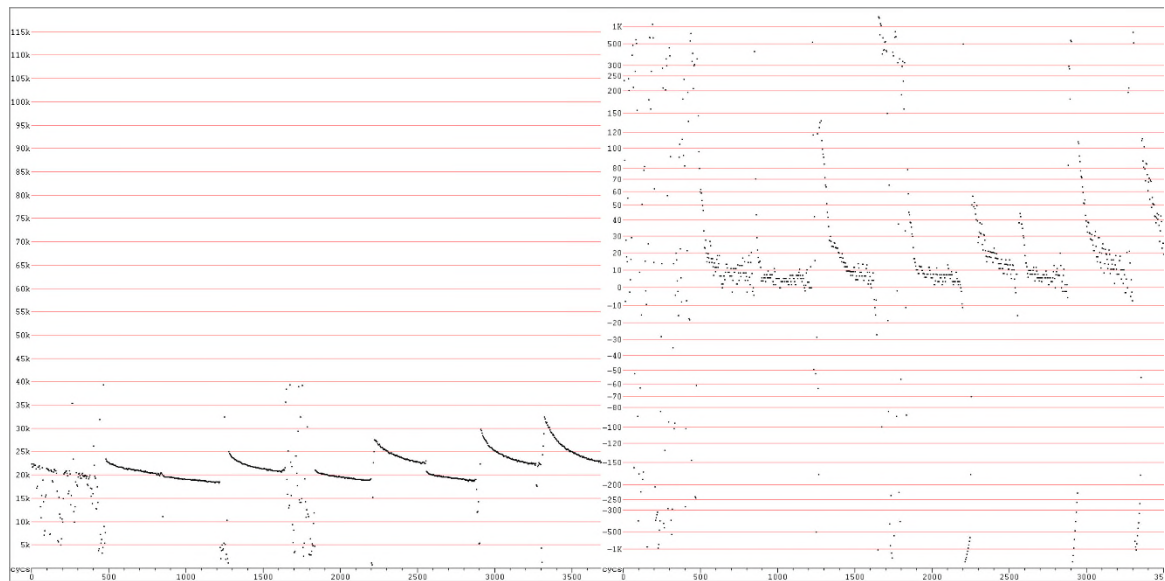


Common pipistrelle bat and soprano pipistrelle bat west boundary 30th July 2026

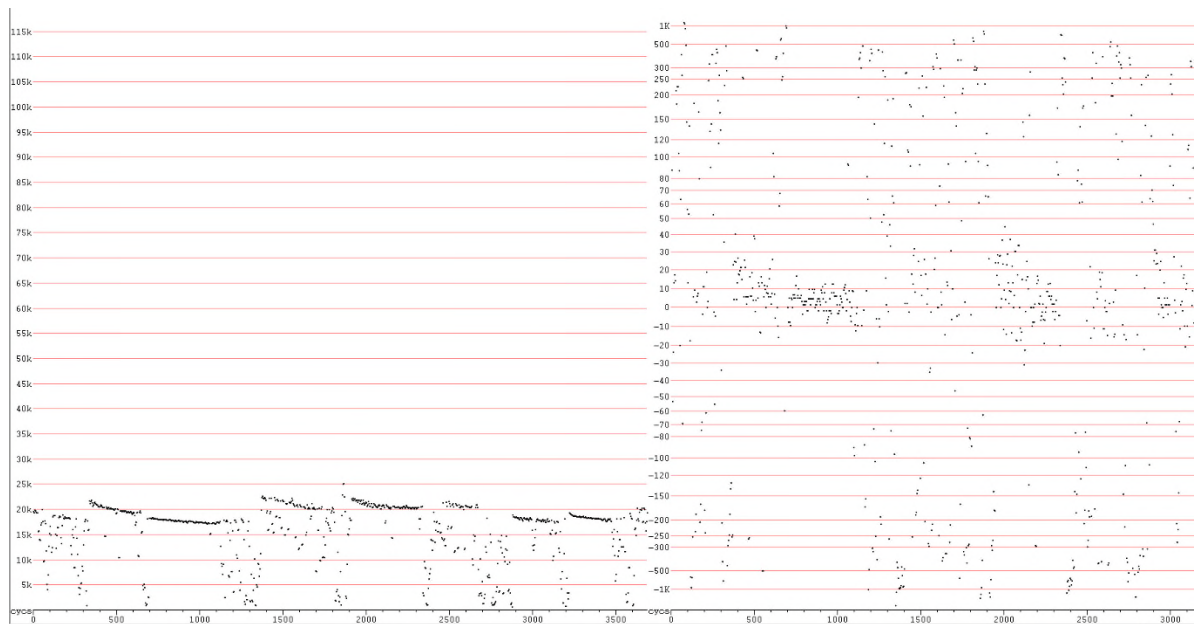


Whiskered/brandts recorded commuting along the south boundary of the site 30th July 2026

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Leisler's bat recorded over the west boundary confirmed using slope analysis in analook



Noctule bat recorded over the south boundary confirmed using slope analysis in analook