Reports prepared by Angela Graham MCIEEM commissioned by Mr & Mrs Peter Edwards for a bat survey and the implications that might apply to the property, 20 The Sands, Whalley, BB7 9TL in connection with a proposed Planning Application.

This supporting document is an integral part of a Planning Application for 20 The Sands Whalley for Mr and Mrs P. Edwards and the three reports within have been consolidated by EDS Limited.

E D S L i m i t e d

D E S I G N & A C C E S S C O N S U L T A N S

26 Stokes Hall Avenue – Leyland – Lancashire – PR25 3FA

01772 435519 – [redacted]

August 2022

Angela Graham Bat Consultancy Service Limited

Office 47, Bury Business Centre, Kay Street, Bury, Lancs, BL9 6BU

tel - 0161 763 6171, fax - 0161 761 7854, mob - [redacted]

e-mail : bat.consultancy@talktalk.net Company no. 7492656

Bat Survey Report (preliminary day-time survey):
20 the Sands,
Whalley,
Clitheroe
BB7 9TN

OS grid reference:
SD 7308 3617

Commissioned-by:
Peter Edwards

Survey Date: 31/5/22

Report Date: 6/6/22

Table of Contents

1. Summary.

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

This semi-detached house is on the edge of Whalley, about 160m from the River Ribble. There is a good network of trees and woodland in the area.

Bat access is easily available to the loft. Although two bat droppings were found on the board to which the fixed loft-ladder is attached, there was no evidence otherwise to suggest this is an established bat roost or that even a single bat has done more than enter the loft and leave again.

A lack of lining material to the roof makes it a less favourable roosting place than it would be if the roof was lined. There are however some gaps between slates and some apparent access under the ridge tiles. Bat access is also available to wall-heads and thence potentially into wall-cavities. There is also access available behind hanging-tiles above the front door. These face south and are potentially the highest-risk feature; though they won't be directly affected by the development.

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.

Without the bat droppings having been seen, my assessment of the risk of use of features that will be affected directly by the work would be low; perhaps moderate because there is easy access to good bat feeding habitat. The presence of the droppings hasn't changed my assessment significantly, but a dusk emergence survey is needed to better investigate the situation and an additional survey may be merited after that. The dusk emergence survey should be undertaken in the first half of the accepted bat survey season of May to August/September inclusive. Further recommendations will be made based on the findings.

The confirmation of roosting would not preclude development, but would require an appropriate licence from Natural England if the roost were to be impacted by the work.

As some roosting potential will be lost to the development, to accord with the biodiversity objectives of the National Planning Policy Framework, the opportunity should be taken to install integrated bat boxes in the new extension.

Care should be taken when planning any additional external lighting, to ensure any potential roosting features available are appropriately shielded.

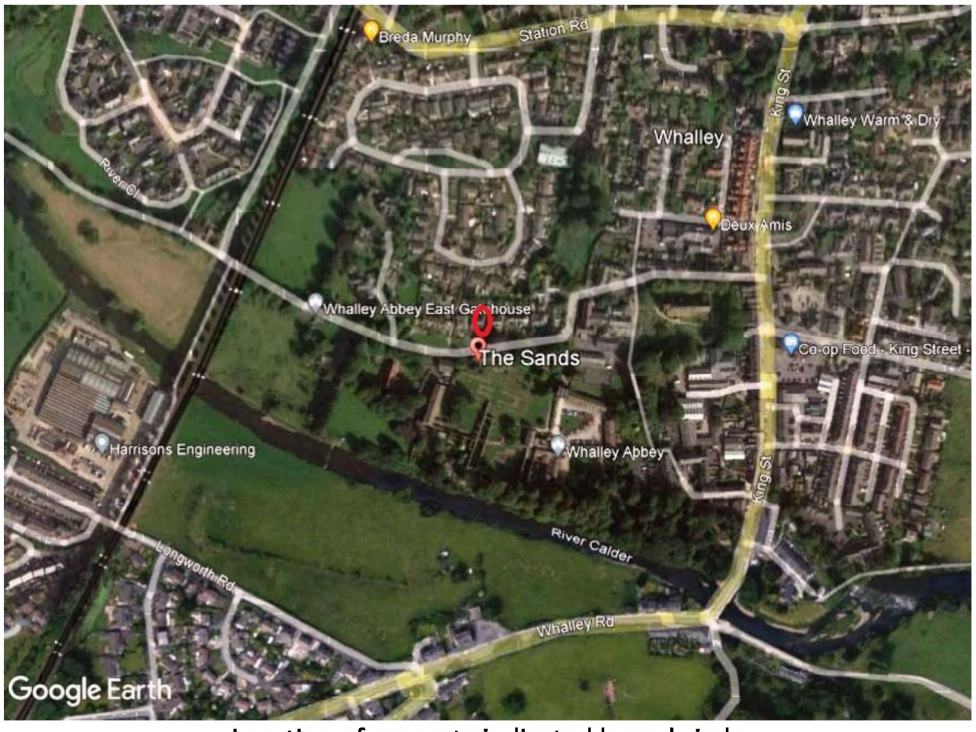
2. Introduction

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

This is a pebble-dashed, 1930's-style, semi-detached house:

Front (southern) and rear elevations

It is in a sub-urban location on the edge of Whalley, about 160m from the River Ribble, which provides an excellent commuting route for bats into the wider countryside, and easy links with woodland from about 500m away. There are mature trees in the grounds of the Abbey, immediately opposite:



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 this 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.

A data search from the National Biodiversity Network discovered bat records within 1kilometre of soprano pipistrelle and brown long-eared (*Plecotus auritus),* within 2kms records of common pipistrelle and noctule (*Nyctalus noctula*); and within 5 kilometres Daubenton's (*Myotis daubentonii*), whiskered (*Myotis mystacinus*), Nathusius' pipistrelle (P*ipistrelle nathusii*) and serotine (*Eptesicus serotinus*). Some of the more distantly recorded species are likely, to occur within 1km. Other species likely occur include the 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) states 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… . "

4. Survey

I made a daytime visit on **31/5/22** 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 35 years and consultancy work for 26 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.

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.

5. Limitations of the survey

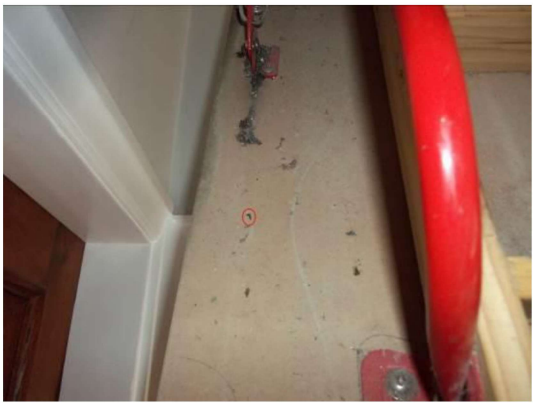
This was a preliminary survey to discover whether there are obvious signs of use by bats and to assess potential for use. If potential exists, usually follow-up work is required at dusk or dawn, possibly at a more appropriate time of year. See Appendix 3.

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

Before ascending the loft ladder it was noticed that there appeared to be two bat droppings attached to the hatch and ladder. The most obvious is shown below:



It was crushed to confirm it to be a bat dropping. The other was intended to be put in a vial and taken away, but there was uncertainty about whether it was a bat dropping due to the presence also of some non-organic debris. It was crushed and the characteristic glistening of insect remains was present. There was an insufficient sample to send for dna analysis, but the droppings appeared typical of the pipistrelle bat.

Upon entering the loft there was no further evidence seen to suggest bats had been present. Directly above the hatch is a junction of roof-timbers, which are heavily laden with cobwebs:

There was one small area clear of cobwebs, but no droppings were seen on the beam or in the cobwebs:

The loft is quite small and of open construction, containing stored items:

The roof is unlined with multiple gaps evident between slates and at the eaves:

The floor is largely boarded, with some old insulating material present:

Externally, gaps at the eaves had been confirmed from within the loft, but are hard to illustrate photographically from outside the property:

Similarly gaps between slates are also present:

Rear roof-pitch

Both front and back there are gaps not far from the union of timbers where it seems a bat probably gained entry in order to deposit two droppings. These are highlighted in red below, with the rear option the more likely of the two:


Rear and front roof-pitches respectively. Potential bat access illustrated in red.

Defects in hanging-tiles to the front of the property have roosting potential too, though these will be unaffected by the work:

7. Conclusions/Discussion

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

Bat access is easily available to the loft. Although two bat droppings were found on the loft hatch, there was no evidence otherwise to suggest this is an established bat roost or that even a single bat has done more than enter the loft and leave again.

The lack of lining to the roof makes it a less favourable roosting place than it would be if the roof was lined. There are however some gaps between slates and some apparent access under the ridge tiles. Bat access is also available to wall-heads and thence potentially into wall-cavities. There is also access available behind hanging-tiles above the front door. These face south and are potentially the highest-risk feature.

Without the bat droppings having been seen, my assessment of the risk of use of features that will be affected directly by the work would be low, perhaps moderate because there is easy access to good bat feeding habitat. The presence of the droppings hasn't changed my assessment significantly, but a dusk emergence survey is needed to better investigate the situation. Further recommendations will be made based on the findings.

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.

The confirmation of roosting would not preclude development, but would require an appropriate licence from Natural England if the roost were to be impacted by the work.

As bats use buildings in different ways over the course of the season, often changing roost; if more than one survey is necessary it is my usual practice to undertake one in both the first and second half of the accepted bat survey period and to separate them by at least a month. This also reduces the chance of missing pipistrelle mating roosts, if present, in the later part of the summer.

As some roosting potential will be lost to the development, to accord with the biodiversity objectives of the National Planning Policy Framework, the opportunity should be taken to install integrated bat boxes in the external structure. See Appendix 4.

Care should be taken when planning any additional external lighting, to ensure any potential roosting features provided are appropriately shielded. (4)

8. Recommendations

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

Have a dusk emergence survey undertaken in the first half of the accepted bat survey season of May to August/September inclusive.

9. References

1. Eaton, M. A. et al (2015). 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. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines - Third Edition. Bat Conservation Trust.
4. Bat Conservation Trust (2018). Guidance Note 8/18: Bats and Artificial Lighting in the UK.

Appendix 1 - Angela Graham's Experience.

- I hold Natural England Class Licences CL21 (Annex B) - Registered Consultant 163 - and CL18. 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 is 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 26 years I have done increasing numbers of bat surveys on a consultancy basis, firstly part-time, then full time from December 2003.
- My experience at applying-for European Protected Species Licences with respect to bats spans approximately 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.
- I regularly communicate with the Ecologists who advise local authority planners, especially the Greater Manchester Ecology Unit and West Yorkshire Ecology raising concerns about practice and protocols.

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:

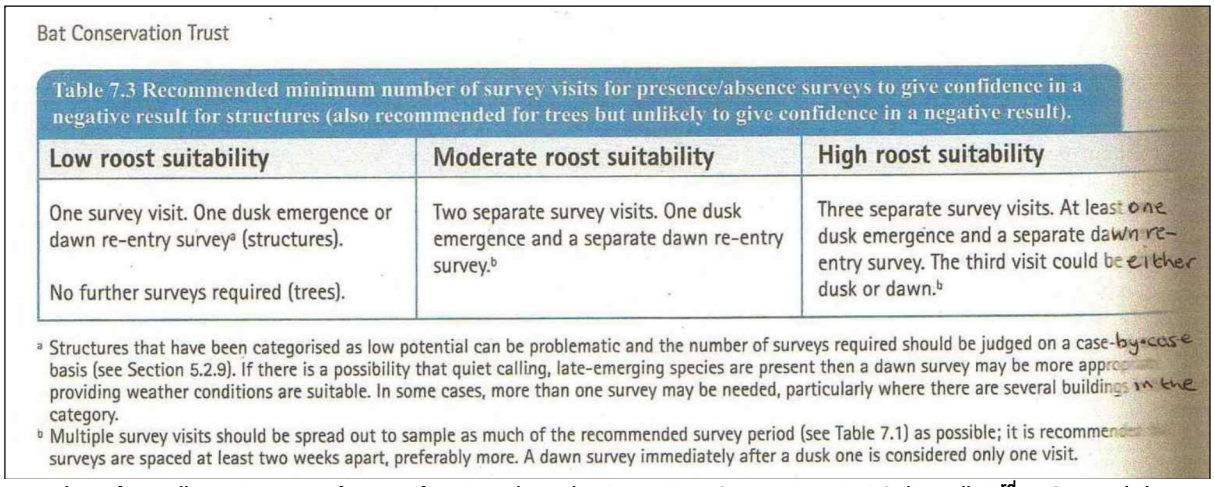
- Bird watching for fun since 1982 with a general interest in wildlife, ecology and conservation for a similar period.
- Attending short courses and field training with respect to grasses, flowering plants, British mammals including water voles, reptiles and amphibians, non-native invasive plant species, Extended Phase 1 Habitat Surveying, National Vegetation Classification, Environmental Impact Assessment and use of GIS.
- Taking part in British Trust for Ornithology breeding bird and associated butterfly 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.



Bat Conservation Trust

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)

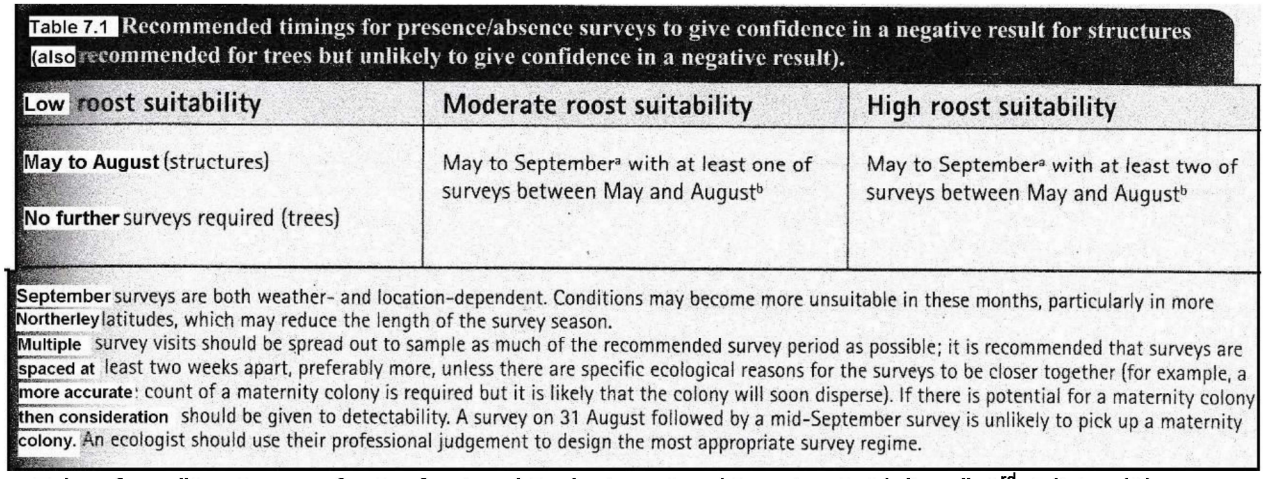


Table 7.1 Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

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 – 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
http://www.ibstock.com/sustainability-ecozone.asp

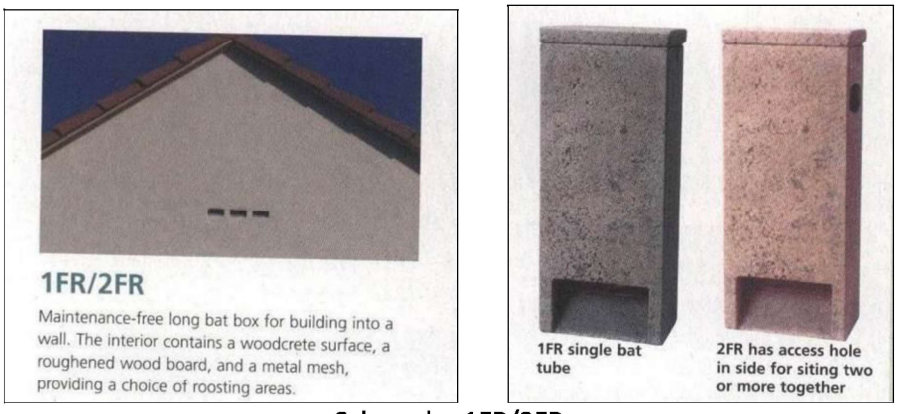
Above: typical unit in situ. Photo © Angela Graham

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

Forticrete

Available from building-supply merchants

Above and below - standard colours available. Others available to order

Example of Forticrete boxes in situ

A similar box is available from Habibat. See above listing.

Angela Graham Bat Consultancy Service Limited

Office 47, Bury Business Centre, Kay Street, Bury, Lancs, BL9 6BU

tel - 0161 763 6171, fax - 0161 761 7854, mob - [redacted]

e-mail : bat.consultancy@talktalk.net Company no. 7492656

Dusk emergence survey at :
20 the Sands,
Whalley,
Clitheroe
BB7 9TN

OS grid reference:
SD 7308 3617

Commissioned-by:
Peter Edwards

Survey Date: 23/6/22
Previous surveys: day-time - 31/5/22

Report Date: 8/7/22
Previous reports: day-time - 6/6/22

Contents

Summary.

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

A dusk emergence survey was commissioned here after two bat droppings were found in association with the loft ladder at a day-time survey at the end of May 2022.

At dusk a roost was discovered at the front gable apex where a small number of a pipistrelle species entered and exited under the end ridge tile.

Further work is needed to fully assess the status of the roost and to inform the type of licence that will be necessary from Natural England if the roost is to be impacted directly by the work. This would include direct impact on the roost from re-roofing.

Whether or not the roost can be reinstated as existing, appropriate compensation for its loss will be required, along with enhancements in line with good practice. Alternative roosting options can be considered when the status of the roost is known.

A Bat Method Statement will need to be written and the bat consultant will need input on site at the time of the work.

It is advised, if appropriate trees exist, to put up bat boxes both as an enhancement measure in advance of the work and to provide roosting alternatives for bats while the work is undertaken.

As previously mentioned, care should be taken when planning any additional external lighting to the building, to ensure any roost/potential roosting features provided are appropriately shielded.

Introduction.

I was engaged to undertake a dusk emergence survey of this building further to my day-time survey on **31/5/22.**

At that survey two bat droppings were found in association with the loft ladder but no other evidence of roosting was discovered. Further work was recommended to better assess the roosting status of the building.

This report should be read in conjunction with the report of the day-survey.

Survey.

I returned on **22/6/22** to carry out the dusk emergence. 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.

In addition I placed Anabat Express and Anabat Swift detectors front and back of 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.

Fig. 1.
Key: Approximate locations of surveyors shown by red stars,
approximate locations of recording devices shown by yellow crosses.

Findings.

The main results 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
22/6/22	dusk	21.45	21.30 to 23.00	16.1°C at start, clear, still 14.2°C at end	Pipistrelle bats recorded from 21.43 and seen entering and leaving at front gable apex from 22.03. See Fig. 2, Plate 1 and Appendix 1. At least 6 emerged,

					but at least 4 entered too. A bat had entered before the first bat emerged. None of these bats were recorded on the Anabat Express to the front of the property, but common and soprano pipistrelle were recorded on both recording devices. See Appendix 1. Little activity to the rear but feeding by bats taking place to the front. A bat may also have emerged from the rear eaves of 22 at 21.54 (not heard on detector) and another possibly from the west-facing eaves of 18 at 22.23 (not heard on detector). No other species were recorded except, incidentally, a *Nyctalus species, from 22.25

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

*'Nyctalus' bats – bats of the genus Nyctalus - noctule (Nyctalus noctula) and Leisler's (Nyctalus leisleri).

Fig. 2.
Key: Location of bat roost indicated by red circle.

Plate 1. Bat roost entrance illustrated in red

Conclusions/Discussion

There is a confirmed bat roost at the front gable apex, where bats are entering under the end ridge tile.

The status of the roost is uncertain at this stage so additional work is needed to help clarify the situation and inform the type of licence needed from Natural England if the roost is to be impacted directly in the course of any work.

My understanding is that this gable end is not part of the development, but will be included in associated re-roofing. Accordingly the roost will be impacted directly and therefore needs to be covered by an appropriate licence from Natural England. Ideally bats would be able to return to an equivalent roosting place under the end ridge tile. This would require "bat-friendly" roof lining material to be used, unless it could be ensured that bats would not come into contact with the primary roof lining material. Alternative roosting options can be considered when the status of the roost is known.

The licence cannot be obtained until planning consent has been granted; and requires sufficient survey effort to have been undertaken to allow a reasonable degree of confidence that the findings give a good representation of the bat roosting situation. Whether or not the roost can be reinstated as existing, appropriate compensation for its loss will be required, along with enhancements in line with good practice.

A Bat Method Statement will need to be written and the bat consultant will need input on site at the time of the work.

It is advised, if appropriate trees exist, to put up bat boxes both as an enhancement measure in advance of the work and to provide roosting alternatives for bats while the work is undertaken.

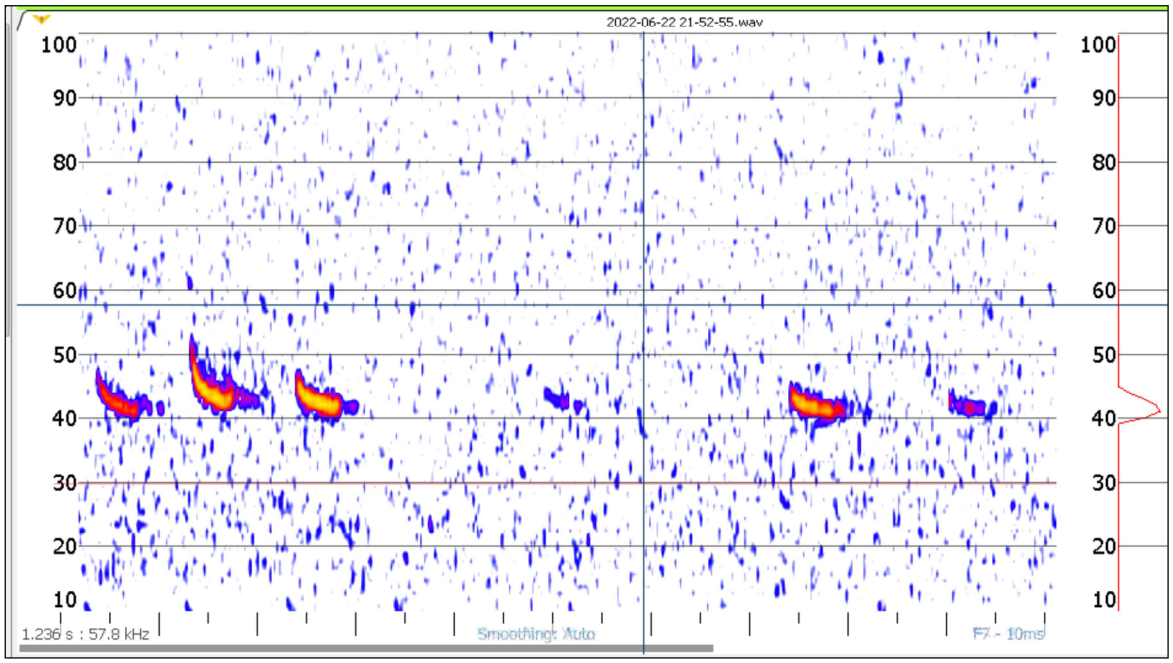
As previously mentioned, care should be taken when planning any additional external lighting to the building, to ensure any roost/potential roosting features provided are appropriately shielded.

Recommendations.

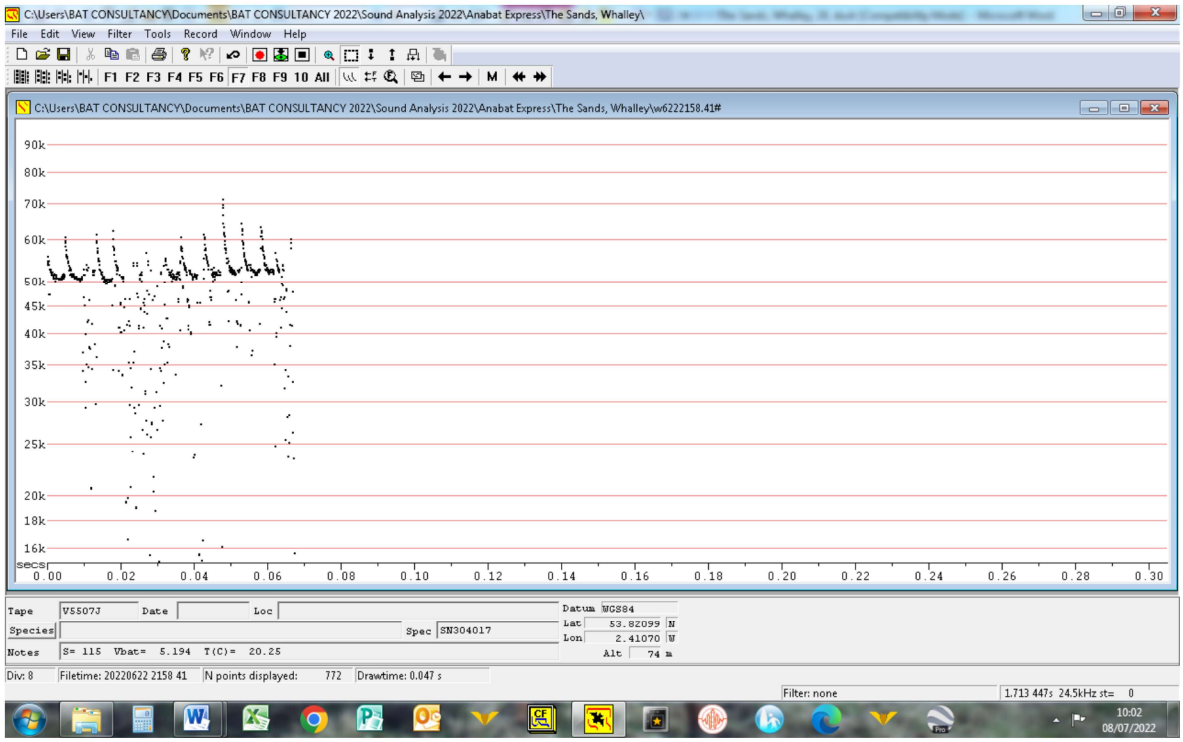
These recommendations should be read in conjunction with the conclusions above.

Have a return-to-roost-at-dawn survey undertaken. Further advice will be given based on the findings.

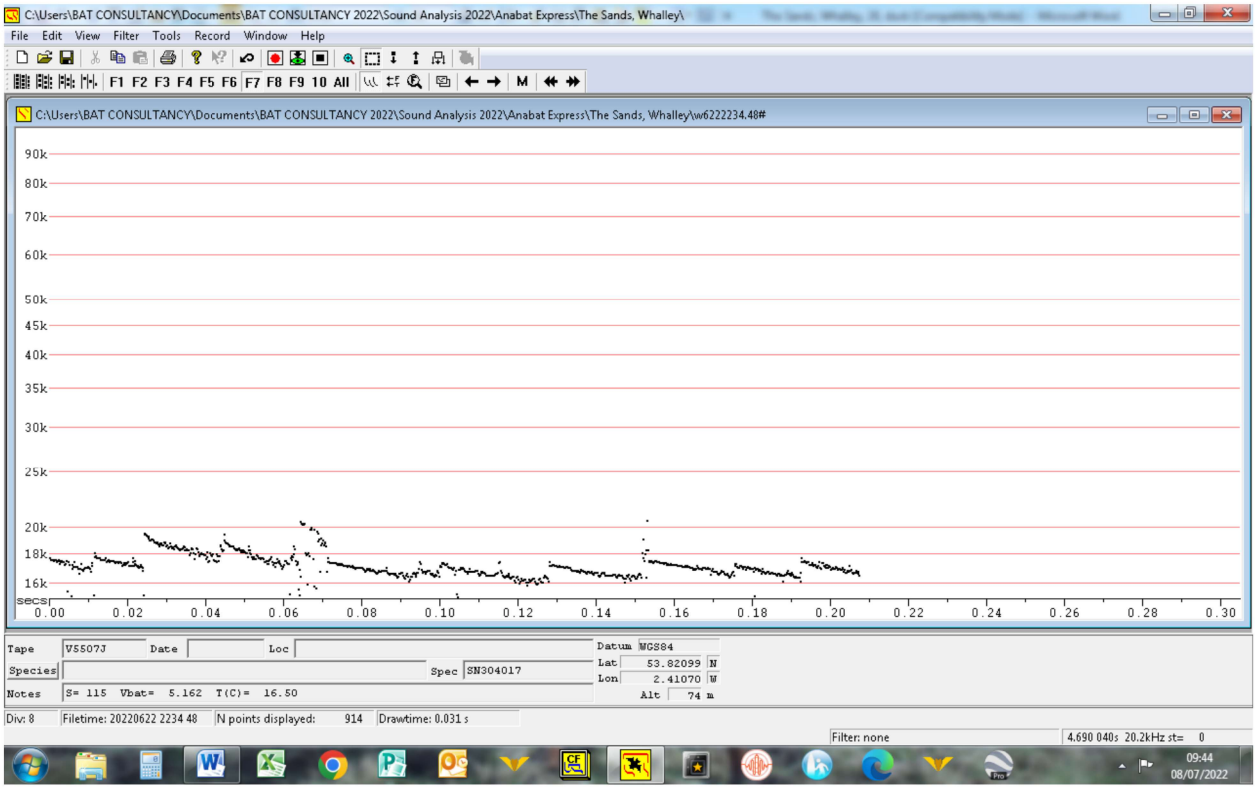
Appendix 1 - Example sonogram/s recorded at dusk/dawn survey



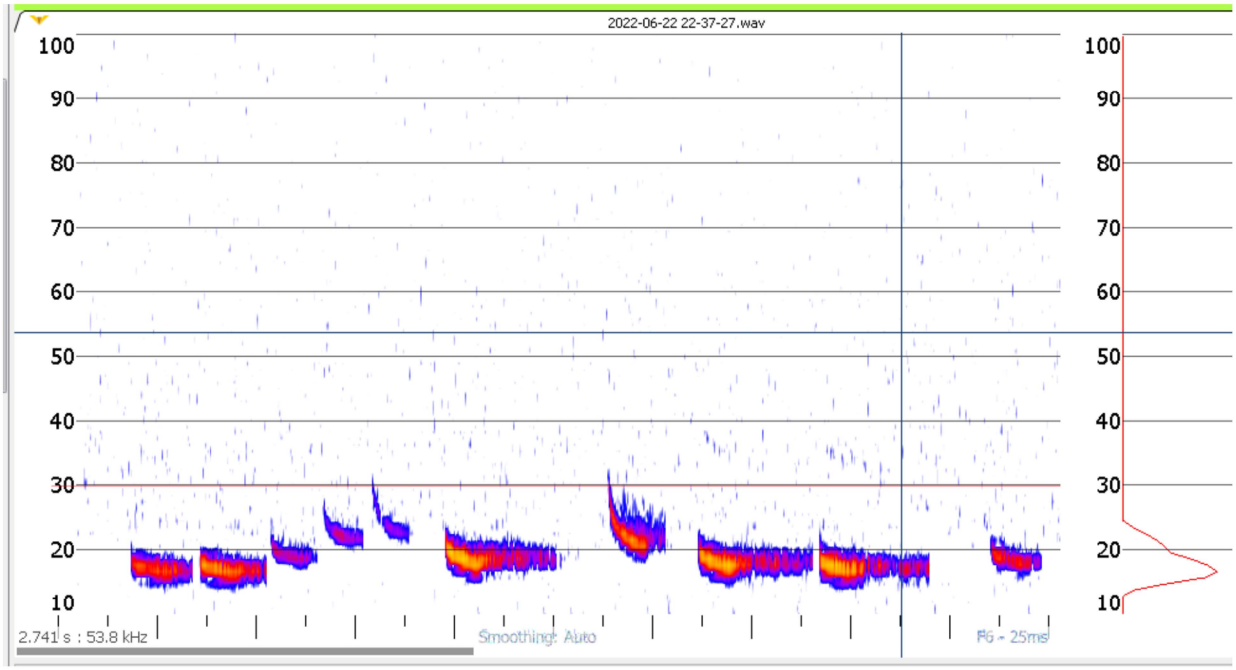
21.50. First bat recorded to rear of property - common pipistrelle



21.58. First bat recorded to front of property - soprano pipistrelle



22.34 - Nyctalus species



22.37 - Nyctalus species

Angela Graham Bat Consultancy Service Limited

Office 47, Bury Business Centre, Kay Street, Bury, Lancs, BL9 6BU

tel - 0161 763 6171, fax - 0161 761 7854, mob - 07710 184142

e-mail : bat.consultancy@talktalk.net Company no. 7492656

Dawn return-to-roost survey at
20 the Sands,
Whalley,
Clitheroe
BB7 9TN

OS grid reference:
SD 7308 3617

Commissioned-by:
Peter Edwards

Survey Date: 18/7/22
Previous surveys: day-time - 31/5/22, dusk - 23/6/22

Report Date: 1/8/22
Previous reports: day-time - 6/6/22, dusk 8/7/22

Table of Contents

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

This semi-detached house is in an area of good bat feeding habitat on the edge of Whalley, about 160m from the River Ribble. There is a network of trees and woodland in the area.

A dusk emergence survey was commissioned here after two bat droppings were found in association with the loft ladder at a day-time survey on **31/5/22**. On **23/6/22**, a small number of common pipistrelle bats were found to be roosting under the end ridge tile at the front gable-apex.

This dawn survey discovered a single common pipistrelle returning to roost in the same location.

The activity surveys were timed to optimise the likelihood of discovering activity by a maternity colony. The roosting opportunities associated with this building are relatively limited and it seems, based on the two bat activity surveys, that roosting is by a small number of common pipistrelle bats only, rather than a maternity colony with dependent young in summer.

The the site will need to be registered with Natural England under their Low Impact licencing scheme unless the existing roost can be both retained and remain undisturbed during the work. The aim should always be to try to avoid impacting a roost if possible, via timing and/or methodology.

As I understand the property is to be re-roofed this seems unlikely to be feasible. Discussions are needed with respect to reinstating the roost in its current location if it can't be retained. This would be Natural England's expectation if it's possible.

If the roost cannot be retained/recreated, appropriate compensation for its loss will be required, along with enhancements in line with good practice. These are expected by Natural England and are usually conditioned by the Planning Authority.

The need to impact the roost has to be justified. In this case I believe the need to re-roof in the course of the development can be justified.

A Bat Method Statement will need to be written and the bat consultant will need input on site at the time of the work.

It is advised, if appropriate trees exist, to put up bat boxes both as an enhancement measure in advance of the work and to provide roosting alternatives for bats while the work is undertaken. This should be done as soon as possible.

As previously mentioned, care should be taken when planning any additional external lighting to the building, to ensure any roost/potential-roosting-features-provided are appropriately shielded.

With a Low Impact Licence there are essentially no timing restrictions, though I advise avoiding the coldest winter months on a precautionary basis just in case a bat has chosen to hibernate here.

The licence can be applied-for when planning consent has been obtained and the start date for the work is known. The bat consultant must have visited site within the 3 months prior to applying for the licence.

Once applied-for the licence will usually be issued within 2 weeks.

If the work is not underway by May 2023, update bat activity survey work will be needed, along with an update day-time inspection.

Introduction.

I was engaged to undertake a dawn return-to-roost survey of this building further to my day-time survey on **31/5/22** and dusk emergence survey on **23/6/22.**

At the day survey two bat droppings were found in association with the loft ladder but no other evidence of roosting was discovered. At dusk a small number of common pipistrelle bats were discovered using a gap at the front gable apex.

This report should be read in conjunction with the report of the day-time and dusk surveys.

Survey.

I returned on **18/7/22** to carry out the dawn return-to-roost survey. I had one assistant with me.

We took up fixed positions to watch for bats returning to 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 of 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 entered to roost or continued in flight to leave the site.

In addition I placed Anabat SD1 x 2 and Anabat Swift detectors to the front of the property and an Anabat Express to the rear. 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 a Canon Lexia camcorder, converted for use with infra-red light; and supplementary infra-red light-source. It was positioned next to the surveyor to the south of the building (myself) to assist with observations in poor light conditions. See Fig. 1 below:

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 camcorder shown by orange diamond.

Findings.

The main results 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
18/7/22	dawn	05.02	03.30	16.3°C at start, cloudy, still 14.8°C at end	Single common pipistrelle returned to roost at front gable apex at 04.43. Bat activity mainly to the front of the property - common and soprano pipistrelle. See Appendix 1. A few soprano pipistrelle social calls were recorded.
22/6/22	dusk	21.45	21.30 to 23.00	16.1°C at start, clear, still	Pipistrelle bats recorded from 21.43 and seen entering and leaving at front gable apex from

				14.2°C at end	22.03. At least 6 emerged, but at least 4 entered too. A bat had entered before the first bat emerged. None of these bats were recorded on the Anabat Express to the front of the property, but common and soprano pipistrelle were recorded on both recording devices. Little activity to the rear but feeding by bats taking place to the front. A bat may also have emerged from the rear eaves of 22 at 21.54 (not heard on detector) and another possibly from the west-facing eaves of 18 at 22.23 (not heard on detector). No other species were recorded except, incidentally, a *Nyctalus species, from 22.25

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

Conclusions/Discussion

The activity surveys were timed to optimise the likelihood of discovering activity by a maternity colony.

The roosting opportunities associated with this building are relatively limited and it seems, based on two bat activity surveys, that roosting is by a small number of common pipistrelle bats only, rather than a maternity colony with dependent young in summer.

If the roost site cannot be left undisturbed directly by any work, including re-roofing, the site will need to be registered with Natural England under their Low Impact scheme. It would be Natural England's expectation that the existing roost will be retained, or recreated, if it's possible to do that. The aim should always be to try to avoid impacting a roost if possible, via timing and/or methodology.

If the roost can be retained as it is, there may still be a need for a licence if there is any possibility of disturbance to roosting bats in the course of the work.

The need to impact the roost has to be justified. In this case I believe the need to re-roof in the course of the development can be justified.

If the roost cannot be reinstated as before, there will be a need for appropriate compensation, and pro-active "enhancement" of roosting potential via bat boxes in trees is

also recommended. Enhancement measures are expected by Natural England and are usually a condition of the Planning Consent. The bat boxes should be erected as soon as possible and definitely prior to the work taking place.

A Bat Method Statement will need to be written. Any lighting proposals need also to be taken into account. If the roost it retained/recreated, the entrance and flight-path to it must be appropriately shielded from artificial light, as must any bat boxes put up.

With a Low Impact Licence there are essentially no timing restrictions, though I advise avoiding the coldest winter months on a precautionary basis just in case a bat has chosen to hibernate here.

The licence can be applied-for when planning consent has been obtained and the start date for the work is known. The bat consultant must have visited site within the 3 months prior to applying for the licence.

Once applied-for the licence will usually be issued within 2 weeks.

Recommendations.

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

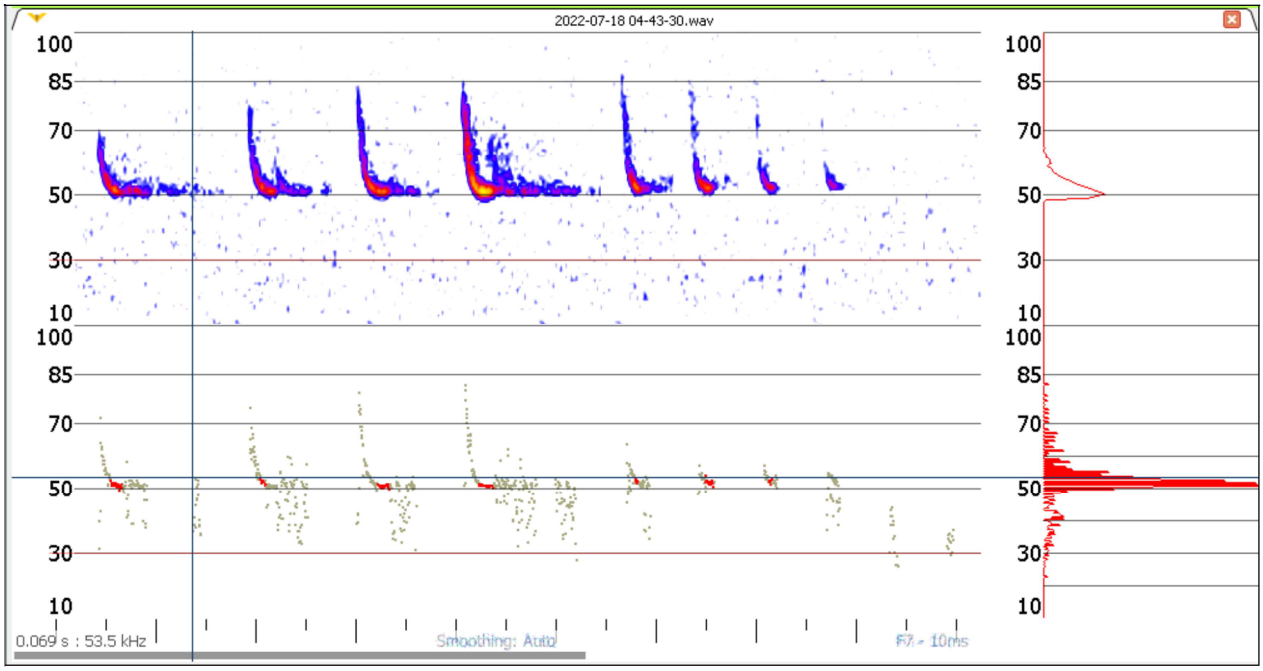
Consider in discussion with the bat consultant, whether the roost discovered can be retained, or recreated in situ. If not, plan in conjunction with the bat consultant how to compensate for its loss and provide roosting enhancements. Discuss also any proposed new lighting to be introduced to the site. The Bat Method Statement can then be written.

Aim to introduce compensatory/enhancement measures as soon as possible, and definitely before work starts, to ensure alternative roosting places area available prior to and during the work.

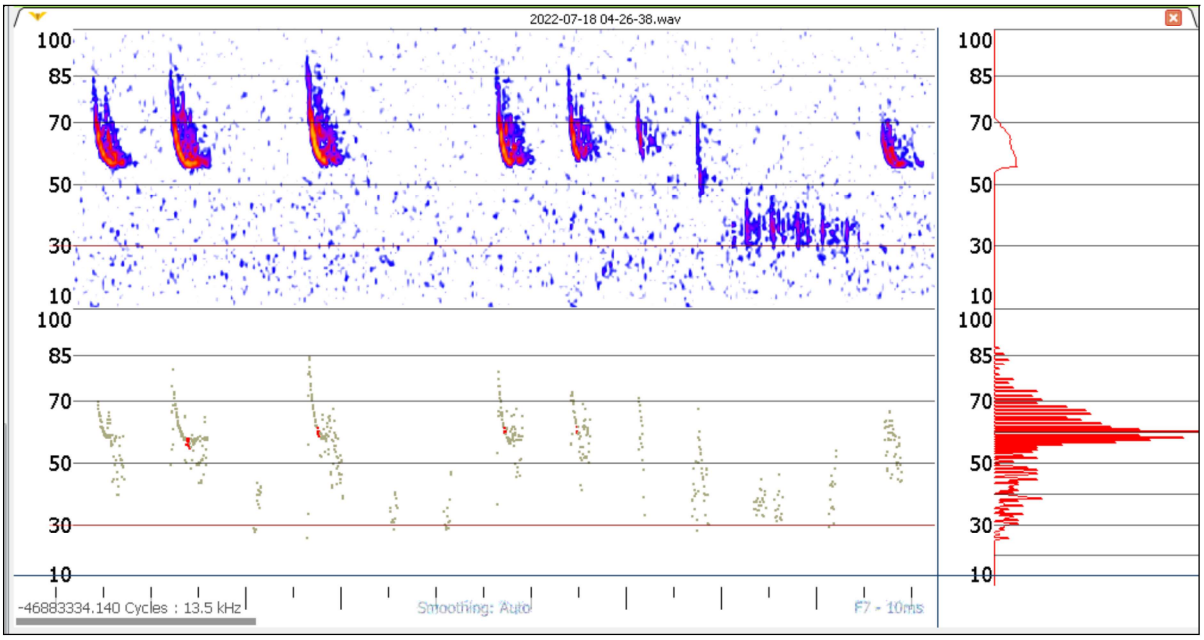
The licence, if needed, can be applied-for when the start date of the work is known.

If the work is not underway by May 2023, update bat activity survey work will be needed, along with an update day-time inspection.

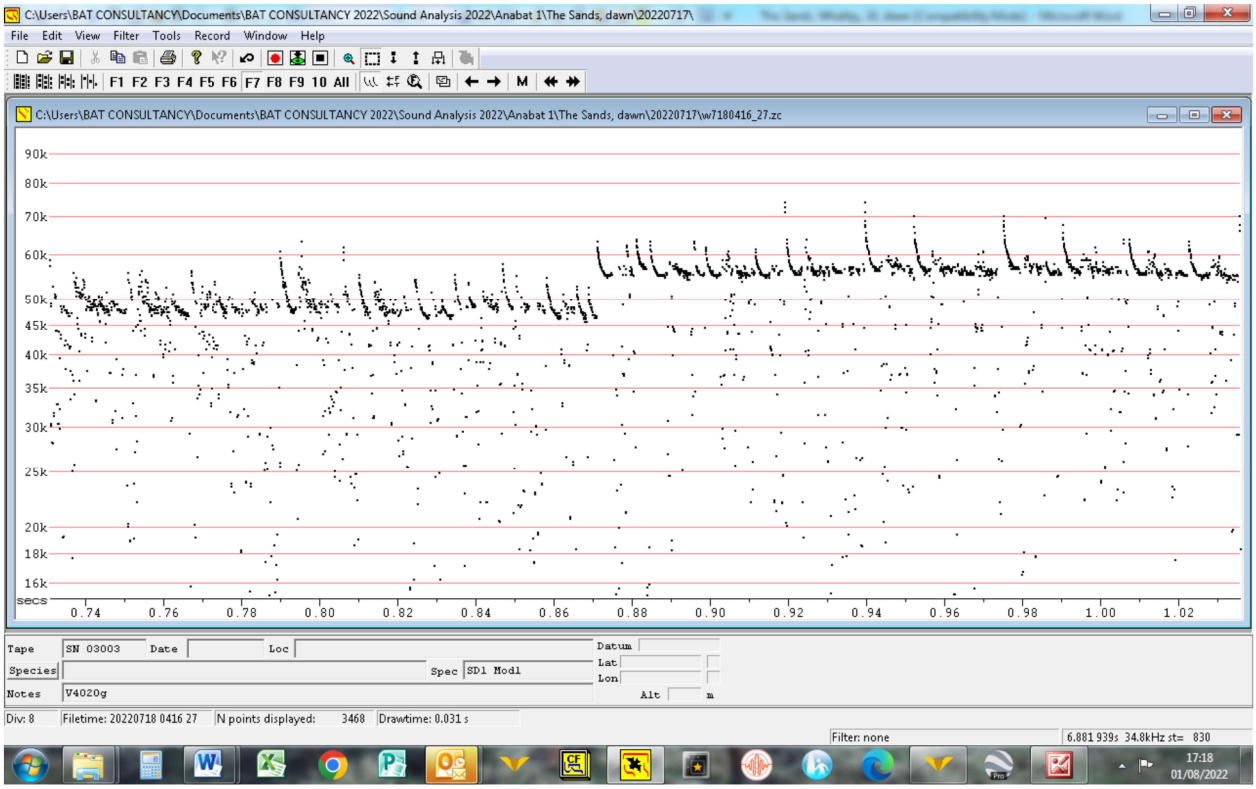
Appendix 1 - Example sonogram/s recorded at dusk/dawn survey



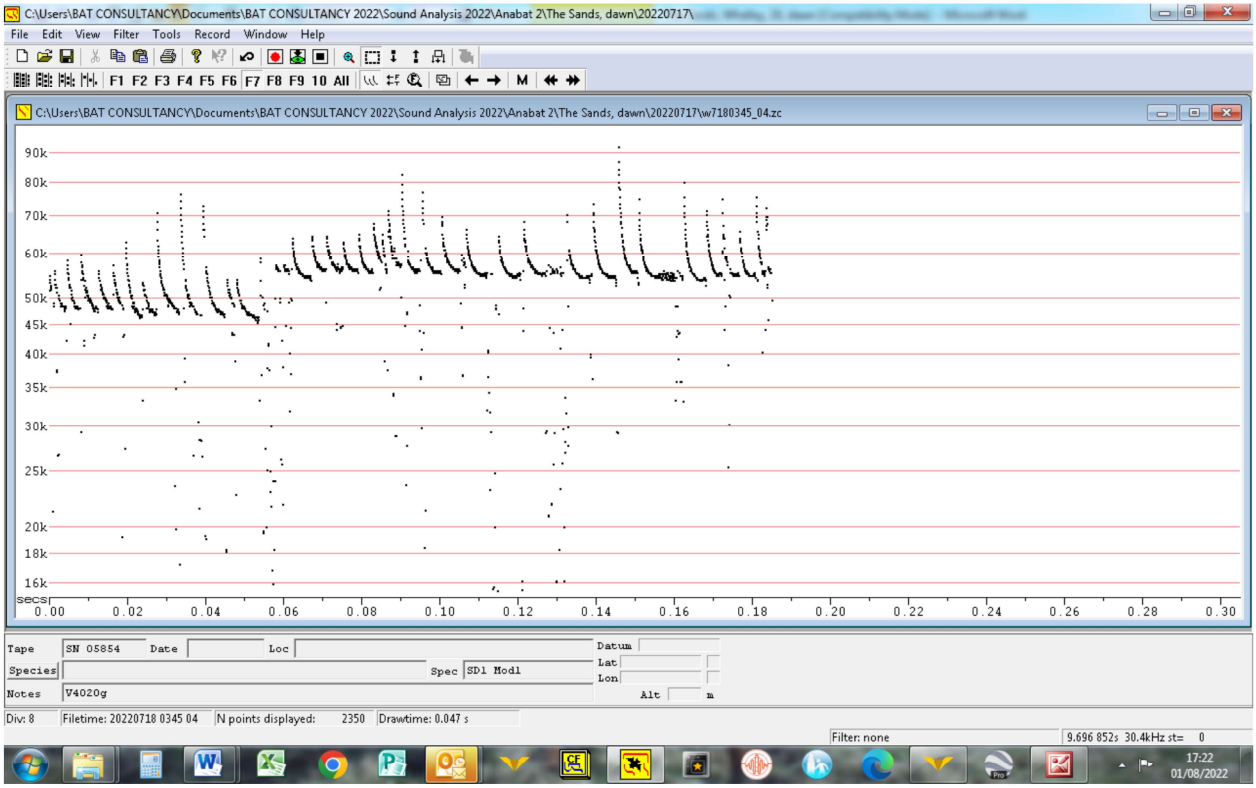
Common pipistrelle that returned to roost at 04.33 (front of property)



Soprano pipistrelle and social call at 04.26 (front of property)



Common and soprano pipistrelle at 04.16 (front of property)



Common and soprano pipistrelle at 03.45 (front of property)