Angela Graham Bat Consultancy Service Limited

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

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

e-mail : bat.consultancy@talktalk.net

Angela Graham Bat Consultancy Service

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Preliminary Bat Survey Report for
21 Darkwood Crescent, Chatburn

Commissioned-by:
Beth Yewlett

Survey Date: 6/2/15 Report Date: 13/2/15

Summary.

There was no evidence inside the loft to suggest roosting by bats. Externally there is little bat roosting potential but house sparrows (*Passer domesticus*) are entering where the dry verge is damaged.

The likelihood of use by a bat at any given time, of the one or two small gaps available between roof-tiles is very low, so further investigative survey work is not required.

Apart from ensuring nesting house sparrows aren't disturbed, all that is needed is for contractors to stop work and seek advice from the bat consultant in the unlikely event they discover a bat.

The client should be commended for being willing to provide "sparrow terracing" for the sparrows to nest in.

A purpose-made, self-contained roost-unit is also recommended as an optional, pro-active measure for bats.

Introduction.

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

This is a semi-detached, ex-council house:

Front elevation

Rear elevation

It is in a rural location less than 400m from the River Ribble, and has good linkages with woodland:

Location of 21 Darkwood Crescent illustrated by red star

In rural areas both rivers and woodland provide good feeding and commuting resources for bats of a number of species.

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. 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.

Other species likely to occur within 2 kilometres are the brown long-eared (*Plecotus auritus*) - the species most likely to leave evidence of roosting within lofts, Daubenton's (*Myotis daubentonii*), noctule (*Nyctalus noctula*), whiskered (*Myotis mystacinus*), Brandt's (*Myotis brandtii*) and Natterer's (*Myotis nattereri*).

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 1992 as implemented by the 2010 Conservation of Habitats and Species Regulations. (Further information is available via http://www.legislation.gov.uk/)

As a result of these two pieces of legislation, amongst other things it is an offence to intentionally or recklessly kill, injure or capture bats, disturb bats or damage, destroy or obstruct access to bat roosts. Doing so can result in a custodial sentence. Fines of up to £5000 per bat can be issued in cases of non-compliance with the law. Bat roosts are protected whether or not bats are present at the time.

Under the European legislation, it is necessary for a development to maintain the favourable conservation status of bats in their natural range. This has generally been interpreted as meaning no net loss of roosts, and it is expected that roosting provision for bats will be made better than or equal to whatever is being lost to development. Wider environmental issues such as changes to feeding and commuting habitat, and lighting, also require consideration. However, the term "roost" in this context, tends to be interpreted to exclude places used opportunistically on a single occasion by just one bat.

Under English legislation (the Wildlife and Countryside Act, as above), a "bat roost" is described as "any structure or place which any wild [bat]... uses for shelter or protection".

Implications.

Where a development will potentially impact on the favourable conservation status of bats in their natural range, a European Protected Species Licence is required before the roost can be interfered with in any way. It takes approximately 7 weeks for these to be issued once the application has been submitted. The application includes a Method Statement, and this along with the licence itself forms a legally binding document.

European Protected Species licences are issued providing planning permission has been granted, where appropriate.

Three conditions have to be met in order to obtain a licence and planning authorities are now required to apply the same 3 tests before granting planning consent:

- 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".

Accordingly, planners must now satisfy themselves before issuing planning consent that they have enough information to conclude that either the project will not have a negative impact on the favourable conservation status of bats, or if it seems likely it will, then appropriate mitigation and compensation measures will be employed to ensure this does not occur.

The mitigation and compensation measures would include appropriate timing and methodology for the work including details of how the bats will be provided-for in the long term.

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 (http://www.naturalengland.org.uk/ourwork/planningtransportlocalgov/spatialplanning/standingadvice/advice.aspx).

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. Where this is in doubt it is necessary to seek appropriate advice and licencing before commencing any work on site.

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. Assuming good-quality bat survey work had been carried-out before the commencement of the project, and its recommendations followed, it would be unlikely that the discovery of bats during the course of the work would be considered to be "reckless" interference.

Additional Relevant Legislation and Policy.

Section 40 of the Natural Environment and Rural Communities Act (NERC) of 2006 requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty', which relates to section 74 of the Countryside and Rights of Way Act 2000 (CROW).

The aim of the biodiversity duty is to raise the profile of biodiversity in England and Wales, so that the conservation of biodiversity becomes properly embedded in all relevant policies and decisions made by public authorities.

Accordingly, certain more vulnerable habitats and species are the subject of National and/or Local Biodiversity Action Plans. Some bat species are covered by such plans.

(http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx provides more information)

Survey

I made a daytime visit on 6/2/15 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 being involved with bat survey work for 27 years and consultancy work for 18 years, it is always my objective to carry-out my work in a manner consistent with accepted Good Practice Guidelines (1) and consistent with the code of practice of the CIEEM. I hold Natural England Class Licences CL16 and CL18 (Registration CLS03475). These cover me for consultancy/scientific and Volunteer Bat Warden work, surveying hibernation sites and training others. I have a supplementary licence to photograph bats in roosts and disturb barn owls (2014/SCI/0160). My credentials are expanded-upon in Appendix 1.

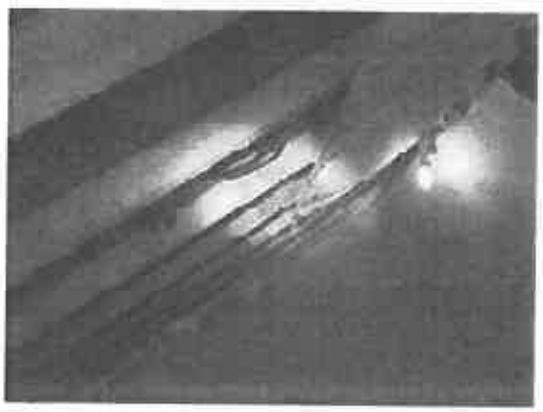
As far as possible, I surveyed the building inside and out with the aid of surveyor's ladders, million candle-power torch, camera with 6x optical zoom and binoculars (10x50 and 8x42). 10x50 binoculars and a fibrescope (6 and 13mm heads, extendable to 2m) were also available if needed.

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

Findings.

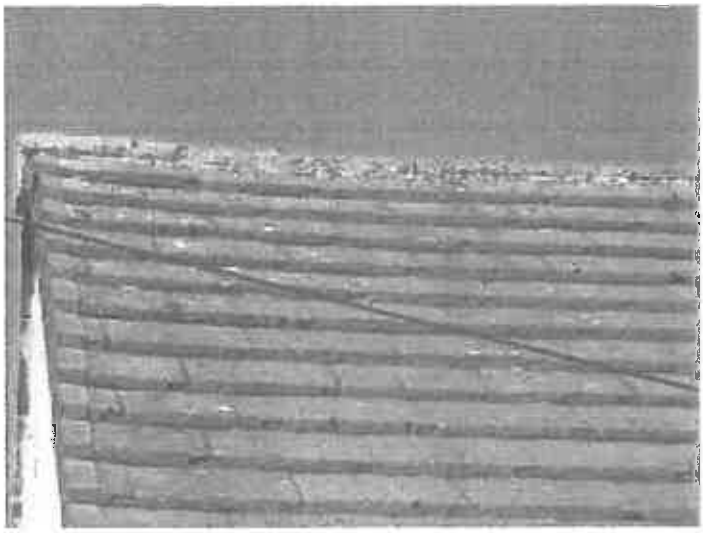
The loft, which is insulated at floor-level, was quite cluttered but the gable end and area below the ridge beam, where signs of bat occupation are most likely to be found, could be inspected easily. There was no evidence to suggest bats had been present.

The roof has been lined with a variety of materials in a fairly ad hoc manner:



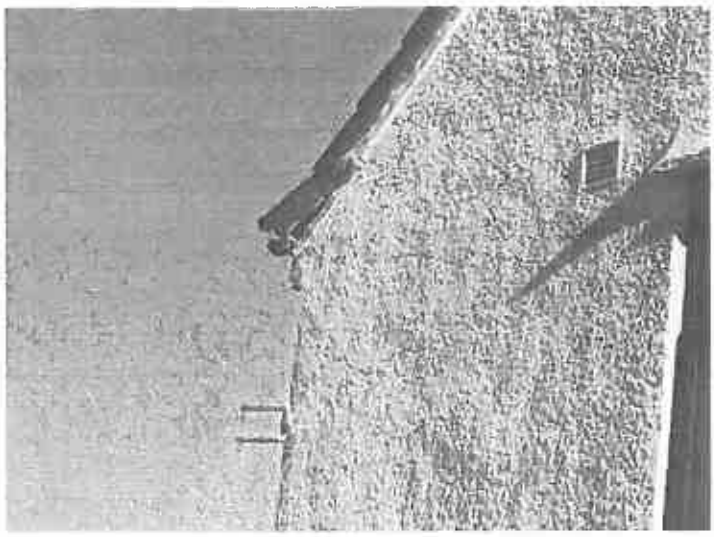
There were obvious defects that would allow any bats roosting between the tiles and lining material to access the loft.

Externally however, the tiles are closely-fitting apart from one or two very small gaps:



The eaves and those of the single-storey, flat-roofed out-house close to the gable end, were well sealed.

The dry verge however is defective and provides a gap where a house sparrow was seen to enter:



Two houses across the road have sparrow-terracing fitted and house sparrows were coming and going. The sparrow terracing is shown below:

Conclusions.

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

There was almost no roosting potential for bats associated with this house, just one or two very small gaps between roof-tiles, which seem unlikely to be attractive to bats and at most might be used by an individual on a casual basis.

No further survey work is needed unless the development is delayed for a significant period of time.

House sparrows appear to be intending to nest at the eaves where the dry-verge is defective.

A consortium of organisations, via their report on "The population status of birds in the UK: Birds of Conservation Concern 3 (2009)" have given the house sparrow "red" status, on a scale of "red" to "green", where red is of the highest conservation concern.

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 but can extend a number of weeks either side of this depending on the species concerned and weather conditions in that particular year.

The home owners across the road have provided sparrow terracing for sparrows to nest in. The client is amenable to doing likewise and has been provided with information on some of the types available and suppliers.

Appendix 3 illustrates commercially available, purpose-made, self-contained roost units that can be installed in the wall/s of the new build to provide a roosting place for bats. To do this would be a commendable pro-active measure.

Recommendations.

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

1. If it is certain sparrows are not yet nesting, the defect at the dry-verge should be blocked.
   Reason: The opportunities to start the development would be limited by the presence of nesting birds because it would constitute an offence to start work while a nest was being built or used.

2. Consider putting up sparrow terracing, as far as possible from the gable end where the development will take place.
   Reason: The house sparrow is a high priority species of conservation concern so an alternative nesting place should be provided.

3. Ensure contractors should be advised that, in the unlikely event a bat or droppings that may have come from a bat are found, work **must** stop immediately. 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.
   Reason: They have a legal obligation to do this.

4. Consider installing one or more bat roost units in the new build (see Appendix 3).
   Reason: As a proactive measure to help bats.

5. If the development is not underway by May 2016, have the survey-work updated.
   Reason: In case new potential roosting places for bats have become available.

References.

1. Hundt L. (2012). Bat Surveys: Good Practice Guidelines - Second Edition. Bat Conservation Trust.
2. RSPB et al. "The population status of birds in the UK: Birds of Conservation Concern 3 (2012)".

Appendix 1 - Angela Graham's Experience.

- I hold Natural England Class Licences CL16 and CL18. These cover me for consultancy/scientific work, work as a Volunteer Bat Warden and allow me to train 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) and disturb barn owls (2014-4525-SCI-SCI).
- I'm a member of The Chartered Institute of Ecology and Environmental Management and I report concerns about standards to them on an increasing basis.
- 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 27 years, initially as a volunteer with the Nature Conservancy Council (NCC) - first licenced in 1989 - and as a founder member of the South Lancashire Bat Group (1987). 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.
- Over the last 19 years I have done increasing numbers of bat surveys on a consultancy basis, firstly part-time, then-full time from December 2003.
- I am experienced at applying-for European Protected Species Licences with respect to bats, especially common pipistrelles.
- From 2003 to 2008 I represented the bat groups of the north-west region at national meetings of the Bat Conservation Trust.
- I regularly communicate with the Ecologists who advise local authority planners, especially the Greater Manchester Ecology Unit, raising concerns about practice and protocols.

Other experience includes:

- Attending bat-worker conferences every year since 1988 plus additional symposia on specific topics such as mitigation and woodland bats.
- Helping with winter surveys of underground hibernation sites.
- 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, including the plan for Bolton.
- 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 May 2012 and updating my confined spaces training in 2006.
- Contributing to the Bat Conservation Trust's survey standards guidelines.

Appendix 2 - Criteria used in assessing risk of roosting (in the absence of obvious evidence of roosting).

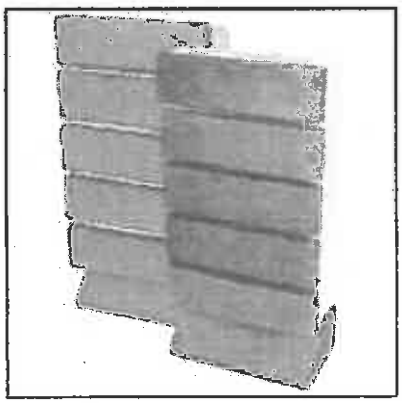
Risk of roosting	Definition	Suggested Action
Nil	Whole of structure/tree can be seen well enough to be sure there are no roosting opportunities.	No need to consider bats further unless development is delayed and potential roosting places might develop in time.
Minimal/ negligible	All or most of structure/tree can be seen well enough to suggest (but not confirm with 100% certainty) there are few, if any, places where bats could roost and/or the location does not provide easy access for bats to their insect prey, either in the immediate vicinity and/or via links with the wider natural environment.	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 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 prey items, either in the immediate vicinity and/or via links with the wider natural environment.	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 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. My personal view is that it may be possible to by-pass such a survey if the timing and methodology (including alternative provision of potential roosting places for bats if any will be lost) can be planned to ensure no harm comes to bats and there is no reduction of appropriate roosting places available to them in the future. As pipistrelle bats in particular can change roosts frequently, often leaving no signs of their presence, this could be better all-round than carrying out a single survey that may provide little additional useful information. Basic precautions will be required at the time of the work irrespective of the findings of any additional survey work.

Moderate/ medium	A small number of openings are present and at least some seem likely to provide good conditions for roosting bats, and/or a loft/hay-loft/cellar is present that appears to have good qualities for roosting but no evidence of bats has been found at the time; and/or the location (as above) may limit the attractiveness to bats, but it is uncertain to what extent.	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. It is likely that more than one survey at dusk or dawn will be necessary, and possibly a repeat day-time inspection, including lofts/hay-lofts. In the case of cellars and equivalent winter inspection is necessary.
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 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.) 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 will 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.

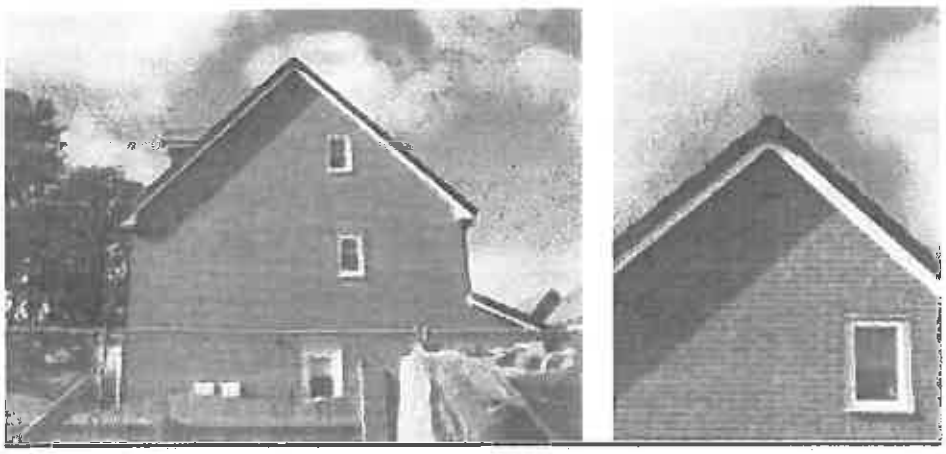
Appendix 1 – examples of available bat roost units

EcoSurv Habibat
http://www.ecosurv.co.uk/product/habibat-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."

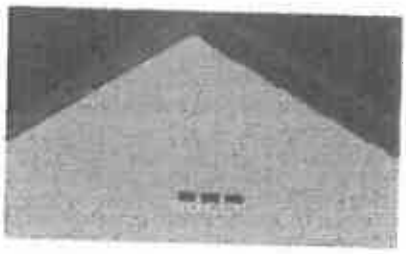


Brick example of Ecosurv Habibat. Can also be faced with stone.



Above: typical unit in situ. Photo © Angela Graham

Schwegler 1FR/2FR



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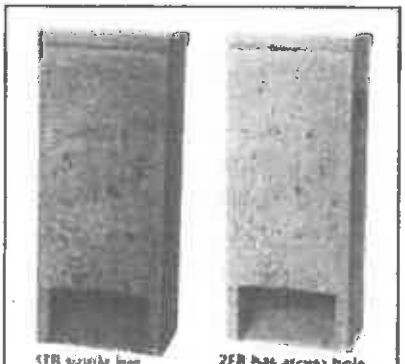


1FR single bat tube

2FR bat access hole in wide for using two or more together

Schwegler 1W1

Summer & Winter Batbox 1WI

for flush installation into walls of buildings and structures

The 1WI is usually set into an external wall or incorporated in the masonry and then rendered flush with the surface so that only the entrance is visible. Easy for integration into insulation when new buildings are constructed or when renovation work is taking place. In such cases use of the holes and screws/plugs provided. Its rear of the box is fitted with a fine gauze, which helps for example, to prevent any unwanted items or material from entering the box and also gives the animals a secure place on which to roost

The 1WI has been designed to provide many decades of use in nature conservation.

Maintenance: self-cleaning and therefore maintenance-free

Interior: the interior has a variety of different surfaces at various heights, from which the bats can hang. Along with certain climatic advantages this arrangement enables the individual species to find a suitable roost.

Exterior: the funnel-shaped entrance area is provided with small steps offering a good foothold, making the box more acceptable, especially for inexperienced younger animals.

Colour: the one-piece box is supplied unpainted.

Material: weather-resistant and air-permeable wood concrete

Dimensions:

Height: 54.5 cm

Width: 34.5 cm

Depth: 9.5 cm

Weight: 15.0 kg

Order no. 00 756/7

Wall Bat Box Suppliers

Schwegler woodcrete:

NHBS: http://www.nhbs.com/bat_boxes_eqcat_421.html

Envisage Wildcare. 01793 724848:
http://www.wildcareshop.com/Products_Results.php?pageNum_WADAProducts=0&totalRows_WADAProducts=25&Search=1&ProductCategoryID[]=5

Jacobi Jayne: http://www.livingwithbirds.com/nest-boxes-by-species/bats/

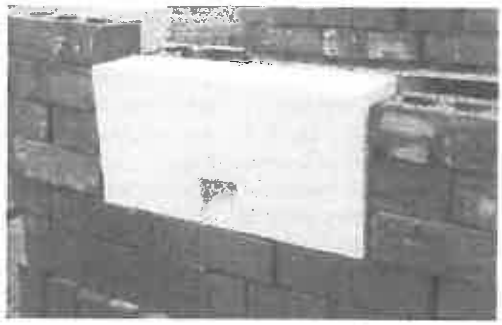
Other:

Habibat. 01642 724800: http://ecosurv.co.uk/habbitat%20range.html
Also available from NHBS. (See above.)

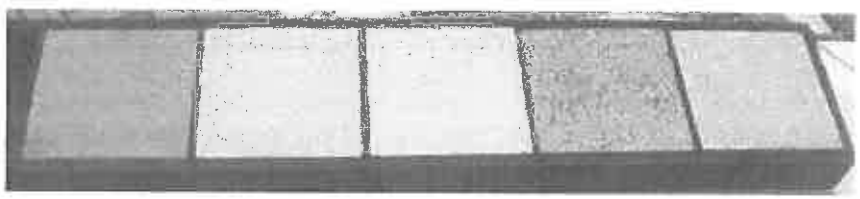
Forticrete: http://www.forticrete.co.uk/products/184/bat-boxes.html

Forticrete

http://www.forticrete.co.uk/products/184/bat-boxes.html.



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



Photos above © Angela Graham

"Forticrete's boxes have been designed to be fitted to your property easily. Suitable for new build construction or renovation work where there is a requirement to provide a habitat for Pipistrelle bats."