



ecosupport



Phase II Bat Surveys

Queens View

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Client:

Eastleigh Borough Council

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1.0 INTRODUCTION

1.1 Background

This document outlines the results of the phase II bat survey carried out by Ecosupport Ltd during August 2022 on the properties known as 30-32 Queens View, Netley. These surveys were required to support a planning application for a development on the site after a PEA conducted identified the building as to be of **low potential** to support roosting bats, therefore highlighting the requirement to undertake one dusk survey (Ecosupport 2022).

1.2 Site Description & Location

The site is comprised of two dwellings, a garage, a convenience store and a food bank with associated land located off 30 - 32 Queens view, Netley, Southampton SO31 5EA (Grid reference: SU45869 08814) (**Fig 1**). Residential properties and associated land bound the site to the east, while the site is bound by Queens view to the north and Castle Road to the west. To the south the property is bound by Netley recreational ground. In the wider landscape the site is located within Netley, a coastal town predominantly comprised of residential properties with scattered patches of recreational grassland and trees.

Figure 1. Aerial image of the site with approximate redline boundary provided (Google Earth, 2022).



1.3 Brief Description of the Proposals

The current proposals are for the demolition of the buildings on site and construction of 18 new dwellings, a ground floor retail unit, vehicle access, parking and associated landscaping.

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019)*

This instrument makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.2 *The Wildlife and Countryside Act (1981) (as amended)*

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

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2.1.4 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

2.1.5 Protection of Badgers Act

The Protection of Badgers Act (1992) relates to the welfare of Badgers (*Meles meles*) as opposed to nature conservation considerations. The Act prevents:

- The wilful killing, injury, ill treatment or taking of Badgers and / or
- Interference with a Badger sett
- Damaging or destroying all or part of a sett
- Causing a dog to enter a set and
- Disturbing a Badger while it is occupying a sett

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF) 2021

Section 15 of the National Planning Policy Framework (NPPF) 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural environment. They should do this by protecting and enhancing sites of biodiversity and minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks.

The plan states to protect and enhance biodiversity plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks. This includes the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them. Plans should identify the protection and recovery of priority species and opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

2.2.2 Local: Eastleigh Borough Council

The Eastleigh Borough Local Plan 2016 – 2036 has a number of policies relating to ecology with the relevant ones listed below;

General Approach

1. The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:

a. protect, conserve and enhance all:

i. international, national and local nature conservation designations;

and

ii. networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character; and facilitate their adaptation to climate change wherever possible;

b. assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);

c. seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and

d. contribute to major elements of the PfSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements (see strategic policy S9).

International Designations

2. Development which is likely (either individually or in combination with other developments) to adversely affect the integrity of an international or European nature conservation site will not be permitted subject only to imperative reasons of overriding public interest and securing any necessary compensatory measures in the absence of alternative solutions. A 'project level' Habitat Regulations Assessment will be required where there are likely significant effects or uncertainty. Any mitigation measures required to ensure no adverse impact must be implemented at the appropriate time.

3. The Council will work with PFSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement with developers a strategic approach to the protection and enhancement of international and European sites from the direct and indirect effects of development. Within Eastleigh Borough this will include:

a. implementing:

i. the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and

ii. the interim and any future New Forest Recreation Mitigation Strategy if required; or alternative agreed site specific measures to address recreational disturbance;

b. preserving the water quality and flows within the Itchen and Hamble, Southampton Water and Solent;

c. protecting the River Itchen SAC, in particular the maintenance and where appropriate restoration of habitats and qualifying species to favourable conservation status (as defined by article 1 of the Habitats Directive); and

d. seek contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.

National and Local Designations

4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:

a. there are no alternative solutions;

b. the adverse effects are unavoidable;

c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;

d. there is an overall biodiversity net gain; and

e. if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.

Priority habitats, protected and priority species and the local ecological network

5. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on priority

habitats, protected or priority species, or on the local ecological network unless it can be demonstrated that:

- a. there are no alternative solutions;
- b. the adverse effects are unavoidable;
- c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;
- d. there is an overall biodiversity net gain; and
- e. if there are any residual adverse effects, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.

Irreplaceable habitats

6. Development will not be permitted if it results in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Buffers

7. Buffers free from development will be provided to designated sites to avoid/mitigate impacts, including recreational impact and impacts on edge habitats, and to maintain dark skies.

Surveys

8. Development will not be permitted unless it can be demonstrated that:

- a. there have been thorough habitat and species surveys;
- b. the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and
- c. the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.'

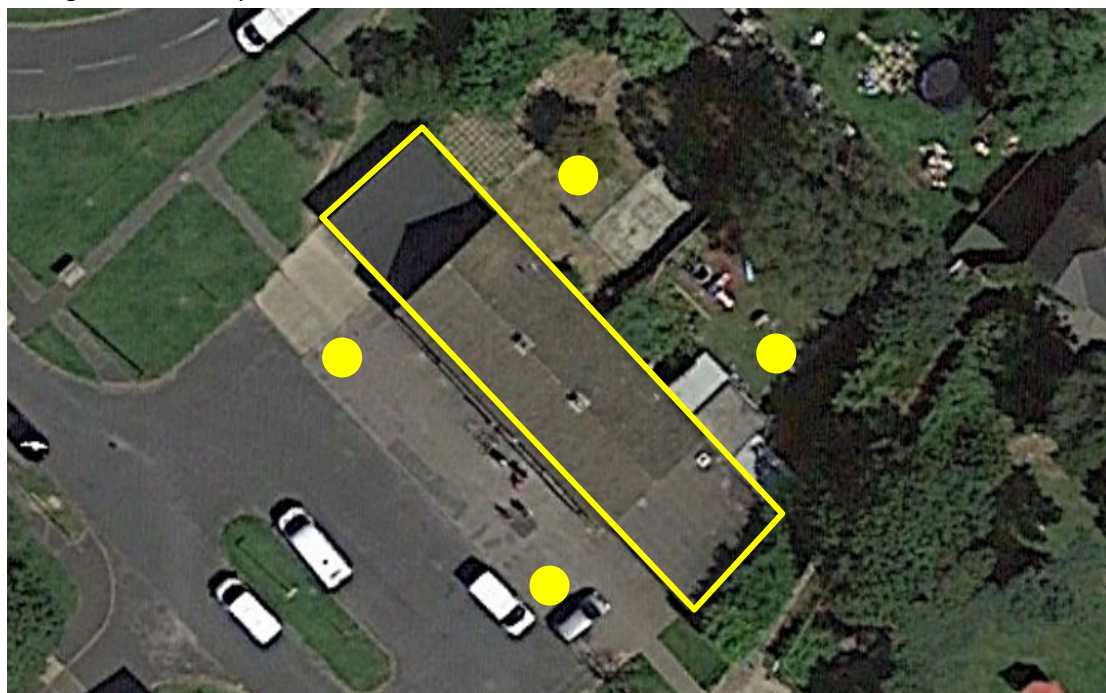
3.0 METHODS

3.1 Emergence Surveys

The bat survey conducted on the 30-32 Queens View property was led by Ashley James with assistance from Sue Waight, Karen Niven and Helen Gillooly (approximate locations of the surveyors indicated in **Fig 2**). Both heterodyne (Bat Box Duet, Peterson D230 and Elkon Batscanner) and time expansion (Anabat Express, Elekon Batlogger) detectors were used for identifying species calls / analysis of calls via sonogram (where required). The dusk emergence survey began approximately 15 minutes prior to sunset and continued until approximately 1 hour and 30 minutes after sunset. The following information was recorded on during the survey:

- Time of call registration
- Species (if possible to identify using heterodyne detector)
- Location / activity
- Direction of flight (if seen)

Figure 2. Approximate locations of the surveyors that surveyed the property (yellow) during the dusk emergence bat survey.



3.2 Limitations

There were not considered to be any significant limitations to the survey, with it undertaken during the accepted survey season (Collins (ed) 2016), during suitable weather conditions and with all access points covered.

4.0 RESULTS

4.1 Emergence / Re-entry Surveys

The results of the bat emergence survey along with other relevant information of survey conditions are provided in **Tables 1** and **2** below.

Table 1. Relevant information on survey conditions recorded.

Date	Temp (°C)	Cloud Cover (%)	Wind (beaufort scale)	Start Time	Sunset Time	Finish Time	Additional Information
22/08/2022	18	100	1	19:55	20:10	21:40	Intermittent light drizzle

Table 2. Results from dusk emergence survey on 30-32 Queens View. HNS = Heard Not Seen.

Survey Date	Recorded Bat Roost(s)?	Bat Activity on Site		
		Species	First Pass	Last Pass
22/08/2022	No emergences	Common Pipistrelle	20:17	21:30
		Soprano Pipistrelle	20:44	21:24
		Serotine	21:05	21:06
		Long-eared	21:14	21:14
		Noctule	21:17	21:25
		<u>Summary:</u>		
		Activity during this survey was moderate with intermittent foraging and commuting recorded during the survey. Species diversity was moderate with 5 species recorded.		
		The first species recorded was a Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) which was HNS to the south of the property. A further 4 Common Pipistrelles were recorded intermittently foraging and commuting across the site before the final recording at 21:30.		
		The second species recorded was a Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) which was recorded foraging in the rear of 30a at 20:17. Occasional Soprano Pipistrelles were recorded foraging and commuting around the site before the final recording at 21:24.		
		The third species recorded was a Serotine which was recorded commuting NW – SE over the site at 21:05		

		The fourth species recorded was a Long-eared which was HNS once north of the property at 21:14. The fifth and final species recorded was a Noctule (<i>Nyctalus noctula</i>) which was recorded foraging over the site between 21:17 and 21:25.
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5.0 EVALUATION, IMPACTS & RECOMMENDATIONS

5.1 Summary & Evaluation of Results

5.1.1 Foraging and Commuting

Overall, the levels of foraging and commuting bats recorded on site during the surveys was moderate and comprised predominantly of only two common species, the Common Pipistrelle and Soprano Pipistrelle. Given the size and nature of the development, and the surrounding urbanized habitat, it is considered there will only be **minor adverse impact** at the **Local Scale** for foraging and commuting bats.

5.1.2 Roosting

Based on the results of the PEA and follow up emergence survey, the building on site is not considered to be used by roosting bats and no further survey work in regards to roosting bats within buildings is considered necessary. However, in order to ensure no impacts to bats occurs, it is recommended that a non-licensed precautionary working method is followed as outlined in **Section 5.2.1** below.

5.2 Mitigation / Enhancements

Below are some general mitigation and enhancements for bats, some of which was also previously described within the PEA report (Ecosupport 2022) alongside the precautionary working method to be followed.

5.2.1 Precautionary Working Method

Timing

As there were no roosts identified, no timing restrictions will be required (Reason and Wray, 2023). If, however, larger numbers of bats are encountered during the destructive search which may indicate a roost of higher importance, timing restrictions may be required.

Supervision

The removal of roof tiles, hanging tiles and any other areas considered to support bat roosting potential will be conducted under the supervision of a licensed ecologist. These areas include, but are not limited to, all of those mentioned within **Table 6** of the PEA report (Ecosupport, 2022).

Prior to any works getting underway the licensed bat worker will give a Toolbox talk which will detail best practice methods of sensitive stripping/removal of roofing tiles/materials of the building (i.e tiles around the new roof skylight and the new extension) once the areas surrounding the roost have been stripped and identifying signs of bats. Personnel will be educated on signs of bats and that, in the unlikely event a bat is found whilst the licensed ecologist is not on site, that all works should stop immediately until the licensee returns to site.

The licensed bat worker will then assist contractors with the removal of construction materials surrounding the roost and any other areas which are considered to be high risk for roosting bats.

Capture (if required)

If during the sensitive removal of construction materials bats are discovered, the supervising ecologist will place the individuals into a holding bag (a soft cloth bag with closure-strings and with seams on the outside (Mitchell-Jones and McLeish, 2004)) to ensure the bat keeps calm and will not take flight during daylight hours. They will then immediately transport the bat to the bat box where the bat will be released and left undisturbed. During this time, the licensed bat worker will be wearing appropriate bat handling gloves to ensure the bat does not come to any harm. The licensed bat worker will have ample experience in handling a variety of bats and is confident in doing so.

Bat boxes

Prior to works getting underway 1 large Multi chamber bat box will be installed onto a tree or building being retained on site. (**Fig 3**) (Location indicated in **Fig 4**). These bat boxes are designed as summer roosting spaces for crevice-dwelling species such as Pipistrelles. The bat boxes maintain a stable temperature inside and are painted black to absorb warmth. This box should be erected 3-6m high and in an open, sunny position (preferably facing a southern direction). Once the works have been completed this box should be left in perpetuity to provide additional long-term enhancements for local bats.

Figure 3. Large multi-chambered bat box to be installed (NHBS).



Figure 4. Suggested location for the bat box on site (yellow circle) (proposed site plan mharchitects)



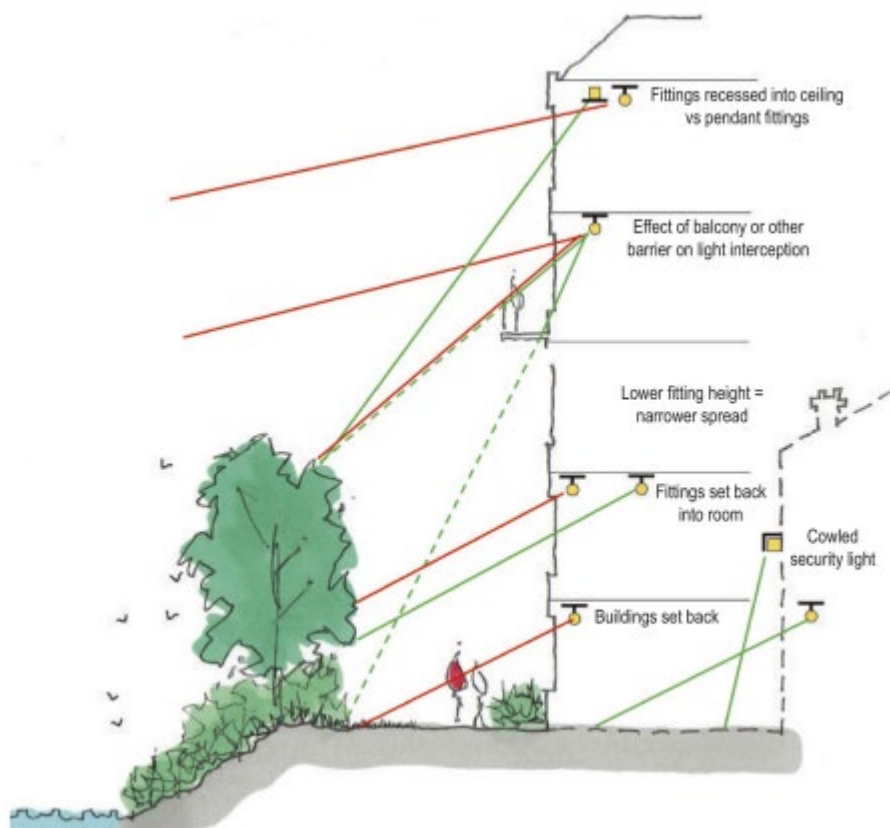
5.2.2 Minimisation of Disturbance to Nocturnal Wildlife

It is currently unknown if any new external lighting will be added to the externals of the buildings however, it is recommended that any lighting is added, it complies with the following document (*Guidance Note 08/23 Bats and Artificial Lighting in the UK*) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented as far as is practicable.

'Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used*
- LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability*
- A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component*
- Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)*
- Internal luminaires can be recessed (as opposed to using a pendant fitting - See **Figure 5**) where installed in proximity to windows to reduce glare and light spill*
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1)*
- Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards*
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01*
- Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt*
- Where appropriate, external security lighting will be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate*
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS*
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues. See Case Study 6*
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely'*

Figure 5. Internal lighting mitigation options (ILP 2023)



5.2.3 Roof Underlining

In-line with Natural England guidance non-bitumen coated roofing membrane that has passed a 'snagging propensity test' (2022) or bitumen roofing felt (2015) should be utilised as opposed to Breathable Roof Membrane (BRM) for all roofing works as there is considerable evidence to suggest that BRM poses a threat to bats occupying a structure due to entanglement in the fibres (Natural England, 2015).

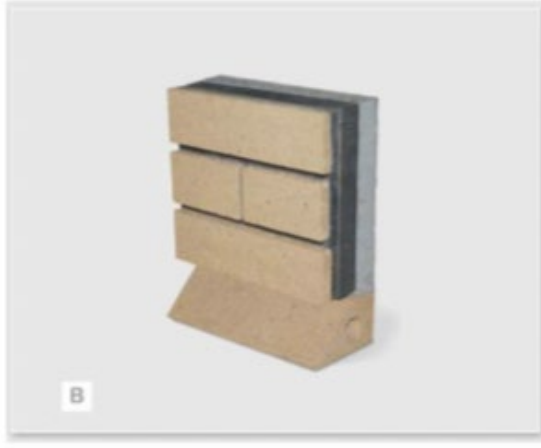
5.2.4 Bat Bricks

To act as biodiversity enhancement, four bat bricks will be included in the newly built apartments. The bat bricks used should be the ibstock bat brick B as they are available in a

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variety of different brick colours and requires no maintenance (**Fig 6**). These will be positioned as close to the eaves as possible, away from windows and in a position that will receive direct sunlight. These will also be positioned away from the proposed retail unit which will likely be illuminated at night.

Figure 6. The Ibstock bat brick 'B' that will be incorporated into the newly built apartments.



6.0 REFERENCES

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