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**Bat Survey Report (preliminary day-time survey):
Meadow Heys,
Off Holcombe Old Road/Branch Road,
Holcombe,
Bury,
BL8 4QS**

OS grid reference:
SD 7778 1598

Commissioned-by:
Peter Kenyon

Survey Date: 7/10/24

Report Date: 9/10/24

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1. Summary.

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

This detached, dormer bungalow is in an area of high quality bat feeding habitat.

There was no evidence to suggest bats have entered any roof-void, though some areas were boxed-off.

The highest-risk feature at the north-east-facing gable apex, has historically been excluded to bats using chicken wire. This was probably fitted to prevent nesting by birds.

Bird species that might make use of this sort of opportunity include swifts, house sparrows and starlings – all birds of conservation concern.

Some lower risk bat access is still available and there are some gaps under rear roof-slates and into the chimney.

Potential bat access associated with the existing extension has been sealed with expanding foam.

Taking into account the high-risk location, I've provisionally assessed the risk of some bat roosting activity still taking place here as moderate.

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.

Further recommendations will be made based on the findings.

There must be no work done in the meantime that may disturb bats or impact potential roosting areas via deconstruction, noise or vibration. Existing gaps must be retained until the bat activity survey work has been completed, as must vegetation on site.

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.

Regardless of future finding, a precautionary approach should be adopted during deconstruction work involving the roof and/or eaves.

As roosting potential will inevitably be lost to the development, to accord with the principles of Biodiversity Net Gain, the opportunity should be taken to install integrated bat boxes in the external structure. This is doubly important here as it appears bats have been excluded from potential roosting-sites historically.

It would be a commendable pro-active measure to also reinstate nesting opportunities for birds. I recommend provision for swifts.

Incidentally it was noted that bat access was available into the rear retaining wall of the garden. This potential is more likely to be used by hibernating bats in winter.

There is a mature tree overhanging the existing extension. I was not asked to assess any trees on site, but if any removal or surgery is planned, the relevant trees need to be assessed for bat roosting potential first.

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

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 small, brick, dormer bungalow with an existing single-storey, flat-roofed extension to the rear:



Front (south-east-facing) and rear elevations

It is in a rural location on the moorland edge, but there are immediately accessible mature trees, linking well with Redisher Woods less than 250m away:

A data search from the National Biodiversity Network discovered no bat records within 500m, but common and soprano pipistrelle within 1km. Noctule (*Nyctalus noctula*) had been recorded within 2kms. As these findings did not add to my personal knowledge/expectation, the sources of the records were not examined and have not been acknowledged.

The absence of records doesn't necessarily equate with an absence of bats and a formal data search from GM Records Centre may discover additional species. I am aware that the brown long-eared bat (*Plecotus auritus*) has been recorded within Reddisher Woods for example and it is highly likely that at least whiskered (*Myotis mystacinus*)/Brandt's (*Myotis brandtii*), which are hard to separate without dna analysis, will be present too.

Bats also roost in tree cavities and individual bats may roost in minor defects, including underneath raised bark and in dense ivy.

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.

Roosts are protected whether or not bats are there at the time. Bats are protected from direct interference and disturbance. It is an offence to destroy a bat roost or obstruct access to it. Certain activities that would otherwise be illegal can be undertaken if covered by licence from Natural England.

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 Biodiversity 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) became mandatory for certain developments on 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 **7/10/24** 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.

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 central loft is boarded at floor level and beneath the roof-slates. Most of the roof is also lined with insulating material:



There was only one eaves void that could be inspected:



The roof is lined with sarking boards and there is no insulating material present at roof or floor level.

At the north-eastern gable, bat access is available over the wall-head. There was no evidence to suggest bats have been present:



The eaves fall away below the level of the loft:



Externally, the south-west-facing eaves appear to be sealed:



At the north-eastern gable the main gap at the eaves has been covered with mesh, presumably to prevent nesting by birds:



However, the mesh appears sufficiently fine gauge and closely enough fitted to the wall as to exclude bat access too.

This type of gable apex is often favoured by the pipistrelle bat, including by maternity colonies, especially when there is immediate access available to high quality feeding habitat.

There is a possibility that the fitting of the mesh, illegally excluded bat access to a roost. It was fitted well before the current owners took possession.

At the bottom ends of the same soffit there is still bat access available, but this may be less favourable for use by a maternity colony:



At the roof apex, the ridge tile is missing and the timbers are decayed, so it is possible bats may still be able to access the wall-head/cavity:



Possible bat access circled in red, mesh circled in black

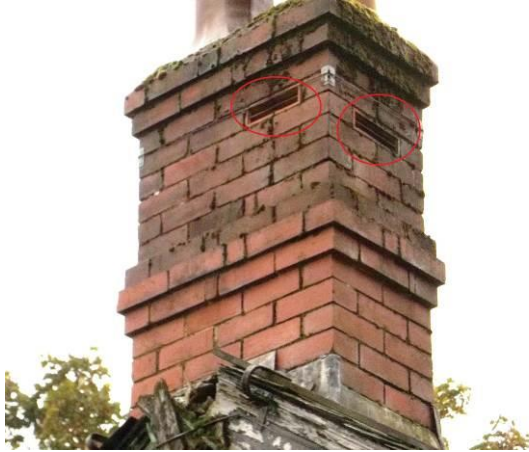
There are some defective roof-slates on the rear roof-pitch where bats could potentially gain access to roost between slates and sarking board:



There is room for a bat to shelter beneath raised flashing at the chimney:



All four faces of the chimney contain air vents that appear suitable for allowing bat access:



The eaves of the single-storey extension have been sealed historically with expanding foam:



There is a large tree limb hanging over the extension:



Incidentally it was noted that there is bat access available into the rear, retaining, garden wall:



On the bank above there is high-quality bat feeding habitat:



7. Conclusions/Discussion

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

There was no evidence to suggest bats have entered any roof-void, though some areas were boxed-off.

The highest-risk feature at the north-east-facing gable apex, has historically been excluded to bats using chicken wire. This was probably fitted to prevent nesting by birds but, especially given the location, may have illegally excluded bats at the same time. Bat roosts are protected whether or not bats are present at the time and without assessment by a bat expert are often over-looked by householders, though bats can also be excluded deliberately.

Bird species that might make use of this sort of opportunity include swifts, house sparrows and starlings – all birds of conservation concern.

Some lower risk bat access is still available and there are some gaps under rear roof-slates and into the chimney.

Potential bat access associated with the existing extension has been sealed with expanding foam.

Taking-into-account the high-risk location, I've provisionally assessed the risk of some bat roosting activity taking place here as moderate.

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 try to undertake one in both the first and second half of the accepted bat survey period (May to August/September) inclusive 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. Enough time should be left to allow a third survey if necessary before the end of September. Although surveys can be spaced at three-weekly intervals, this is only acceptable from a good practice perspective if such close spacing can be justified.

Irrespective of the findings of future survey work, because individuals and small numbers of bats change roost frequently so could have been missed at the time of bat activity survey work, a precautionary approach should be adopted during deconstruction work involving the roof and/or eaves.

The work should be done by contractors who are familiar-with and sympathetic-to the law relating to bats. They should be aware of the roosting behaviour of the common/soprano pipistrelle bat; and be competent to recognise bat droppings if present. If there is *any* doubt about their expertise with respect to bats, the bat consultant MUST

attend site to provide a tool-box-talk before work commences and be present in case a bat is found.

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.

As roosting potential will inevitably be lost to the development, to accord with the biodiversity objectives of the National Planning Policy Framework, and the principles of Biodiversity Net Gain, the opportunity should be taken to install integrated bat boxes in the external structure. See Appendix 4. This is doubly important here as it appears bats may have been excluded from roosting-sites historically.

It would be a commendable pro-active measure to also reinstate nesting opportunities for birds. House sparrows and starlings probably have natural habitats available locally, but provision for swifts via use of swift boxes would provide much-needed potential nesting sites. See Appendix 5.

Incidentally it was noted that bat access was available into the rear retaining wall of the garden. This potential is more likely to be used by hibernating bats in winter.

There is a mature tree overhanging the existing extension. I was not asked to assess any trees on site, but if any removal or surgery is planned the relevant trees need to be assessed for bat roosting potential first.

Care should be taken when planning any lighting on the site, to ensure any potential roosting features retained or provided, and likely flight-lines to and from them, are appropriately shielded. (4)

8. Recommendations

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

Have bat activity survey work undertaken in 2025 as outlined above, to assess better whether or not bats make use of the roosting potential available.

There must be no work done in the meantime that may disturb bats or impact potential roosting areas via deconstruction, noise or vibration. Existing gaps must be retained until the bat activity survey work has been completed, as must vegetation on site.

Further recommendations will be made based on the findings. However some provision for at least bats, and preferably also swifts, should be made in the course of the work.

Ensure contractors 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.

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

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. 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.

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 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 northerly 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)

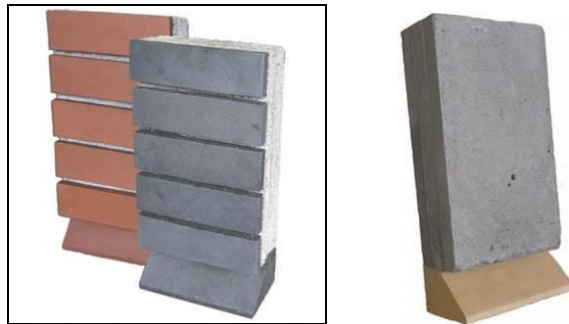
Appendix 4 – examples of available integrated bat boxes

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 Habitat

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

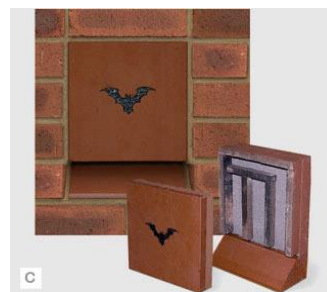
"Designed to be built into an exterior wall and is available in a variety of faces to match the building. Standard facings of red or blue brick - ideal for new builds - are normally available from stock, or boxes can be made to your specific requirements with a face of brick, stone, timber, or plain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



Example of Habitat boxes Can also be faced with stone.

Ibstock Ecozone

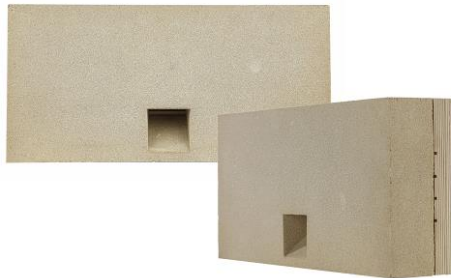
<https://www.ibstock.co.uk/product/ecohabitats/bat-box?page=1&>





Above: typical unit in situ. Photo © Angela Graham

Bat Box - Concrete



Cast Stone.

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



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



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

Green and Blue Bat Block/Brick

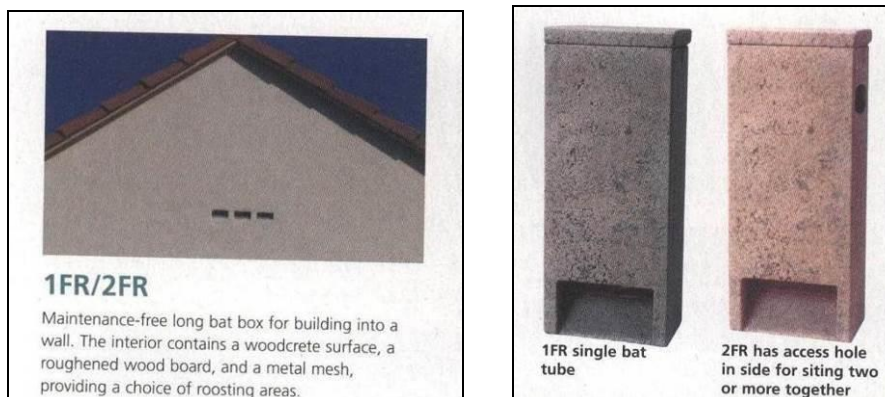
<https://www.greenandblue.co.uk/products/bat-block-bat-brick>



Green and Blue Bat Block/Brick in situ

Schwegler 1FR/2FR

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



Schwegler 1FR/2FR

Appendix 5 - examples of commercially available nesting boxes for swifts

There are 3 types of brick recommended by **Louise Bentley of Bolton & Bury Swifts Group**:

- The S Brick Swift Brick – manufactured by not-for-profit Action for Swifts
- The Lightweight 1A Schwegler Brick
- The Woodstone Swift Brick used extensively in Ireland

The S brick is a particularly compact and lightweight brick which is made in the UK and can be colour matched, there is a short lead time.

Swifts are a colonial nesting species, so it is highly recommended to use 3 bricks as a minimum. The bricks are ideally placed under the eaves or high on a gable end, they can be arranged symmetrically or as a group about 1 metre apart from each other.



S Brick Swift Brick



Schwegler Lightweight Swift Box Type 1A:



Examples of other available designs:



Integrated swift box from Habibat:

<http://www.habibat.co.uk/category/bird-boxes/habibat-swift-box>



Integrated swift box from Forticrete:

<https://www.roofingsuperstore.co.uk/product/forticrete-swift-box.html>



Wooden, wall-mounted swift nest boxes in situ