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Bat Survey Report (preliminary day-time and dusk-emergence surveys):

31Eastfield Drive,
West Bradford,
BB7 4TQ

OS grid reference:
SD 7451 4483

Commissioned-by:
Daniel Cryne

Survey Date: 17/9/24 (dusk), 5/9/24 (day)

Report Date: 23/9/24

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1. Summary.

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

This is a 1970's-style, detached, dormer bungalow in a rural location of good bat feeding habitat.

Essentially the only roosting potential identified was in association with the dormer windows, which are to be replaced.

There was a lot of activity by pipistrelle bats at dusk, especially common pipistrelles. Consistent arrival by bats from the west, along with some social calls suggestive of juveniles, indicates a likely maternity colony roost to the west. Social calls typical of a male with a mating roost suggest there is also such a roost nearby.

At the time of the day-survey it was thought bat roosting potential available was low risk and suitable for only individuals or small numbers of bats, not a maternity colony. September is a good month to discover these roosts, as maternity colonies break-up and males become territorial, attracting females to mate.

Upon closer inspection of photographs in the course of writing the report, it was realised that bat access was possible behind warped cladding in at least three places. This type of roosting potential could possibly be used by a maternity colony of pipistrelle bats.

Undertaking a single bat activity survey outside the main maternity colony period, was justifiable based on my assessment at the day survey. Reassessment based on the warped cladding and large amount of bat activity, with other roosts clearly present in the locality, suggest an assessment of at least moderate risk would be more realistic than low.

Good Practice Guidelines suggest even low risk buildings should have a bat activity survey (emergence at dusk or to return-to-roost at dawn) when the findings of the initial survey were negative. Those at moderate risk should have two.

While the proposals of the client should not impact the objectivity required when assessing risk of use by a legally protected species - and the need for an appropriate licence from Natural England to allow destruction of any roost discovered - I always try to take the client's situation into account. In this case I believe the client has genuine need to undertake the work as soon as possible.

I outline below, in red, a methodology which, in the absence of additional bat activity survey work during the main maternity colony period (May to August inclusive) in 2025, should be made a condition of the planning consent, along with the need to involve the bat consultant as stated:

This property would ideally have more survey work between May and August inclusive. **The only alternative to this I believe would be acceptable**, would be for a design to be agreed between the architect and the bat consultant **to ensure essentially like-for like bat roosting potential is recreated** in association with the new dormers; and for **the bat consultant to be present as existing dormers are carefully dismantled** by hand **outside the May to September inclusive period**. Use of a fibrescope as dismantling commences would help to identify the presence of bat/s or droppings sooner rather than later. If a bat or droppings from a bat or bats are found, the work would then have to cease to allow an appropriate licence to be obtained.

The bat consultant would also need to check upon reinstatement of dormers that **provision for bats was made as intended. The contractors must be contractually obliged to make that provision and to rectify any errors that may occur due to misunderstanding.**
This is the only alternative to additional bat activity survey work I consider appropriate.

Essentially the methodology above is what would be required if a roost had been identified – though in that case there would be no need to stop work if bats were found in the course of work. Unfortunately, Natural England don't issue licences on a precautionary basis.

A house martin nest was found at the front gable eaves. The house martin is now on the red list of conservation concern. It should be ensured therefore that house martins can still nest when the work has been done. Bear-in-mind also that birds' nests are protected throughout the nesting process.

When the work is undertaken, it should be by contractors who are familiar-with and sympathetic-to the law relating to bats and birds. They should be aware of the frequency-with-which and manner-in-which bats use modern-style buildings.

Contractors must understand that, if at any time a bat or droppings that may have come from a bat are found work **must** stop **immediately**. They have a legal obligation to do this. As far as practicable the feature that was sheltering the bat/s should be replaced. Further advice **must** then be sought from the bat consultant before work continues, even if the bat has flown off or droppings appear old.

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

2. Introduction

I was asked to assess the importance of this property to bats as part of the planning process prior to the upgrading of dormer accommodation. Incidentally I comment on any issues discovered with respect to other protected/priority/invasive species and species of conservation concern.

This is a 1970's-style, detached, dormer bungalow on the edge of an estate of similar properties:

Front (south-east-facing) and rear (plus north-eastern) elevation

It is in an elevated position on a hillside, backing onto cattle pasture, with good links to bat feeding-habitat in the wider area. It is about 620m from the River Ribble and a similar distance from woodland.

Location of property indicated by red circle

The pipistrelle bat (2 species: *Pipistrellus pipistrellus* - the common pipistrelle, and *Pipistrellus pygmaeus* - the soprano pipistrelle) is common and widespread in the area.

Roosts of these species can occur in any building that provides suitable roosting crevices, with the risk of bat presence increased by close proximity to good bat feeding habitat and commuting routes; for example tree-lines, hedges, woodland, scrub and water courses and bodies. The bats use different roosts at different times of year, sometimes singly and sometimes in large groups of females with dependent young. They can move frequently and unpredictably between the roost sites known to them. The majority of house-holders with a roost of this species are unaware of it.

In summer females gather together each with their single off-spring in, sometimes large, maternity colony groups. Disturbance can cause the abandonment of babies (pups). In autumn when the young are independent, females visit males to mate. In winter the bats hibernate and rousing from hibernation - a slow process - can result in a depletion of fat reserves that may compromise the bats' ability to survive the winter. Females become pregnant in spring when their food (insects) becomes available again.

Pipistrelle bats in particular are extremely small, weighing about 5g (the weight of a 2p coin) so need only the smallest of gaps in order to enter to roost; often making use of external features and wall cavities without leaving signs in the loft/interior.

Existing bat records.

A search of DEFRA's Magic database discovered that a 4 bat European Protected Species licences had been granted within around 1.6 to 2kms away - two for common pipistrelle and soprano pipistrelle, one for common pipistrelle, soprano pipistrelle and whiskered (*Myotis mystacinus*) and one for common pipistrelle, whiskered and Daubenton's (*Myotis daubentonii*).

A data search from the National Biodiversity Network discovered records of soprano pipistrelle (roosts visits spanning 2011 to 2018) and Daubenton's (Waterways survey 2006) within 500m. Within 1km were also common pipistrelle, brown long-eared, whiskered and noctule (*Nyctalus noctula*). As these latter findings did not add to my personal knowledge or expectation, the sources of the records were not examined and have not been acknowledged.

I am personally aware of a common pipistrelle maternity colony roost within 350ms (2021) and recently discovered an apparently now illegally excluded brown long-eared maternity roost about 650m away.

Other species likely to occur within 2 kilometres include the Brandt's (*Myotis brandtii*) and Natterer's (*Myotis nattereri*).

Breeding birds.

Buildings generally can be used by birds of conservation concern (1), such as the house sparrow (*Passer domesticus*), house martin (*Delichon urbicum*), swift (*Apus apus*) and starling (*Sturnus vulgaris*). The house sparrow and starling are both listed in Section 41 of the Natural Environment and Rural Communities Act (NERC) as species "of principal importance for the purpose of conserving biodiversity".

3. Bats and the Law

All British bats and their roosts are legally protected under the Wildlife and Countryside Act of 1981 (as amended) and the EC Habitats Directive of 1994 as implemented by the Conservation of Habitats and Species Regulations 2017.

Where a development will destroy a bat roost, a Low Impact Class Licence or a European Protected Species Licence (Mitigation Licence) is required before the roost can be interfered with in any way. The former applies in cases where only small numbers of common species of bat are using the building within certain parameters. It usually takes approximately 2 weeks for these licences to be issued, whereas the turn-around time for a full European Protected Species Licence is approximately 7 weeks once the application has been submitted. Any licence issued is a legally binding document.

Licences can only be issued providing planning permission has been granted, where applicable.

When a roost is found, both the bat consultant and the planners have to apply the "three tests" required by Natural England. Essentially these are:

- That the development is necessary for the purpose of "preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment";
- That there is "no satisfactory alternative";
- That the action authorised "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".

N.b. The way in which the necessity is assessed includes whether the client has an alternative that it would be reasonable to expect them to adopt.

Necessary mitigation and compensation measures to ensure the favourable conservation status of bats will be maintained, would include appropriate timing and methodology for the work, including details of how the bats will be provided-for in the long term.

Planners are required by the Government to satisfy themselves before granting planning consent that it would be possible for a licence to be obtained if necessary. Accordingly they are obliged to apply the three tests before issuing consent. For this reason enough survey work has to have been undertaken that the planning authority can evaluate whether or not the three tests can be satisfied and what degree of compensation/enhancement is necessary. To avoid delays in obtaining consent it is in the client's best interest to find out sooner rather than later whether any bat roosting issues need to be addressed.

Natural England, the Government body responsible for administering the law relating to bats, have issued guidelines to planners on how to proceed with respect to bats

Outside the planning system, the onus is on developers/members of the public, to have sufficient investigations undertaken to satisfy themselves (and the authorities in the event of a subsequent investigation), that their actions are unlikely to be in contravention of bat legislation.

N.b. **It should always be remembered that bats often roost in places not anticipated by a lay person, such as modern buildings, trees with cavities, and bridges. Some leave no signs in lofts, as they roost underneath external features such as roof slates, ridges, weather-boarding and cladding.**

In the case of a building, tree or other feature not already known to be a bat roost, if bats are found during the course of work, contractors are legally obliged to stop work and seek advice. This should be from an appropriately experienced and licenced bat ecologist.

Breeding birds.

The Wildlife and Countryside Act of 1981 gives protection to the nests of all wild birds whilst being built or in use, including by newly fledged birds that have not left the immediate vicinity of the nest. The bird nesting season is generally considered to be 1st March to 31st July for most species but can extend a number of weeks either side of this depending on the species concerned and weather conditions in that particular year. Natural England cite the nesting season as being 1st March to 31st August.

A consortium of organisations, via their report on "The population status of birds in the UK: Birds of Conservation Concern 5 (2021)" have listed species according to their conservation need based on red, amber, green basis, where red is of the highest conservation concern.

Additional Relevant Legislation and Policy.

Between 1995 and 2010 certain more vulnerable habitats and species were the subject of National or Local Biodiversity Action Plans. This strategy for the protection of biodiversity has been superseded by UK post-2010 Biodiveristy Framework, which is largely now implemented at county level. Internationally The Convention on Biodiversity produced a Strategic Plan for Biodiversity 2011-2020. Further to this the EU Biodiversity Strategy was launched in 2011.

Section 41 of the Natural Environment and Rural Communities Act 2006 lists species "of principal importance for the purpose of conserving biodiversity". The list was up-dated in 2014 and includes the brown long-eared bat (*Plecotus auritus*), noctule (*Nyctalus noctula*) soprano pipistrelle (*Pipistrellus pygmaeus*) and 4 other bat species.

The National Planning Policy Framework of 2012 (2) stated that "the planning system should contribute to and enhance the natural and local environment" by a number of means, including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks… . "

'Biodiversity Net Gain' (BNG) is mandatory from 12 February 2024 under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). In England developers must deliver a BNG of 10%. This means a development will result in more or better quality natural habitat than there was before development. While this initiative relates primarily to vegetation, it accords with the principles to consider the needs of fauna also.

4. Survey

I made a **daytime visit on 5/9/24** to undertake a preliminary survey of the building, assess its likely importance to bats and advise whether or not a precautionary approach or further survey work is needed.

Having been involved with bat survey work for 37 years and consultancy work for 28 years, it is always my objective to carry-out my work in a manner consistent with accepted Good Practice Guidelines (3) 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. The basic criteria I use for assessing the level of risk of roosting are given in Appendix 2.

As far as possible, I surveyed the building inside and out with the aid of surveyor's ladders, 2 million candle-power torch, camera with 6x optical zoom and binoculars (8x42). Head-torch, 10x 50 binoculars, fibrescope (6 and 13mm heads, extendable to 2m), camera with 18x zoom and mirrors were also available if needed.

I was looking for access to potential roosting places and evidence of their use, such as droppings and staining.

I also take into consideration the surrounding habitat and the range of bat species it appears likely to support, along with the quality of the habitat linkages with the wider area.

The survey was conducted with the needs of different species of bat over the seasons in mind.

Incidentally I comment on any relevant issues discovered with respect to bat feeding habitat and commuting routes, possibly including likely roosting sites nearby, as well as any relevant findings with respect to other protected/invasive species, biodiversity priority species and species of conservation concern.

I returned on **17/9/24 to carry out a dusk emergence survey**. I had one assistant with me.

We took up fixed positions to watch for bats leaving the building. See Fig 1 below. We both 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.

Accordingly, I also employed three 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.

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

Fig. 1.
Key: Approximate locations of surveyors shown by red stars,
approximate locations of recording devices shown by yellow crosses,
approximate location of infra-red camcorders shown by orange diamond.

5. Limitations of the survey

This was a preliminary survey to discover whether there are obvious signs of use by bats and to assess potential for use. If potential exists, usually follow-up work is required at dusk or dawn, possibly at a more appropriate time of year. See Appendix 3.

It should be noted that droppings are the sign most frequently found, but they are often deposited in areas that cannot be easily visualised, if at all, and they can turn to powder quite quickly. They are usually soon washed and blown away from exposed external surfaces so evidence of use often doesn't last long and pipistrelle bats in particular can change roosts frequently. However an assessment has been made of potential bat roosting places associated with the exterior of the building.

As bats often roost in crevices in winter, and are particularly hard to locate when hibernating, the report will highlight any areas that could be used by bats in winter without their presence necessarily being obvious.

6. Findings

The property has a low loft:

The roof is lined with bitumastic felt and there is insulating material at floor level.

Potential bat access is possible over the gable walls:

There was no evidence to suggest bats have been present.

Externally the eaves are sealed, but there was a house martins' nest at the front gable apex:

Rear and front gables

Mesh has been fitted around an outlet pipe, presumably to prevent nesting by birds. It wouldn't necessarily prevent access by bats:

It appeared there was some access available for bats where dormer cheeks meet the roof, but this is hard to illustrate by photograph. There was bat access available behind west-facing cladding where it has warped:

Gaps allowing bat access behind cladding highlighted in red

The true extent of the access behind cladding was not appreciated until the photographic record was reviewed at the time of writing this report.

As some roosting potential associated with the cladding had been recognised at the day-survey, bat activity survey work was recommended. The level of risk of roosting taking place was provisionally assessed as low.

The main results of the dusk survey are shown in Table 1 below:

Table 1. Summary of surveys and significant findings

Date	Survey type	Sunset / sunrise time	Time of survey	Conditions °C/weather	Comments
17/9/24	dusk	19.20	19.00 to 20.45	13.8°C at start, clear, still, 10.7°C at end	Mainly common pipistrelle bats recorded (from 19.43) but a few soprano pipistrelles too (from 19.40) plus a single *Myotis at 20.44. See Appendix 3. No bats emerged but bats were recorded frequently during the survey. Most bats seen by surveyors arrived from the west, suggesting a maternity colony roost in that direction. Many common pipistrelle social calls were heard, mainly indicating the presence of a male mating roost nearby, but also some "tandem flight" calls by juveniles were recorded (4). Bats flew mainly along the rear boundary and across the front of the property with a few passing alongside the property.

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

*'Myotis' bats – bats of the genus Myotis, which includes the Daubenton's (*Myotis daubentonii*), whiskered (*Myotis mystacinus*) Brandt's (*Myotis brandtii*) and Natterer's (*Myotis nattereri*).

7. Conclusions/Discussion

Appendix 2 gives an outline of the criteria used in assessing the level of risk of use by bats.

Essentially the only roosting potential identified was in association with the dormer windows, which are to be replaced.

There was a lot of activity by pipistrelle bats at dusk, especially common pipistrelles. Consistent arrival by bats from the west, along with some social calls suggestive of juveniles, indicates a likely maternity colony roost to the west. Social calls typical of a male with a mating roost suggest there is also such a roost nearby.

The Myotis bat was recorded sufficiently late to suggest this bat was commuting (along the rear fence-line).

At the time of the day-survey it was thought most bat roosting potential was present where dormer cheeks meet the roof, though cladding had been noted as warped in one place.

Upon closer inspection of photographs taken when writing the report, with the benefit of zoom facilities, it was realised that bat access was possible behind cladding in at least three places. This type of roosting potential could possibly be used by a maternity colony of pipistrelle bats.

Undertaking a single bat activity survey outside the main maternity colony period, was justifiable based on my assessment at the day survey. The potential then was though suitable for only individuals or small numbers of bats, not a maternity colony. September is a good month to discover these roosts as maternity colonies break-up and males become territorial, attracting females to mate.

Reassessment based on the warped cladding and large amount of bat activity, with other roosts clearly present in the locality, suggest an assessment of at least moderate risk would be more realistic than low.

Good Practice Guidelines suggest even low risk buildings should have a bat activity survey (emergence at dusk or to return-to-roost at dawn) when the findings of the initial survey were negative. Those at moderate risk should have two. See Appendix 3.

While the proposals of the client should not impact the objectivity required when assessing risk of use by a legally protected species - and the need for an appropriate licence from Natural England to allow destruction of any roost discovered - I always try to take the client's situation into account. In this case I believe the client has genuine need to undertake the work as soon as possible.

This property would ideally have more survey work between May and August inclusive. **The <u>only</u> alternative to this I believe would be acceptable**, would be for a design to be agreed between the architect and the bat consultant **to ensure essentially like-for like bat roosting potential is recreated** in association with the new dormers; and for **the bat consultant to be present as existing dormers are carefully dismantled** by hand **<u>outside the May to September inclusive period</u>**.

Use of a fibrescope as dismantling commences would help to identify the presence of bat/s or droppings sooner rather than later. If a bat or droppings from a bat or bats are found, the work would then have to cease to allow an appropriate licence to be obtained. The bat consultant would also need to check upon reinstatement of dormers that **provision for bats was made as intended. The contractors must be contractually obliged to make the provision as intended and to make any necessary alterations in the event what was required had been misunderstood.**

Essentially the methodology above is what would be required if a roost had been identified – though in that case there would be no need to stop work if bats were found in the course of work. Unfortunately, Natural England don't issue licences on a precautionary basis.

A house martin nest was found. Bear-in-mind also that birds' nests are protected throughout the nesting process. The house martin is now on the red list of conservation concern. It should be ensured therefore that house martins can still nest when the work has been done.

When the work is undertaken, it should be by contractors who are familiar-with and sympathetic-to the law relating to bats and birds. They should be aware of the frequency-with-which and manner-in-which bats use modern-style buildings.

Contractors must understand that, if at any time a bat or droppings that may have come from a bat are found work **must** stop **immediately**. They have a legal obligation to do this. As far as practicable the feature that was sheltering the bat/s should be replaced. Further advice **must** then be sought from the bat consultant before work continues, even if the bat has flown off or droppings appear old.

Care should be taken when planning any lighting on the site, to ensure any potential roosting features provided are appropriately shielded. (5)

8. Recommendations

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

The precautionary methodology above, with attendance by the bat consultant as outlined, is the only alternative I consider acceptable to undertaking additional bat activity survey work in 2025. It should be made a condition of the planning consent, along with the need to obtain the necessary licence from Natural England if evidence of roosting is found.

9. References

1. 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.
2. Department for Communities and Local Government (2012). National Planning Policy Framework.

3. Ed. by Collins, J. (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines - Fourth Edition. Bat Conservation Trust.
4. Middleton, N. et al (2022). Social Calls of the Bats of Britain and Ireland. Pelagic Publishing.
5. Bat Conservation Trust (2018). Guidance Note 8/18: Bats and Artificial Lighting in the UK.

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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 - Personally-devised criteria used in assessing risk of roosting (in the absence of obvious evidence at the preliminary survey).

Risk of roosting	Definition	Suggested Action
Nil	Whole of structure/tree can be seen well enough to be sure there are no roosting opportunities.	No need to consider bats further unless development is delayed and potential roosting places might develop in time.
Minimal/ negligible	All or most of structure/tree can be seen well enough to suggest there are few, if any, places suitable for roosting and the location does not provide easy access to potential feeding grounds.	Although roosting is thought to be unlikely and therefore the development is unlikely to impact on the favourable conservation status of bats, a precautionary approach should be taken in relevant areas at the time of the work. Further survey work needed only if development delayed.
Low	Whole of structure/tree can be seen well enough to know there are no more than a few openings that could be used by an individual bat or two and/or these provide access to the sorts of features that are likely to be suboptimal due to materials and/or conditions within (eg unstable temperature); and/or the location provides limited access to potential feeding grounds.	Although regular roosting is thought to be relatively unlikely and the development is unlikely to impact on the favourable conservation status of bats, a single survey at dusk or dawn in favourable weather conditions would be appropriate to accord with good practice. This would reduce the extent to which the judgement is based on speculation. If the findings were ambiguous e.g. possible bat emergence and/or considerable bat activity around the building, the survey would need repeating.
Moderate/ medium	A small number of openings are present in an area of reasonable habitat, and at least some seem likely to provide access to good conditions for roosting bats, and/or a loft/hay-loft is present that appears to have good qualities for roosting but there were limitations to access or no evidence of bats was found at the time. Cellars may be assessed as potentially being suitable for hibernation in winter,	Further work is needed to better assess the abundance of bat activity in the vicinity and whether or not bats seem to make use of the roosting potential available. To accord with good practice a dusk emergence survey and a dawn return-to-roost survey will be necessary. A second inspection of the interior may also be necessary - if the survey was undertaken in winter for example. As the absence of bats on two occasions wouldn't guarantee absence at other

	but the conditions and/or location aren't optimal.	times, possibly including winter, some precautions would be needed at the time of the work and some roosting potential should be retained/re-created. In the case of cellars and equivalent, inspection in winter is necessary. Some work, for example pointing old stone walls, should be avoided in winter.
High	There is at least one feature that is typical of those favoured by bats for regular roosting and it/they provide access to abundant insect food on-site and/or via good links with the wider natural environment. The feature/s could be suitable for use by a maternity colony, either as a main or satellite roost, or by a territorial male in autumn in the case of pipistrelles, or by individuals or small numbers of bats at any time of year, including winter when hibernating.	The extent to which bats of different species make use of the potential available needs to be investigated by carrying-out at least 3 surveys at dusk and/or dawn spaced over the months of May to September inclusive, possibly extending into April or October if weather conditions are favourable. (Air temperature above 8°C and not more than light rain and/or gentle breeze. I generally plan to do surveys only when the forecast is for 10°C or above.) Maternity colonies have largely disbanded by September, but territorial male pipistrelles may be missed without a survey in September and a lot of smaller roosts are discovered at this time of year. As bats could hibernate unseen in winter and/or roost at other times not covered by the survey work, appropriate precautions would be needed at the time of the work along with maintenance of appropriate potential roosting places.
High - hibernation only	Cave-like places with stable conditions and high humidity, such as cellars can be used for hibernation in winter.	High-risk potential hibernation sites need at least 3 inspections spaced over the winter months as bats will move between sites depending on the weather conditions.

Appendix 3 - Recommendations for further survey work when the findings of the preliminary survey were negative.

N.b. new Good Practice Guidelines were published in late 2023, but the guidance has changed little from that shown below, except to extend the recommended minimum period between surveys to 3 weeks and put more emphasis on the use of infra-red recording equipment.

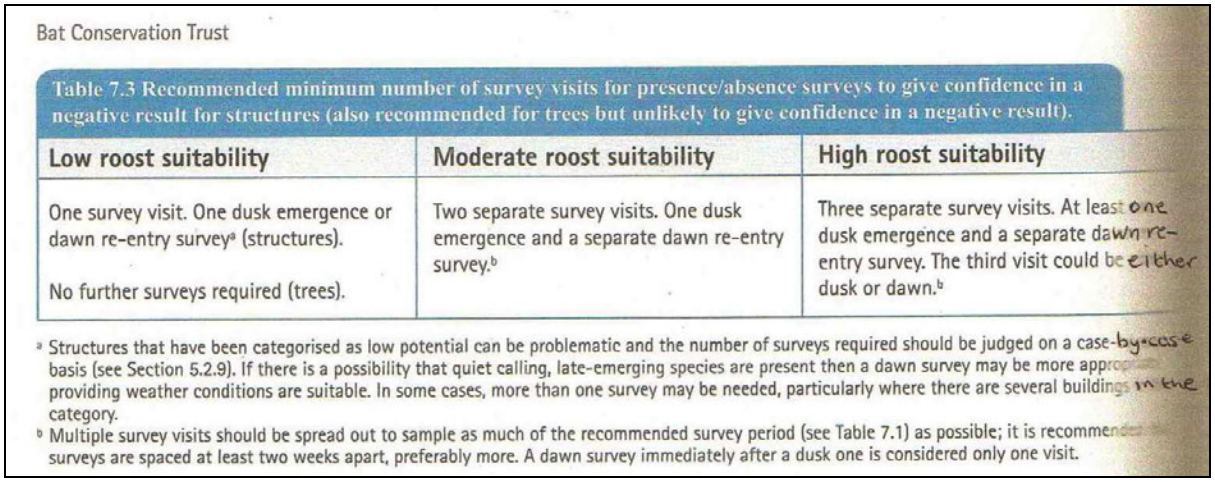

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Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry survey[a] (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.[b]	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn.[b]

[a] Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see Section 5.2.9). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in the category.

[b] Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

Taken from "Bat Surveys for Professional Ecologists: Good Practice Guidelines", 3rd Edition (2)

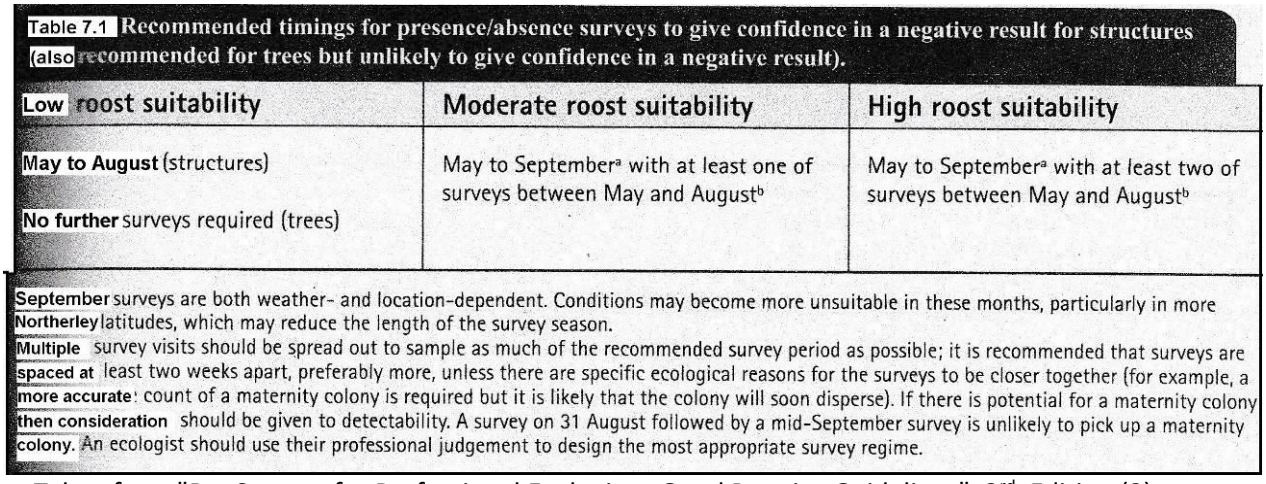


Table 7.1 Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

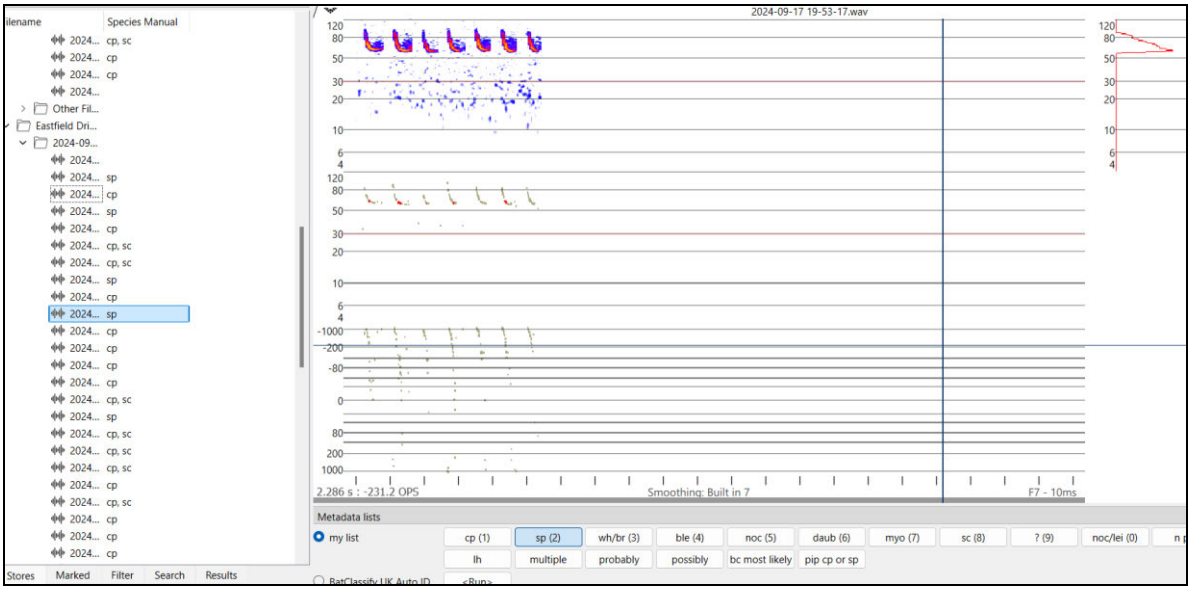
Low roost suitability	Moderate roost suitability	High roost suitability
May to August (structures) No further surveys required (trees)	May to September[a] with at least one of surveys between May and August[b]	May to September[a] with at least two of surveys between May and August[b]

September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more Northerley latitudes, which may reduce the length of the survey season.

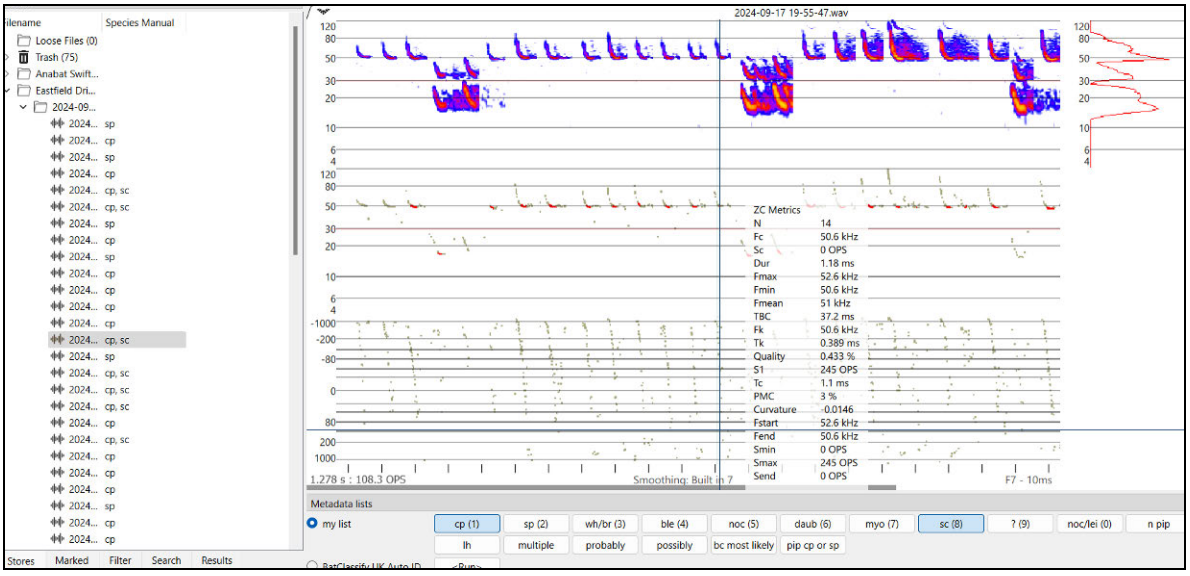
Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on 31 August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.

Taken from "Bat Surveys for Professional Ecologists: Good Practice Guidelines", 3rd Edition (2)

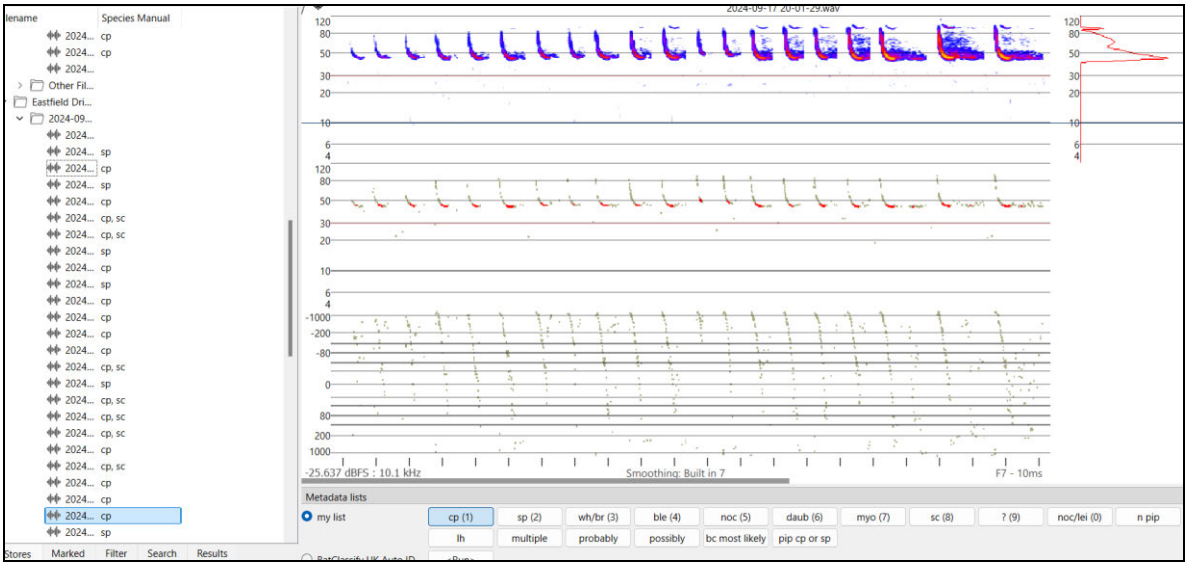
Appendix 4 - Example sonogram/s recorded at dusk/dawn survey



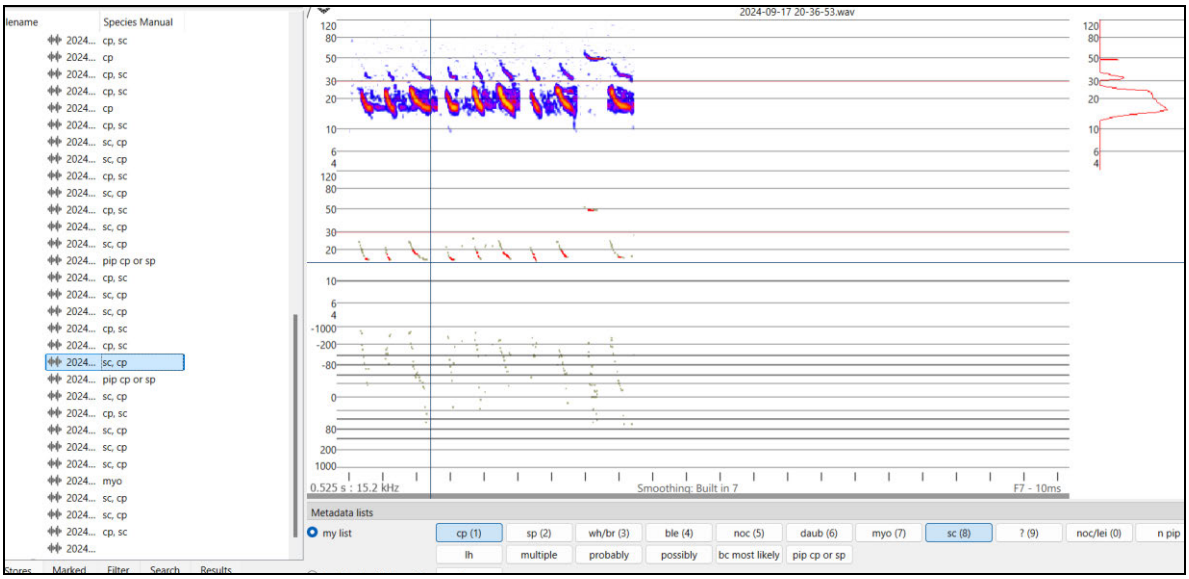
Soprano pipistrelle at 19.53



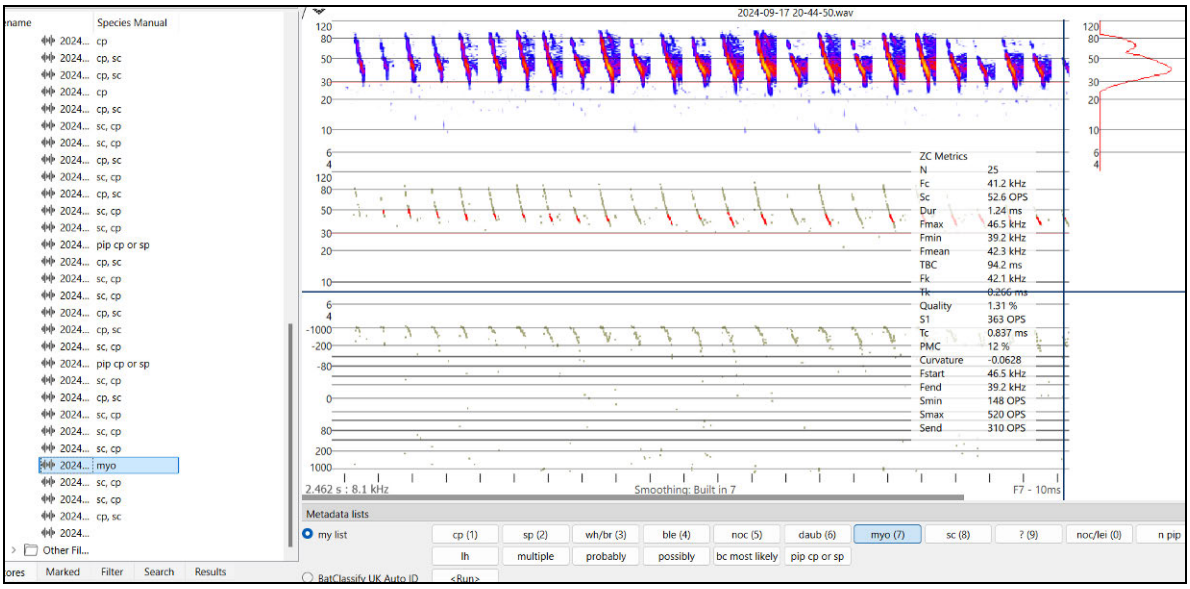
Common pipistrelle and mating-type social calls at 19.55



Common pipistrelle at 20.01



Common pipistrelle social calls, thought to be ‘juvenile tandem’ calls, at 20.25



Myotis species at 20.44