

**Land at Worcester Close,
Gravesend, Kent.**

**Ecological Mitigation and
Enhancement Strategy**

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LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date. This report provides a snap shot of the species that were present at the time of the survey only.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 INTRODUCTION

1.1 The Ecology Partnership was commissioned by Frankhams to complete a Biodiversity Ecological Mitigation and Enhancement Strategy for the development at Worcester Close, Gravesend, DA13 9LA.

1.2 This report details the proposed biodiversity enhancement throughout the site and management of those habitats outside the ownership of the residential dwellings.

2.0 HABITAT MANAGEMENT

2.1 The proposed development will include the creation of new modified grassland and native species-rich hedgerow habitats within the site, alongside the areas of proposed hardstanding.

2.2 Species to be included within the hedgerow planting are recommended to be native and provide benefits to the local wildlife, recommended species include spindle (*Euonymus europaeus*), hazel (*Corylus avellana*), cherry (*Prunus avium*), hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), guelder rose (*Viburnum opulus*), wayfaring tree (*Viburnum lantana*), rose (*Rosa* sp.) and wild privet (*Ligustrum vulgare*). Fruit and berry producing species have been included in the mixture to also offset the loss of the fruit trees. The planting will help compensate for the loss of nesting and foraging opportunities for a wide range of species, including nesting birds and hedgehogs.

2.3 The hedgerows will be subject to limited management with light pruning, between January and February, in the first two or three years of growth, if required. More intensive trimming can be completed on rotation every 2-3 years, if necessary, again between January and February, which avoids the nesting bird season.

2.4 Grassland will be sown with a flowering lawn mixture, such as Emorsgate Seeds EL1. This mix contains species such as lady's bedstraw (*Galium verum*), oxeye daisy (*Leucanthemum vulgare*), selfheal (*Prunella vulgaris*), meadow buttercup (*Ranunculus acris*), common bent (*Ranunculus acris*) and red fescue (*Festuca rubra*). These species respond well to regular short mowing so are most suitable to residential gardens. They will also support a wide

- range of invertebrate and pollinator species, including bumble bees which have experienced widespread decline, up to 70%, in over a third of the species. All grassland will be left uncut during May (No Mow May) to provide opportunities for a range of invertebrates and mammals.
- 2.5 The flowering lawn mixture should be sown in autumn or spring to ensure there is sufficient warmth and moisture. Although can be sown at other times of year if required. During the first year of establishment, the new lawns should be mown every 7 to 10 days, to aid the development of a good sward structure and to maintain a balance between faster growing grasses and slower wildflowers. Once established, the lawn will be maintained between 25-40mm. To enable the lawn to flower, mowing should be relaxed from late June.
- 2.6 A total of four trees are set to be planted onto the site, it is recommended that these be fruit trees such as apple (*Malus domestica*), pear (*Pyrus communis*) and plum (*Prunus domestica*), to replace those which are to be removed as they have significant value for pollinators.
- 3.0 WILDLIFE ENHANCEMENTS**
- 3.1 Four bird boxes will be integrated into the new structure to provide new nesting opportunities in compensation for the lost trees. The Habibat small nest box, or similar if not available, are recommended and should be positioned near vegetation and 2-3m above the ground. No cleaning or management of the bird boxes is required.



Figure 1: Habibat Small Bird Nest Box

- 3.2 Two bat boxes will be integrated into the new structure to provide new roosting opportunities for bats. Habibat Integrated Bat Box, or similar if not available, (Figure 2) are recommended as they can be built into masonry of external walls or beneath a rendered surface and require no maintenance. The bat boxes should be at least 4m above ground (or as high as possible) and away from artificial light sources. No cleaning or management of the bat boxes is required.

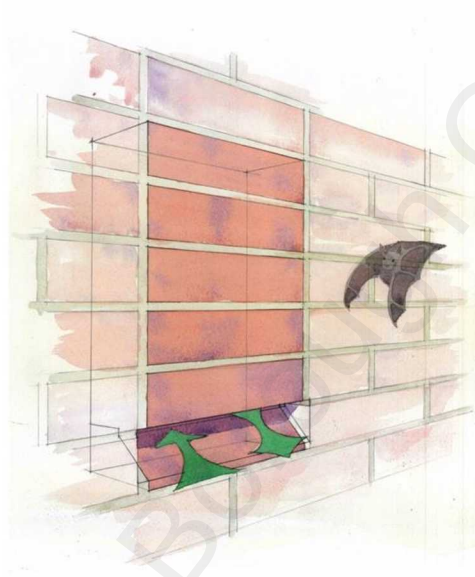


Figure 2: Habibat Integrated Bat Box

- 3.3 To support the invertebrates and bees attracted to the site by the flowering lawn mixtures, Bee Bricks (Figure 3) will be incorporated into the structure (2 in total). Bee Bricks can be used in place of a standard brick or block in construction to create habitat for solitary bees. Bee Bricks will be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. No cleaning or management of the Bee Bricks is required.



Figure 3: Bee Bricks to be incorporated into the development

- 3.4 The use of raised beds and planters will be incorporated into the design of the scheme where green space on site is limited. Native nectar-rich species should be planted to benefit invertebrates which are in turn food sources for other species including birds and bats. Species can include chamomile (*Anthemis nobilis*), honeysuckle, jasmine (*Jasminum officinale*), lavender (*Lavendula vera*), mint (*Mentha piperita*), rosemary (*Rosmarinus officinalis*), sage (*Salvia officinalis*), sweet pea (*Lathyrus odoratus*) and thyme (*Thymus vulgaris*). The raised planters can be established in suitable areas of open space within the development.
- 3.5 The recommended location for these enhancements is shown within the Ecological Enhancement Strategy Map within the Appendix.

[illegible]

- RLB
- Tree Planting
- Bird Boxes
- Bat Boxes
- Bee Bricks
- Flowering Lawn
- Planters

Site: Land at Worcester Close,
Gravesend, Kent
Map Title: Ecological Enhancement
Strategy
Client: Frankhams
Base Map: Proposed Block Plan
(WCL-BPTW-S01-ZZ-DR-A-0112)

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Date: 18/01/23