

Biodiversity Enhancement at Belle Vue – Bats

Ecology Bat Assessment

Biora was commissioned in August 2018 by Rhodar Limited to conduct a Preliminary Bat Roost Assessment, followed by a single Bat Roost (Dusk) Survey of a building, 'Indulge Suite', at Hyde Road, Belle Vue, Manchester, M12 5AL. Surveys were commissioned to support in advance of demolition of the existing building.

Preliminary Roost Assessment of Indulge Suite assessed the building as having Negligible potential to support bat roosts.

Very low bat activity was noted at this site during the Bat Roost Survey. No bats were recorded roosting or foraging at this site and only four bat passes were recorded throughout the whole survey: all four were of Noctule bats passing high overhead. It should be noted that Noctules are primarily tree-dwellers and occur only rarely in buildings (typically old timber structures).

Survey Results

Below extracts taken directly from the survey.

Indulge Suite, Hyde Road, Belle Vue –Bat Surveys Report

10th September 2018

4.0 SURVEY RESULTS

4.1 Desk Study Results

- 4.1.1 The MAGIC website did not return any sites statutorily-designated for nature conservation within 2 km of the survey area. A Local Nature Reserve, Highfield Country Park, is to the south but it is over 2km from the site.
- 4.1.2 The GMEU records' search returned results of roosting Brown Long-eared Bats *Plecotus auritus* and Soprano Pipistrelle *Pipistrellus pygmaeus*, and activity of Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle from within 1km of this site, as well as records of Dunnock *Prunella modularis*, Song Thrush *Turdus philomelos* and Hedgehog *Erinaceus europaeus*. The NBN gateway search returned no records of bats or other protected species.

4.2 Field Survey Results – Preliminary Roost Assessment

- 4.2.1 Preliminary Roost Assessment assessed the building as having **Negligible** potential to support bat roosts, although it should be noted, that the score was effectively borderline with the **Low** potential assessment category (see **Table 3** below). Given the presence of features on the building suitable to support roosting bats, the presence of some bat foraging habitat (woodland) nearby and desktop records of bat species within 1k over the past ten years, Lead Surveyor Dr David Hackett determined that a single dusk Bat Roost Survey of the building should be undertaken to ensure that no bat roosts were present within this building prior to demolition.

TRIGGER INDICES	CATEGORY	T1 VALUE
A) Location, habitat and environmental context of structure		
T1: General location	Dense urban	0.33
T2: Foraging opportunities within 250 m	Poor	0.33
T3: Foraging opportunities within 5 km	Poor	0.33
T4: Commuting opportunities	Poor	0.33
T5: Cover in vicinity of structure	Poor	0.33
T6: External lighting in vicinity of structure	Moderate level	0.33
T7: Number and character of nearby buildings	None or all modern	0.33

4.3 Field Survey Results – Bat Roost Survey

- 4.3.1 **No bats were observed emerging from this building nor recorded foraging at this site during survey.** Only very low levels of bat activity were recorded, and those were of a single bat species, Noctule *Nyctalus noctula* which is primarily a tree-dwelling species which only rarely roosts in buildings. Four brief records of Noctule were picked up by only one of the two surveyors on site between 20.09 and 21.13. These four passes were the only evidence of bats recorded during the full survey. Details of these records can be seen at **Appendix 2**.

Although the ecologist did not recommend any provision for bats, this is a requirement of planning.

Given the site's location - adjacent to a woodland and proximity to Debdale Park, Nutsford Vale Park and Reddish Vale nature areas – there were lots of potential opportunities for bats foraging in the vicinity. Therefore the Sustainability Manager at Belle Vue got in touch with the local bat group, South Lancashire Bat Group (SLBG) to seek further advice.



Steve from SLBG provided useful insight into a number of known roosts nearby, predominantly common and soprano pipistrelle bat species.

Both of these species roost in tree holes, bat boxes and building cavities.

It was also confirmed that noctule bats feed at Debdale Park, 1 mile away.

Greenwood's Ecohabitats

[Home | Greenwood's Ecohabitats \(greenwoodsecohabitats.co.uk\)](http://greenwoodsecohabitats.co.uk)

Greenwood's Ecohabitats Boxes were recommended. This is a relatively local company based in Lancashire and the owner is very keen on conservation and sustainability.

They are made from Ecostyrocete - taking used polystyrene that was heading to landfill, shredding and mixing it with cement, then moulded to make an insulated and durable home for wildlife.

Traditional wooden boxes can be draughty, leaky, prone to rot and have a limited lifetime of around 10 years.

As an Ecostyrocete box should last for decades, providing a home for generations.

Steve at SLBG noted the boxes have a good take up rate for bat occupation too.

Photographs of Greenwood's Ecohabitats installed



Ecostyrocrete Products Available

Please say, when ordering, if you want the bat boxes for walls or trees, as they can be made with a flat or round back.

COLOURS AVAILABLE

As each of the bat boxes is handmade, the colour may vary slightly from that shown.



Brown



Buff



Charcoal



Pastel Red



Sage Green



Terracotta



Uncoloured

FIXINGS

All bat boxes are supplied with stainless steel screws/washers with nylon plugs for walls (2 per box) and aluminium nails for trees (3 per box). The hooks are made with stainless steel.

SINGLE CREVICE BAT BOX



£36

Individually Handmade - Specifications are in cm and approximate.

External: 43 high x 21.5 wide x 6.8 deep

Internal: 41 x 16.5 x 1.8 crevices @ 1

Weight approx. 5kg

Designed for small groups of crevice dwelling bat species, such as Common and Soprano Pipistrelles.

TWO CREVICE BAT BOX



£48

Individually Handmade - Specifications are in cm and approximate.

External: 43 high x 21.5 wide x 6.8 deep

Internal: 41 x 16.5 x 1.8 crevices @ 2

Weight approx. 7kg

Designed for small groups of crevice dwelling bat species, such as Common and Soprano Pipistrelles.

THREE CREVICE BAT BOX



£66

Individually Handmade - Specifications are in cm and approximate.

External: 43 high x 21.5 wide x 13.5 deep

Internal: 41 x 16.5 x 1.8 crevices @ 3

Weight approx. 8.5kg

Designed for larger groups of crevice dwelling bat species, such as Common and Soprano Pipistrelles.

FOUR CREVICE BAT BOX



£78

Individually Handmade - Specifications are in cm and approximate.

External: 43 high x 21.5 wide x 16 deep

Internal: 41 x 16.5 x 1.8 crevices @ 4

Weight approx. 10kg

Designed for larger groups of crevice dwelling bat species, such as Common and Soprano Pipistrelles.

What species of bat use each type of bat box and when?

Key					
* Large well-insulated hibernation boxes may be more successful					
N/A Not applicable; bat boxes should not be considered as replacement roosts					
H Tree hollow-type box, providing a void in which bats can cluster					
C Tree crevice-type box, with 15-35mm crevices					
? Few data on which to base an assessment					
Species	Common name	Summer/ maternity	Summer/ non-breeding	Hibernation*	Notes
Rhinolophus ferrumequinum	Greater horseshoe bat	N/A	N/A	N/A	Horseshoe bats do not use bat boxes.
Rhinolophus hipposideros	Lesser horseshoe bat	N/A	N/A	N/A	
Myotis bechsteinii	Bechstein's bat	Hollow	H		Maternity roosts
Myotis brandtii	Brandt's bat	H	H		
Myotis daubentonii	Daubenton's bat	H	H		
Myotis mystacinus	Whiskered bat	H	H		
Myotis nattereri	Natterer's bat	H	?		
Pipistrellus nathusii	Nathusius' pipistrelle	H	H		
Pipistrellus pipistrellus	Common pipistrelle	Crevice	C/H	C	H are rarely used as maternity roosts.
Pipistrellus pygmaeus	Soprano pipistrelle	C	C/H	C	
Nyctalus leisleri	Leisler's bat	H	H	H?	
Nyctalus noctula	Noctule	H	H	H	
Eptesicus serotinus	Serotine	N/A	N/A	N/A	Not found in boxes
Barbastella barbastellus	Barbastelle	C	?	C?	
Plecotus auritus	Brown long-eared bat	H	H		Maternity roosts
Plecotus austriacus	Grey long-eared bat	H	?		

Extract taken from Bat Mitigation Guidelines 2004 – English Nature

Orientation and location of bat box installation

It is always best to provide a number of different options for bats so that they can choose the most appropriate temperature based on their needs. This can be achieved by grouping a few bat boxes each with a different aspect; two or three boxes is preferable to one, although a single box still has a chance of being used depending on the bat species that use the local area.

Three boxes can be arranged around the trunk of larger trees.

Bat boxes are more likely to succeed in areas where there is a good mixture of foraging habitat, including trees, and a source of water (most maternity roosts are located within a short distance of permanent fresh water such as a stream, pond, river or lake). Bat boxes in areas with few other roosting opportunities are also likely to be more successful.

Bat boxes should also be located close to unlit linear features, such as lines of trees or hedgerows. Bat species use these features for navigation between their roosting sites and feeding grounds and to avoid flying in open and exposed areas. Ensure the bats approach to the box is not impeded, for example by branches – clear away underneath the box so the bats can land easily before crawling up into the box.

Bats are nocturnal and adapted to low light conditions. Artificial light sources should not be directed onto bat boxes or flight paths as most bat species find artificial lighting very disturbing.

An assessment of the site was carried out on 21st September by the Sustainability Manager.

The site plan shows a school campus with several sports fields (green) and a residential area (white). A north arrow points towards the top. A table in the top right corner lists dimensions for various areas.

Area	Dimensions
Residential Area	10.00
Blue Area 1 (Sports Field)	10.00
Green Area 1 (Sports Field)	10.00
Green Area 2 (Sports Field)	10.00
Green Area 3 (Sports Field)	10.00
Green Area 4 (Sports Field)	10.00
Green Area 5 (Sports Field)	10.00
Green Area 6 (Sports Field)	10.00
Green Area 7 (Sports Field)	10.00
Green Area 8 (Sports Field)	10.00
Green Area 9 (Sports Field)	10.00
Green Area 10 (Sports Field)	10.00
Green Area 11 (Sports Field)	10.00
Green Area 12 (Sports Field)	10.00
Green Area 13 (Sports Field)	10.00
Green Area 14 (Sports Field)	10.00
Green Area 15 (Sports Field)	10.00
Green Area 16 (Sports Field)	10.00
Green Area 17 (Sports Field)	10.00
Green Area 18 (Sports Field)	10.00
Green Area 19 (Sports Field)	10.00
Green Area 20 (Sports Field)	10.00
Green Area 21 (Sports Field)	10.00
Green Area 22 (Sports Field)	10.00
Green Area 23 (Sports Field)	10.00
Green Area 24 (Sports Field)	10.00
Green Area 25 (Sports Field)	10.00
Green Area 26 (Sports Field)	10.00
Green Area 27 (Sports Field)	10.00
Green Area 28 (Sports Field)	10.00
Green Area 29 (Sports Field)	10.00
Green Area 30 (Sports Field)	10.00
Green Area 31 (Sports Field)	10.00
Green Area 32 (Sports Field)	10.00
Green Area 33 (Sports Field)	10.00
Green Area 34 (Sports Field)	10.00
Green Area 35 (Sports Field)	10.00
Green Area 36 (Sports Field)	10.00
Green Area 37 (Sports Field)	10.00
Green Area 38 (Sports Field)	10.00
Green Area 39 (Sports Field)	10.00
Green Area 40 (Sports Field)	10.00
Green Area 41 (Sports Field)	10.00
Green Area 42 (Sports Field)	10.00
Green Area 43 (Sports Field)	10.00
Green Area 44 (Sports Field)	10.00
Green Area 45 (Sports Field)	10.00
Green Area 46 (Sports Field)	10.00
Green Area 47 (Sports Field)	10.00
Green Area 48 (Sports Field)	10.00
Green Area 49 (Sports Field)	10.00
Green Area 50 (Sports Field)	10.00
Green Area 51 (Sports Field)	10.00
Green Area 52 (Sports Field)	10.00
Green Area 53 (Sports Field)	10.00
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Green Area 85 (Sports Field)	10.00
Green Area 86 (Sports Field)	10.00
Green Area 87 (Sports Field)	10.00
Green Area 88 (Sports Field)	10.00
Green Area 89 (Sports Field)	10.00
Green Area 90 (Sports Field)	10.00
Green Area 91 (Sports Field)	10.00
Green Area 92 (Sports Field)	10.00
Green Area 93 (Sports Field)	10.00
Green Area 94 (Sports Field)	10.00
Green Area 95 (Sports Field)	10.00
Green Area 96 (Sports Field)	10.00
Green Area 97 (Sports Field)	10.00
Green Area 98 (Sports Field)	10.00
Green Area 99 (Sports Field)	10.00
Green Area 100 (Sports Field)	10.00

Handwritten notes on the plan:

- 2 NO. ASH TREES - PARTICULARLY SUITABLE FOR BATS.
- WILD CHERRY TREE - SOURCE OF FRUIT & BLOSSOM - GREAT FOR WILDLIFE.

The linear woodland on the West boundary of the site was explored and demonstrated good potential foraging habitat containing a variety of species including a number of wildlife rich species such as cotoneaster coriaceus, dog rose, willow leaved cotoneaster, red clover and golden chain.

The neighbouring Belle Vue Speedway was identified as both a noise & light nuisance to the bats so the southern half of the woodland strip was avoided.

2no. young ash trees were found within the most northern area of the woodland, close to the residential housing. Ash trees are importance for biodiversity and are particularly suitable for bats.

In the centre of the woodland with a good canopy for shelter but also with good exposure to the warmth from the sun all day is a Wild Cherry tree. This tree is indicated on the drawing above by X and is deemed the optimum location for a number of bat boxes to be installed.



Floodlights from Speed Way, South of site



Residential area, North West of site



2no. Ash trees



Above: Location of Wild Cherry Tree in relation to site

Left: Wild Cherry Tree

Summary

The following will be supplied to site based on the species of bat found and their roosting numbers, habits and preferences.

- 1no. two crevice bat box
- 1no. three crevice bat box
- 1no. four crevice bat box (suitable for maternity roosts)