254 Barton Road, Comberton

Scheme of Ecological Enhancement

Produced for Daniel Smith

By Applied Ecology Ltd

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1 Introduction

1.1 Applied Ecology Ltd (AEL) has been appointed by PiP Architects, on behalf of Daniel Smith, to prepare a Scheme of Ecological Enhancement in relation to a proposed residential development at 254 Barton Road, Comberton, CB23 7BU.

1.2 The Development includes the demolition of an existing dwelling and its replacement with a single new dwelling ("the Development") and was granted full planning permission by South Cambridgeshire District Council (SCDC) in October 2023 (23/03294/FUL). The purpose of this report is specifically to address Planning Condition 8 of planning permission which states the following.

1.3 *"Prior to the commencement of development above slab level a scheme of ecology enhancement shall be supplied to the local planning authority for its written approval. The scheme must include details of bat and bird box installation, hedgehog connectivity, and other enhancements as applicable and in line with the Greater Cambridge Biodiversity Supplementary Planning Document (2022). The approved scheme shall be fully implemented within an agreed timescale unless otherwise agreed in writing.*

1.4 *Reason: To provide ecological enhancements in accordance with the NPPF 2021 para 174, South Cambridgeshire Local Plan 2018 policy NH/4 and the Greater Cambridge Shared Planning Biodiversity SPD 2022."*

2 Scheme of Ecological Enhancement

Overview

2.1 The proposed enhancements to be provided as part of the Development will include the provision of an new extensive green roof, installation of bird boxes in appropriate locations on the new dwelling, the installation of bat boxes on suitable retained trees, and where necessary creating ground level gaps as hedgehog crossings along boundary fences. These measures are consistent with the Greater Cambridge Biodiversity Supplementary Planning Document, GCBSPD (2022)[1].

Extensive Green Roof

Background

2.2 The GCBSPD encourages the creation of biodiverse roofs and walls as a means to maximise biodiversity, particularly where the opportunities for ecological enhancement on a site area are limited.

Roof provision

2.3 An area of extensive green roof covering around 50m^2 will be created on a single storey flat roof section of the new building.

Bird Boxes

Background

2.4 Given the small size of the Site and the limited opportunities provided by the single new dwelling and garden, bird boxes will be targeted at house sparrow *Passer domesticus*.

2.5 House sparrow is an opportunistic bird of towns and cities, parks, gardens and farmland and is a species of Red List Conservation Concern as a result of significant population decline. It is estimated that the UK house sparrow population has suffered a 71% drop between 1977 and 2008. House sparrows feed on a variety of foods, including buds, grains, nuts and scraps, and will visit bird tables and feeders. They live in colonies and nest in holes or crevices in buildings, among ivy or other bushes, and in nestboxes; they use a variety of materials to make their nests. Both parents will incubate the three to five eggs and raise the young. House sparrows are residents in the UK, but may disperse from their breeding grounds to feed on nearby farmland and grassland in winter.

2.6 It is not fully understood why house sparrow numbers have decreased so drastically in the UK but some of the explanations given include increased urbanisation leading to a lack of food and suitable nesting sites, and an increase in the number of predators such as magpies and squirrels.

[1] Greater Cambridge Shared Planning (2022) *Biodiversity Supplementary Planning Document*. February 2022.

2.7 House sparrows are particularly vulnerable to building demolition, maintenance, and refurbishment as such activities can result in the loss of their traditional nest site locations in buildings.

House sparrow *Passer domesticus*

Box number and location

2.8 The development provides an opportunity to provide artificial nest sites for house sparrow in the form of nesting boxes that can be affixed to an external wall of the new house.

2.9 It is recommended that two house sparrow terrace nest boxes are attached to the east-facing external wall of the new building, as identified as red blocks on **Figure 2.1**. This should provide a sheltered position and avoid excessive sunlight.

Figure 2.1: Proposed location of house sparrow terrace boxes on east elevation

Left Elevation (East Elevation)
1 : 50

Example of suitable house sparrow nest box – Vivara Pro WoodStone nest box

Monitoring and maintenance

2.10 Once installed the boxes require minimal maintenance, with the occasional clearance of old nesting material from the boxes outside of the bird nesting period in the autumn or winter. The nest box type recommended above have a detachable fronts to allow easy maintenance.

Bat Boxes

Background

2.11 The Site is located adjacent to arable fields and a small residential settlement. The existing dwelling was found to support a small non-breeding soprano pipistrelle *Pipistrellus pygmaeus* roost. In addition to soprano pipistrelles, common pipistrelle *Pipistrellus pipistrellus* were shown to use the Site for foraging.

2.12 Both of these bat species will roost during the day in crevices on the exterior of buildings including, for example, under roof/ridge tiles, in soffits, behind facia boards and under lead flashings. South facing aspects are particularly favoured as they provide warm conditions that help bats maintain a high body temperature, but bats will regularly switch their roost locations depending upon local weather conditions.

Common pipistrelle *Pipistrellus pipistrellus*

Box number and location

2.13 As stated in the Ecology Report[2], a bat box will need to be placed on a suitable on-site tree in advance of building demolition as part of the Bat Low Impact Class License. It is recommended that a second tree mounted bat box is provided as a further enhancement. Suitable trees for these boxes will be identified by the licensed ecologist, and both boxes will be installed prior to building removal.

Schwegler 2F Bat Box – an example of suitable bat box for tree mounting

[2] Applied Ecology (2023) *254 Barton Road, Comberton – Ecology Report*. Produced for Daniel Smith.

Monitoring and maintenance

2.14 Once installed the bat boxes should require no maintenance.

Hedgehog Friendly Boundaries

Background

2.15 Hedgehogs *Erinaceus europaeus* is a declining species but can be found across the UK in a variety of habitat types including woodland, farmland, parks and gardens.

2.16 Measures should be implemented to ensure that the development does not provide a barrier to local hedgehog dispersal, with hedgehog sized gaps provided at the base of any new/replacement fence or boundary wall constructed around edge of the Site.

Hedgehog *Erinaceus europaeus*

Boundary adaptation

2.17 Two separate gaps (130 mm x 130 mm) should be incorporated into the base of opposite boundaries of any closed board fencing to allow hedgehogs to disperse across the Site.

2.18 A “Hedgehog Highway” sign should be attached to the fence/wall immediately above the gap on both sides of the fence to highlight the function of the gap and to minimise the risk of the gap being inadvertently blocked.

Hedgehog highway sign

Monitoring and maintenance

2.19 The hedgehog gaps holes should remain free from obstruction but otherwise do not require any management.

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