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**Bat Survey Report (dusk-emergence-survey):
Agricultural building at Scott House,
Greenmoor Lane,
Knowle Green,
Preston,
PR3 2YR**

OS grid reference:
SD 6392 3716

Commissioned-by:
Laura Proos

Survey Date: 31/7/24
Previous surveys: day-time - 7/11/23

Report Date: 5/8/24
Previous reports: day-time - 8/11/23

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N.b. Copywrite applies to all my reports and they must not be altered in any way whatsoever by anyone other than myself, or combined with any other report/s, irrespective of who wrote them, without the proposed changes being submitted to me in writing and agreed by me in writing.

Summary.

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

Unsurprisingly in a rural location of high-quality bat habitat like this, a variety of bat species were recorded at this dusk-emergence-survey. No bats emerged from or entered the building however.

The roosting potential isn't so great that additional bat activity survey work is needed before the development can go ahead, but if the building is still standing in May 2025 the bat activity survey work should be updated.

As individuals and small numbers of bats change roost frequently so could have been missed at the time of this bat activity survey work, roof-slates must be removed with appropriate care by hand. This 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 bats; and be competent to recognise bat droppings if present. If there is any doubt about their expertise with respect to bats, the bat consultant should provide a tool-box-talk before work commences.

Contractors must understand that if at any time a bat or droppings that may have come from a bat are found work **must stop immediately**. They have a legal obligation to do this. As far as practicable the feature that was sheltering the bat/s should be replaced. Further advice **must** then be sought from the bat consultant before work continues, even if the bat has flown off or droppings appear old.

As roosting potential will be lost to the development and in this location a range of bat species could benefit from provision being made for them, to accord with the principles of Biodiversity Net Gain, alternative potential roosting places should be provided for bats.

Swallows have nested here in previous years so appropriate beams, similar to those present currently, or additional ledges on walls, should be provided inside the building, with open access available for birds in flight, over the top of the doors for example.

As nesting by other birds has been taking place recently, it must be borne in mind that birds' nests are legally protected throughout the nesting process. The main accepted bird nesting season is March to August inclusive.

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

Introduction.

I was engaged to undertake a dusk emergence survey of this building further to my day-time survey on **7/11/23**.

At that time, I was under the impression the building was being extended and converted into an American Barn type stables block. It seems actually this is more of a demolition and rebuild, which is unsurprising given the construction-style and condition of the building.

At that survey no evidence of roosting was found inside the building, but some potential roosting potential were identified, thought to be at low risk of use by bats, pending a bat activity survey.

This report should be read in conjunction with the report of the day-time survey.

Survey.

I returned on **31/7/24** to carry out the dusk emergence survey.

Immediately prior to the emergence survey I rechecked the interior of the building and assessed the outside from the point-of-view of positioning infra-red recording equipment.

I had 2 assistants with me for the dusk-emergence-survey. We took up fixed positions to watch for bats leaving the building. See Fig 1 below. We all had the use of heterodyne “bat detectors” to help alert us to the presence of bats and to help us distinguish the species present, and synchronised watches to help us piece together the flight paths followed by bats.

Watches are checked as quickly as possible after sighting a bat and times are recorded to the second.

The usual aim of the survey is to position surveyors so that even if areas of roof cannot be seen directly, the building is covered well enough that, by a process of elimination, it can be worked-out whether or not bats emerged or arrived from off-site. This becomes more difficult when conditions darken as the survey progresses.

Accordingly, I also employed four Canon XA10 camcorders with supplementary infra-red lighting to assist with observations in poor light conditions. See Fig. 1 below. Simple heterodyne bat detectors were used alongside the cameras at low volume to provide basic sound recordings of bat activity.

In addition, I placed Anabat Swift x 2, and Anabat SD1 x 2 detectors around the building. See Fig 1 below. These record bat calls for analysis on computer later. They are extra tools for helping to confirm the species present.



Fig. 1.

Key: Approximate locations of surveyors shown by red stars, approximate locations of recording devices shown by yellow crosses, approximate location of infra-red camcorders shown by orange diamonds.

Findings.

There was no evidence to suggest bats had been inside the building, despite open access for them in flight.

Two old swallows' nests had been used by other nesting species, most likely to be the wren. One of these had been already noted at the day survey.

No new swallows' nests were present.

The hedge to the south-east, completely obscured the view of the building from that side, though it also effectively prevented bat emergence along that side of the building:



The view of the south-eastern end from the south-west was little better:



The three other aspects could be seen well or reasonably well:



As before there were some raised slates bats could potentially roost beneath.

The main results of the dusk-emergence-survey are shown in Table 1 below:

Table 1. Summary of surveys and significant findings

Date	Survey type	Sunset / sunrise time	Time of survey	Conditions °C/weather	Comments
31/7/59	dusk	21.09	20.50 – 22.50	21°C at start, high cloud, still 19.6°C at end	No bats emerged. Few bats actually seen. Most just heard on detector in passing. Most numerous species recorded was the noctule passing overhead from 21.41. See Appendix 1. A few common pipistrelle were recorded from 21.44 and one soprano pipistrelle at 22.16. A *Myotis species was recorded 3 times, first at 21.41. A silent bat was seen over the building at 22.04, thought likely to be brown long-eared.

Survey type key: **dusk** = dusk emergence survey, **dawn** = dawn re-entry survey

*‘Myotis’ bats – bats of the genus *Myotis*, which includes the Daubenton's (*Myotis daubentonii*), whiskered (*Myotis mystacinus*), Brandt's (*Myotis brandtii*) and Natterer's (*Myotis nattereri*).

Conclusions/Discussion

Unsurprisingly for a rural location like this a variety of bat species were recorded, but no bats emerged on this occasion.

As individuals and small numbers of bats change roost frequently so could have been missed at the time of this bat activity survey work; roof-slates must be removed with appropriate care by hand. This 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 bats; and be competent to recognise bat droppings if present. If there is any doubt about their expertise with respect to bats, the bat consultant should provide a tool-box-talk before work commences.

Contractors must understand that if at any time a bat or droppings that may have come from a bat are found work **must** stop **immediately**. They have a legal obligation to do this. As far as practicable the feature that was sheltering the bat/s should be replaced. Further advice **must** then be sought from the bat consultant before work continues, even if the bat has flown off or droppings appear old.

As roosting potential will be lost to the development to accord with the principles of Biodiversity Net Gain, alternative potential roosting places should be provided for bats.

Given the number of bat species recorded, provision of these boxes stands a high likelihood of improving the roosting situation for bats.

As the new build will be for stabling horses and I'm recommending open access in flight be provided so swallows can gain entry to nest, I'm recommending boxes be provided for bats both inside and outside the building. I recommend 4 in total, two per gable end, one inside and one outside.

As far as the construction allows, these should be integrated bat boxes. See Appendix 2.

Wall-mounted is a less favourable alternative. If these are used the type should be approved by the bat consultant, but I recommend boxes constructed of concrete mixed with recycled polystyrene by Greenwood Ecohabitats:

<https://www.greenwoodsecohabitats.co.uk/shop>,
<https://www.greenwoodsecohabitats.co.uk/bats>

Any durable, open-bottomed box of woodcrete/woodstone is likely to be acceptable however. There are many designs and suppliers available.

For swallows, there should be beams similar to those present currently, or additional ledges on walls inside the building.

As other nesting by birds has been taking place, it must be remembered that birds' nests are protected throughout the period they are being constructed and used, and while fledglings are still present in the vicinity. The main accepted bird nesting season is March to August inclusive.

Care should be taken when planning any lighting on the site, to ensure any potential roosting/nesting features provided are appropriately shielded. (1)

Recommendations.

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

Ensure contractors understand that if at any time a bat or droppings that may have come from a bat are found work **must** stop **immediately**. They have a legal obligation to do this. As far as practicable the feature that was sheltering the bat/s should be replaced. Further advice **must** then be sought from the bat consultant before work continues, even if the bat has flown off or droppings appear old.

Provide for bats and swallows in the new build as outlined above.

Bear in mind that birds' nests are legally protected throughout the nesting process.

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

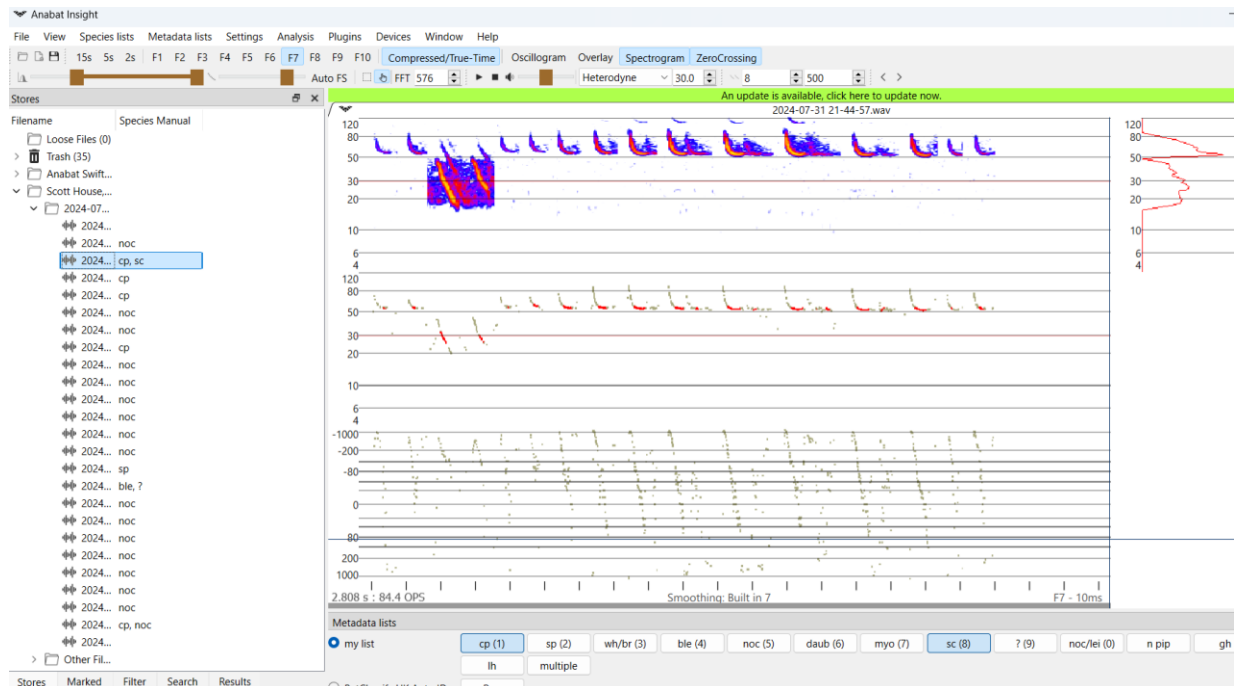
If the building is still standing in May 2025 the bat activity survey work should be updated.

References.

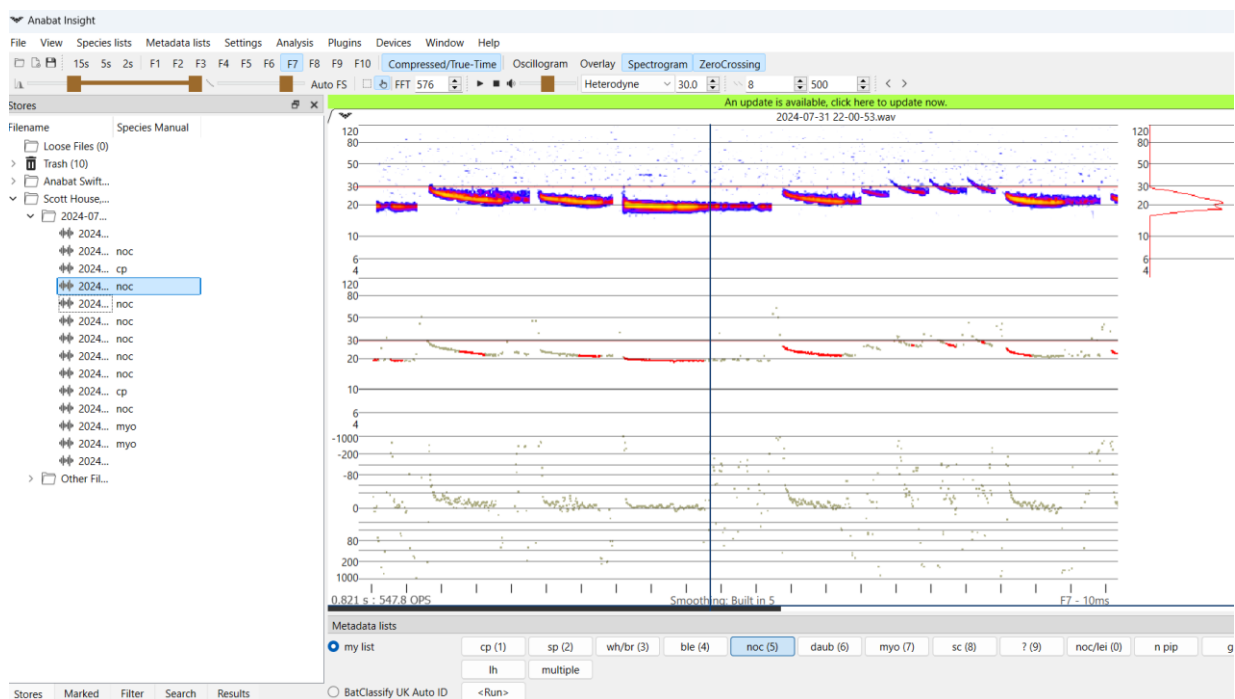
1. Bat Conservation Trust (2018). Guidance Note 8/18: Bats and Artificial Lighting in the UK.

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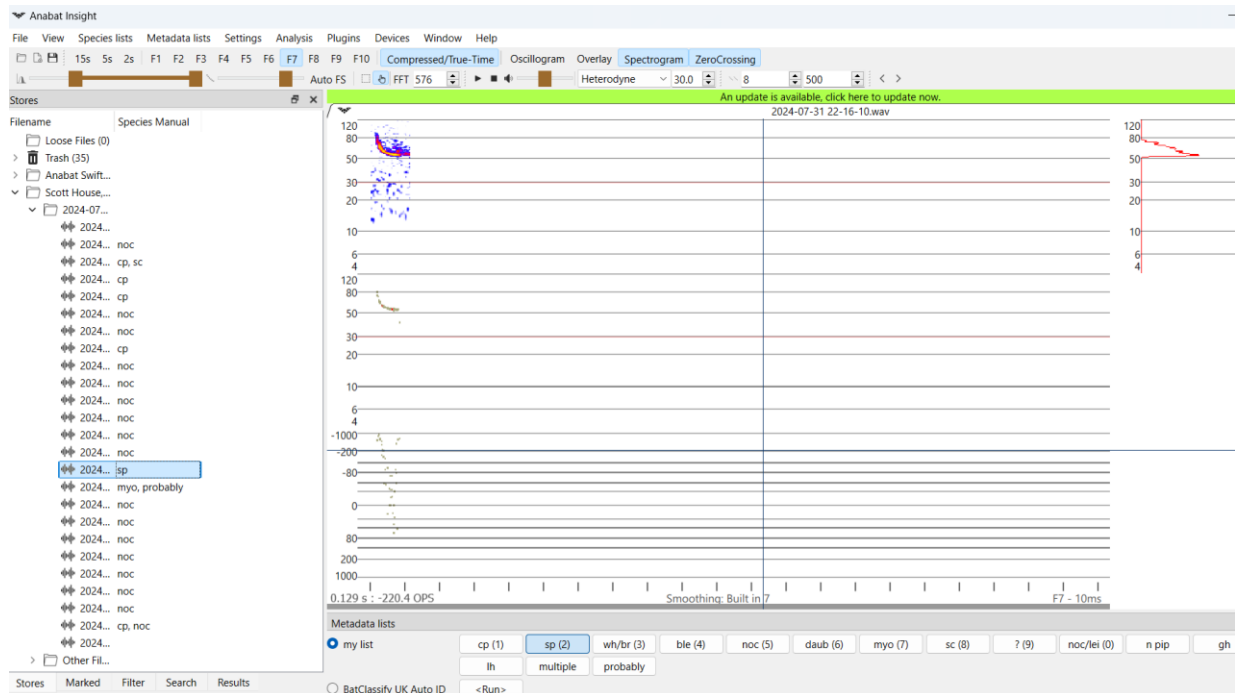
Appendix 1 - Example sonogram/s recorded at dusk/dawn survey



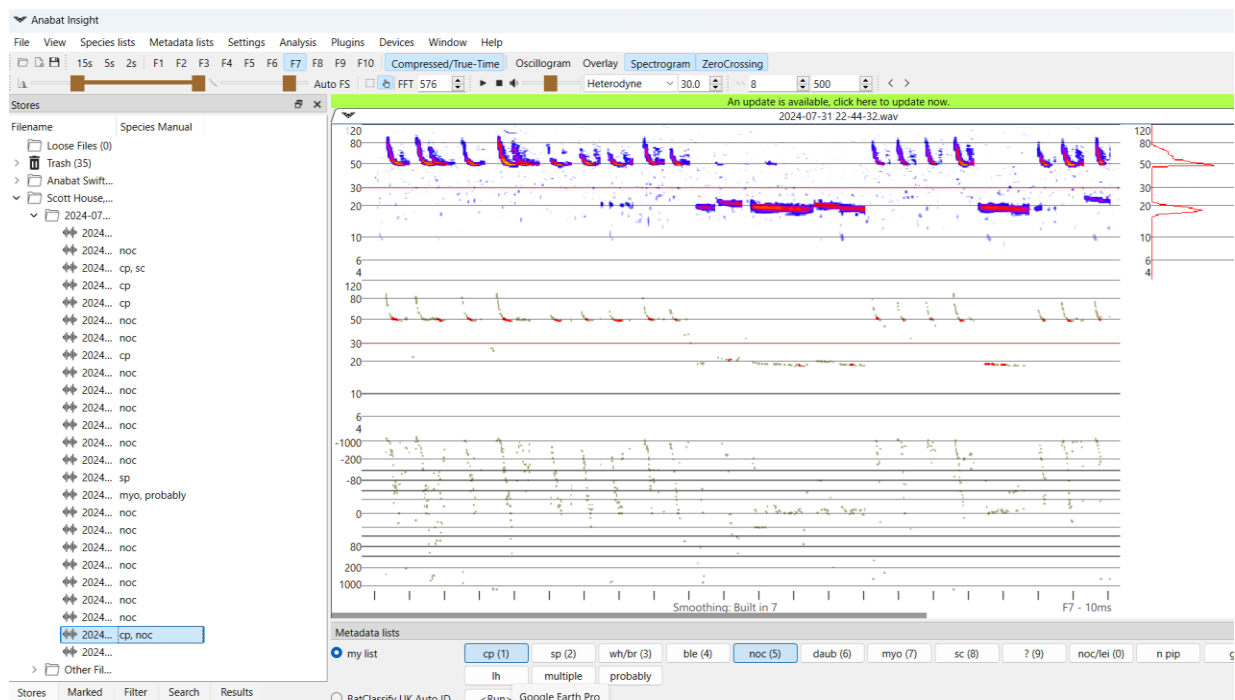
21.44. Common pipistrelle plus social call on detector 4



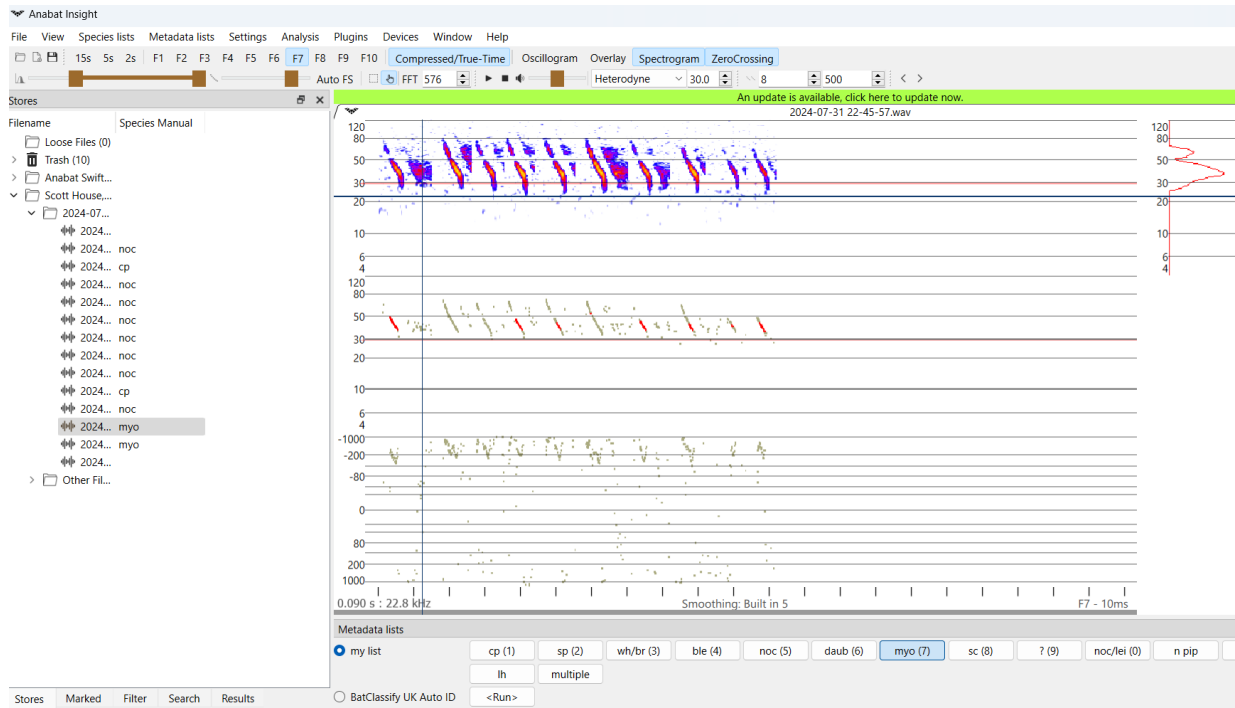
22.00. Noctule plus feeding buzz on detector 4



22.16. Soprano pipistrelle on detector 2.



22.44. Common pipistrelle and noctule on detector 2



22.45. Myotis bat on detector 4

Appendix 2 – examples of available integrated bat boxes

N.b. An internet search for "integrated bat boxes" will bring up types and suppliers of these boxes but advice from the bat consultant should be sought before they are ordered.

EcoSurv Habibat

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

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



Example of Habibat boxes Can also be faced with stone.

Ibstock Ecozone

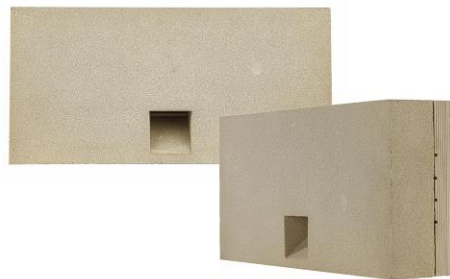
<https://www.ibstock.co.uk/product/ecohabitats/bat-box?page=1&>





Above: typical unit in situ. Photo © Angela Graham

Bat Box - Concrete



Cast Stone.

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



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



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

Green and Blue Bat Block/Brick

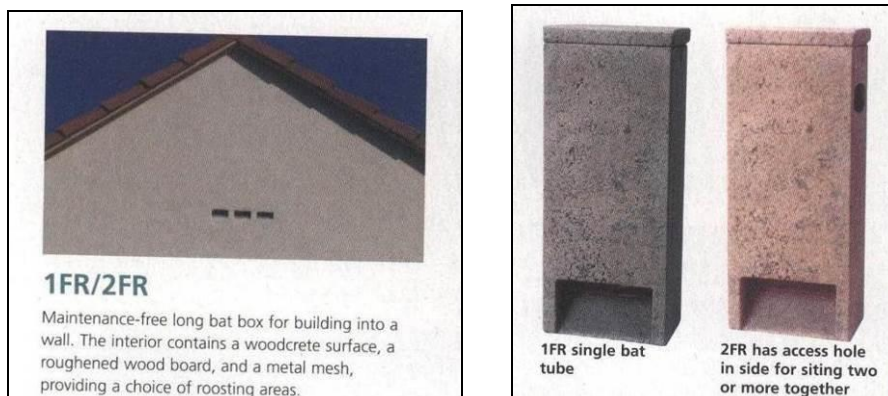
<https://www.greenandblue.co.uk/products/bat-block-bat-brick>



Green and Blue Bat Block/Brick in situ

Schwegler 1FR/2FR

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



Schwegler 1FR/2FR