

# Ecological Enhancement Scheme

Project	29 Broadwater Road, Welwyn Garden City
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Client	The Hill Group
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## Summary:

To maximise the ecological value of the proposed development, the following features have been included within the design. This document includes further details.

Bat, bird, hedgehog, and invertebrate boxes

Log pile and compost heap

Additional planting and habitat management

## Purpose of this document

This Ecological Enhancement Scheme outlines the ways in which the proposed development at 29 Broadwater Road, Welwyn Garden City will seek to enhance the ecological value of the site and the surrounding area.

The following considerations and references have driven the design process:

- Gunnell et al. 2013, Designing for Biodiversity: A technical guide for new and existing buildings.
- Royal Horticultural Society 'Plants for Pollinators' plant species guidance lists
- ARC Amphibian Habitat Management Handbook (2011)
- RHS Wildflower meadow maintenance (website)

## Opportunities for Biodiversity Compensation and Enhancement

The proposed development involves the construction of 125-130 apartments on previously developed land, with associated landscaping. Due to the nature of the development the

following opportunities for biodiversity enhancement have been identified (see Appendix 1 and 2 for locations):

- Northern side of building – 3 x swift boxes
- Southern side of building – bat box
- Western courtyard side of building – 3 x swift boxes, bat box
- North-eastern corner of site – hedgehog box, log pile and compost heap
- East of site – invertebrate box



The ecological enhancement opportunities detailed in this document are intended to maximise the ecology of the site itself and also link to habitats and species likely to be found within the nearby area.

### **Wildlife boxes, and other enhancement opportunities**

The wildlife boxes below have been chosen specifically to benefit species that are found in the local area. The locations of the boxes (see Appendix 1) have been chosen to meet the requirements of the species concerned and maximise the chances of successful occupation. All boxes are available at [www.nhbs.com](http://www.nhbs.com) or direct from manufacturers.

#### **Bat boxes**

**Two** bat boxes will be included in the development. Recommended models are shown below. The bat boxes will be located on the southern side and western courtyard side of the new building installed as high as possible underneath the eaves. The boxes will be located away from artificial lighting as far as possible. The following box models are designed specifically to accommodate crevice dwelling species such as *Pipistrellus* species and cavity-dwelling bats such as the brown long-eared bat (*Plecotus auritus*).

Recommended bat box models:	
Ibstock Enclosed Bat Box 'C' (Integrated)	Or) Ibstock Enclosed Bat Box 'B' (Integrated)
	 <p>Large Bespoke 215 x 290 mm</p>
Location: Southern side and western courtyard side of the building installed under the eaves.	


### Swift bricks

Swifts (*Apus apus*) are an iconic bird species which typically use buildings as nesting places. This species is listed as a Red List Species of conservation concern in the UK due to population declines.

The house sparrow (*Passer domesticus*) is listed on the UK Biodiversity Action Plan as priority species for conservation. Monitoring suggests a severe decline in the UK house sparrow population recently estimated as dropping by 71 per cent between 1977 and 2000 with substantial declines in both rural and urban populations (RSPB).

The inclusion of swift bricks will provide a new potential nesting site for both species. Swift bricks have been proposed as a 'universal' nest brick, as evidence suggests that swift bricks could also provide nesting opportunities for other small birds (e.g., house sparrows, tit species, starlings (*Sturnus vulgaris*)). **Six** swift bricks will be included in the development. The recommended models are shown below. The swift bricks will be located in clusters of three on the northern side and western courtyard side of the new building installed as high

as possible under the eaves to provide sufficient height for swifts to access the box, with a clear flight path to the entrance and out of prevailing winds and strong sunlight.

<b>Recommended swift brick models:</b>	
Ibstock Eco-habitat for Swifts (Internal)	Or) S Brick by Action for Swifts (Internal)
	
Or) No. 17B Schwegler Swift Nest Box (Single Cavity) (External)	Or) Vivara Pro WoodStone Swift Nest Box (External)
	
Location: Clusters of three on the northern side and western courtyard side of the building under the eaves.	



### Hedgehog boxes

The proposed habitats within the development site and the existing habitats in the surrounding area, including open lawns, hedgerows, scrub, and landscaped areas, will provide many foraging opportunities for hedgehogs (*Erinaceus europaeus*). There is growing evidence of a considerable decline in hedgehog numbers in recent years, with around a third of the national population lost since the year 2000. To contribute to halting this decline, **one** of the following models of hedgehog nest box will be located in the north-eastern corner of the site, installed in an undisturbed location.

Recommended hedgehog box models:	
HH7 Hedgehog/Mammal House	Or) Hedgehog Nest Box
	
Location: North-eastern corner of the site installed in an undisturbed location.	

### Invertebrate boxes

To provide additional habitat for invertebrates to shelter, over-winter, or nest in, **one** of the following models of invertebrate box will be included within the site. The box will be affixed to an outbuilding to the east of the site, at a height approximately 1 m above floor level and orientated facing south.

Recommended invertebrate box models:	
Insect Tower (CJ Wildlife)	Or) Bug Mansion
	
Location: Affixed to an outbuilding east of the site, at approximately 1 m above floor level and orientated facing south.	

### Log Pile and Compost Heap

**One** log pile and compost heap will be added to the north-eastern corner of the site to enhance the site for a range of species. Log piles and compost heaps have the potential to support a number of hibernating reptiles and amphibians, as well as support diverse populations of invertebrates.

Log piles and compost heaps located in sheltered areas can prevent regular temperature fluctuations and encourage a stable environment for invertebrates, whereas log piles and compost heaps placed in sunny areas will provide basking and egg-laying opportunities for reptiles. The log pile will be created in accordance with the suggested minimum size recommended in ARC Amphibian Habitat Management Handbook (2011), ideally “2-4 m long x 2 m wide x 1 m deep”. If tree or scrub removal is taking place, the proposed log pile can be created using the felled branches from native trees and scrub within the site. Compost heaps can be created using the cuttings from mowing lawns or vegetation clearance. The compost heap can be regularly piled up following site maintenance and gardening. Any existing log piles, dead wood and brash located within the site should be retained.

### Additional planting

This project does not yet have a proposed planting schedule; however, this report includes recommendations for additional planting of species which will benefit wildlife.

Incorporating grassland within the proposed development site will provide an improved foraging opportunity for many species such as invertebrates, birds, and bats. Recommended seed mixes include Emorsgate EL1 Flowering Lawn Mixture. This mix will include species listed within the RHS ‘Perfect for Pollinators Wildflower List’.

Any additional tree planting should include locally native woody species or species with a known attraction or benefit to local ecology, with species bearing nectar, berries, fruit and nuts providing food for birds, small mammals and invertebrates. Recommended tree species include: field maple (*Acer campestre*), hazel (*Corylus avellana*), English oak (*Quercus robur*), quince (*Cydonia oblonga*), pear (*Pyrus invincible*) and apple species (*Malus sp.*).



These trees will provide good foraging resources for birds, invertebrates and small mammals.

Incorporating flowering shrubs and evergreen shrubs into the proposed development site can provide food for birds, small mammals and invertebrates. Recommended species include: guelder rose (*Viburnum opulus*), common wayfaring tree (*Viburnum lanata*), Japanese quince (*Chaenomeles speciosa*), sweet box (*Sarcococca hookeriana humilis*), English lavender (*Lavandula angustifolia*), cornelian cherry (*Cornus mas*), and *Weigela* species.

## **Maintenance**

As part of the aftercare and long-term maintenance of ecological features, annual inspections will be undertaken to ensure that enhancements e.g., boxes, are present and in a good state of repair. Annual inspections should be undertaken by the site owner and/or manager. Replacement or repair of enhancements will be arranged where necessary.

### Specific requirements according to species:

**Bats** – Once in use, bat boxes are protected by law against damage or disturbance. As such, should any disturbance to these boxes be required, an ecologist should be consulted to advise.

**Hedgehogs** – Hedgehog boxes should be cleared of debris and old nests annually. Cleaning should be sensitive of hedgehog breeding and hibernation periods, and so will either be undertaken in April (after hibernation but before hedgehogs start breeding) or October (before hibernation but after most litters have been weaned).

### Grassland and vegetation management

Note that on-going management will be stipulated within future landscape information. Below are key recommendations to manage habitats for biodiversity:



- When grassland is newly sown it is important to mow regularly in the first year to encourage plant species to make strong root growth.
- Once established, cutting should be undertaken at three main times of the year: spring cut, summer cut, autumn cut.
- Areas intended to be used for amenity space will receive more frequent mowing, however it is recommended that relaxed mowing is implemented between May and June to allow flowering plants to grow.
- Leave an area uncut to provide sites for animals such as small mammals and invertebrates to shelter and overwinter.

## **Appendix 1 – Ecological Enhancements Site Plan**



# Legend


- Site Boundary
- Bat box
- Hedgehog box
- Invertebrate box
- Log pile/compost heap
- Swift boxes x 3

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Date	Drawn by	Authorised
15/08/2024	JT	CT
Drawing No	Rev	Scale
190432-EC-08	-	1:550



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