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**Bat Survey Report (preliminary day-time survey):
Redundant Commercial Building,
Domett Street,
Manchester,
M9 8QP**

OS grid reference:
SD 8547 0293

Commissioned-by:
Tony Pinder

For
Riverside Demolition and Reclamation Limited

Survey Date: 26/1/21

Report Date: 27/1/21

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1. Summary.

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

This ex-commercial building is in an essentially urban area but has immediate links with good bat feeding-habitat. There is a small single-storey building to the rear, to which there was no access available at this visit. It is proposed to demolish the buildings to allow the site to be redeveloped. A single road-side tree is for removal.

There was access available to only one small roof-void in the main building. The roof was lined with bitumastic felt and no loft insulation was present. There were no signs of occupation by bats. Tower scaffolding would be needed to access the main roof-void and a sealed hatch would need opening-up. I consider the likelihood of finding signs of bats in this area to be minimal however.

The extensive cellar is largely dry.

There was no bat access obviously available to any part of the interior that could be inspected.

Externally there are south-facing fascias, gaps under roof-slates and a range of gaps into brickwork, including around window-frames in places.

There is modern-style housing around the building, potentially more suitable for use by a maternity colony of bats in the summer. Gaps associated with the building being surveyed have potential for use mainly by individual bats. The single-storey building has a degree of roosting potential but this is probably at minimal risk of being used.

To accord with good practice a dusk emergence survey should be undertaken to better investigate the level of bat activity and whether or not any roosting is taking place at the time.

Further recommendations will be made based on the findings.

In the meantime, access should be provided to the interior of the single-storey building and, if possible, to the out-standing roof-voids.

As bat roosting potential will be lost at the time of demolition; to accord with the biodiversity objectives of the National Planning Policy Framework, alternative roosting provision should be made in the new build by means of integrated bat boxes.

The tree can be felled with no obvious risk to bats, but its loss should be compensated-for in the landscaping plan.

The potential impact of any proposed lighting on bat roosting potential provided should be minimised via appropriate positioning and shielding.

2. Introduction

I was asked to assess the importance of two buildings on this site to bats as part of the planning process, prior to their demolition to allow the site to be redeveloped. Incidentally I comment on any issues discovered with respect to other protected/priority/invasive species and species of conservation concern.

This is a large, multi-storey, ex-commercial building:



Rear (eastern)/north, and southern elevations

There is a small, single-storey building to the rear and a roadside tree to the front:



The site is shown below:



Fig. 1. Site outlined in red

The site is in an urban location but with a lightly wooded site extending north immediately opposite.

It is only around 250m from the River Irk to the south-west and 150m from a stream with wooded banks to the south-east that leads to Boggart Hole Clough.



Fig. 2. Location of site indicated by red circle

There is abundant housing in close proximity to the building, of a type that will provide bat roosting potential so long as gaps exist at soffits, as appears likely.

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.

The likelihood of any other species frequenting the vicinity of this building is probably low, though additional species such as the Daubenton's (*Myotis daubentonii*) and the whiskered (*Myotis mystacinus*)/Brandt's (*Myotis brandtii*), which are hard to separate without dna analysis, have been recorded in Blackley Forest about 1.5kms away and the latter at least is likely to occur nearby. The brown long-eared bat (*Plecotus auritus*) is likely to occur also in the wooded areas.

A search of DEFRA's Magic database discovered that the nearest bat European Protected Species licence had been granted for a development about 1200m away.

A data search from the National Biodiversity Network discovered only pipistrelle bats to have been recorded within 2kms.

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.

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 before issuing planning consent. 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 4 (2015)" 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) states that "the planning system should contribute to and enhance the natural and local environment" by a number of means, including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks... ."

4. Survey

I made a daytime visit on **26/1/21** to undertake a preliminary survey of the buildings, assess their likely importance to bats and advise whether or not a precautionary approach or further survey work is needed. A tree to the front of the building was also assessed from the ground.

Having been involved with bat survey work for 30 years and consultancy work for 20years, 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), 18 and 16. Amongst other things these cover me to apply for Low Impact Licences for clients and undertake bat

survey work. I have a supplementary licence to photograph bats in roosts and a CL29 Barn Owl Class Licence. My credentials are expanded-upon in Appendix 1.

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

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

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

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

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

5. Limitations of the survey

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

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

There are additional limitations to undertaking a bat survey in winter, when bats are hibernating and largely inactive. Droppings from the summer may no longer be evident.

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

6. Findings

The accesses to the main roof-void are at considerable height, and one appears to have been sealed shut. Tower scaffolding would be needed in order to access them safely:



There was access to a small roof-void to one of the rear elements of the building. The roof is lined with bitumastic felt and there is no insulation present. Bat access was not obviously possible:



All window-openings are sealed and it seemed bat access to the interior of the building was unlikely to occur.

There is an extensive cellar. This was quite humid in one area only but there was no obvious bat access possible to any part of it:



humid part of cellar

Externally there are fascias to the southern elevation. In general the slate roof is in deteriorating condition and there are gaps in brickwork. Examples are show below:



There are some gaps around window-frames too:



There was no access to view the interior of the single-storey building. Externally there was bat access available at the metal fascia, wall-head and a broken vent:



The tree had no obvious bat roosting potential:



7. Conclusions/Discussion

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

The condition of the bitumastic felt where seen was good. It has been assumed the main roof is also lined with bitumastic felt and that it is also in good condition. However, there are gaps under uneven slates allowing bats to both roost between slates and felt and potentially in the roof-void if there are any defects in the felt. There is also a possibility of access being available to the roof-void via fascias.

My experience of this type of building in urban areas, when access to the roof-void has been possible, is that evidence of a typical loft-dwelling species of bat such as the brown long-eared is unlikely to be found. Although there are good feeding networks for the pipistrelle bat immediately accessible from the building, the likelihood of other at species occurring regularly in the immediate vicinity of the building is quite low. However, if possible safe access should be provided to the main roof-void to double check on the absence of signs of bats. The roof-void of the rear element in the south-east of the site has not been inspected either so access should also be provided to this.

The likelihood of finding signs of bats within the single-storey building is also low, but again access to the interior should be provided to allow it to be inspected as a matter of good practice.

The sort of roosting potential associated with the exterior of the building can be made use of by the pipistrelle bat.

Modern housing around the building provides the sort of roosting opportunities favoured by pipistrelle bats - so long as gaps exist at soffits, as appears likely. Maternity colony roosts are more likely to be discovered in these properties. The sorts of opportunities associated with the building being surveyed are potentially more likely to be used by individual pipistrelles when hibernating, but could be used at other times.

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. See Appendix 3.

A dusk emergence survey should be undertaken during the main bat activity survey season of May to August inclusive, though sometimes evening temperatures are high enough in April to justify undertaking a survey earlier.

Further recommendations will be made based on the findings.

Irrespective of the findings, as the absence of roosting at the time of a given survey would not confirm the absence of roosting at other times, alternative provision should be made for bats in the new build by installing integrated bat boxes. See Appendix 4. This would accord with the biodiversity objectives of the National Planning Policy Framework.

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

The tree does not appear to have any bat roosting potential, but at the time of felling contractors should be mindful of the fact bats can roost in small defects. (5)

8. Recommendations

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

Have a dusk emergence survey undertaken in April/May, as soon as evening temperature conditions permit.

In the meantime, provide access to the interior of the single-storey building to allow it to be inspected.

If possible, provide safe access to outstanding loft-areas in the main building.

9. References

1. Eaton, M. A. et al (2015). Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. British Birds 108: 708-746.
2. Department for Communities and Local Government (2012). National Planning Policy Framework.
3. Ed. by Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines - Third Edition. Bat Conservation Trust.
4. Bat Conservation Trust (2018). Guidance Note 8/18: Bats and Artificial Lighting in the UK.
5. Andrews, H. (2018). Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-Care and Ecological Professionals. Pelagic Publishing.

Appendix 1 - Angela Graham's Experience.

- I hold Natural England Class Licences CL21 (Annex B) - Registered Consultant 163 - CL18 and CL16. 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. CL16 allows me to do voluntary work with house-holders at domestic properties in certain circumstances, on behalf of Natural England, and to train new volunteers. I have a supplementary licence to use flash photography in bat roosts (2014/SC1/0160), 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 30 years, initially as a member of the South Lancashire Bat Group from its inception in 1987 and as a volunteer with the Nature Conservancy Council (NCC) - first licenced in 1989. Later, and for many years, I was Co-ordinator/Chair and Trainer for the South Lancashire Bat Group. I trained the people who currently run the group, one of whom is a Trustee for the Bat Conservation Trust. I was a founder member of the Greater Manchester Bat Group in 2002 and ran the group for 4 years.
- Over the last 23 years I have done increasing numbers of bat surveys on a consultancy basis, firstly part-time, then full time from December 2003.
- My experience at applying-for European Protected Species Licences with respect to bats spans approximately 20 years.
- From 2003 to 2008 I represented the bat groups of the north-west region at national bat worker meetings, hosted by the Bat Conservation Trust.
- I regularly communicate with the Ecologists who advise local authority planners, especially the Greater Manchester Ecology Unit and West Yorkshire Ecology raising concerns about practice and protocols.

Other experience includes:

- Attending bat-worker conferences every year since 1988 (mainly England, some in Wales) plus additional symposia on specific topics such as mitigation and woodland bats.
- Helping with winter surveys of underground hibernation sites in Clwyd and north Lancashire..
- Participating in "Bat Detector Workshops" during the 1990s in different areas of the country, concerned with locating bat roosts and feeding sites/commuting routes.
- Sitting on local council "Wildlife Advisory Groups" (WAGs) in the Greater Manchester area from the early 1990s until around 2005.
- Helping local authorities and the Greater Manchester Ecology Unit formulate their Biodiversity Action Plans for bats.
- Administering the bat casework for English Nature (now Natural England) in the South Lancashire and Greater Manchester areas over 1998-2000.
- Assisting with research involving mist netting, harp trapping and radio-tracking.

- Continuing to attend courses run by recognised experts to ensure I stay up-to date both with respect to bat survey-work and conservation, and issues such as health and safety.
- Re-passing the Construction Site (CITB) Operatives test in June 2017 and last updating my confined spaces training in 2006.
- Contributing to the Bat Conservation Trust's survey standards guidelines.

Other ecological experience includes:

- Bird watching for fun since 1982 with a general interest in wildlife, ecology and conservation for a similar period.
- Attending short courses and field training with respect to grasses, flowering plants, British mammals including water voles, reptiles and amphibians, non-native invasive plant species, Extended Phase 1 Habitat Surveying, National Vegetation Classification, Environmental Impact Assessment and use of GIS.
- Taking part in British Trust for Ornithology breeding bird and associated butterfly surveys annually.
- A year-long sandwich placement assisting with badger research, including radio-tracking.
- Short periods of voluntary work with the Lancashire Wildlife Trust and Royal Society for Protection of Birds.

Appendix 2 - Personally-devised criteria used in assessing risk of roosting (in the absence of obvious evidence at the preliminary survey).

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

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

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

Bat Conservation Trust

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

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

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

^b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended 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. Other boxes are available but the advice of the bat consultant should be sought before selecting one of these.

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

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 unpointed.”



Brick example of Ecosurv Habitat. Can also be faced with stone.

Green and Blue Bat Block/Brick

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



Green and Blue Bat Block/Brick in situ

Forticrete

Available from building supplies merchants



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



Example of Forticrete boxes in situ

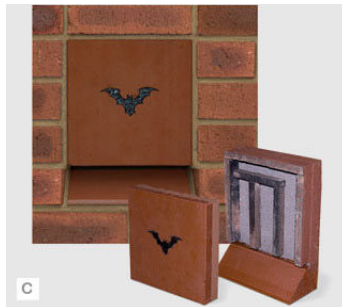
Ibstock Ecozone

<http://www.ibstock.com/sustainability-ecozone.asp>



Enclosed Bat Box B

- Designed specifically for the pipistrelle bat
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work



Enclosed Bat Box C with engraved motif

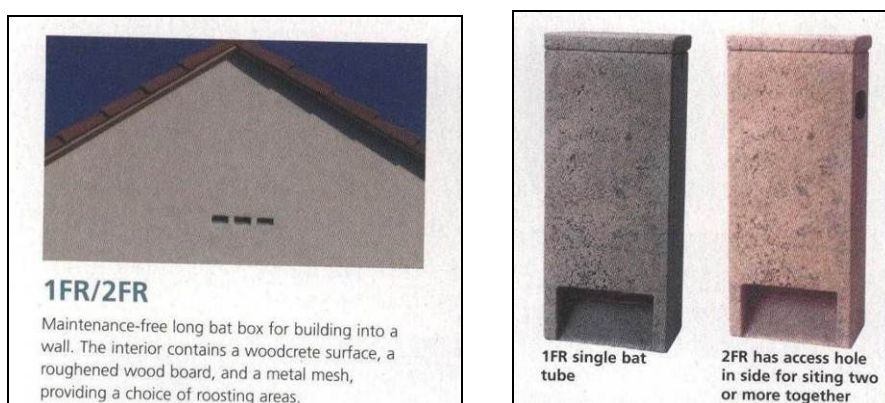
- Designed specifically for the pipistrelle bat
- Available in smooth blue, smooth gold & smooth red
- Attractive "bat" motif
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work

	Sizes	Durability
Eco Habitats for Bats - Technical Data: A	215mm x 65mm	F2 S2 - Fully Frost Resistant
Eco Habitats for Bats - Technical Data: B	215mm x 215mm or 215mm x 290mm	F2 S2 - Fully Frost Resistant
Eco Habitats for Bats - Technical Data: C	215mm x 215mm or 215mm x 290mm	F2 S2 - Fully Frost Resistant



Above: typical unit in situ. Photo © Angela Graham

Schwegler 1FR/2FR



Schwegler 1FR/2FR