WINVIC CONSTRUCTION LTD

ECOLOGYSOLUTIONS

Part of the ES Group

GSK SITE,
STOCKLEY PARK,
HILLINGDON

Ecological Enhancement Plan

April 2022
10644.EEP.dv1

ecology solutions for planners and developers

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PLANS

APPENDICES

1. INTRODUCTION

1.1. Background & Proposals

1.1.1. Ecology Solutions was instructed by Winvic Construction Limited in March 2022 to prepare information to discharge Condition 12 attached to the planning consent for the former GSK Site at Stockley Park, Hillingdon in London. Condition 12 is detailed within the application planning permission for the redevelopment of the site (planning ref: 39207/APP/2020/2188) and refers to the promotion and enhancement of wildlife opportunities, as follows:

Prior to the above ground works, an ecological enhancement plan shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall include plans and specifications that demonstrate the incorporation of measures and features within the landscaping and the fabric of the building that support a range of habitats and species, as a minimum it is recommended that living walls / screens, green roofs, bat and bird boxes and artificial refugia will be included. Thereafter the development shall be implemented and retained / maintained in accordance with these details for as long as the development remains in existence.

1.1.2. This document should be read in conjunction with the Ecological Assessment produced by Ecology Solutions and the Landscape Concept Plan produced by Barry Chinn Associates.

1.1.3. This report details the proposed biodiversity enhancement measures for the site and provides information to discharge Condition 12.

1.2. Site Characteristics

1.2.1. The site is approximately 6.3ha in size and located within the urban area of Yiewsley. West Drayton lies a short distance to the south whilst Uxbridge, Hillingdon and Hayes lie to the north and east. Stockley Road, a busy dual carriageway (A408), lies adjacent to the eastern boundary of the site. Immediately south of the site is the Grand Union Canal, while Stockley Park and associated golf course lie to the north. The mainline railway from London Paddington to Bristol is a short distance to the south of the Grand Union Canal beyond existing warehousing. Further south (approximately 1.4km) is the M4 motorway, beyond which is Heathrow Airport. Between Yiewsley and the M25 motorway, some 3km west, are the watercourses and waterbodies of the Colne valley.

1.2.2. The site is dominated by a large area of hardstanding (car park), in addition to three main office buildings and other ancillary buildings (Buildings B1 to B5) of varying size and structure. Several small areas of amenity grassland and amenity planting are present throughout the site, in addition to amenity hedgerows and trees. A man-made pond is also present in the north of the site. A small area of woodland lies in the east and south of the site, separating the site from the A408 dual carriageway (Stockley Road) and the Grand Union Canal.

2. BASELINE CONDITIONS

2.1. The results of all surveys undertaken within the site are set out below. A habitat survey was undertaken across the site in September 2019. Full details of these surveys are detailed within the Ecological Assessment produced by Ecology Solutions in July 2021.

2.2. Habitats

2.2.1. Five buildings (Buildings B1 to B5) are to be demolished as a result of the redevelopment (see Plan ECO2). The buildings on site include a single-storey gatehouse, three three-storey modern buildings and a three-storey car park. The buildings are all constructed from steel, concrete and glass.

2.2.2. Hardstanding dominates the site, associated with site access, footpaths and the car park. Areas of amenity grassland, planting, and hedgerow, consisting of primarily introduced species, intersect the hardstanding and divide the car parking spaces. At the time of survey, the grass was heavily managed.

2.2.3. An area of woodland is present in the east and south, separating the site from the A408 (Stockley Road) and the Grand Union Canal. The broadleaved woodland is dense and comprises largely immature tree species.

2.2.4. A large, ornamental pond is present in the north of the site with large fish within. No aquatic vegetation was present but the marginal vegetation included Common Reed *Phragmites australis*, Lesser Bulrush *Typha angustifolia*, Purple-loosestrife *Lythrum salicaria* and Great Willowherb *Epilobium hirsutum*.

2.3. Species

Bats

2.3.1. The buildings on site do not have potential to support roosting bats, owing to their construction materials and design. No trees with potential roost features were noted during survey work.

2.3.2. The woodland to the south and east, which separates the site from the adjacent dual carriageway and canal, provides potential foraging opportunities. The Grand Union Canal to the immediate south of the site, part of the London's Canals Site of Metropolitan Importance for Nature Conservation (SMI) (see Plan ECO2), has potentially significant foraging interest for bat species and could be used as a corridor for commuting bats

Birds

2.3.3. Several bird species were recorded on site during the course of the surveys; no Schedule 1 species were recorded. The site will support an assemblage of common species, which would generally be focused on the margins, in particular the south and east.

Amphibians

2.3.4. The waterbody in the north of the site was surveyed in September 2019. The pond is classed as offering poor amphibian aquatic and terrestrial habitat, with no emergent vegetation suitable for newts to lay eggs and short-mown grass encompassing the pond. The presence of fish was confirmed within the pond, further reducing the likelihood of finding Great Crested Newts *Triturus cristatus* owing to likely predation. It was not considered necessary to undertake further surveys for Great Crested Newts as the species is not likely to be present.

Hedgehogs

2.3.5. No evidence of Hedgehog *Erinaceus europaeus* was recorded during the survey works undertaken. The woodland present along the eastern and southern boundary of the site offers suitable opportunities for foraging and dispersing Hedgehogs, in particular along the Grand Union Canal.

Invertebrates

2.3.6. Given the habitats present on site, it is likely a limited number of common of invertebrate species would be present.

3. CREATED HABITATS

3.1. Trees

3.1.1. A total of 170 trees will be planted across the site and alongside the Grand Union Canal including the native species, Alder *Alnus glutinosa*, Field Maple *Acer campestre*, Silver Birch *Betula pendula*, Wild Cherry *Prunus avium*, Goat Willow *Salix caprea*, Small-leaved Lime *Tilia cordata* and Large-leaved Lime *Tilia platyphyllos*.

3.1.2. The provision of new trees will bolster the retained trees and woodland and offer future nesting opportunities for birds. The wildlife corridor of Grand Union Canal will also be strengthened by additional planting, furthering opportunities for bats, birds and other mammals.

3.1.3. The locations and species of the trees to be planted are detailed on drawing 1982-19-05 produced by Barry Chinn Associates (see Appendix 1).

3.2. Thicket Planting

3.2.1. New planting utilises predominately native species and those with a known value to wildlife (see Table 3.1). The thicket will bolster and diversify the site boundaries and as it comprises several fruit-bearing species, the thicket will also provide additional foraging opportunities for invertebrates, birds, bats and small mammals.

Species	Percentage (%)
Field Maple *Acer campestre*	20
Hazel *Corylus avellana*	35
Hawthorn *Crataegus monogyna*	5
Alder Buckthorn *Frangula alnus*	10
Wild Privet *Ligustrum vulgare*	10
Blackthorn *Prunus spinosa*	5
Goat Willow *Salix caprea*	10
Gorse *Ulex europaeus*	5

Table 3.1. Species composition of native thicket planting.

3.3. Native Hedgerow

3.3.1. Additional hedgerow planting will be planted at the site boundaries and utilised to divide the parking spaces. The planting will comprise native species (see Table 3.2) and provide dispersal opportunities for small mammals such as Hedgehog. The hedgerow also incorporates fruit-bearing species that will be of benefit to foraging birds and mammals.

Species	Percentage (%)
Field Maple *Acer campestre*	50
Hazel *Corylus avellana*	10
Hornbeam *Carpinus betulus*	30
Hawthorn *Crataegus monogyna*	5
Goat Willow *Salix caprea*	5

Table 3.2. Species composition of native hedgerow planting.

3.4. Shrub Planting

3.4.1. Ornamental shrub species will be established along the western site boundary and within the site car park (see Appendix 1). The planting will incorporate both native and non-native species, some of which are beneficial to pollinators. The shrub will provide opportunities for small mammals, invertebrates, and birds.

3.5. Wildflower and Ecological Grassland

3.5.1. Areas of wildflower and ecological grassland will be established along the Grand Union Canal and within the site (see Appendix 1). The grassland will contain flowering species that are beneficial to pollinators and provide opportunities for small mammals.

3.6. Rain Gardens

3.6.1. A series of perennial planting areas, referred to as rain gardens, are to be established on the perimeter of the built area, largely focused along the western site boundary. Planting will comprise a mix of native shrub and wildflower species that will provide further opportunities for invertebrates, bats and birds.

3.7. Marginal Planting

3.7.1. Planting of native species (see Table 3.3) around the attenuation pond in the north of the site will provide additional opportunities for wildlife. The area will provide new nectar resources and habitats for birds and invertebrates. The attenuation basin and planting will also provide further opportunities for foraging bats.

Species	Percentage (%)
Marsh-marigold *Caltha palustris*	10
Meadowsweet *Filipendula ulmaria*	10
Marsh-bedstraw *Galium palustre*	10
Purple-loosestrife *Lythrum salicaria*	10
Water Mint *Mentha aquatica*	10
Water Forget-me-not *Myosotis scorpioides*	10
Celery-leaved Buttercup *Ranunculus sceleratus*	10
Water Figwort *Scrophularia auriculata*	10
Branched Bur Reed *Sparganium erectum*	10
Brooklime *Veronica beccabunga*	10

Table 3.3. Species composition of native marginal planting.

3.8. Inundation Grassland

3.8.1. An area of inundation grassland will be established around the attenuation basin in the north of the site (see Appendix 1). The Emorsgate EP1 Pond Edge Mixture contains a mixture of native wildflowers and grasses that are beneficial to pollinators and will provide new opportunities for small mammals and invertebrates (see Table 3.4).

Species	Percentage (%)
Wildflowers	
Yarrow *Achillea millefolium*	1
Agrimony *Agrimonia eupatoria*	0.2
Wild Angelica *Angelica sylvestris*	0.2
Rough Chervil *Chaerophyllum temulum*	2
Common Knapweed *Centaurea nigra*	0.3
Crosswort *Cruciata laevipes*	3
Wild Teasel *Dipsacus fullonum*	2
Meadowsweet *Filipendula ulmaria*	5
Hedge Bedstraw *Galium album*	2.6
Lady's Bedstraw *Galium verum*	1
Oxeye Daisy *Leucanthemum vulgare*	2
Purple-loosestrife *Lythrum salicaria*	0.2
Musk-mallow *Malva moschata*	0.2
Ribwort Plantain *Plantago lanceolata*	0.1
Sorrel *Rumex acetosa*	0.1
Pepper-saxifrage *Silaum silaus*	0.1
Grasses	
Common Bent *Agrostis capillaris*	10
Sweet Vernal Grass *Anthoxanthum odoratum*	3
Quaking-grass *Briza media*	6
Crested Dog's-tail *Cynosurus cristatus*	26
Tufted Hair-Grass *Deschampsia cespitosa*	2
Red Fescue *Festuca rubra*	28
Meadow Fescue *Festuca pratensis*	5

Table 3.4. Species composition of Emorsgate EP1 Pond Edge Mixture.

3.9. Green Walls

3.9.1. A number of green walls will be established on the facades of the buildings. The Wall Planter green wall system will be supplied by Hedera Screens Ltd (see Appendix 2) and support Ivy *Hedera helix*.

3.9.2. Living wall panels supporting native climbing shrubs such as Honeysuckle *Lonicera periclymenum* will also be incorporated into the site landscaping. The living walls will provide additional opportunities for bats, birds and invertebrates.

3.10. Green Roofs

3.10.1. A green roof will be established on each of the warehouse units (see Appendix 1). The extensive sedum green roofs will be supplied by Blackdown Roof and Podium Landscaping and offer a 95% plant coverage on installation.

3.10.2. The green roofs will provide additional opportunities for invertebrates, bats and birds.

4. SPECIES ENHANCEMENTS

4.1. To provide ecological enhancements for wildlife within the redevelopment area a number of bat, bird and invertebrate boxes will be installed. Boxes that are designed to be incorporated into buildings will be installed during construction phase.

4.2. Bats

4.2.1. As an enhancement for roosting bats, ten Schwegler 1FF Bat Boxes (or similar) will be installed on suitable retained trees within the site and, subject to agreement, on the canal interface (see Plan ECO3).

4.2.2. Schwegler's 1FF Bat Box is suitable for attachment to trees and has a narrow crevice-like internal space attractive to Pipistrelle *Pipistrellus* sp. bats such as Soprano Pipistrelle *Pipistrellus pygmaeus*, which are known to use the site for foraging. Soprano Pipistrelle is a UK and London priority species.

4.2.3. Two Schwegler 2FE boxes will also be installed. One of these will be erected on the south-western corner of Unit 2 and one on the north-western corner of Unit 1, close to the wildlife habitat areas that provide interconnectivity with the canal interface to allow ready access to commuting and foraging opportunities (see Plan ECO3).

4.2.4. Further details of the box designs are available in Appendix 3.

4.2.5. The bat boxes will not be subject to direct lighting. Where lighting is required, the effects will be minimised by including use of appropriate low UV emitting luminaries. Lighting of green space will also be kept to a minimum during the construction phase.

4.3. Birds

4.3.1. As an enhancement for nesting birds, ten Schwegler 1B Bird Boxes, five Schwegler 1N Deep Nest Boxes and five Schwegler 2GR Nest Boxes (or similar) will be installed on retained trees within the site and, subject to agreement, on the canal interface. Details of these bird boxes (both of which are suitable for attachment to trees) are given below, with further information available in Appendix 3.

4.3.2. Schwegler's 1B Bird Box is the most popular box for garden birds and appeals to a wide range of species that are likely to be present in the suggested area. Two of the three entrance hole sizes (namely the 26mm diameter hole for small Tit species and the standard 32mm diameter hole) are suitable in this context.

4.3.3. The 1N Deep Nest Box is a deeper-than-standard box with two entrances. Ideal for species including Tits and Robin *Erithacus rubecula*, its depth offers protection from predators such as cats and Magpie *Pica pica*.

4.3.4. The 2GR Nest Box features a large nesting area and a front panel to provide birds with enhanced protection from predators.

4.3.5. These boxes will be attached to suitable trees in the wildlife habitat areas (see Plan ECO3).

4.3.6. Four House Sparrow *Passer domesticus* terraces will also be installed, with two erected on Unit 1 and two on Unit 2. House Sparrow is a UK and London priority species and nests colonially.

4.3.7. Schwegler's Sparrow Terrace (see Appendix 3) is a long-lasting, low maintenance bird box providing three nesting spaces. Sparrow terraces should be installed at least two metres above ground height, at least one metre apart, out of direct sunlight. The terraces will be installed on the northerly aspect of Unit 2 and the easterly aspect of Unit 1 and all will be close or adjacent to the foraging opportunities provided by the thicket planting, green roofs and proposed wildflower grassland (see Plans ECO2 and ECO3).

4.4. Hedgehogs

4.4.1. A series of 'Hedgehog Gateways' will be installed within the boundary fences to facilitate movement through the new development and ensure continued permeability (see Appendix 3).

4.5. Invertebrates

4.5.1. Dead wood produced by required scrub clearance works will be used to form three log piles, offering new habitat for saproxylic invertebrate species.

4.5.2. Suitable locations for log piles exist within the proposed wildlife habitat areas within the site and /or on green roofs (see Plan ECO3).

4.5.3. Landscaping throughout the new development will include native species and species of benefit to native wildlife, including butterfly and moth food-plants such as Wild Privet and Alder Buckthorn. This will provide resources for invertebrate populations within the site at various points during their life cycles.

4.6. Maintenance

4.6.1. All features described in this section will be subject to an annual visual inspection of their condition and fixings, where access allows. Where these are found to be in poor condition the unit will be replaced with the same model, or a similar item where the original model is no longer available. Bird boxes will be inspected outside of the bird nesting season (approximately March to July / August inclusive). Bat boxes will similarly be inspected by a licensed ecologist outside of the main activity period for bats i.e., outside of the period April to October inclusive.

5. SUMMARY AND CONCLUSIONS

5.1. Ecology Solutions was instructed by Winvic Construction Limited in March 2022 to provide ecological advice regarding the redevelopment of the former GSK Site at Stockley Park, Hillingdon in London.

5.2. This report is concerned with information to address the requirements of Condition 12 on ecological enhancement measures.

5.3. This document should be read in conjunction with the Ecological Assessment produced by Ecology Solutions and the Landscape Concept Plan produced by Barry Chinn Associates.

5.4. The site is dominated by a large area of hardstanding in addition to three main office buildings and other ancillary buildings. Several small areas of amenity grassland and amenity planting are present throughout the site, in addition to amenity hedgerows and trees. A man-made pond is present in the north of the site and small areas of woodland lie in the east and south of the site, separating the site from the A408 dual carriageway and the Grand Union Canal.

5.5. Proposed planting will include native trees, native hedgerow, native thicket, ornamental shrubs, rain gardens, wildflower grassland, marginal and inundation grassland associated with the proposed attenuation basin as well as green roofs and walls. Species that will be used have known benefits to wildlife, particular pollinators.

5.6. **Bats.** Twelve bat boxes will be provided within the redevelopment to provide new opportunities for roosting bats. The bat boxes will be integrated onto retained trees and into the new buildings during construction. Bat boxes will not be subject to direct lighting.

5.7. **Birds.** Twenty-four bird boxes, including Sparrow Terraces and general boxes, or boxes of similar design, will be integrated into retained vegetation and the new buildings to provide new opportunities for nesting birds during construction. New tree, thicket and hedgerow planting as well as wildflower grassland and green roofs will also offer new foraging and nesting opportunities for birds.

5.8. **Hedgehogs.** A series of ‘Hedgehog Gateways’ will be installed within the boundary fences to ensure continued permeability throughout the site.

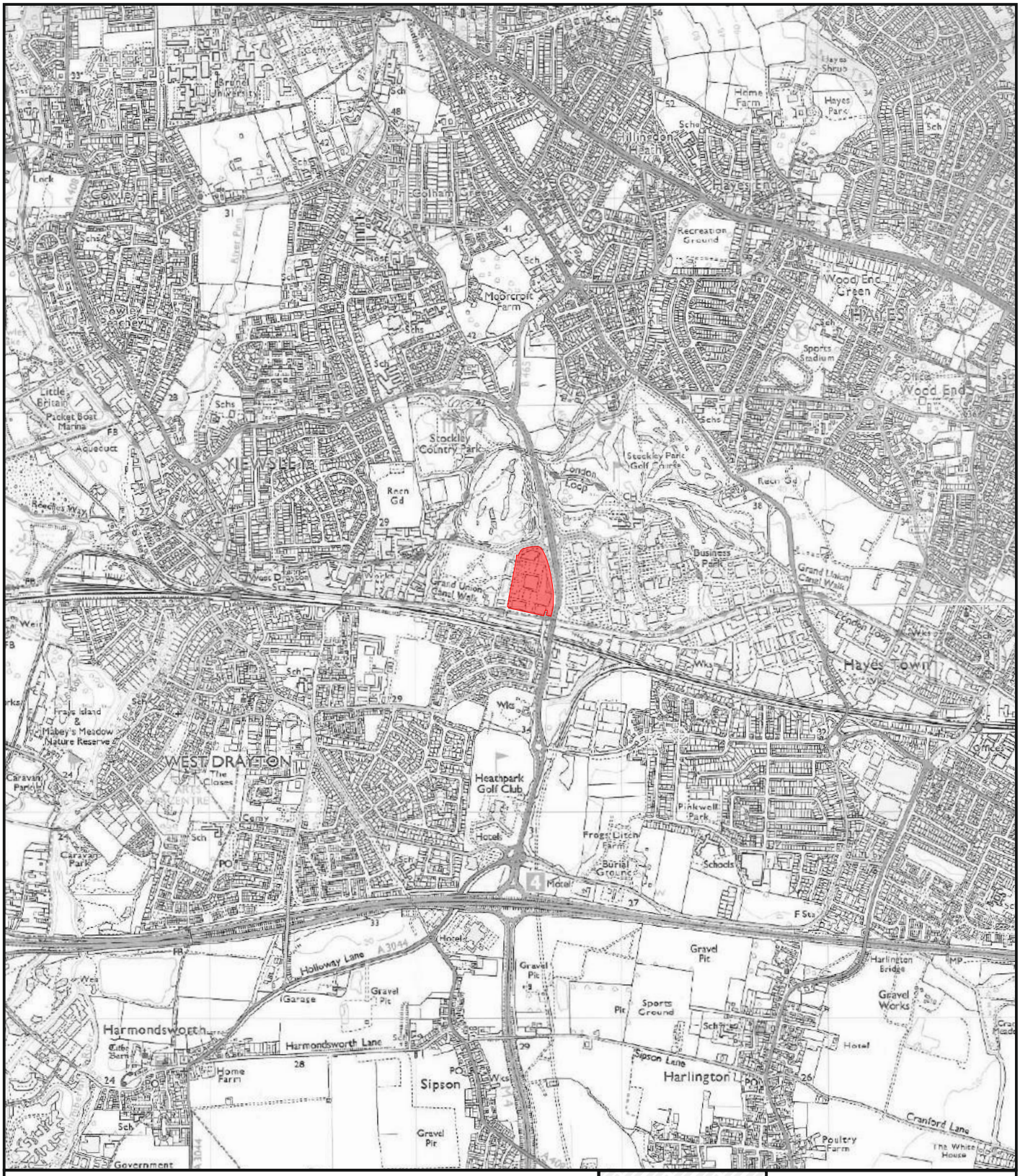
5.9. **Invertebrates.** Three log piles will be integrated on green roofs during construction and / or into retained vegetation. Planting will also include species of known value for pollinators.

5.10. In conclusion, Condition 12 will be satisfied through the implementation of the measures detailed within this report. The ecological enhancements included within the redevelopment will ensure opportunities for wildlife are secured post-redevelopment and appropriate compensation is provided for protected species recorded within the site.

PLANS

PLAN ECO1

Site Location



KEY:

SITE LOCATION

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10644: GSK SITE, STOCKLEY PARK, HILLINGDON

PLAN ECO1: SITE LOCATION

Rev: A

Apr 2022

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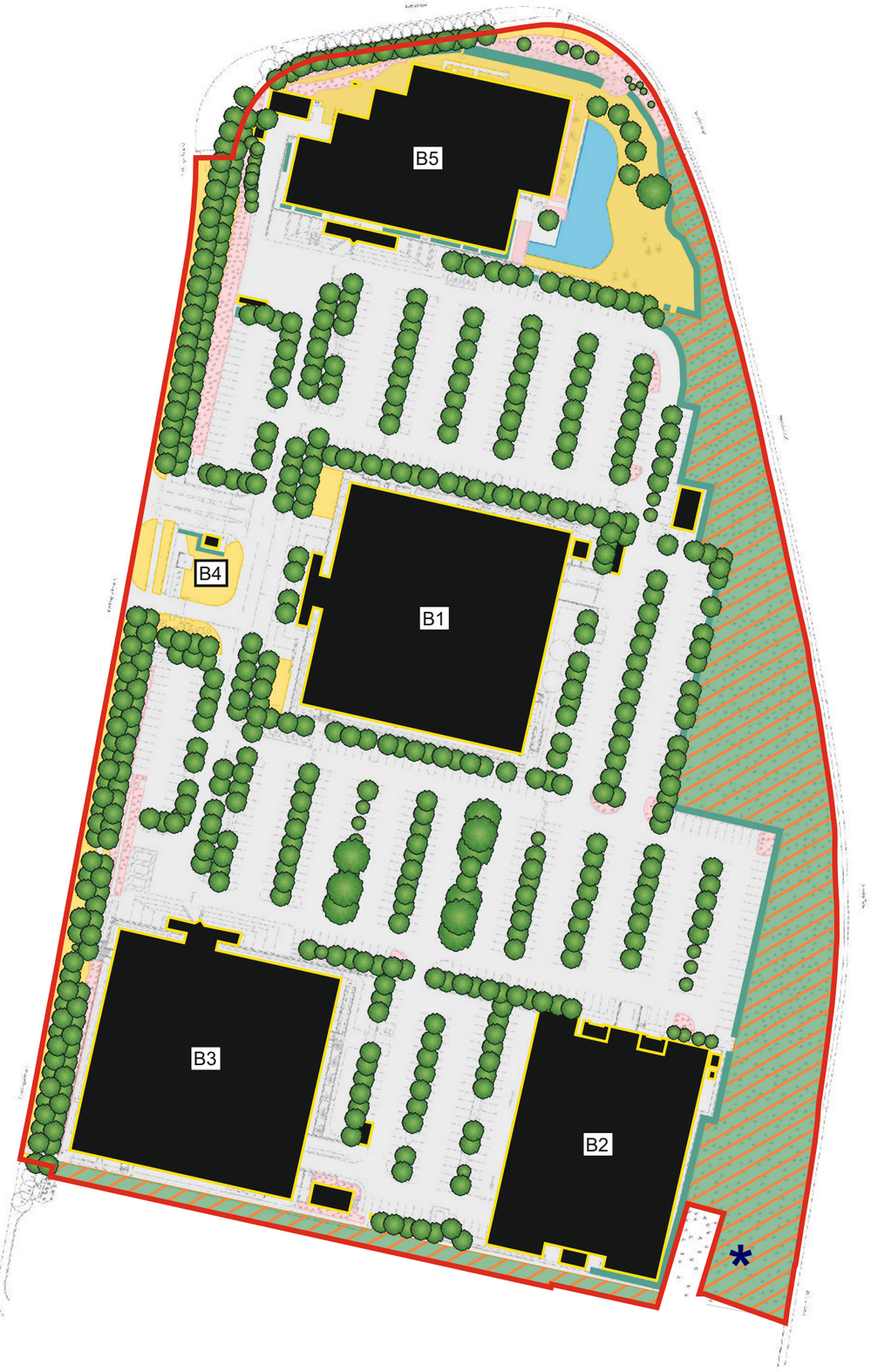
PLAN ECO2

Ecological Features



KEY:

- SITE BOUNDARY
- BUILDING
- HARDSTANDING
- WOODLAND
- AMENITY PLANTING
- SCATTERED SCRUB
- AMENITY GRASSLAND
- POND
- TREE
- FLY TIPPING / ENCAMPMENT
- AMENITY HEDGEROW

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PLAN ECO2:
ECOLOGICAL FEATURES

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PLAN ECO3

Ecological Enhancements

Thicket planting to contain native and fruit-bearing species that will provide new opportunities for small mammals, invertebrates and birds.

New tree planting to use native species and those with a known value to wildlife.

New marginal vegetation and inundation grassland are to comprise native species that will provide new nectar resources and habitats for birds and invertebrates.

Rain gardens to be provided to offer new habitats and an increase in invertebrate and visual interest.

Wildflower grassland planting alongside canal will incorporate native species which are beneficial to pollinators and provide further opportunities for birds and small mammals.

UNIT 1

UNIT 2

NOTE:
Planting to outside of red line all subject to approval from the LPA/land owner

Feature paving at entrance

Amenity zone

Green wall

Day Nursery

GRAND UNION CANAL

IRON BRIDGE ROAD

Hedges to car park perimeter to be maintained as 1.8m tall

Shrub planting to include species that are beneficial to pollinators.

Green walls established on the facades of the new building will provide opportunities for bats, birds and invertebrates.

Extensive sedum green roofs will offer a 95% plant coverage on installation and provide additional opportunities for foraging bats.

Native hedgerow planting contains fruit-bearing species and will provide dispersal opportunities for small mammals such as Hedgehog.

KEY:

- SITE BOUNDARY
- 2X SCHWEGLER 2FE BAT BOXES (INDICATIVE LOCATION)
- 10X SCHWEGLER 1FF BAT BOXES (INDICATIVE LOCATION)
- 10X SCHWEGLER 1B BIRD BOXES (INDICATIVE LOCATION)
- 5X SCHWEGLER 1N DEEP NEST BOX (INDICATIVE LOCATION)
- 5X SCHWEGLER 2GR NEST BOX (INDICATIVE LOCATION)
- 4X SCHWEGLER SPARROW TERRACE (INDICATIVE LOCATION)
- 3X LOG PILES (INDICATIVE LOCATION)

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Based on the Landscape Concept Plan by Barry Chinn Associates Limited

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PLAN ECO3: ECOLOGICAL ENHANCEMENTS

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