ARK ESTATES 2 LIMITED

ECOLOGYSOLUTIONS

Part of the ES Group

UNION PARK AT BULLS BRIDGE,
HAYES,
LONDON

Ecological Enhancement Strategy

Pursuant to Condition 15
of 75111/APP/2022/3435

March 2023
7854.EES.3435.vf

ecology solutions for
planners and developers

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APPENDICES

1. INTRODUCTION

1.1. Background & Proposals

1.1.1. Ecology Solutions was instructed by Ark Estates 2 Limited to prepare an Ecological Enhancement Strategy to address the requirements of the planning condition for the development of Union Park at Bulls Bridge, Hayes, London (ref: 75111/APP/2022/3435). The site location is shown on Plan ECO1.

1.1.2. The site has a complex planning history with the Condition 15 within this report pertaining to the substantive permission reference 75111/APP/2020/1955. Condition 15 requires a detailed Ecological Enhancement Scheme be produced which is to be submitted within planning application 75111/APP/2022/3435.

1.1.3. Condition 15 is as follows:

Prior to the commencement of any superstructure works, a detailed ecological enhancement scheme demonstrating net gains in biodiversity value shall be submitted to and approved in writing by the Local Planning Authority, in consultation with the Ministry of Defence and Heathrow Airport Ltd.

The scheme shall be made up of a plan (or plans) of the development annotated with ecological enhancement measures to be included within the fabric of the buildings and the landscaping and accompanied by a report detailing the justification for such measures and how they will be maintained in perpetuity.

The development must proceed in accordance with the approved plans. REASON To ensure the development contributes to a net gain in biodiversity in accordance with Policy DMEI 7 of the Hillingdon Local Plan: Part 2 (2020), Policy EM7 of the Hillingdon Local Plan: Part 1 (2012), Policy G6 of the London Plan (2021) and the National Planning Policy Framework (2019)

1.1.4. The proposals for this site are for redevelopment to provide a new data centre (Use Class B8), two MV Energy Centres (including stand-by generation plant and gas storage), a HV Sub-Station, a visitor reception centre, plant, the creation of a new footpath and cycleway link to the canal towpath, works to the highway, car parking, cycle parking, associated infrastructure, enclosures and necessary physical security systems, hard and soft landscaping (including works to the River Crane) and ancillary uses, as well as associated external works.

1.1.5. A part of the site (outlined on Plan ECO2), referred to within this document as the ‘drop-in’ application, is part of a separate planning application ref 75111/APP/2022/1007, which requires a stand-alone Ecological Enhancement Strategy to discharge Condition 13 pertaining to that planning application. The ecological enhancements for that area are therefore detailed in a separate document (ref: 7854.EES.1007.vf). This ‘drop-in’ application is for energy centres and visitor reception centres wholly ancillary to the main data centre of planning application 75111/APP/2022/1955.

1.2. Site Characteristics

1.2.1. The site comprises a parcel of land within a busy industrial estate southeast of the centre of Hayes.

1.2.2. The site consisted of the former Vodafone offices (which have now been demolished). The Vodafone office area surveyed in 2020 comprised a single office building, hardstanding, amenity planting, amenity grassland and semi-improved grassland.

1.3. Purpose of this Report

1.3.1. This report is prepared to address the condition attached to the planning permission requiring an Ecological Enhancement Strategy.

1.3.2. This report is informed by existing ecological survey reports, as appropriate.

2. BASELINE CONDITIONS

2.1. Ecology Solutions undertook a Phase 1 survey of the site in March 2020.The full details of which are contained within the Ecological Assessment[1].

2.2. Habitats

2.2.1. The majority of the site comprises hardstanding and rubble from the demolished industrial building.

2.2.2. Along the northern boundary of the site there are areas of semi-improved grassland, with no management currently undertaken. Species present include: Bristly Oxtongue *Picris echioides*, Bulbous Buttercup *Ranunculus bulbosus*, Cat's-ear *Hypochaeris radicata*, Cleavers *Galium aparine*, Colts-foot *Tussilago farfara Tussilago farfara*, Creeping Buttercup *Ranunculus repens*, Creeping Cinquefoil *Potentilla reptans*, Cut-leaved Crane's-bill *Geranium dissectum*, Daisy *Bellis perennis*, Dovesfoot cranesbill Daisy *Bellis perennis*, Field Wood-Rush *Luzula campestris*, Germander Speedwell *Veronica chamaedrys*, Ground Ivy *Glechoma hederacea*, Groundsel *Senecio vulgaris*, Hairy Bittercress *Cardamine hirsute*, Hogweed *Heracleum sphondylium*, Meadow Grass *Poa* sp., Meadow Vetchling *Lathyrus pratensis*, Mouse-ear *Cerastium fontanum*, Ox-eye Daisy *Leucanthemum vulgare*, Ragwort *Senecio jacobaea*, Red Dead-nettle *Lamium purpureum*, Red Fescue *Festuca rubra*, Ribwort Plantain *Plantago lanceolate*, Smooth Sow-thistle *Sonchus oleraceus*, Speedwell *Veronica* sp., Spotted Medick *Medicago arabica*, White Dead Nettle *Lamium album*, Willowherb *Epilobium* sp., Yarrow *Achillea millefolium* and Yorkshire Fog *Holcus lanatus*.

2.2.3. The site supports small areas of unmanaged amenity grassland, with some areas lost during the demolition works. Species present include Cat's-ear, Common Storks-bill *Erodium cicutarium*, Cranesbill *Geranium* sp., Daffodil *Narcissus* sp., Daisy, Groundsel, Mouse-ear, Perforate St John's-wort *Hypericum perforatum*, Round-leaved Cranesbill *Geranium rotundifolium*, Selfheal *Prunella vulgaris*, Scurvy-grass *Cochlearia* sp., Smooth Sow-thistle, Speedwell and Tufted Vetch *Vicia cracca*.

2.2.4. Areas of amenity planting are present along the boundaries of the site as well as within the car park areas. Some small areas of amenity planting have been lost as a result of the demolition. Species present include Ash *Fraxinus excelsior*, *Berberis* sp., Bindweed *Calystegia* sp., Cleavers, *Clematis* sp., Dogwood *Cornus sanguinea*, Creeping Thistle *Cirsium arvense*, English Elm *Ulmus minor*, European Gorse *Ulex europaeus*, Garlic Mustard *Alliaria petiolate*, Goat's-rue *Galega officinalis*, Hairy Sedge *Carex hirta*, Hazel *Corylus avellana*, Holly *Ilex aquifolium*, Ivy *Hedera helix*, Mexican Orange Blossom *Choisya ternate*, Common Nettle *Urtica dioica*, Silver Birch *Betula pendula*, Snowberry *Symphoricarpos albus*, Spanish Bluebell *Hyacinthoides hispanica*, Rose *Rosa* sp., Portuguese Laurel *Prunus lusitanica*, Sycamore *Acer pseudoplatanus*, Valerian *Valeriana officinalis*, Wild Privet *Ligustrum vulgare*, Willowherb, Wood Avens *Geum urbanum* and Yew *Taxus baccata*.

[1] Ecology Solutions (2020) *North Hyde Gardens, Hayes, London – Ecological Assessment*. Ref: 7854.EcoAs.vf7 [complete]

2.3. **Species**

Bats

2.3.1. The main areas of the site are of very little interest to any locally present bat species, with only limited foraging habitat provided by the small areas of amenity planting.

2.3.2. The River Crane and Grand Union Canal offer far greater potential for foraging and dispersing bats.

Badgers

2.3.3. No Badger setts or field signs that could be attributed to this species were recorded within or immediately adjacent to the site. The site offers negligible opportunities for this species.

Hedgehog

2.3.4. No evidence of Hedgehog *Erinaceus europaeus* was recorded on site. The amenity planting and grassland areas do provide some opportunities for foraging, dispersing and hibernating Hedgehogs.

Birds

2.3.5. The amenity plantingprovides nesting and foraging opportunities for birds.

2.3.6. Wood Pigeon *Columba palumbus*, Goldfinch *Carduelis carduelis*, Ring-necked Parakeet *Psittacula krameria*, Magpie *Pica pica*, Dunnock *Prunella modularis*, Carrion Crow *Corvus corone*, Feral Pigeon *Columba livia*, Pied Wagtail *Motacilla alba*, Long-tailed Tit *Aegithalos caudatus*, Robin *Erithacus rubecula*, Herring Gull *Larus argentatus*, Blackbird *Turdus merula* and Black-Backed Gull *Larus* sp. were noted during the course of the survey.

Reptiles

2.3.7. The site is not considered to offer any opportunities for reptile species given the current management regime of the grassland habitats.

Amphibians

2.3.8. No amphibians were recorded within the site during the survey work. The site does not support any suitable aquatic or terrestrial habitat for this group.

2.3.9. There are no off-site ponds within 250m of the site boundary. The Grand Union Canal and the River Crane do not support any suitable breeding opportunities for amphibians.

Invertebrates

2.3.10. Given the habitats present it is likely a limited number of common invertebrate species would be present within the site. However, there is no evidence to suggest that any rare or notable species would be present.

3. CREATED HABITATS

3.1. Extra Heavy Standard Trees and Specimen Shrubs

3.1.1. The provision of new extra heavy standard trees will offer increased future nesting opportunities for birds and foraging opportunities for bats. Species will include Field Maple *Acer campestre* 'Elegant', Alder *Alnus glutinosa*, Silver Birch *Betula pendula*, Hornbeam *Carpinus betulus* and Small-leaved Lime *Tilia cordata*.

3.2. Thicket Mix Planting

3.2.1. Native thicket mix planting will be located throughout the site. Planting will comprise of Dogwood, Hazel, Hawthorn, Holly *Ilex aquifolium*, Blackthorn *Prunus spinosa*, Osier *Salix viminalis* and Guelder Rose *Viburnum opulus*. This habitat will provide increased foraging potential for locally present bat and bird species.

3.3. Mixed Species Native Hedgerow

3.3.1. The hedgerows will be planted at 450mm centres in a double staggered row. Rows to be spaced 500mm apart and species present will include Hawthorn, Hazel, Holly, Privet, Blackthorn, Dog Rose *Rosa canina* and Guelder Rose. This habitat will provide similar benefits to faunal groups as the native thicket mix in addition to providing further improvements in connectivity around the site.

3.4. Tall Ornamental Shrub Planting

3.4.1. Tall ornamental shrub planting in the north-west of the site will aim to form a shrub height of above 1m and provide additional foraging and potentially low nesting habitat.

3.5. Low Ornamental Ground Cover Shrub Planting

3.5.1. Areas of below 1m high ornamental and herbaceous planting will be present throughout the site.

3.5.2. Although this planting is primarily for ornamental purposes it will provide additional green infrastructure within the development. The inclusion of some nectar rich species will offer further opportunities for invertebrates subsequently improving the availability of food resource for bats.

3.6. Wildflower Grass Seed Areas

3.6.1. Areas of wildflower grass will be located throughout the site. This will be a species rich mix to elevate the overall floristic diversity across then site.

3.7. Proposed Brown Roof and Green Roof Planting

3.7.1. To provide additional green space *Sedum* sp. and species rich planting of green and brown roof offering similar benefits to the abovementioned habitats including providing additional habitat for bats, birds and invertebrate species. These roofs will offer new habitat opportunities for early-colonising and open habitat specialist invertebrates throughout the

lifetime of the development. They will also offer connectivity across an otherwise urban landscape through the greening of the roofs of the development in combination with the additional planting.

4. SPECIES ENHANCEMENTS

4.1. To provide ecological enhancements for wildlife within Union Park at Bulls Bridge, Hayes, London a number of bat and bird boxes will be installed throughout the site and onto the newly constructed buildings.

4.2. Bats

4.2.1. To offer net gains in roosting opportunities, three Schwegler 1FF bat boxes or similar, will be installed on larger trees throughout the site and on the Data Centre building associated with the green walls. These boxes will be positioned 3-5m high on southern or eastern aspects.

4.2.2. 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, particularly to the south of the site will also be kept to a minimum during the construction phase.

4.3. Birds

4.3.1. A total of three Schwegler 1B bird boxes, or similar, will be installed on larger trees within the site. These bird boxes will have 26mm entrance holes which will allow small birds such as Blue Tit *Cyanistes caeruleus*, Marsh Tit *Poecile palustris*, Coal Tit *Periparus ater*, Crested Tit *Lophophanes cristatus* and Wren *Troglodytes troglodytes* to nest inside.

4.3.2. Larger species and flocks of birds will not be encouraged within the site owing to the proximity of Heathrow Airport and RAF Northolt and the subsequent risk of bird strike, as detailed within the submitted Bird Hazard Management Plan.

4.4. Maintenance

4.4.1. 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. Bat boxes will be inspected by a licensed ecologist outside the main activity period for bats i.e., outside the period April to October inclusive.

4.4.2. Owing to the design of the selected boxes, no further maintenance is considered necessary.

5. SUMMARY AND CONCLUSIONS

5.1. Ecology Solutions was instructed by Ark Estates 2 Limited to provide ecological advice regarding Union Park at Bulls Bridge, Hayes, London.

5.2. The site consists primarily of hardstanding, amenity planting, amenity grassland and semi-improved grassland.

5.3. Proposed planting will include: Extra Heavy Standard Trees, Thicket Mix Planting, Mixed Species Native Hedgerow, Tall Ornamental Shrub Planting, Low Ornamental Ground Cover Shrub Planting, Wildflower Grass Seeded Areas, Proposed Grasscrete Areas, Proposed Sedum Green Roof Planting and Proposed Brown Roof and Green Roof Planting.

5.4. **Bats.** Three Schwegler 1FF bat boxes (or similar) will be installed on larger trees and on the Data Centre building associated with the green walls. These boxes will be positioned 3-5m high on southern or eastern aspects. Bat boxes will not be subject to direct lighting.

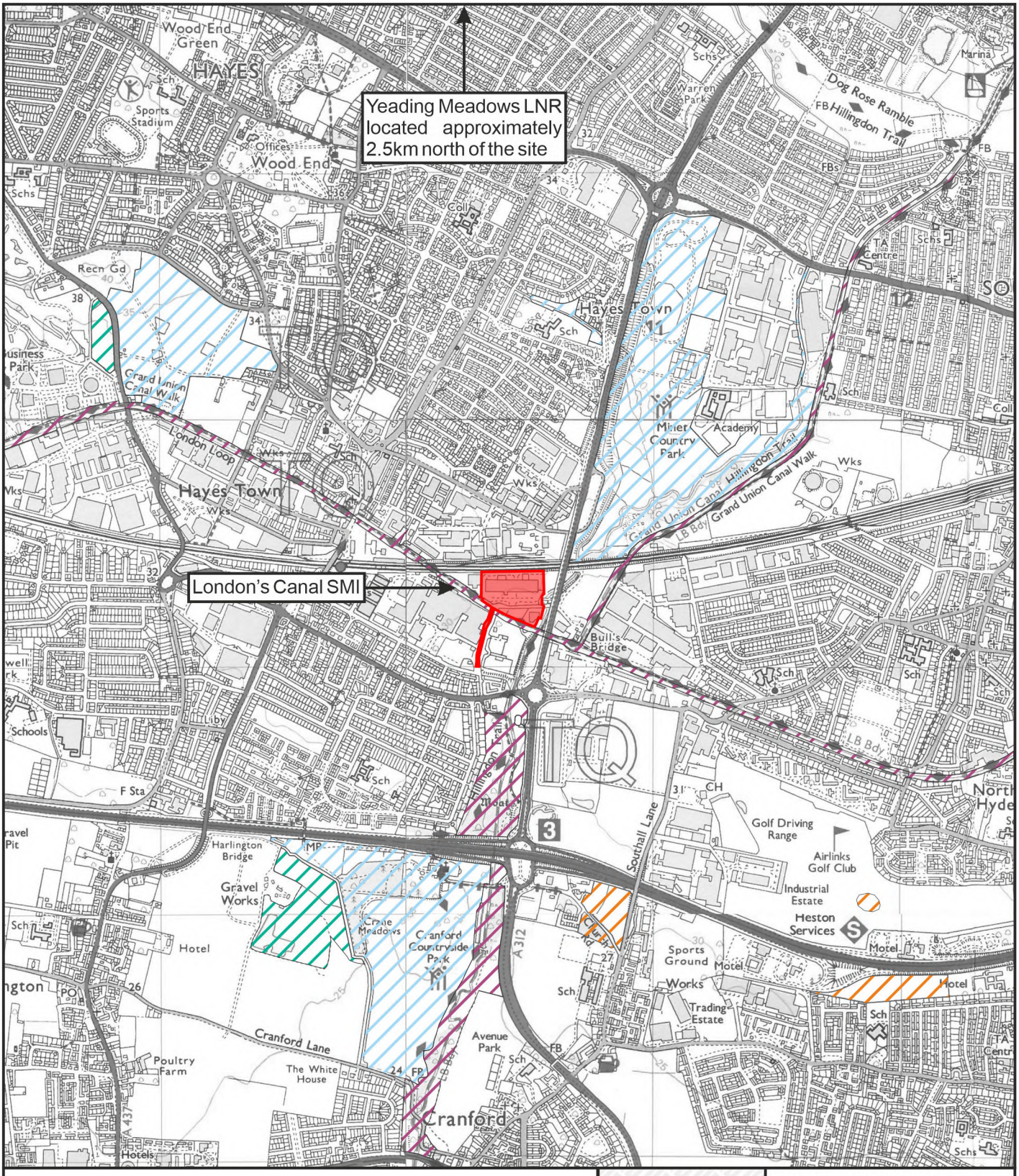
5.5. **Birds.** Three Schwegler 1B bird boxes (or similar) with 26mm entrance holes will be installed on larger trees along the southern boundary. Larger species and flocks of birds will not be encouraged within the site owing to the proximity of Heathrow Airport and RAF Northolt and the subsequent risk of bird strike, as detailed in the submitted Bird Hazard Management Plan.

5.6. In conclusion, the ecological enhancements included within Union Park at Bulls Bridge, Hayes, London will ensure opportunities for wildlife are secured post-redevelopment.

PLANS

PLAN ECO1

Site Location and Ecological Designations



KEY:

- SITE LOCATION
- SITE OF METROPOLITAN IMPORTANCE (SMI)
- SITE OF BOROUGH IMPORTANCE GRADE 1 (SBII)
- SITE OF BOROUGH IMPORTANCE GRADE 2 (SBIII)
- SITE OF LOCAL IMPORTANCE (SLI)

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PLAN ECO1: SITE LOCATION AND ECOLOGICAL DESIGNATIONS

Rev: A

Mar 2023

PLAN ECO2

Ecological Features

KEY:

- BUILDING
- BUILDING (NOW DEMOLISHED)
- HARDSTANDING
- SEMI-IMPROVED GRASSLAND
- AMENITY PLANTING
- SCRUB
- RIVER CORRIDOR
- AMENITY GRASSLAND
- RIVER CRANE
- TREE
- GIANT HOGWEED
- JAPANESE KNOTWEED
- RUBBLE
- SITE OF METROPOLITAN IMPORTANCE
- PLANNING APPLICATION 75111/APP/2022/1007

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PLAN ECO2: ECOLOGICAL FEATURES

Rev: A

Mar 2023

PLAN ECO3

Ecological Enhancement Strategy

Brown roofs on the Data Centres will provide increased biodiversity gains and will consist of a mixture of sedums and shade tolerant species around and under the solar panels.

Plants will be replaced if they fail. Any replacements made will be like for like.

The planting of native species and species of known ecological value will provide foraging opportunities for locally present invertebrates, bats, birds and hedgehogs.

Railway Paddington Line

Water tanks

Loading Bay

Loading Bay

Solar panels on undulating roof

Data centre

Solar panels on undulating roof

Data centre

Solar panels on undulating roof

Data centre

Cycle Store

Vehicle lock

Bypass gate

Vodafone Mast enclosure

Significant biodiversity gains will be delivered through the provision of green walls and green roofs, comprising a number of sedums, grasses and flowering plants, which will require no irrigation.

75111/APP/2022/1007

Grassland areas sown with wildflower seed mix to provide additional ecological interest.

New wildflower grassland will be managed as necessary to maintain floral diversity, providing opportunities for invertebrates and other wildlife.

A number of bat and bird boxes, such as Schwegler 1FF bat boxes and Schwegler 1B bird boxes will be installed across the site on suitable trees to increase nesting / roosting opportunities.

Bird boxes will have 26mm entrance holes to provide opportunities for small birds such as Blue, Marsh, Coal and Crested Tit and Wrens. Larger species and flocks will not be encouraged owing to the risk of birdstrike on Heathrow Airport and RAF Northolt, as stated in the Bird Hazard Management Plan.

These will provide increased opportunities for invertebrates, specifically bees and butterflies.

Bat boxes to be positioned 3-5m high on the southern or eastern aspects.

Lighting will be carefully considered and designed such that potential indirect effects on bats and other nocturnal species are minimised.

Invasive species Giant Hogweed and Japanese Knotweed will be removed by an accredited company if found onsite during works.

Grand Union Canal

River Crane

A312 Flyover The Parkway

North Hyde Gardens

SUBSTATION

KEY:

SCHWEGLER 1FF BAT BOX (OR SIMILAR)

Suitable for attaching to buildings or trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

Woodcrete construction.
Width: 27cm
Height: 43cm
Weight: 8.3kg

This box is attractive to a wide range of species. It can be hung from a branch, nailed to the trunk of a tree with a 'tree-friendly' aluminium nail or hung on walls.

Available in four colours and three entrance hole sizes. 26mm for small tits, 32mm standard size and oval, for redstarts for example.

GREEN WALL

INDICATIVE LOCATIONS

Pertaining to planning permission number: 75111/APP/2022/3435

Based on Barry Chinn Associates Landscape Architects Concept Landscape Layout Plan Numbers: 2017-19-10 Rev F

Scale: 25m

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PLAN ECO3: ECOLOGICAL ENHANCEMENT STRATEGY

Rev: A

Mar 2023

APPENDICES

APPENDIX 1

Schwegler 1FF Bat Boxes

Bat Boxes

Schwegler bat boxes are made from woodcrete and have the highest rates of occupation of all types of box.
The 75% wood sawdust, clay and concrete mixture is ideal, being durable whilst allowing natural respiration and temperature stability. These boxes are rot- and predator-proof and extremely long lasting.

1FF Bat Box

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or on sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

Woodcrete construction.
Width: 27cm
Height: 43cm
Weight: 8.3kg

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APPENDIX 2

Schwegler 1B Bird Boxes

Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box.
They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting.
Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.

1B Bird Box

This is the most popular box for garden birds and appeals to a wide range of species. The box can be hung from a branch or nailed to the trunk of a tree with a 'tree-friendly' aluminium nail.

Available in four colours and three entrance hole sizes. 26mm for small tits, 32mm standard size and oval, for redstarts.

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