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Bat Survey Report (preliminary day-time survey):

**Pioneer Mill,
Kanky Ginnel,
Off Lodge Street,
Middleton,
M24 6AA**

OS grid reference:
SD 8728 0612

Commissioned-by:
Christine Childs

Survey Date: 29/4/25

Report Date: 6/5/25

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1. Summary.

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

Buildings on this site include a two-storey brick building and four or five smaller buildings of different construction-types.

Despite the essentially urban location, there is good bat feeding habitat - for the pipistrelle at least - immediately available.

There are extreme access limitations to surveying these buildings, but the two-storey brick building is clearly derelict, and the roof appears on aerial photograph to be badly damaged where not completely absent. If roof slates/tiles are still present, even in a damaged state, there is a possibility of individual bats seeking shelter in crevices between them. There are probably other nooks and crannies associated with the building that a bat or bats may use, probably on an opportunistic basis rather than as a regular roosting site. Some of the roosting opportunities may be suitable for hibernation by individual pipistrelles.

The non-derelict, occupied building to the south has access for bats to boxed eaves. The extent to which bats can get to wall heads and enter cavity walls beyond is uncertain, but the possibility of roosting exists, including potentially a maternity colony with dependent young in summer, or a transitional roost in spring.

From what can be seen of the construction-styles of other buildings on site, it seems they are unlikely to have significant bat roosting potential.

Overall, I think it's inevitable that individual bats will make use of at least the brick-building opportunistically at times, if only occasionally, given the easy access available to good feeding habitat for the pipistrelle bat.

It would be usual to undertake investigative survey work at dusk over the summer to better evaluate the deliberations above, but there are extreme limitations to being able to undertake that work effectively in this situation.

My personal professional assessment of the situation is that to avoid any risk of disturbing a maternity colony with flightless, dependent young, in the building to the south, the demolition should be timed to take place outside the May-to-August-inclusive period; and preferably also outside the coldest winter months when bats are most deeply torpid and therefore very vulnerable.

The bat consultant should attend site to ensure contractors are aware that it is possible, albeit unlikely, a bat may be present at the time of the work and to point-out the higher risk areas – though once work is well underway it is likely any bats present will leave the site. Technically that disturbance would be an offence, but it would be defensible in the difficult circumstances, so long as no bats are killed. However, if a bat was encountered, or seen flying away, it would be necessary to stop work and apply for a licence from Natural England to enable destruction of the roost to take place within the law.

As it's possible an unidentified roosting place may be destroyed by the work, because it wasn't realistically possible to undertake the usual bat activity survey work to investigate better for the presence of roosts, provision should be made for bats in the new build. This would be required if the destruction of a bat roost was covered by a licence

from Natural England. Natural England would also expect roosting “enhancements to be provided, and this would also accord with the principles of Biodiversity Net Gain. Accordingly, the opportunity should be taken to install integrated bat boxes in the external structure of the new build.

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 derelict buildings on this site to bats as part of the planning process, prior to demolition and clearance. Incidentally I comment on any issues discovered with respect to other protected/priority/invasive species and species of conservation concern.

The buildings consist of an old linear, brick building and four or five additional structures of various construction-types:



The site is shown below:



Fig.1. Site outlined in red

It is in an essentially urban location though there is a wooded bank behind and it's less than 100m from Whit Brook to the east and about 125m north of River Irk:



Location of site indicated by red circle

The pipistrelle bat (2 species but especially *Pipistrellus pipistrellus*) is common and widespread in the area and is recorded in even the most urban locations.

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. Transitional roosts are used in the spring before larger maternity groups establish.

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.

The likelihood of any other species frequenting the vicinity of this building is low.

A search of DEFRA's Magic database discovered that 3 bat European Protected Species licences had been granted within 2kms, involving common pipistrelle (*Pipistrellus pipistrellus*). One was about 550m away, the other two were almost 2kms away.

A data search from the National Biodiversity Network discovered no bat records within 500m. Within 1km was the common pipistrelle and within 2kms were soprano pipistrelle (*Pipistrellus pygmaeus*) and Daubenton's (*Myotis daubentonii*). 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 of other bat species doesn't necessarily equate with an absence of bats. A search from the Local Records Centre may discover additional bat records.

Other species that may occur within 2 kilometres include the brown long-eared (*Plecotus auritus*), the whiskered (*Myotis mystacinus*)/Brandt's (*Myotis brandtii*), which are hard to separate without dna analysis 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

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.

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.

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.

‘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 **29/4/25** 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 38 years and consultancy work for 30 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.

There was access to only the south-western corner of the site, where 3 buildings could be viewed from one side only. Due to the congested nature of the site and surrounding buildings, there was no access available to inspect additional buildings or elevations. There was no safe access available to the interior of any building.

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

Only the south-west corner of the site is accessible. From there the front elevation of the two-storey brick building can be seen:



Bat access to the interior is clearly possible due to the deteriorating condition of the structure and there are inevitably some cracks and crevices where a bat might shelter. Most of what could be seen of the walls lacks roosting potential, but there are a few defects that bats might make use of:



The roof could not be seen from any vantage point available, but on aerial photo appears to be absent, apart from damaged remains:



Aerial view of roof of brick building

An attempt to view the rear from the hill behind the site revealed only an intact tiled roof, presumably of the building immediately to the north of the site:



Not all the front elevation could be seen due to the presence of adjoined structures:



These extend fully across the site from north to south, blocking access to structures beyond, in the east of the site:



Superficially, what could be seen of these buildings did not appear to provide significant bat roosting potential.

There is a large buddleia bush/tree in the apparently small yard, enclosed by those buildings and the one to the south which is not included in the demolition proposal.

The southern building is fitted with boxing to the eaves. The soffit is open sufficiently as to allow bat access to the wall behind:



7. Conclusions/Discussion

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

Despite the essentially urban location, there is good bat feeding habitat - for the pipistrelle at least - immediately available.

There are extreme limitations to surveying these buildings, but the two-storey brick building is clearly derelict and the roof appears to be badly damaged where not completely absent. If roof slates/tiles are still present, even in a damaged state there is a possibility of individual bats seeking shelter in crevices between them. There are probably other nooks and crannies that a bat or bats may use, probably on an opportunistic basis rather than as a regular roosting site. Some of the roosting opportunities may be suitable for hibernation by individual pipistrelles.

There appears to be a non-derelict building immediately adjacent to the rear, limiting roosting potential to the brick building on site, but this could not be assessed for roosting potential itself, other than to note it apparently has a tile roof in good condition with no obvious bat roosting potential.

The non-derelict, occupied building to the south has access for bats to boxed eaves. The extent to which bats can get to wall heads and enter cavity walls beyond is uncertain, but the possibility of roosting exists, including potentially a maternity colony with dependent young in summer or a spring transitional roost.

From what can be seen of the construction-styles of other buildings on site, it seems they are unlikely to have significant bat roosting potential.

Overall, I think it's inevitable that individual bats will make use of at least the brick-building opportunistically at times, given the easy access to good feeding habitat for the pipistrelle bat.

The likelihood of the building to the north being at high risk of use by a maternity colony in summer appears to be low and the other onsite buildings appear unlikely to be suitable for use by a maternity colony.

It would be usual to undertake investigative survey work at dusk over the summer to better evaluate the suppositions above, but there are extreme limitations to being able to undertake that work in this situation. Appendix 3 gives the basic criteria for additional survey work being needed.

Most of the site can't be seen directly. Any other vantage point is sufficiently far-removed or obstructed that it would be almost impossible to determine whether any bats recorded had emerged from parts of the buildings on site, that cannot be viewed directly. There are limited opportunities for use of infrared recording equipment and recording bat detectors in association with this site.

The access to the site is from a narrow ginnel in an urban location, which is not an ideal location for positioning surveyors at night.

My personal professional assessment of the situation is that to avoid any risk of disturbing a maternity colony with flightless, dependent young in the building to the south, the demolition should be timed to take place outside the May-to-August-inclusive period; and preferably also outside the coldest winter months when bats are most deeply torpid and therefore vulnerable.

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.

The bat consultant should attend site to ensure contractors are aware that it is possible, albeit unlikely, a bat may be present at the time of the work and to point-out the higher risk areas – though once work is well underway it is likely any bats present will leave the site. Technically that disturbance would be an offence, but it would be defensible in the difficult circumstances, so long as no bats are killed. However, if a bat was encountered, or seen flying away, it would be necessary to stop work and apply for a licence from Natural England to enable destruction of the roost to take place within the law.

As it's possible an unidentified roosting place may be destroyed by the work, because it wasn't realistically possible to undertake the usual bat activity survey work to investigate better for the presence of roosts, provision should be made for bats in the new build. This would be required if the destruction of a bat roost was covered by a licence from Natural England. Natural England would also expect roosting 'enhancements' to be provided, and this would also accord with the principles of Biodiversity Net Gain. Accordingly, the opportunity should be taken to install integrated bat boxes in the external structure of the new build. See Appendix 4.

In the absence of proposed new build, wall-mounted bat boxes could be utilised on buildings in the same ownership. This is not the method of choice however, as wall-mounted boxes lack the thermal stability of integrated bat boxes.

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.

Time the demolition for outside the May-to-August-inclusive period and to not take place in mid-winter.

Have the bat consultant present at the start of demolition to give a tool-box-talk to the contractors.

Make alternative provision for bats to compensate for any roosting places that may have been destroyed by the works.

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.

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

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

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

^b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended 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)

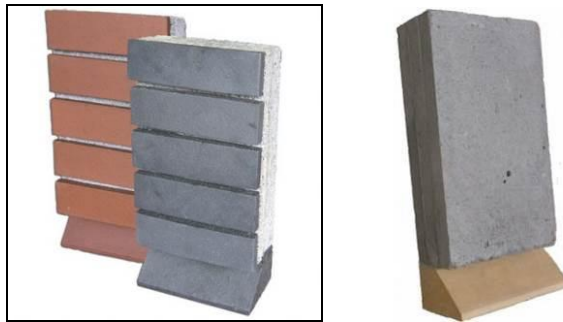
Appendix 4 – examples of available integrated bat boxes

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

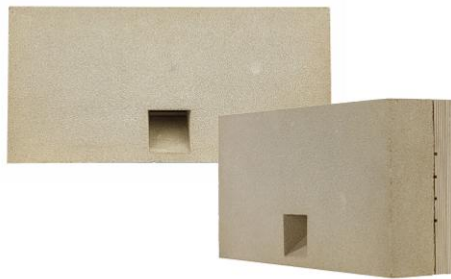
<https://www.ibstock.co.uk/product/ecohabitats/bat-box?page=1&>





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

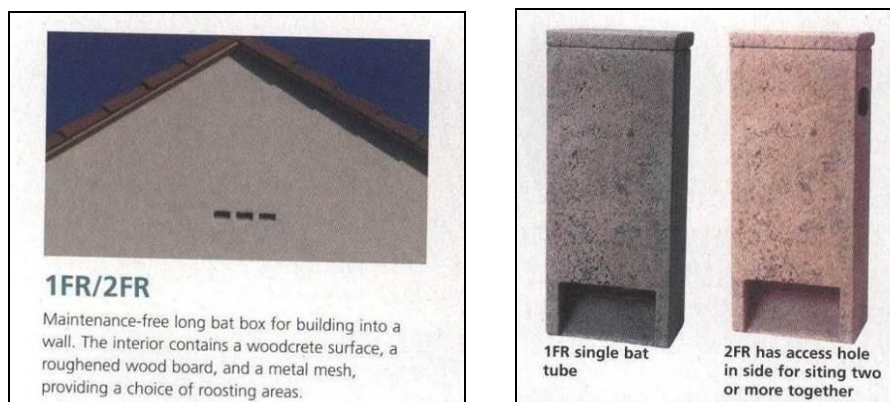
<https://www.greenandblue.co.uk/products/bat-block-bat-brick>



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

Appendix 5 - Natural England requirements for roof lining materials

Condition 39 of the CL21 Bat Mitigation Class Licence (Low Impact) documentation reads:

“Should this licence require the use of roof membranes, Bitumen type 1F felt with a hessian matrix, or a non-bitumen coated roofing membrane (NBCRM) with a test certificate approved by Natural England, must be used.”

If it is proposed to use NBCRM in areas where it may come into contact with roosting bats the licence applicant must state the intention to use NBCRM.

A certificate must be included that proves the roofing membrane has passed a ‘snagging propensity test’.

A snagging propensity test checks that the membrane can stand the repeated snagging actions of roosting bats.

To pass, a membrane must show no change in the average number of loops per cm² as rotations are increased from 0 to 1000.

The certificate must state the following information:

- The organisation that has carried out the snagging propensity test (this must be an independent body to the manufacturer of the NBCRM itself).
- Declaration that the snagging propensity test followed the correct testing protocol.
- Declaration that the snagging test has been passed.

No certificate is needed for bitumen 1F felt that has a non-woven, short fibre construction.”