

**BIODIVERSITY ENHANCEMENT SCHEME
2 POPES WOOD
THURNHAM ME14 3PW**

1.0 INTRODUCTION

This Biodiversity Enhancement Scheme is produced in pursuance of condition 2 of the planning for 2 Popes Wood, Thurnham sauna building; hereafter referred to as the site.

The planning condition this report discharges is as follows:

Condition 2

Within 3 months of the date of this decision, details of a scheme for the enhancement of biodiversity on the site shall be submitted in to the Local Planning Authority for approval. The scheme shall consist of the enhancement of biodiversity through the provision within the site curtilage of bird boxes, bat boxes, bug hotels, log piles, wildflower planting and hedgehog corridors. The development shall be implemented in accordance with the approved details within 3 months of the date of the approval of the submitted details and all features shall be maintained thereafter.

Reason: To enhance the ecology and biodiversity on the site in the future.

1.1 SITE DESCRIPTION

The site relates to a detached, two-storey property located at the end of a small cul-de-sac of a development with 5 detached dwellings on Popes Wood, east of Hockers Lane. The site is located outside the settlement boundaries within the Parish of Thurnham, Maidstone. The land level in the garden slopes upwards in a north and north eastern direction. Brick retaining walls and steps have been incorporated in the site to negotiate the different garden levels with the paved patio surrounding the property. Please refer to Figure 1.1 below for the site location plan.



Figure 1.1 Site Location Plan

2.0 BIODIVERSITY ENHANCEMENT

The key biodiversity enhancements anticipated at the site for habitats and species are set out below.

3.1 Habitat Enhancements

It is recommended to improve the ecological value of the site by implementing a range of biodiversity enhancements which are summarised below:

Wildflower Planting

A wildflower garden is proposed within the western area of the site. It is recommended that a rich variety of plants is used with high nectar to attract bees and other pollinators. The seed mix should contain a mixture of wear tolerant native species. Any ornamental species proposed should be of native origin and locally sourced. Of most benefit to wildlife are fruiting and flowering species which will increase the sites value for birds, bats and invertebrates.

3.2 Species Enhancements

The proposed habitat and landscape features would provide enhancements for the species groups as set out below (with relevant legislation presented in Appendix 1).

Birds

It is proposed that 6 bird boxes are installed on the western and eastern walls of the existing building, as well as on mature trees within the site (please refer to Appendix 2 for their locations). The recommended bird boxes are detailed in Table 3.1 below.

Table 3.1 Bird Box Specifications

Bird Box Specifications	Photograph
<p style="text-align: center;"><u>NHBS Wooden Bird Nest Box</u></p> <p>Material: FSC certified European redwood</p> <p>The 25mm entrance hole is suitable for the smaller tit species such as blue and coal tits whilst the 32mm entrance hole will attract a wide range of garden birds including great tits, house sparrows and nuthatches. Nest boxes also provide vital roosting spaces for birds during the cold winter months and the thick walls of these nest boxes will ensure that roosting birds stay warm.</p> <p>The boxes can be expected to last 5-10 years and are constructed using stainless steel staples which will not rust.</p> <p>These boxes can be installed on a tree or wall and should be placed two to four metres above ground. There should be a clear flight path to the entrance hole and the boxes should be placed so that the entrance is not exposed to strong sunlight or winds.</p> <p>Source: www.nhbs.com</p>	
<p style="text-align: center;"><u>Traditional Open Fronted Wooden Bird Nest Box</u></p> <p>Material: FSC certified European redwood</p> <p>This Traditional Open Fronted Wooden Nest Box has been designed to cater for open nesting species such as robins and is best placed in cover such as ivy, hedgerow areas or other climbing plants so that the nest entrance is secluded and hidden from predators. Nest boxes also provide vital roosting spaces for birds during the cold winter months and the thick walls of these nest boxes will ensure that roosting birds stay warm.</p> <p>The boxes can be expected to last 5-10 years and are constructed using stainless steel staples which will not rust.</p> <p>This nest box can be installed on a tree or wall and should be placed two to four metres above ground in cover. The box should be placed so that the entrance is not exposed to strong sunlight or winds.</p> <p>Source: www.nhbs.com</p>	

WoodStone Swift Nest Box

Material: FSC certified WoodStone

The FSC certified WoodStone Swift Nest Box is constructed entirely out of WoodStone meaning it is long lasting and won't rot away like a traditional wooden nest box. Swift numbers are declining, in part because of the loss of nesting sites. Installing a swift box is a great way to help these birds and to ensure their continued presence in our surroundings. There is an opening at the back of the box for easy cleaning with the nest entrance on the underside of the box. This type of entrance is preferred by swifts but discourages house sparrows and starlings from occupying the box. This box should be installed at least five metres above the ground, ensuring that there is unobstructed access for birds entering and leaving. If possible, boxes should be sited under the shelter of eaves or overhanging roofs.

Source: www.nhbs.com



1SP Schwegler Sparrow Terrace

Material: FSC certified WoodStone

The Sparrow Terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company. This terrace provides ideal nesting opportunities for three families. Made of Schwegler's revolutionary wood-concrete mix, this terrace is durable, breathable and will last many decades. It may also occasionally attract tits, redstarts and spotted flycatchers.

The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided, or install directly into the wall (see the images tab for illustrations). Cleaning is advisable but not necessary. The front panel can be removed by turning the screw hook.


Source: www.nhbs.com



Bats

The development provides the opportunity to further increase the number of roosting opportunities on site for bats. It is recommended that multipurpose bat boxes are to be installed on trees adjacent to the house to target a range of bat species. The recommended bat boxes are detailed in Table 3.2 below.

Table 3.2 Bat Box Specifications

Bat Box Specifications	Photograph
<p><u>1FF Schwegler Bat Boxes With Built-in Wooden Rear Panel</u></p> <p>Material: Schwegler Woodcrete</p> <p>The Schwegler 1FF bat box is spacious enough for bats to use as a summer roost or nursery sites and is open at the bottom, allowing droppings to fall out so it does not need cleaning. The 1FF is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years.</p> <p>Source: www.nhbs.com</p>	 A black, rectangular bat box with a built-in wooden rear panel. The box is hanging from a white wire. The front panel has a bat silhouette embossed on it. The bottom of the box is open, revealing a wooden slatted interior. The box is shown against a white background.

Improved Cavity Bat Box

This Improved Cavity Bat Box has the following features:

- * FSC Certified.
- * Suitable for the British cavity-dwelling bats - including the Brown Long-Eared, Daubenton's, Natterer's, Bechstein's, Grey Long-Eared, Whiskered, Brandt's and Nathusius' Pipistrelle bats. These species together make up about 20% of UK bats.
- * External panels precision cut from 12mm Exterior Grade FSC plywood, for improved heat insulation.
- * Exterior surface stained black with water based woodstain for improved thermal input, whilst avoiding any possibility of deterring the bats due to vapour from the stain.
- * Overhanging apex roof for protection from UK weather.
- * Single large cavity inside, with varying temperature characteristics.
- * Wide entrance with accurately sized opening. Ideal for cavity dwelling bats and deters unwelcome birds etc.
- * Internal ceramic heat sink ensures improved temperature stability.
- * Improved "Bat Ladder" at base of box facilitates bats landing and climbing into box.
- * Ladder continues inside box, while textured internal surfaces ensure bats find it easy to move around inside box and on the walls.
- * Ladder acts as "convector heater" for box - when sun shines on ladder, warm air rises into the box, but does not come out when the outside cools.
- * Easy and safe to erect box on walls or trees - relatively light weight, with 1 keyhole mounting hole and 2 extra screw holes for secure fixing.
- * Floor slides out (after removing 1 screw) for cleaning or inspection where permitted.
- * Improved draught-proofing enhances temperature stability inside box.
- * Improved aesthetics - looks good to humans as well as bats. Suits any building or tree.

Source: www.nhbs.com




The proposed lighting scheme for the site will need to consider the locations of the bat boxes. The use of artificial lighting should aim to follow the protocols outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and BCT's "Artificial

Lighting and Wildlife Interim Guidance: Recommendations to Help Minimise the Impact of Artificial Lighting” (2014) to minimise disturbance and sky-glow across the site and particularly towards the boundary features

Hedgehogs

Hedgehog numbers have dramatically declined in recent years. Research suggests that this is partly because it is becoming harder for hedgehogs to move freely due to an increase in the number of solid walls and fences being erected around gardens. This reduces the available foraging area and so restricts the amount of food that they can eat as well as reducing the possibility of meeting a mate. Creating a hole in a garden wall or fence will allow your local hedgehogs to pass through from garden to garden safely. The recommended fence equipment are detailed in Table 3.3 below.

Table 3.3 Hedgehog Specifications

Eco hedgehog Fence Plate	Photograph
<p>A hole measuring 13cm by 13cm is the right size for a hedgehog to pass through but too small for most pets. A hole is made in the fence or wall, and Eco Hedgehog Hole Plate is fixed to the fence/ wall, ensuring that the hole does not get blocked or stretched. The plate has six screw holes, three along each side, which can be used to fix the plate to your fence or wall. Additional holes can be made in the plastic if required.</p> <p>The Eco Hedgehog Hole Plate is made from 100% recycled plastic, which is mostly derived from plastic waste from farms across the UK. The plastic hedgehog hole is UV-stabilised so will not rot or degrade over time.</p> <p>Source: www.nhbs.com</p>	

APPENDICES

APPENDIX 1 – PROTECTED SPECIES LEGISLATION

Breeding Birds

Under the Wildlife & Countryside Act 1981 (as amended), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to;

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is being built or in use;
- Take or destroy the eggs of any wild bird; and,
- Possess or control any wild bird or egg unless obtained legally.

Birds listed under Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) are afforded additional protection, which makes it an offence to disturb a bird while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

The UK's birds can be split in to three categories of conservation importance - red, amber and green.

Red list criteria:

- Globally threatened;
- Historical population decline in UK during 1800–1995;
- Severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period (the entire period used for assessments since the first BoCC review, starting in 1969); or,
- Severe (at least 50%) contraction of UK breeding range over last 25 years, or the longer-term period.

Amber list criteria:

- Species with unfavourable conservation status in Europe (SPEC = Species of European Conservation Concern);

- Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years;
- Moderate (25-49%) decline in UK breeding population over last 25 years, or the longer-term period;
- Moderate (25-49%) contraction of UK breeding range over last 25 years, or the longer-term period;
- Moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period;
- Rare breeder; 1–300 breeding pairs in UK;
- Rare non-breeders; less than 900 individuals;
- Localised; at least 50% of UK breeding or non-breeding population in 10 or fewer sites, but not applied to rare breeders or non-breeders; or,
- Internationally important; at least 20% of European breeding or non-breeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively).

Green list species occur regularly in the UK but do not qualify under any or the above criteria.

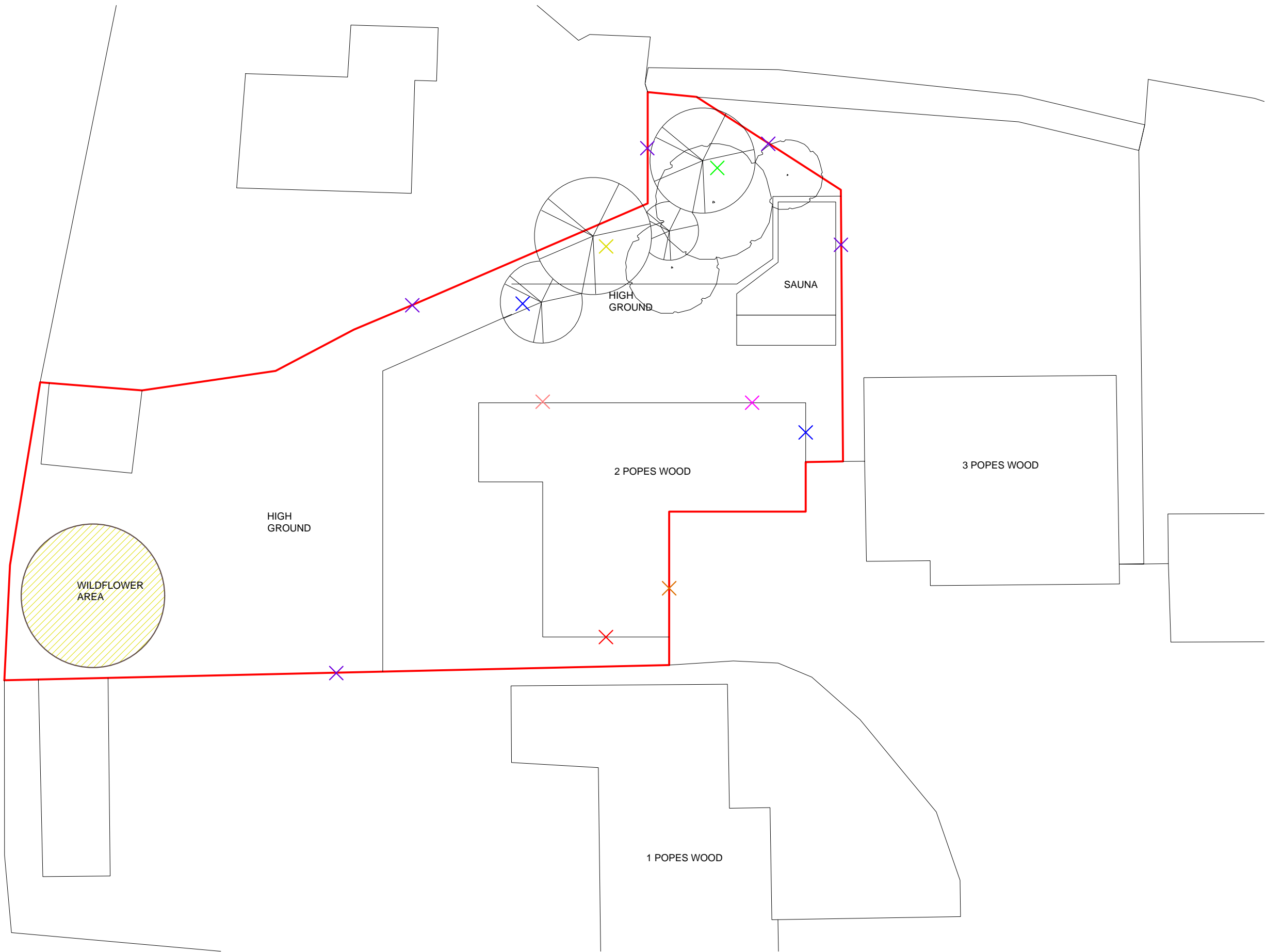
Bats

All bat species are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act (2000) and the Conservation (Natural habitats &c.) Regulations 2010 (as amended). Together, this legislation makes it illegal to:










- Intentionally or deliberately take, kill or injure a bat;
- Damage to, destruction of, and obstruction of access to, a bat roost; and,
- Disturbance of a bat occupying a roost.

A bat roost is defined in the legislation as “any structure or place which a bat uses for shelter or protection”.

APPENDIX 2 – WILDFLOWER, BIRD AND BAT BOX SCHEME



KEY

-  SWIFT BOX
-  IMPROVED CAVITY BAT BOX
-  OPEN FRONTED BIRD BOX
-  25mm BIRD BOX
-  32mm BIRD BOX
-  SPARROW TERRACE
-  1FF SCHWEGLER BAT BOX
-  HEDGEHOG CORRIDOR
-  WILDFLOWER AREA

