

# **VOLUME 4: APPENDICES**

## **APPENDIX F6 – BIODIVERSITY NET GAIN ASSESSMENT**

**APPENDIX F6****Biodiversity Net Gain Assessment**

10.6.1 Biodiversity Net Gain was calculated using the DEFRA Biodiversity Metric 2.0. Initial baseline conditions were determined by way of a walkover survey which classified and graded habitats and hedgerows on site. Loss of habitats and new land use were then estimated using Site Plan 16.140.10.

**Habitats**Pre-intervention

10.6.2 The current site is entirely composed of agricultural land. This has been defined as cereal crops in the metric which is a habitat of low distinctiveness. It is given an automatic score of poor and delivers a total of 28.87 habitat units across 12.55 ha.

Post-intervention

10.6.3 The largest area of green infrastructure post intervention is the area set aside for Brent Geese. This is defined as modified grassland in the metric, a habitat of low distinctiveness. The highest condition that this area can be realistically managed to is fairly poor and, as a consequence, the area delivers a meagre total of 9.25 habitat units. This highlights one of the potential issues with the net gain; the best habitat for creating a net gain is not necessarily the best for ecology. In this case a deviation from modified grassland would have a negative effect on the quality of habitat for Brent Geese.

10.6.4 Within the area set aside for goose habitat is a scrape that will retain water for part of the year. This is entered as a temporary pond in the metric, a habitat of high distinctiveness, that will be considered to be in good condition and will deliver 1.88 habitat units.

10.6.5 Reedbeds are present along the northern and western edge of the goose habitat as well as within the SUDS basin. These are a habitat of high distinctiveness and will be managed to good condition. In total reedbeds deliver 2.47 habitat units.

10.6.6 Standing water in the SUDS basins is considered to be a habitat of high distinctiveness in good condition and will deliver a total of 1.49 habitat units. The portion of SUDS basin that is likely to remain predominantly dry has been scored as other neutral grassland in poor condition. This is a habitat of medium distinctiveness and will deliver 0.63 habitat units.

10.6.7 Surrounding the SUDS basins is another area of damp grassland, scored within the metric as other neutral grassland in moderate condition. This area will deliver 2.67 habitat units.

10.6.8 The final areas of green infrastructure are the areas of grassland across the eastern and western boundaries of the site. This will be other neutral grassland, managed to moderate condition and will deliver a total of 7.13 habitat units.

10.6.9 The development area will consist of sealed surfaces such as houses, driveways and foot paths alongside low distinctiveness habitats such as vegetated gardens. The precise locations of these areas are not yet specified so a proportion that has been shown to be accurate on previous projects has been used. Sealed surfaces are estimated to represent 60% of this area

and vegetated gardens, or similarly low scoring habitats, are estimated to make up the remaining 40%. The gardens will deliver a total of 5.07 habitat units in poor condition.

### Hedgerows

- 10.6.10 The current hedgerows across the site deliver a total of 4.70 hedgerow units. The eastern hedgerow is considered to be in good condition however the south and west hedgerows are only in moderate condition due to frequent gaps. All hedgerows across the site are currently native species poor.
- 10.6.11 Post intervention the existing hedgerows will be retained nearly in their entirety, bar two small gaps in the eastern hedgerow for pedestrian access to the adjacent field. The remaining eastern hedgerow will be enhanced to native species rich by native woody species planting. Likewise, the western hedgerow will be enhanced to species rich and its condition will be improved to good through suitable management. The southern hedgerow will not be enhanced as any enhancement may affect the sightlines of returning Brent Geese.
- 10.6.12 Additional hedgerows will be planted along the southern edge of the development area. This will be species rich and will in places be associated with the ditch containing reedbeds. In total new hedgerows will deliver 3.85 hedgerow units.

### Summary

- 10.6.13 Post intervention there will be a gain in both habitats (5.95%) and hedgerows (132.56%). While the gain for habitats is below the 10% value that is currently expected this development will provide a greater gain to overall ecology than that figure might suggest. The very large proportion of the site set aside for Brent Goose habitat represents a large loss in potential units as it must be managed as modified grassland, a low distinctiveness habitat. Nevertheless this area will provide an important habitat for the Brent Geese known to use the site.
- 10.6.14 The relatively low gain in habitat units must also be considered alongside the very large net gain in hedgerow units. While these figures are not directly comparable there is clearly a very significant net gain for hedgerows that will improve the biodiversity of the site overall.

**Table 1: Biodiversity net gain results**

|                  |                           |                         |
|------------------|---------------------------|-------------------------|
| <b>Habitats</b>  | On-site Baseline          | 28.87                   |
|                  | On-site post intervention | 30.59                   |
|                  | Total Change              | <b>+1.72 (+5.95%)</b>   |
| <b>Hedgerows</b> | On-site Baseline          | 4.70                    |
|                  | On-site post intervention | 10.92                   |
|                  | Total Change              | <b>+6.23 (+132.56%)</b> |



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### Key

- Site Boundary
- Proposed Habitats**
- Urban - Developed land; sealed surface 60% and Urban - Vegetated garden 40%
- Urban - Developed land; sealed surface
- Grassland - Modified Grassland
- Grassland - Other neutral grassland, moderate condition
- Grassland - Other neutral grassland, moderate condition
- Grassland - Other neutral grassland, poor condition
- Wetland - Reedbeds
- Lakes - Ponds (Non-Priority Habitat)
- Lakes - Temporary lakes, ponds and pools
- Meadow Grassland
- Retained hedgerow
- Enhanced hedgerow
- Newly planted hedgerow

Habitats On-site Baseline = 28.87  
 Habitats On-site post intervention = 31.77  
 Habitats On-site Total Change = +2.90 (+10.04%)

Hedgerows On-site Baseline = 4.70  
 Hedgerows On-site post intervention = 10.92  
 Hedgerows Total Change = +6.23 (+132.56%)

7m wide verge of meadow grassland along the northern and western boundary of Brent Goose mitigation areas to meet 10% net gain requirement.

