THE ENVIRONMENT PARTNERSHIP

CHAIN ROAD

BLACKLEY

BAT, BIRD & BUG BOX SCHEME

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1.0 Introduction

Background and Planning

1.1 The Environment Partnership (TEP) Ltd were commissioned by Great Places Housing (hereafter referred to as 'the client') in October 2022 to produce a bat, bird and bug box mitigation scheme to be implemented at the proposed residential development at Chain Road in Blackley, Manchester (hereafter referred to as 'the site').

1.2 A Preliminary Ecological Assessment (PEA) of the site was produced by TEP in 2021, following the completion of an extended Phase 1 habitat survey undertaken in July 2021 (TEP Ref: 8990.001).

1.3 A full planning application was submitted in October 2021 for the erection of 12 two storey dwellinghouses (Use Class C3a) together with the erection of a three-storey building to form 20 residential apartments (Use Class C3a) with associated car parking, landscaping, boundary treatment and other associated works (Manchester City Council Planning Application ref: 131891/FO/2021).

1.4 The application was approved in March 2022 subject to a range of conditions, including Condition 26 which stipulates the requirement for a Bird, Bat and Bug Box scheme:

"26) Prior to the first occupation of the development hereby approved, details of the number, siting and appearance bird, bat and bug boxes at the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved details shall be implemented and be in place prior to the first occupation of the development hereby approved and shall thereafter be retained and maintained in situ.

Reason - In the interest of providing habitats for birds, bats and bugs to improve the ecological value of the application site pursuant to policies SP1 and EN15 of the Manchester Core Strategy (2012)."

1.5 This ecological enhancement plan is therefore focussed on the provision of suitable bat, bird and bug boxes and will provide details on the designs/specifications of the boxes, as well as suitable locations for the installation of the boxes within the site.

1.6 The specification of bat, bird and bug boxes for the mitigation scheme have been chosen with consideration given to the species assemblages potentially present at the site following a review of the Desk Study and survey work completed up to and including 2021, in addition to the Proposed Site Plan (18-002-1010-E) and Indicative External Lighting Locations Plan (18-002-2009) provided by Bowker Sadler.

Site Context

1.7 The site is located at the junction between Chain Road and Victoria Avenue in Blackley and is approximately 0.5 ha in size. The site is centred on grid reference SD 85972 04169. The site context is shown below in Figure 1.

Figure 1: Site location in wider landscape

1.8 The site is surrounded by residential development and the Manchester Ring Road is approximately 250m to the northeast.

1.9 The main habitat types within the site are hardstanding, amenity grassland, modified neutral grassland, dense scrub and scattered trees.

1.10 The scattered trees and dense scrub provide suitable nesting and foraging habitat for birds and the grassland provides additional foraging habitat. These habitats have the potential to support a variety of bird species commonly found in urban environments.

1.11 The scattered trees and dense scrub also offer potential commuting and foraging habitat for bats. There are no suitable habitats for roosting bats present within or adjacent to the site and the site lacks connectivity with the wider landscape due to its urban location.

1.12 Vegetation present within the site provides suitable habitats for terrestrial invertebrates, including the S41 species cinnabar moth *Tyria jacobaeae* which was recorded during the Phase 1 survey. It is considered that only a limited range of invertebrates will be present within the site due to its small size and urban location.

1.13 The development will require all vegetation within the site to be removed in order to facilitate the proposals. However, landscaping proposals include the provision of tree, hedgerow and shrub planting which will partly compensate for the losses and offer some replacement habitat for these species once the vegetation has become established.

1.14 The potential for the newly constructed dwellings to be used by bats, birds and invertebrates can be enhanced by incorporating roosting, nesting and sheltering features into the landscape design.

2.0 Mitigation & Enhancement Strategy

2.1 Bat, bird and bug boxes provide artificial roosting, nesting and sheltering sites in areas where the habitat otherwise provides limited roosting opportunities. Bird and bug boxes incorporated into the design will help to mitigate against the loss of bird nesting habitat and terrestrial invertebrate habitat within the site. Additionally, bat boxes will enhance the ecological value of the site through the provision of roosting opportunities for bats.

2.2 Proposed enhancement measures are concentrated around the three-storey apartment block in the southeast of the site, as requested by Great Places Housing Group. It is recommended that bat and bird boxes are integrated into the apartment building during construction as this prevents the boxes from being removed in the future and will ensure the proposed boxes are kept available for use.

2.3 Appropriate siting of the boxes is important to increase the likelihood of uptake and make them more attractive to bats, birds and invertebrates; further details are provided below.

2.4 Bat, bird and bug box types are also recommended below, however, similar products are likely to be available from alternative suppliers.

Bat Boxes

2.5 In total, two bat boxes will be installed in order to enhance bat roosting opportunities within the site. The proposed positions of the bat boxes are shown in Drawing D8990.001 Bat, Bird and Bug Box Locations.

2.6 The bat box specification is as follows:

- 2 x Vivara Pro Build-in Woodstone Bat Box (or similar).

2.7 The Vivara Pro Build-in Woodstone Bat Box is designed to fit into wall cavities and will provide a summer roosting space for small bats that inhabit crevices, such as common pipistrelle *Pipistrellus pipistrellus*. It has been manufactured from long-lasting materials making it suitable for long-term mitigation projects.

2.8 The two bat boxes will be installed on the external walls of the apartment block, either flush or beneath a rendered surface with only the entrance hole visible. The bat boxes should be sited between the south-east to south-west aspect of buildings, at a height of at least four metres and close to the eaves if possible with a clear flight path.

2.9 Bat boxes have been proposed for the southern aspect of the apartment block to avoid strong north-westerly winds and so they are exposed to the sun for part of the day. This location is also within close proximity to proposed ornamental hedgerow planting and retained scattered trees along Victoria Avenue.

2.10 Locations of bat boxes have also been selected with regard to the current lighting proposals for the scheme. Light spill onto locations where bat boxes are proposed or have been installed should be minimised to avoid disturbance to roosting bats.

Bird Boxes

2.11 In total two bird boxes will be incorporated into the scheme design in order to increase nesting opportunities for birds on site and compensate for the loss of existing potential nest sites in trees and scrub.

2.12 Bird boxes within the scheme will include nest boxes suitable for house sparrows and swifts. Numerous records of house sparrow *Passer domesticus* were identified in the Desk Study (TEP Ref: 8990.002) for within 2km of the site. The Desk Study did not return any records of swift *Apus apus* however swifts are known to be present in the area and records of swift nests within close proximity to the site have been submitted to Swift Mapper (RSPB, 2022)[1]. Tree-mounted and open-fronted nest boxes have not been included within the design as no mature trees or dense scrub will be retained within the development footprint.

2.13 The proposed positions of the bird boxes are shown in Drawing D8990.001 Bat, Bird & Bug Box Locations.

2.14 The bird box specification is as follows:

- 1 x Vivara Pro WoodStone House Sparrow Nest Box Double Chamber (or similar);
- 1 x Vivara Pro WoodStone Build-in Swift Nest Box Deep (or similar).

2.15 The Vivara Pro WoodStone House Sparrow Nest Box is designed primarily for house sparrows and will be integrated into the cavity of a building. The double breeding chamber option is recommended as house sparrows prefer to nest communally. Ideally the terrace should be positioned two metres or more above the ground on a north to northeast facing external wall in close proximity to vegetation to provide cover from potential predators. Sparrow boxes can also occasionally attract other species such as tits, redstarts and spotted flycatchers.

2.16 It is proposed that the sparrow nest box is sited to the rear of the apartment block in a north-facing external wall within close proximity to proposed hedge and shrub planting. The nest box should be positioned in this area in order to reduce human disturbance during the breeding season.

2.17 The Vivara Pro WoodStone Build-in Swift Nest Box Deep is designed primarily for swifts and will be integrated into the cavity of a building. The box should be positioned five metres or more above the ground on a north to northeast facing external wall with a clear flight path.

2.18 It is proposed that the swift nest box is sited on the northeast face of the apartment block, adjacent to Chain Road, in order to provide a clear flight path to the box.

Bug Boxes

2.19 In total two bug boxes will be incorporated into the scheme to increase sheltering habitat for a range of invertebrates and compensate for the loss of existing habitat provided by the scrub, trees and grassland within the site

[1] RSPB, 2022. Swift Mapper. Available at: https://www.swiftmapper.org.uk/ Accessed: 18/11/2022.

2.20 The proposed positions of the bug boxes are shown in Drawing D8990.001 Bat, Bird & Bug Box Locations.

2.21 The bug box specification is as follows:

- 2 x CJ Wildlife Insect Tower (or similar).

2.22 The CJ Wildlife Insect Tower is designed to provide habitat for a range of insects such as solitary bees, moths, butterflies, ladybirds and lacewings. They should be positioned less than two metres above the ground and near to new or existing scrub or shrub planting in a sunny, sheltered location. Deadwood, brash and rubble can also be used to create habitat piles to attract other invertebrates such as woodlice and beetles.

2.23 It is proposed that two insect towers are placed within the ornamental shrub or hedge habitats to the rear of the apartment block.

Siting and Installation

2.24 The bat and bird boxes should be sited in accordance with the attached Drawing D8990.001. Failure to do so may result in boxes being sited in sub-optimal positions that could lead to a lower take-up by the relevant species.

2.25 Proximity to suitable vegetation for invertebrates and commuting and foraging habitat for bats and birds has also been considered.

2.26 It must be ensured that there is unobstructed access for bats and birds entering and leaving the boxes.

2.27 It is recommended that new bat and bird boxes are installed during autumn and winter to ensure they are ready for use the following breeding season, although it is possible to install them at any time of year. Many birds will enter nest boxes during the autumn and winter, looking for a suitable place to roost or feed. They often use the same boxes for nesting the following spring.

2.28 All bat and bird boxes must be installed in line with the manufacturer's specifications to ensure no hazard is posed to members of the public.

2.29 Should the recommended bird/bat boxes not be available, similar products are likely to be available from alternative suppliers. Any substitutions should be agreed with the Local Planning Authority.

Maintenance

2.30 Bat boxes do not typically require any maintenance. Bat boxes can only be inspected by appropriately licensed ecologists.

2.31 The Vivara Pro WoodStone House Sparrow Nest Box will typically require cleaning if it has been occupied by birds or any other wildlife. Cleaning or inspection can be carried out any time between September and February inclusive.

2.32 Cleaning of the Vivara Pro WoodStone Build-in Swift Nest Box is not necessary.

3.0 Bat Box Specification

3.1 Specification of bat boxes to be installed in buildings within the site are provided in Table 1.

Table 1 Recommended bat box specifications

Box specification	Supplier website
Vivara Pro Build-in Woodstone Bat Box The Vivara Pro Build-in WoodStone Bat Box has been specifically designed to fit into the cavity of house walls. It features a slim sized entrance hole which can sit flush in a course of bricks to provide a discreet entry way for bats. It is manufactured from hard-wearing WoodStone and plywood with removable side panels so that several boxes can be placed side by side. Position the box at least 2m above ground level away from artificial light sources. WoodStone is a mixture of sawdust from FSC wood sources and concrete, and it is designed to last for years. It is breathable so there will be no problems with condensation and Woodstone maintains a consistent temperature inside, providing excellent insulation for roosting bats. Dimensions: (H) 500 x (W) 210 x (D) 150mm, Weight: 5.6kg	https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box

4.0 Bird Box Specifications

4.1 Specifications of bird boxes to be installed in buildings within the site are provided in Table 2.

Table 2 Recommended bird box specifications

Box specification	Supplier website
Vivara Pro WoodStone House Sparrow Nest Box Double Chamber This House Sparrow Nest Box is manufactured from WoodStone - a mix of concrete and FSC wood fibres. This material is strong and highly insulating which helps to provide a thermally stable environment within the box. It also protects against damage from predators such as cats, woodpeckers and squirrels. It is available with one or two breeding chambers, which can be particularly suitable for house sparrows as they prefer to nest in colonies. The House Sparrow Nest Box can be integrated into the masonry of a new house or fixed onto an external wall using strong screws and wall plugs (not included). If possible, it should be positioned near to vegetation and at a minimum of 2m above ground. Dimensions: Depth 16cm x Height 29cm x Width 21cm, Weight: 7.5kg	https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box
Vivara Pro WoodStone Build-in Swift Nest Box Deep A lack of suitable nesting sites is thought to be one of the main reasons behind the decline in our swift populations and by installing nest boxes such as this one it will greatly help to support their numbers. This build-in nest box is designed to be integrated into the cavity of a building. It is constructed from long lasting FSC certified WoodStone with a plywood backing. This nest box should be sited at least five metres high, with a clear flight path and avoid south facing sites. Dimensions: Depth 15.5cm x Height 18cm x Width 42cm, Weight: 5.3kg	https://www.nhbs.com/woodstone-build-in-swift-nest-box-deep

5.0 Bug Box Specification

5.1 Specification of bug boxes to be placed within the site are provided in Table 3.

Table 3 Recommended bat box specifications

Box specification	Supplier website
CJ Wildlife Insect Tower The Insect Tower will provide valuable habitat in your garden for solitary bees and other insects. The different sections of the Insect Tower have been designed to provide a habitat for a variety of insect species. The nesting tubes are ideal for solitary bees to build their nests in, the vertical slots are designed to encourage butterflies, other refuge holes are perfect for ladybirds and lacewings and the pine cones offer an excellent habitat for a range of other species. Dimensions: Depth 12.5cm x Height 65cm x Width 21cm, Weight: 3kg	https://www.nhbs.com/insect-tower

DRAWINGS

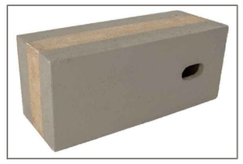
D8990.001 Bat, Bird & Bug Box Locations

Key

- 2nr Bat Boxes
- 2nr Bug Boxes
- 1nr Sparrow Terrace
- 1nr Swift Box

2nr Bat Boxes - Vivara Pro Build-in WoodStone Bat Box (or similar)

1nr Sparrow terrace - Vivara Pro WoodStone House Sparrow Nest Box Double Chamber (or similar)



1nr Swift Box - Vivara Pro WoodStone Build-in Swift Nest Box Deep (or similar)

2nr Bug Boxes - CJ Wildlife Insect Tower (or similar)

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Project
Chain Road, Blackley, Manchester Ecology Services

Title
Bat, Bird & Bug Box Locations

Drawing Number
D8990.001

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