

## Biodiversity Net Gain Report

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| <b>For:</b>              | Tilbury Douglas                                            |
| <b>Site:</b>             | The Priory SEND School, Neville Avenue, Spalding, PE11 2EH |
| <b>Report Date:</b>      | 20 <sup>th</sup> July 2023                                 |
| <b>Report Reference:</b> | SQ-1191.1                                                  |

### Surveying Ecologist:

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|                     |                                                            |
|---------------------|------------------------------------------------------------|
| <b>Client:</b>      | Tilbury Douglas                                            |
| <b>Site Name:</b>   | The Priory SEND School, Neville Avenue, Spalding, PE11 2EH |
| <b>Report:</b>      | Biodiversity Net Gain Assessment                           |
| <b>Survey Date:</b> | 19 <sup>th</sup> July 2023                                 |
| <b>Surveyed by:</b> | Sam Toon BSc (hons), GradCieem                             |

| <b>Issue:</b> | <b>Revision:</b> | <b>Stage:</b>    | <b>Date:</b>               | <b>Prepared by:</b>                      | <b>Approved by:</b>                               |
|---------------|------------------|------------------|----------------------------|------------------------------------------|---------------------------------------------------|
| 1             | -                | Draft for review | 20 <sup>th</sup> July 2023 | Sam Toon BSc (hons), Estrada Ecology Ltd | Natasha Estrada MRes, MCIEEM, Estrada Ecology Ltd |
| 2             | n/a              | FINAL            | 20 <sup>th</sup> July 2023 | Sam Toon BSc (hons), Estrada Ecology Ltd | Natasha Estrada MRes, MCIEEM, Estrada Ecology Ltd |

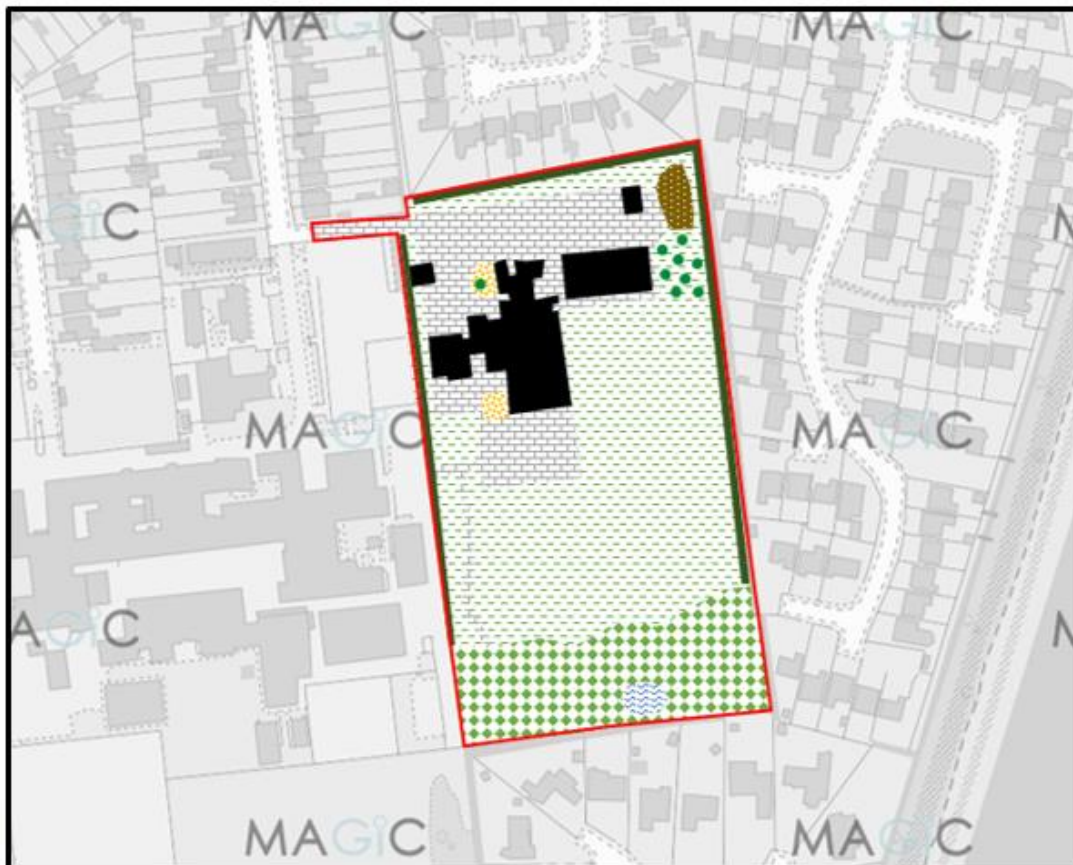
## **1.1 Introduction**

- 1.1.1 Biodiversity Metric calculations were requested by the client to determine the extent of net loss, no net loss, or net gain for the Biodiversity Net Gain requirements of South Holland District Council. The calculations were required for submission as part of a planning application, in accordance with local and national planning policies.
- 1.1.2 Biodiversity Metric calculations were therefore undertaken for baseline and post-development habitats for the development site, using the Biodiversity Metric 4.0 tool developed by DEFRA. This assessment evaluates the impact of current development proposals on existing biodiversity resources within the development site.

## **1.2 Baseline and Post Development Scheme Designs**

- 1.2.1 The UK HABS habitat classification map in Figure 1 summarises the habitats identified via field survey undertaken by Estrada Ecology in July 2023.
- 1.2.2 Figure 2 presents the summary of the DEFRA metric 4.0 calculations.
- 1.2.3 The Proposed Design Scheme and Landscaping are provided in Appendix One and Appendix Two.

**Figure 1:** UK HABS Habitat Classification Map



| Habitat              | Key                                                                                 | UK HABS Code |           |
|----------------------|-------------------------------------------------------------------------------------|--------------|-----------|
|                      |                                                                                     | Primary      | Secondary |
| Site Boundary        |  |              |           |
| Modified Grassland   |  | g4           |           |
| Broadleaved Woodland |  | w1g          |           |
| Line of Trees        |  | w1g6         |           |

|                                  |                                                                                   |     |      |
|----------------------------------|-----------------------------------------------------------------------------------|-----|------|
| Built Linear Features            |  | ule |      |
| Developed Land<br>Sealed Surface |  | ulb |      |
| Scattered Trees                  |  |     | 11   |
| Ruderal/Ephemeral                |  |     | 17   |
| Artificial Pond                  |  |     | 366  |
| Introduced Shrub                 |  |     | 1160 |

### 1.3 Methodology

1.3.1 The Environment Bill (2020) seeks to improve biodiversity through several means, including the introduction of a mandatory requirement for new developments to achieve a minimum of 10% biodiversity net gain, which will be managed as such for a minimum of 30 years after the development has been completed (Environment Bank, 2021). Key parts of the Environment Bill which relate to biodiversity net gain and its delivery are Part 6 Nature and Biodiversity and the supporting Schedule 14, particularly sections 9(3), 13(2), 14(2) and 15.

1.3.2 Baseline habitats were surveyed, and their condition assessed during a site assessment in July 2023 and based on the UK HABS Habitat Classification map (Figure 1). Post-development habitats were measured using AutoCAD 2022, based on the planting scheme of the proposed development.

1.3.3 The DEFRA Biodiversity Metric 4.0 was used to calculate biodiversity units for baseline and post-development habitats for the

development site, to determine if the proposed development will be likely to achieve net loss, no net loss, or net gain of biodiversity units.

- Individual habitat areas were rounded to four decimal places, with the minimum mappable unit being 0.0001 hectares. The canopy areas of Individual trees were calculated using the Urban Tree Helper tool. Linear habitat features such as hedgerows and ditches were measured in meters or kilometres.
- Habitat condition indicates the quality of the habitat, either existing or to be achieved, based on the habitat condition assessments using the Biodiversity Metric 4.0 Habitat Condition Sheets (Natural England, 2023).
- Habitats were assessed for their strategic significance at a landscape scale, using information from sources such as Local Plans, Biodiversity Action Plans, and Nature Recovery Areas to determine their significance within a specific landscape. If habitats weren't included within published reports, significance was determined by their contribution to habitat connectivity and green corridors.

1.3.4 Biodiversity unit calculations are based on the retention and/or enhancement of existing habitats within the proposed scheme design, and the creation of new habitats. Biodiversity units for linear habitat features are calculated separately within the metric.

## **1.4 Limitations**

1.4.1 Habitat areas are rounded up or down to the nearest whole value, with a minimal mappable unit of 0.0001 hectares. However, the overall total of site habitat area and biodiversity units within the Biodiversity Metric 4.0 are calculated and accurate to two decimal places.

- 1.4.2 Habitat areas used in the calculations are based on two-dimensional plans, and so will not necessarily take into account an increase in overall surface area as a result of slopes and banks.

## 1.5 UK HABS Habitat Classification Codes

- 1.5.1 The UK HABS habitat classifications used within the Biodiversity Metric 4.0 and applicable to the site are provided in Table 1 with their associated habitat codes.

**Table 1:** UK HABS habitat classifications and codes

| Phase 1 Habitat Type          | Primary Code | Secondary Code |
|-------------------------------|--------------|----------------|
| Modified Grassland            | g4           |                |
| Other Broadleaved Woodland    | w1g          |                |
| Line of Trees                 | w1g6         |                |
| Built Linear Features         | u1e          |                |
| Developed Land Sealed Surface | u1b          |                |
| Scattered Trees               |              | 11             |
| Ruderal/Ephemeral             |              | 17             |
| Artificial Pond               |              | 366            |
| Introduced Shrub              |              | 1160           |

## 1.6 Biodiversity Net Gain

- 1.6.1 The total baseline biodiversity units for the site were calculated at 10.33 units. Linear units were present on-site and calculated at 1.44 units.

- 1.6.2 The total biodiversity units of on-site habitats post development are 10.67 units for habitats. Linear units are proposed for the site which are predicted to achieve 2.11 units.

## 1.7 Overall Development

- 1.7.1 Overall, the proposals for the development site will result in a gain of 0.35 biodiversity units for habitats, representing a 3.35% net gain. The proposals for the development site will result in a gain of 0.67 biodiversity units for linear features, representing a 46.79% net gain.

**Figure 2:** Summary of Biodiversity Metric 4.0 results

| FINAL RESULTS                                                                                                                |                   |        |
|------------------------------------------------------------------------------------------------------------------------------|-------------------|--------|
| Total net unit change<br><small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small> | Habitat units     | 0.35   |
|                                                                                                                              | Hedgerow units    | 0.67   |
|                                                                                                                              | Watercourse units | 0.00   |
| Total net % change<br><small>(Including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>    | Habitat units     | 3.35%  |
|                                                                                                                              | Hedgerow units    | 46.79% |
|                                                                                                                              | Watercourse units | 0.00%  |
| Trading rules satisfied?                                                                                                     | Yes ✓             |        |

Total net gain achieved is less than target set A

| Unit Type         | Target | Baseline Units | Units Required | Unit Deficit |
|-------------------|--------|----------------|----------------|--------------|
| Habitat units     | 10.00% | 10.33          | 11.36          | 0.69         |
| Hedgerow units    | 10.00% | 1.44           | 1.58           | 0.00         |
| Watercourse units | 10.00% | 0.00           | 0.00           | 0.00         |

Unit requirement met or surpassed ✓

Unit requirement met or surpassed ✓

## 1.8 Recommendations

- 1.8.1 The site, with current proposed scheme design will result in a net gain for habitat units. Furthermore, the trading summary is satisfied within the current proposals.

- 1.8.2 The proposed scheme does not differ substantially in relation to the current landscaping within the site. Furthermore, the majority of the habitats present within the site are due to be retained, with only four trees along the western boundary due to be removed.
- 1.8.3 The calculations in this report are based on target habitat conditions post-development and post-management, taking future land usage and public access into consideration.
- 1.8.4 Current development and landscaping proposals as they stand will result in a net gain in biodiversity units for the site. Furthermore, the current landscaping plan delivers a satisfied trading summary.
- 1.8.5 It is recommended that an updated Biodiversity Net Gain report with updated calculations is completed should current development and landscaping proposals change in any way. An updated report will review habitat condition scores of habitats and will take into account any changes in a final masterplan.

## References

**Environment Bank (2015)** *Biodiversity Impact Calculator – Guidance for Use*.  
Environment Bank.

**Environment Bank (2016)** *Biodiversity Accounting – An introduction*.  
Environment Bank.

**Environment Bank (2021)** The Environment Bill and Biodiversity Net Gain Delivery. [Online]. Accessed July 2023. Available at:  
<https://www.environmentbank.com/blog/the-environment-bill-and-biodiversity-net-gain-delivery-what-planning-authorities-need-to-know/>

**Natural England (2022)** *Biodiversity Metric 4.0 User Guide*

**UK HABS (2020)** *The UK Habitat Classification: Habitat Definitions*. Version 1.1.

Appendix One: Proposed Design Scheme.



