Hillier Ecology Services Limited
127 Fletton Avenue, Peterborough, PE2 8BX
Office: 01733 894979 Mobile: 07730758439
howardwhillier@btinternet.com

Consultant Ecologists - Wildlife Fencing - Habitat Management

Registered in England and Wales 13849558

Mr and Mrs Sommerville

Proposed conversion of outbuilding

Biodiversity Enhancement Strategy and Lighting Design Scheme

August 2022

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1 Introduction

Planning permission was granted in June 2021 (ref DC/21/0547/HH) for:

a. single storey side link extension to house and;

b. weatherboarding to existing dwelling.

As amended by plans received 02 May 2021 at 1-2 Rectory Cottages, The Drift, Fornham St Martin, Suffolk, IP31 1SU.

The permission included the following conditions:

3. Prior to development above existing slab level, a Biodiversity Enhancement Strategy for Protected and Priority species shall be submitted to and approved in writing by the local planning authority. The content of the Biodiversity Enhancement Strategy shall include the following:

Purpose and conservation objectives for the proposed enhancement measures;

b) detailed designs to achieve stated objectives;

c) locations of proposed enhancement measures by appropriate maps and plans;

d) persons responsible for implementing the enhancement measures;

e) details of initial aftercare and long-term maintenance (where relevant).

The works shall be implemented in accordance with the approved details and shall be retained in that manner thereafter.

Reason: To enhance Protected and Priority Species/habitats and allow the

LPA to discharge its duties under the s40 of the NERC Act 2006 (Priority habitats & species).

4. Prior to first use, a lighting design scheme for biodiversity shall be submitted to and approved in writing by the local planning authority. The scheme shall identify those features on site that are particularly sensitive for bats and that are likely to cause disturbance along important routes used for foraging; and show how and

where external lighting will be installed (through the provision of appropriate lighting contour plans, Isolux drawings and technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent bats using their territory.

All external lighting shall be installed in accordance with the specifications and locations set out in the scheme and maintained thereafter in accordance with the scheme. Under no circumstances should any other external lighting be installed without prior consent from the local planning authority.

Reason: To allow the LPA to discharge its duties under the Conservation of Habitats and Species Regulations 2017 (as amended), the Wildlife & Planning and Growth, West Suffolk Council, West Suffolk House, Western Way, Bury St Edmunds, Suffolk, IP33 3YU Countryside Act 1981 as amended, s40 of the NERC Act 2006 (Priority habitats & species).

2 Purpose and Conservation Objectives

The outbuilding is currently used as a garage and two stores, all of which are in regular use. The building was re-roofed around 10 years ago and three new roof lights were installed at that time. These are to be retained as part of the conversion proposals, with a further two roof lights being installed.

The outbuilding will be connected to the house by a new structure, linking to a feature that is believed to have been constructed in the 1950's. This feature is of brick construction beneath a flat, felted roof. The roof was replaced within the last 5 years. The brick elevations beneath it will be clad with weatherboard as part of the permitted development.

Consultation undertaken by the LPA regarding ecology to inform the determination of the application recommended the following:

"to secure measurable net gains for biodiversity, as outlined under Paragraph 170d of the National Planning Policy Framework 2019, reasonable biodiversity enhancement measures will need to be provided. A Biodiversity Enhancement Strategy for protected and Priority Species should be secured as a condition of any consent. Given the scope of this application, we recommend this includes the provision of a bird box and a solitary bee nesting box. We a recommend bird and bat boxes box could be erected on suitable trees or an integral bird box, could be built into the extension."

This strategy seeks to provide details of the proposed measures to respond to these recommendations.

3 Detailed Design

The proposed measures are set out as follows.

3.1 Ecological Enhancements

The following ecological enhancements will be implemented on site:

a) 2 x House sparrow and 1 x wren boxes will be erected on the locations indicated below. Examples are provided in Appendix 1, though suitable alternatives may be available. The following guidance will be considered when erecting the boxes:

Nestboxes are best put up during the autumn. Many birds will enter nestboxes during the autumn and winter, looking for a suitable place to roost or perhaps to feed. They often use the same boxes for nesting the following spring.

Boxes for sparrows be fixed two to four metres up a tree or a wall.

House sparrows and starlings will readily use nestboxes placed high up under the eaves. Since these birds nest in loose colonies, two or three can be sited spaced out on the same side of the house. Keep these away from areas where house martins normally nest.

Open-fronted boxes for robins and wrens need to be low down, below 2m, well hidden in vegetation (essential to avoid predation issues).

Unless there are trees or buildings which shade the box during the day, face the box between north and east (or sheltered western aspects, thus avoiding strong sunlight and the wettest winds).

Make sure that the birds have a clear flight path to the nest without any clutter directly in front of the entrance. Tilt the box forward slightly so that any driving rain will hit the roof and bounce clear.

When erecting boxes on buildings, consideration should be given to position to avoid potential fouling around windows, doors and patios.

A well-designed nest box will only need one annual clean in the autumn. It is important not to clean out nest boxes before August as they may still be occupied. Wait until autumn and then remove the contents, scattering them on the ground some way from the box to help prevent parasites re-infesting the nest box. Wear gloves and use a small brush or scraper to remove debris from the corners. Boiling water can be used to kill any parasites remaining in the box, but remember to leave the lid off for a while for it to dry out. Do not wait until the winter to clean out nest boxes as birds may already be roosting in them.

b) The erection of 1 x bat box to be affixed on the south facing side of the large TPO protected Walnut Tree within the site. Examples are provided in Appendix 1, though suitable alternatives may be available. The following guidance will be considered when erecting the box:

Bat boxes can be installed at any time of year, but they are more likely to be used during their first summer if they are put up before the bats emerge from hibernation in the spring.
All bat boxes should be positioned at a height of 3-6 metres (the higher the better) in an open, sunny position (6-8 hours of direct sunlight, or in a location where it receives the morning sun if this is not possible), avoiding areas to be lit at night.
The most common location to hang a bat box is on a tree using a strong nail that is at least 85 mm in length. It is important to use aluminium nails, as these will not damage a chainsaw (or chainsaw user) should they be left in the tree when it is felled.
Bat boxes can be checked to ensure they remain secures, with cobwebs removed from the outside, but should not otherwise be disturbed.

c) 1 x Bee Nesting Box will be erected to support local bee populations. There are various designs available commercially online and an example is shown in Appendix 2. Houses should be fixed firmly at about waist or chest height facing south in a sunny position, near bee-friendly flowers and shrubs, ideally sheltered from rain.

d) A timber constructed domed-roof box will be sited in vegetation on the northern side of the site. For image see Appendix 3. This will will provide habitat for invertebrates and small mammals e.g. nesting hedgehog (Erinaceus europaeus).

3.2 Lighting Design

The following recommendation are based on the ecological assessment for the scheme as well as current guidance, specifically:

a) Bats and artificial lighting guidance note (2018) produced by the Bat Conservation Trust (BCT) and the Institute of Lighting Professionals (ILP); and
b) Eurobats guidance on bats and artificial light (2018) produced by a panel of experts including the BCT, to provide broad international guidance that complements the nationally drafted BCT/ILP guidance above.

The specifications aim to balance the important safety and amenity needs of future occupiers of the property, with the requirement to minimise impacts upon biodiversity features on and adjacent to the site (and to comply with the relevant wildlife legislation).

The site itself is assessed as providing moderate value foraging habitat, with vegetation within and adjoining the site providing important features to bats. Therefore exterior lighting will incorporate the following features:

- Light levels will be as low as possible, and the number of fixtures kept to the minimum required, to fulfil the lighting need;
- Lighting will aim to minimise light spillage towards boundary features;
- Lighting will be directed to where it is needed, with horizontal spillage towards retained habitats minimised. This can be achieved on the building by restricting the height of the lighting installation and the design of the luminaire;
- Luminaires will have an upward light ratio of 0%, mounted on the horizontal;
- Where appropriate (e.g. patios and porch) lighting should incorporate Passive Infra Red (PIR) motion sensors and timers to minimise the lit time, set to the minimum to minimise the duration of disturbance;

- As a matter of last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill;

A. There is currently an existing exterior light located adjacent to the current entrance door, which is above the current door within the 1950's structure on the eastern side of the dwellinghouse. This will be replaced by a pair of lights meeting the above objectives which will be located either side of the new entrance door in the northern elevation of the link structure (see map below). The area in front of the new door will be paved as existing.

B. A further exterior security light will be installed on the western side of the north elevation of the single storey outbuilding (see map below). The light will illuminate the area immediately north of the outbuilding which will be an open area providing pedestrian access into the adjoining lane. The end of the existing leylandii hedge will be removed as per the planning permission up to point 1a on the map below and so the light will fall over this walkway only.

An example of these lights is included at Appendix 4, though suitable alternatives may be available that meet these criteria.

4 Locations of Proposed Enhancement Measures

The measures will be located as follows:

1. Bird boxes
    a. Wren Box – to be located on the edge of the hedge to be retained or nearby tree close to the hedge as indicated on the plan below
    b. House Sparrow Boxes – to be located spaced out at high level under the eaves on the north eastern side of the existing house as indicated on the plan below
2. Bat box – to be located on the southern side of the Walnut Tree as indicated on the plan below
3. Bee House – to be located on a south facing wall or tree, well above the ground

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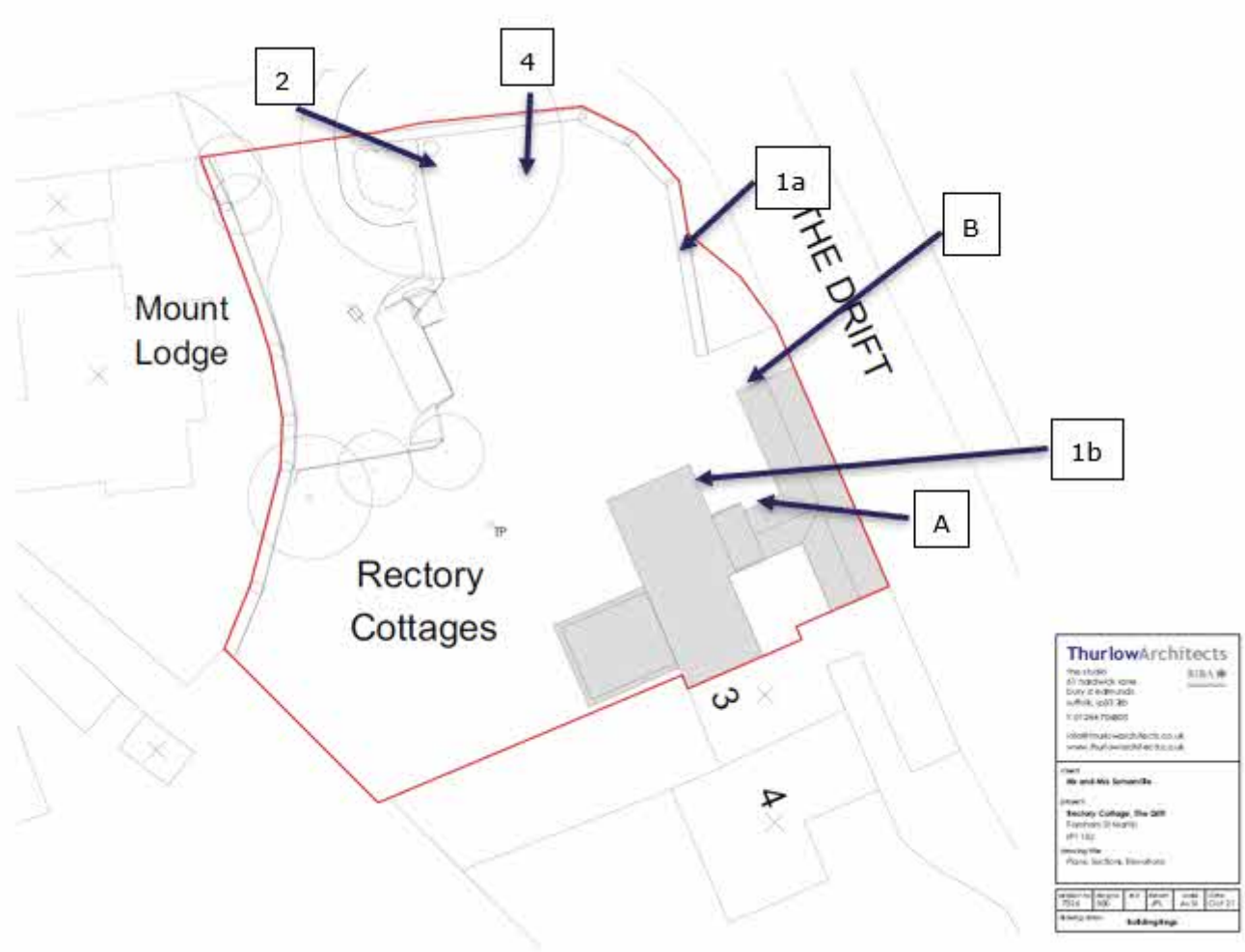
4. Hedgehog House – to be located in vegetation in a suitable position on the site, initially to be within the dense vegetation on the northern side of the site as indicated below.



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5 Implementation

The measures are to be implemented by the householder/contractor in accordance with the following timetable:

Action	Timing
Erection of bird boxes	Prior to occupation
Erection of bat box	Prior to occupation
Erection of insect house	Prior to or within the first year of occupation
Hedgehog house	Prior to occupation (at earliest opportunity)

It will be the landowner's responsibility (and their contractor as instructed) to install and maintain the agreed enhancements outlined in section 3.1 and lighting as per the specifications proposed in section 3.2. If any significant deviations or amendments are subsequently required in relation to the latter, the prior consent of the LPA must be sought by the proposer prior to installation.

6 Aftercare and Long Term Maintenance

It will be the landowner's responsibility to maintain the boxes, undertaking annual inspection/cleaning as required and in accordance with the above advice. Boxes should be replaced when these are no longer in repair.

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Appendix 1

Bird and Bat Box Examples

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Vivara Pro WoodStone House Sparrow Nest Box

Manufacturer: Vivara Pro

One or two breeding chambers
Durable and thermally stable
Guaranteed for 10 years

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Vivara Pro Barcelona WoodStone Open Nest Box

Manufacturer: Vivara Pro

Durable and predator proof nest box
Made with 100% FSC certified wood
10 year guarantee

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Vincent Pro Bat Box

Manufacturer: Wildlife World

Black front and top for maximum heat absorption
Based on the Vincent Wildlife Trust design
No cleaning required

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Appendix 2

Bee House Examples

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Wooden Bee House

The bee house imitates honeycomb's hexagonal shapes, allowing bees to follow their natural instincts for finding holes in walls, tunnels in the ground and hollowed out stems of plants. Giving a helping hand to the decreasing bee population. Fix to an outdoor wall or fence that sees plenty of sunlight without any obstructing plants to create a happy home.

One supplied.

Attract bees and insects to your garden

Use freestanding or hang using hanging loop

Handcrafted wood

100% FSC Wood

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Appendix 3

Hedgehog House image

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Appendix 4

Example Lighting

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