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**Bat Survey Report (preliminary day-time survey):  
36 Hillcrest,  
Langho,  
BB6 8EL**

OS grid reference:  
SD 7038 3371

*Commissioned-by:*  
Richard Ellis

**Survey Date: 18/11/24**

**Report Date: 20/11/24**

## **Table of Contents**

<b>1. Summary</b>	<b>page 3</b>
<b>2. Introduction</b>	<b>page 4</b>
<b>3. Bats and the law</b>	<b>page 6</b>
<b>4. Survey</b>	<b>page 8</b>
<b>5. Limitations of the Survey</b>	<b>page 8</b>
<b>6. Findings</b>	<b>page 9</b>
<b>7. Conclusions/Discussion</b>	<b>page 11</b>
<b>8. Recommendations</b>	<b>page 12</b>
<b>9. References</b>	<b>page 13</b>
<b>Appendix 1 - Angela Graham's Experience</b>	<b>page 14</b>
<b>Appendix 2 - Criteria used in assessing risk of roosting (in the absence of obvious evidence of roosting)</b>	<b>page 16</b>
<b>Appendix 3 - Recommendations for further survey work when the findings of the preliminary survey were negative</b>	<b>page 18</b>
<b>Appendix 4 - Examples of available integrated bat boxes</b>	<b>page 19</b>

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## **1. Summary.**

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

This semi-detached bungalow provides immediate access to the rear to suitable bat feeding habitat.

There is no evidence of bats having roosted in the loft recently or historically.

There is some access available for bats at the north-east corner and front eaves.

A location at low-level and facing into the street is relatively unfavourable for bats, but some entry at the north-east corner, between properties, is also possible.

As no re-roofing or work-to-fascias is proposed, it should be possible to undertake the development without impacting the potential roosting locations identified.

They are relatively unlikely to be used by a maternity colony of bats in summer with dependent young but, as a precaution, the development should be done outside the months of May to September inclusive unless bat activity survey work has been undertaken to better investigate whether the roosting potential is used.

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.

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 provide a tool-box-talk before work commences.

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.

Although it seems the roosting potential available now will not be lost to bats, it is likely roosting potential has been lost in the past in the course of remedial works, if not in association with this property, with others on the estate. It would be a commendable pro-active measure therefore, to recreate bat roosting potential in the new, east-facing dormer cheek.

This would accord with principles of the Biodiversity Net Gain initiative.

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.

## 2. Introduction

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

This is a 1950's-style semi-detached bungalow:



Front (north) and rear elevations

It is in a sub-urban location letting onto fields and woodland at the back:



Location of property indicated by red circle

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

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

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

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

A search of DEFRA's Magic database discovered that no bat European Protected Species licences had been granted developments within 2km.

A data search from the National Biodiversity Network discovered a dead common pipistrelle bat has been recorded by a Natural England Roost Visitor just under 500m away. There were no other bat records within 2kms.

The absence of records doesn't necessarily equate with an absence of bats. A search from the Local Records Centre would probably discover additional bat records.

Other species likely to occur within 2 kilometres include the brown long-eared (*Plecotus auritus*) - the species most likely to leave evidence of roosting within barns and lofts, the whiskered (*Myotis mystacinus*)/Brandt's (*Myotis brandtii*), which are hard to separate without dna analysis, Natterer's (*Myotis nattereri*), Daubenton's (*Myotis daubentonii*) and noctule (*Nyctalus noctula*).

#### *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

Roosts are protected whether or not bats are there at the time. Bats are protected from direct interference and disturbance. Lofts where bats roost should be accessed only by bat workers with an appropriate licence, or by operatives accompanied by such a person. (The exception is in the case of householders who may enter to store and retrieve items such as suitcases, without a licence.) 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.

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 1<sup>st</sup> March to 31<sup>st</sup> 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 from 12 February 2024 under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). In England developers must deliver a BNG of 10%. This means a development will result in more or better quality natural habitat than there was before development. While this initiative relates primarily to vegetation, it accords with the principles to consider the needs of fauna also.

#### **4. Survey**

I made a daytime visit on **18/11/24** 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.

No attempt was made to lift insulating material covering the internal eaves.

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



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

## 6. Findings

The property has a large, open roof-void:



The roof has been lined with breathable membrane and there is a thick layer of insulating material to the floor.

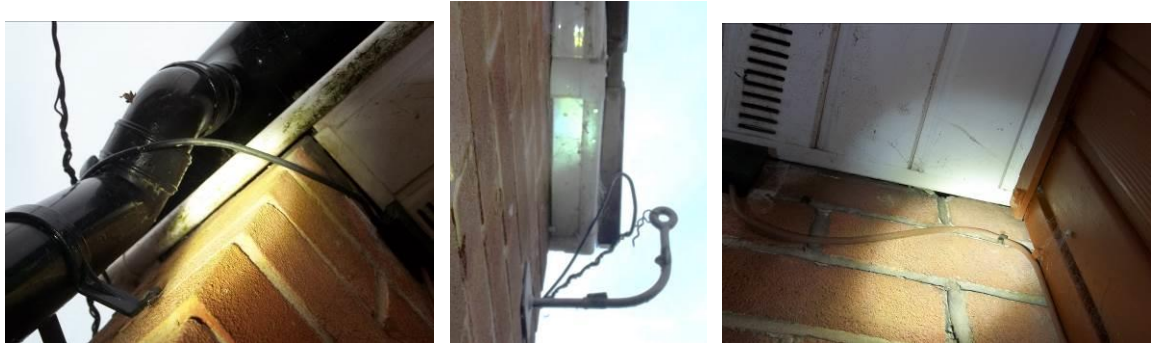
The insulating material extends to the eaves:



No attempt was made to look for signs of bats beneath this.

The insulating material was raised at both gable ends to confirm there was no evidence of historic roosting by bats. No evidence was found in the loft of past or recent roosting.

Externally the eaves are largely sealed except at the north-east corner of the property:



Gaps at soffit, sufficiently large as to allow bat access

The only other exception is at the front eaves where the property adjoins the next:



The roof is in good condition and does not provide bat roosting potential.

The dormer of the house next door does not appear to provide any potential bat access:



## **7. Conclusions/Discussion**

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

The property is situated on an estate of similar bungalows which are likely to have had bat roosting potential at the eaves at the time of construction. Much of this is likely to have been lost in the course of renovations to boxed eaves and cladding, and in the course of re-roofing. Some roosts are likely still to be present however, and there is easy access for bats to good feeding habitat.

In this case, no evidence was found in the loft of past or recent roosting.

A location at low-level and facing into the street is relatively unfavourable for bats, but some entry at the north-east corner, between properties, is also possible.

As no re-roofing or work-to-fascias is proposed, it should be possible to undertake the development without impacting the potential roosting locations identified.

They are relatively unlikely to be used by a maternity colony of bats in summer with dependent young but, as a precaution, the development should be done outside the months of May to September inclusive unless bat activity survey work has been undertaken to better investigate whether the roosting potential is used.

Appendix 3 gives the basic criteria for additional survey work being needed. I've assessed the risk here as low.

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.

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.

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 provide a tool-box-talk before work commences.

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.

Although it seems the roosting potential available now will not be lost to bats, it is likely roosting potential has been lost in the past in the course of remedial works, if not in association with this property, with others on the estate. It would be a commendable proactive measure therefore, to recreate bat roosting potential in the new, east-facing dormer cheek. Bats would need access to a narrow void (about 15 to 20mms) with at least one internal surface of wood that has a degree of texture so bats can grip it, with no access available to breathable membrane, in which bats can get their claws fatally entangled. Bats can't grip smooth surfaces such as the foil backing to 'Kingspan', or upvc. The access opening needs to be only about 30mms x 13mms. Or it might be possible to modify the design to enable embedding an integrated bat box into the structure. See Appendix 4.

This would accord with principles of the Biodiversity Net Gain initiative.

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 the work done outside the May to September inclusive period, unless bat activity survey work has been undertaken to better investigate whether roosting potential is used.

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.

Consider creating bat roosting potential in the new east-facing dormer cheek.

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, but the conditions and/or location aren't optimal.	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 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 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 case of pipistrelles, or by individuals or small numbers of bats at any time of year, including winter when hibernating.	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.*

**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 <sup>a</sup> (structures). No further surveys required (trees).	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. <sup>b</sup>	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. <sup>b</sup>

<sup>a</sup> 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.

<sup>b</sup> 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", 3<sup>rd</sup> 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 <sup>a</sup> with at least one of surveys between May and August <sup>b</sup>	May to September <sup>a</sup> with at least two of surveys between May and August <sup>b</sup>

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", 3<sup>rd</sup> 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

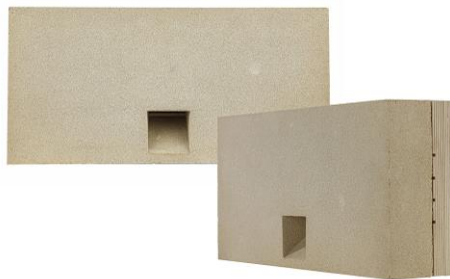
<https://www.ibstock.co.uk/product/ecohabitats/bat-box?page=1&>





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

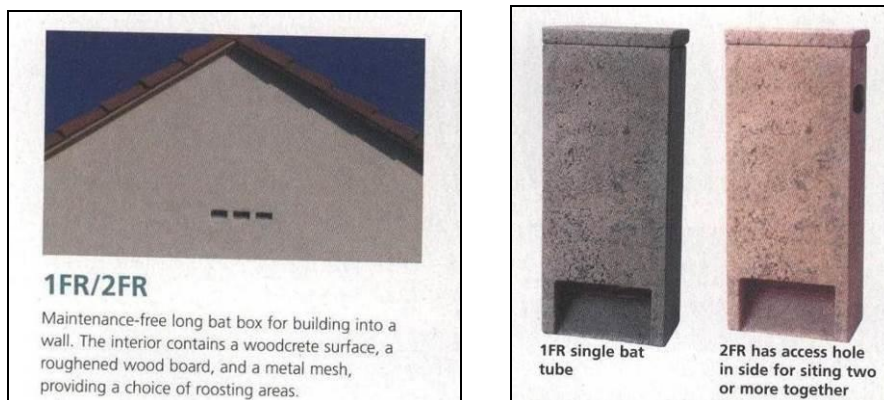
<https://www.greenandblue.co.uk/products/bat-block-bat-brick>



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