



## **Biodiversity Net Gain Assessment**

Greggs, Hyperion Trade Park

October 2022

# Biodiversity Net Gain Assessment

Greggs, Hyperion Trade Park

13/10/2022

JLL

30 Warwick Street

London

W1B 5NH

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| Rev0 | Natalie Arscott | Paul Carter | Paul Carter    | 13 <sup>th</sup> October 2022 |
| Rev1 | Natalie Arscott | Paul Carter | Paul Carter    | 13 <sup>th</sup> October 2022 |

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# Contents

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|    |                                       |   |
|----|---------------------------------------|---|
| 1. | Introduction.....                     | 1 |
| 2. | Methodology.....                      | 2 |
| 3. | Biodiversity Net Gain Assessment..... | 5 |
| 4. | Discussion .....                      | 7 |
| 5. | Conclusions and Recommendations.....  | 8 |
| 6. | References .....                      | 9 |

## Appendices

Appendix A – Habitat Map

Appendix B – Post Development Landscape Plan

Appendix C – Suggested Compensatory Planting

Appendix D – The Biodiversity Metric 3.1 Headline Results

# 1. Introduction

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## Project Background

- 1.1 Phlorum Limited was commissioned by JLL to compile a Biodiversity Net Gain Assessment in relation to the proposed development of the Land at Hyperion Trade Park, Reading (hereafter referred to as “the site”). The site is situated on Hyperion Way off Rose Kiln Lane, Reading, RG2 0HG.

## Site Description and Context

- 1.2 The site is currently a car park, comprising mostly hardstanding with two introduced shrubs of cherry laurel and a line of trees along the eastern boundary.
- 1.3 The site is bound by private residential gardens to the east, and hardstanding associated with car parking and roads to the north, south, and west. The surrounding area is built-up, comprising a mixture of residential, commercial, and industrial properties. There are areas of open grassland in the wider surrounds.
- 1.4 The National Grid Reference for the centre of the site is SU 71755 71276. The total site area is 0.0458 hectares (ha).

## Description of Development

- 1.5 It is understood that the development proposals are for the construction of a new Greggs Pod Unit with associated car parking, seating area, and landscaping.

## Documentation Provided

- 1.6 This document has been developed with reference to the findings contained within the previous ecological letter report:
  -  Summary of Ecological Scoping Survey (Phlorum, 2022).

## 2. Methodology

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### Establishing the Baseline Habitat

- 2.1 Phlorum carried out an ecological scoping survey on the 12<sup>th</sup> August 2022 to assess the baseline habitat conditions of the site, following the guidance set by the Joint Nature Conservation Committee, handbook for Phase 1 surveys (JNCC 2010).

### Calculating Biodiversity Net Gain/Loss

- 2.2 The calculation of Biodiversity Net Gain (BNG) was undertaken using 'The Biodiversity Metric 3.1' published by Natural England (2022). The metric uses site habitats, as areas and linear lengths, to calculate a score for the site. Each habitat is scored according to its relative biodiversity value. This value is then adjusted depending on various factors, to calculate the 'biodiversity units' for each habitat.

#### Baseline Calculation

- 2.3 Site baseline habitats are assessed based on the following:
-  Habitat areas;
  -  Terrestrial linear lengths; and
  -  Aquatic linear lengths.
- 2.4 The baseline habitat map from the ecological scoping survey is used to calculate the individual parcels of habitats on the site, such as habitat areas (e.g. woodland, grassland), terrestrial lengths (e.g. hedgerows) and aquatic lengths (e.g. streams, rivers). Each area is measured in *hectares* and each linear feature in *kilometres*.
- 2.5 The Biodiversity Metric 3.1 calculator requires habitats present on site to be described using the UKHabs Classification System. As a result, the calculator in the technical data section includes a tool to translate Phase 1 habitats into UKHabs habitats.
- 2.6 Once the UKHabs habitat names, and areas/lengths have been measured the parcels need to be assessed against the following criteria:
-  Habitat Distinctiveness – The calculator creates an automated score based on the type of habitat present. Highly diverse habitats, particularly those habitats of Principal Importance under the NERC Act (2006) or Annex 1 habitats in the Habitats Directive (1992) score 'high', whilst sites with low diversity such as arable crops have 'low' scores.
  -  Habitat Condition – An assessment of the quality of the habitat parcel assessed during the baseline surveys.
  -  Strategic Significance – An assessment based on the information set out in local plans or policies.

- 2.7 The calculator realises the importance of individual trees but there is no UKHabs habitat for these in the area calculation. As a result, the 'Urban tree helper', which allows numbers of trees to be converted to an area in hectares, is used, regardless of if the tree is an urban tree or isolated tree in another habitat. Trees are categorised as 'small', 'medium' or 'large'.

#### **Post Development Calculation**

- 2.8 The post development areas are calculated by initially assessing the areas/lengths of habitats retained, enhanced, and created plus any offsite areas created or enhanced.
- 2.9 A 'Habitat Condition' and 'Strategic Significance' assessment are carried out on the post-development habitats. Where habitats have been created or enhanced, additional factors are considered, such as time taken for each of these habitats to reach target condition (temporal multiplier) and the difficulty of recreating these habitats (difficulty multiplier).
- 2.10 The baseline biodiversity score and post-development score are then calculated and compared the biodiversity impact loss or gain is calculated for each habitat (e.g. area habitat, terrestrial linear and /or linear aquatic habitat).
- 2.11 If needed offsite enhancement and/or creation of habitats can be carried out and assessed.

#### **Caveats**

- 2.12 The BNG calculates habitats and only provide a score to represent the biodiversity on site. As a result, compensation and mitigation should be designed using appropriate expertise and common sense.
- 2.13 As only habitats are calculated an increase in biodiversity due to increase in fauna (e.g. birds, bats, insects, reptiles, amphibians, or other mammals) is not included. The creation of bird/bat/insect boxes, log piles, and/or hibernacula can significantly enhance the ecosystems on a site, but these enhancements are not calculated by the BNG calculator. The BNG calculator is a good guide to help increase biodiversity, but habitats need both flora (plants) and fauna (animals) enhanced to ensure healthy and sustainable ecosystems.
- 2.14 The existing levels of protection provided to certain habitats or protected species are not changed by this calculator. The impact on protected species is not considered by the calculator and must be assessed separately.
- 2.15 In nature the boundaries between ecological habitats are not usually an easily defined line, unless human impact such a hard surface (e.g. buildings/roads), fences, ploughing, and/or felling has occurred. As a result, the habitat areas used are based on best judgement and therefore are subjective.
- 2.16 The calculator requires area measurements in *hectares* and linear measurements in *kilometres*, which for small sites can result in smaller areas/lengths not being recorded when only 2 decimal places are used.

- 2.17 As isolated trees are measured separately the overall area of all the habitat parcels can be greater than the actual site area.
- 2.18 The calculator cannot take account of all site-specific features and circumstances that may affect the true value of certain habitats or dictate the nature of habitat creation and enhancement. Such features and circumstances may make it impossible to satisfy trading rules for medium and high distinctiveness habitats, even where a clear net gain for biodiversity is being delivered. Whilst the calculator provides a valuable guide as to how a development will affect biodiversity, it should be considered as a guide to be used in combination with pragmatic and knowledge-based judgement when reaching conclusions as to how effective biodiversity enhancement will be delivered.

### 3. Biodiversity Net Gain Assessment

#### Existing Habitats

3.1 The existing habitats identified on site during the ecological scoping survey are shown in Tables 1 and 2 below.

**Table 1: Existing Area Habitat Calculation**

| PEA habitat      | UKHabs habitat                 | Area (ha)  | Habitat Distinctiveness | Habitat Condition        | Strategic Significance | Habitat Units |
|------------------|--------------------------------|------------|-------------------------|--------------------------|------------------------|---------------|
| Hardstanding     | Developed land; sealed surface | 0.042<br>3 | Very low                | N/A - Other              | Low                    | 0             |
| Introduced shrub | Introduced shrub               | 0.003<br>5 | Low                     | Condition Assessment N/A | Low                    | 0.01          |

**Table 2: Existing Terrestrial Linear Habitat Calculation**

| PEA habitat   | UKHabs habitat | Length (km) | Habitat Distinctiveness | Habitat Condition | Strategic Significance | Hedgerow Units |
|---------------|----------------|-------------|-------------------------|-------------------|------------------------|----------------|
| Line of trees | Line of trees  | 0.032       | Low                     | Poor              | Low                    | 0.06           |

#### Development Proposals and Assessment of Impacts

3.2 The proposed post development habitats are shown in Tables 3 and 4 below, and summary table provided in Table 5.

**Table 3: Proposed Area Habitat Calculation**

| PEA habitat          | UKHabs habitat                 | Area (ha)  | Habitat Distinctiveness | Habitat Condition | Strategic Significance | Habitat Units |
|----------------------|--------------------------------|------------|-------------------------|-------------------|------------------------|---------------|
| Hardstanding         | Developed land; sealed surface | 0.042<br>6 | Very low                | N/A - Other       | Low                    | 0             |
| Wildflower grassland | Other neutral grassland        | 0.003<br>2 | Medium                  | Moderate          | Low                    | 0.02          |
| Trees                | Urban tree                     | 0.012<br>2 | Medium                  | Moderate          | Low                    | 0.04          |

**Table 4: Proposed Terrestrial Linear Habitat Calculation**

| PEA habitat                  | UKHabs habitat               | Length (km) | Habitat Distinctiveness | Habitat Condition | Strategic Significance | Hedgerow Units |
|------------------------------|------------------------------|-------------|-------------------------|-------------------|------------------------|----------------|
| Line of trees                | Line of trees                | 0.01        | Low                     | Poor              | Low                    | 0.02           |
| Native species rich hedgerow | Native species rich hedgerow | 0.0208      | Medium                  | Moderate          | Low                    | 0.14           |

## Headline Results

3.3 The headline results, including total unit and % change are shown in Table 5 below.

**Table 5: Headline Results**

|                           | Habitat Units (habitat area) | Hedgerow Units (terrestrial linear length) | River Units (aquatic linear length) |
|---------------------------|------------------------------|--------------------------------------------|-------------------------------------|
| On-site baseline          | 0.01                         | 0.06                                       | 0                                   |
| On-site post-intervention | 0.06                         | 0.16                                       | 0                                   |
| Total net unit change     | +0.05                        | +0.10                                      | 0                                   |
| Total net % change        | <b>+738.87%</b>              | <b>+148.83%</b>                            | <b>0%</b>                           |

## Results Summary

- 3.4 The existing area habitats on the site are considered by the Biodiversity Net Gain assessment to have a value of **0.01 units**. The post-development area habitats are considered by the Biodiversity Net Gain Assessment to have a value of **0.06 units**. This is a **+0.05 net change** in habitat units which equates to a **738.87% net gain**.
- 3.5 The existing terrestrial linear habitats on the site are considered by the Biodiversity Net Gain assessment to have a value of **0.06 units**. The post-development area habitats are considered by the Biodiversity Net Gain Assessment to have a value of **0.16 units**. This is a **+0.10 net change** in hedgerow units which equates to a **148.83% net gain**.
- 3.6 It should be noted that the scores given for units are rounded to 2 decimal places, whilst the percentage net/gain loss score has used the exact unit values.
- 3.7 This reflects the removal of the existing introduced shrubs and a length of the line of trees, and planting of an area of wildflower grassland, three new native trees, and a new species rich native hedgerow.
- 3.8 There are no aquatic habitat features on the site pre- or post-development.

## 4. Discussion

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- 4.1 A Biodiversity Net Gain Assessment has been carried out for the proposed Greggs development at Hyperion Trade Park, Reading. The site comprised hardstanding, introduced shrub, and a line of trees.
- 4.2 It is understood that development proposals are for the construction of a new Greggs Pod Unit with associated car parking, seating area, and landscaping.
- 4.3 Overall net gains of 738.87% in habitat units and 148.83% in hedgerow units from the existing baseline have been calculated. This reflects the removal of the existing introduced shrubs and a length of the line of trees, and planting of an area of wildflower grassland, three new native trees, and a new species rich native hedgerow. There are no aquatic habitat features on the site pre- or post-development.
- 4.4 The site currently contains little ecology and has very low biodiversity, especially in area habitats. This has resulted in a significant net gain for habitat units with the inclusion of some ecologically valuable habitats in the development proposals.
- 4.5 There may also be significant gains for ecology on the site that are not captured by the BNG Assessment, such as species-specific enhancements including bird and bat boxes.

## 5. Conclusions and Recommendations

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### Conclusions

- 5.1 A Biodiversity Net Gain Assessment has been carried out for the proposed Greggs development at Hyperion Trade Park, Reading. Overall **net gains** of **738.87% in habitat units** and **148.83% in hedgerow units** from the existing baseline have been calculated.
- 5.2 It should be noted that the BNG assessment does not capture other methods of ecological enhancement such as the inclusion of bat and bird boxes.

### Recommendations

- 5.3 It is recommended that the proposed development is carried out in accordance with the recommendations made within the letter report summarising the ecological scoping survey of the site (Phlorum, 2022).

## 6. References

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-  Baker J., Hoskins R. and Butterworth T. (2019). Biodiversity Net Gain. Good practice principles for development: A practical guide. Ciria, London. Baker J., Hoskins R. and Butterworth T. (2019). Biodiversity Net Gain. Good practice principles for development: Case studies. Ciria, London.
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-  The Harris Partnership (2022). *Proposed Site Plan. Proposed Greggs Pod Unit*. Drawing by The Harris Partnership Architects.

## Figures and Appendices

## Appendix A

### Habitat Map

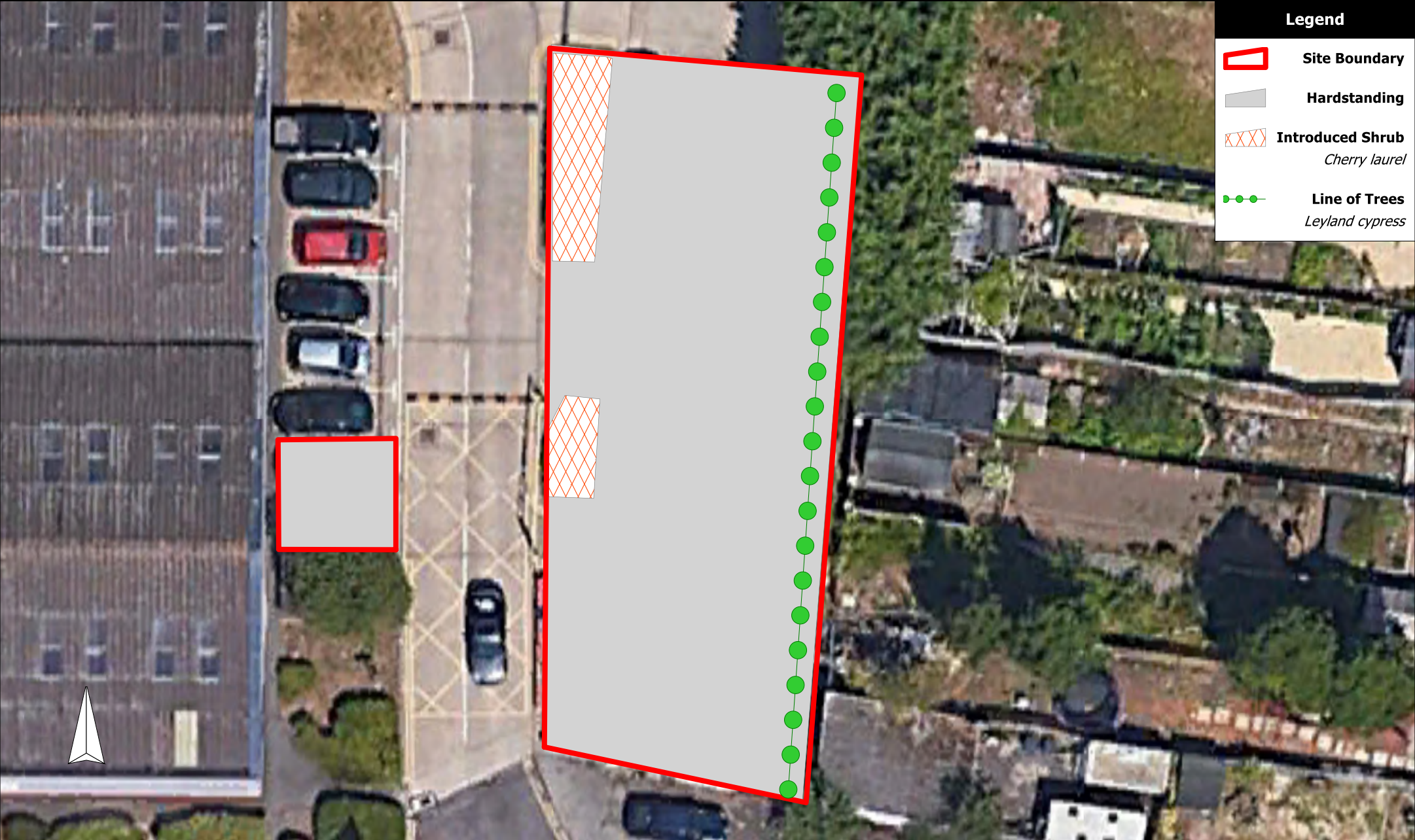


Figure 1: Hyperion Trade Park Habitat Survey Map

Drawn by: NA  
On the: 13/10/2022  
Not to Scale  
Ref: 11691



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## Appendix B

### Post Development Landscape Plan



SUBJECT TO SITE SURVEY, CONFIRMATION OF LEGAL BOUNDARIES, SITE CONSTRAINTS & HIGHWAYS

THE HARRIS GROUP LTD DOES NOT ACCEPT LIABILITY FOR ANY DEVIATION FROM OUR DRAWINGS OR SPECIFICATION



|     |            |                                            |        |          |
|-----|------------|--------------------------------------------|--------|----------|
| E   | 11.10.2022 | 2No PARKING SPACES ADDED WITH RED LINE     | ERJ    | -        |
| D   | 03.10.2022 | AMENDED LANDSCAPE, KERBS TO MATCH SURVEY   | ERJ    | -        |
| C   | 16.09.2022 | AMENDED CAR PARKING AND TREES              | AMC    | -        |
| B   | 08.02.2021 | AMENDED GREGGS POD FOOTPRINT AND ALIGNMENT | DM     | -        |
| A   | 02.02.2021 | ALTERED BOUNDARY RED LINE TO BE CONTINUOUS | DM     | -        |
| Rev | Date       | Description                                | Rev By | Chk'd By |

|               |                                                           |              |    |            |
|---------------|-----------------------------------------------------------|--------------|----|------------|
| Project Title | PROPOSED GREGGS POD UNIT                                  |              |    |            |
|               | HYPERION TRADE PARK<br>HYPERION WAY<br>READING<br>RG2 0HG |              |    |            |
| Client        | JLL BUILDING CONSULTANCY                                  |              |    |            |
| Status        | PLANNING                                                  |              |    |            |
| Scale         | 1:200                                                     | Drawing Size | A3 |            |
| Date          | 26.01.2021                                                | Drawn By     | DM | Checked GH |

|                                                                                                                |                    |     |   |
|----------------------------------------------------------------------------------------------------------------|--------------------|-----|---|
| Drawing Title                                                                                                  | PROPOSED SITE PLAN |     |   |
| Job-Dwg No                                                                                                     | 16740-102          | Rev | E |
| <input type="checkbox"/> 2 St. Johns North, Wakefield, WF1 3QA t. 01924 291800                                 |                    |     |   |
| <input type="checkbox"/> Carvers Warehouse, 77 Dale Street, Manchester, M1 2HG t. 0161 2388555                 |                    |     |   |
| <input checked="" type="checkbox"/> The Old Rectory, 79 High Street, Newport Pagnell, MK16 8AB t. 01908 211377 |                    |     |   |
| <input type="checkbox"/> 101 London Road, Reading, RG1 5BY t. 0118 9507700                                     |                    |     |   |
| <input type="checkbox"/> 10 Gees Court, St Christophers Place, London, W1U 1JJ t. 0207 4091215                 |                    |     |   |



## Appendix C

### Suggested Compensatory Planting

# Suggested Compensatory Planting

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This section provides a list of plants which are of proven value to wildlife. The list is not exhaustive and merely provides a guide for suggested planting for wildlife value. Planting should be tailored on a site by site basis. The list includes native species.

This list includes species that may be harmful if handled or ingested. Schedule 9 (Part 2) of the Wildlife and Countryside Act, 1981 (as amended) includes a list of invasive plants, including aquatic species, that should always be avoided in planting schemes.

## Large Shrubs

Hawthorn (*Crataegus monogyna*)

Blackthorn (*Prunus spinosa*)

Rose: dog rose (*Rosa canina*), field rose (*R. arvensis*), burnet rose (*R. pimpinellifolia*)

Wild privet (*Ligustrum vulgare*)

Common holly (*Ilex aquifolium*)

Hazel: (*Corylus avellana*)

Viburnum (*Viburnum* spp.): wayfaring tree (*V. lantana*), guelder rose (*V. opulus*),. Note: *V. lantana* can become invasive in more open habitats.

Dogwood (*Cornus sanguinea*)

Broom (*Cytisus scoparius*)

Buckthorn (*Rhamnus cathartica*)

Spindle (*Euonymus europaeus*)

Tutsan (*Hypericum androsaemum*)

Yew (*Taxus baccata*)

## Trees

Ash (*Fraxinus excelsior*)

Apple (*Malus* spp.): edible apple (*M. domestica*), crab apple (*M. sylvestris*)

Small-leaved lime (*Tilia cordata*)

Silver birch (*Betula pendula*)

Yew (*Taxus baccata*)

Black poplar (*Populus nigra*)

Beech (*Fagus sylvatica*)

## Climbers

Ivy (*Hedera helix*)

Honeysuckle (*Lonicera* spp.): (*L. periclymenum*)

Hop (*Humulus lupulus*)

### **Bulbs**

English bluebell (*Hyacinthoides non-scripta*)

Snowdrop (*Galanthus nivalis*)

Wild Daffodil (*Narcissus pseudonarcissus*)

Wood anemone (*Anemone nemorosa*)

Lesser celandine (*Ficaria verna*)

## Appendix D

### The Biodiversity Metric 3.1 Headline Results

|                                                                                                                                  |                       |         |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------|
| On-site baseline                                                                                                                 | <i>Habitat units</i>  | 0.01    |
|                                                                                                                                  | <i>Hedgerow units</i> | 0.06    |
|                                                                                                                                  | <i>River units</i>    | 0.00    |
| On-site post-intervention<br>(Including habitat retention, creation & enhancement)                                               | <i>Habitat units</i>  | 0.06    |
|                                                                                                                                  | <i>Hedgerow units</i> | 0.16    |
|                                                                                                                                  | <i>River units</i>    | 0.00    |
| On-site net % change<br>(Including habitat retention, creation & enhancement)                                                    | <i>Habitat units</i>  | 738.87% |
|                                                                                                                                  | <i>Hedgerow units</i> | 148.83% |
|                                                                                                                                  | <i>River units</i>    | 0.00%   |
| Off-site baseline                                                                                                                | <i>Habitat units</i>  | 0.00    |
|                                                                                                                                  | <i>Hedgerow units</i> | 0.00    |
|                                                                                                                                  | <i>River units</i>    | 0.00    |
| Off-site post-intervention<br>(Including habitat retention, creation & enhancement)                                              | <i>Habitat units</i>  | 0.00    |
|                                                                                                                                  | <i>Hedgerow units</i> | 0.00    |
|                                                                                                                                  | <i>River units</i>    | 0.00    |
| Total net unit change<br>(including all on-site & off-site habitat retention, creation & enhancement)                            | <i>Habitat units</i>  | 0.05    |
|                                                                                                                                  | <i>Hedgerow units</i> | 0.10    |
|                                                                                                                                  | <i>River units</i>    | 0.00    |
| Total on-site net % change plus off-site surplus<br>(including all on-site & off-site habitat retention, creation & enhancement) | <i>Habitat units</i>  | 738.87% |
|                                                                                                                                  | <i>Hedgerow units</i> | 148.83% |
|                                                                                                                                  | <i>River units</i>    | 0.00%   |
| Trading rules Satisfied?                                                                                                         | Yes ✓                 |         |



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