BIODIVERSITY NET GAIN ASSESSMENT (BNGA)

PROJECT NAME: Land to the North of High Road, Spalding, Lincolnshire, PE12 6JU

PURPOSE: Prepared in order to address (in part) Condition 10 of planning permission ref: H22-0887-21

DATE: May 2022

1. Introduction

1.1. Background

1.1.1. Allied Ecology has been appointed to undertake a Biodiversity Net Gain Assessment of Land to the North of High Road, Spalding, Lincolnshire, PE12 6JU (grid reference TF 28654 24798).

1.1.2. The site is located to the east of Spalding, within an urban edge context, and comprises an arable field and improved grassland field. A wet ditch forms the northern site boundary, with dry ditch and residential curtilage to the east and High Road to the south. A single tree is present within the site, at the southern boundary.

1.1.3. Full planning permission (ref: H22-0887-21) was granted by South Holland District Council in March 2022 for 68 dwellings and associated works. A number of conditions are attached to the consent, with Condition 10 relating to ecology:

'…the submitted landscaping proposals shall demonstrate that Biodiversity Net Gain will be achieved on site, using the Biodiversity Metric 3.0 (or any successor).'

1.1.4. Ashwood Homes intend to commence development and as such has appointed Allied Ecology to undertake a Biodiversity Net Gain Assessment of the proposals, in order to demonstrate that a biodiversity net gain will be achieved. DEFRA has released a 3.1 version of their Biodiversity Metric, which supersedes the 3.0 version identified within the wording of Condition 10.

1.2. Ecological Survey Work

1.2.1. This Biodiversity Net Gain Assessment has been informed by ecological survey work undertaken at the site. The site was initially subject to a Phase 1 habitat survey in August 2021 by a third-party ecologist, in order to establish the broad habitat classifications for the site.

1.2.2. The site has subsequently been subject to an update Phase 1 habitat survey and Biodiversity Net Gain Condition Assessment survey in April 2022 by Allied Ecology (as detailed at Section 2), in order to inform the coding of the DEFRA 3.1 Biodiversity Metric.

1.3. Basis of Reporting

1.3.1. The following Biodiversity Net Gain Assessment is intended to satisfy the stated requirements of Condition 12, by demonstrating that the proposals will deliver a biodiversity net gain. For

the purposes of this assessment, and in the absence of a stated minimum percentage gain requirement in the condition wording, a demonstrable biodiversity net gain constitutes ≥ +1%.

2. Methodology

2.1. Habitat Survey

2.1.1. Phase 1 habitat survey was carried out in April 2022, based on standard JNCC Phase 1 Habitat Survey Methodology[1], whereby habitat types present were noted and mapped, together with an assessment of the general 'ecological value' of each habitat. A detailed species list was compiled for each habitat type, and from this the botanical composition of the site was classified into areas of similar community types. Species identification is based on the Botanical Society for the British Isles (BSBI) Checklist. This methodology provides an initial appraisal of the basic habitat types present and is translated into corresponding UK Habitat classifications detailed within the DEFRA 3.1 biodiversity calculator.

2.2. Condition Assessment Survey

2.2.1. In order to inform the coding of the DEFRA 3.1 biodiversity calculator, each of the identified habitats was assessed on site in April 2022, against the condition criteria set out within the DEFRA 3.1 technical supplements. This enables an objective assessment of the baseline conditions for each habitat present, and represents the most robust and replicable method to establish the ecological baseline for Biodiversity Net Gain purposes.

2.3. Survey Constraints

2.3.1. The Phase 1 habitat survey and Condition Assessment survey was undertaken at an optimal time of year, with all available assessment criteria able to be assessed / distinguished. As such, it is considered that the condition assessment data underpinning the metric calculations is reliable and suitably robust to inform the assessment.

2.4. Biodiversity Metric Calculation

2.4.1. All identified habitats within the site are measured using QGIS software, in order to accurately establish their extents (see Plan 22009-BNG1). The identified habitats, and their extents, are coded into the DEFRA 3.1 biodiversity calculator, alongside their condition assessment information and other spatial / locally strategic information. This information generates the baseline number of 'biodiversity units' present within a site. The extents of proposed habitats are measured from the relevant landscape strategy plans / details (see Plan 22009-BNG2) and input to the DEFRA 3.1 biodiversity calculator, alongside the realistically achievable conditions that are targeted for each habitat type. Additional spatial / locally strategic information is also input, which enables the number of proposed 'biodiversity units' to be established.

2.4.2. In order to understand the 'net' biodiversity gains or losses of a project, the proposed biodiversity units are subtracted from the baseline conditions, from which a percentage change in biodiversity can be calculated.

2.4.3. In calculating the biodiversity net gains that can be delivered under the consented scheme, the mitigation hierarch has been followed at all times. This approach aims to ensure that, in the first instance, potential ecological harm is avoided. Where this is not always possible, such

[1] Joint Nature Conservation Committee (2010, as amended) *'Handbook for Phase 1 habitat survey: A technique for environmental audit.'*

harm must be suitably reduced and only then compensated for as a last resort, when other potential design interventions have been exhausted.

3. Results

3.1. Baseline – Site Habitat Baseline

3.1.1. The status of existing habitat areas, and a summary of their current conditions, are detailed at Table 3.1 below.

Table 3.1 Baseline habitat conditions

Ref	Habitat	Condition	Condition Assessment	Description
1	Cropland: Cereal crops	N/A Agriculture	The DEFRA 3.1 Metric automatically assigns the condition data.	Located in the western half of the site.
2	Grassland: Modified grassland	Poor	**Criteria Passed** 3, 5, 6, 7 **Criteria Failed** 1,2, 4	Located in the eastern half of the site.

3.1.2. Based on the extent of habitats within the site, and their current condition, existing habitats are assessed to provide **5.78** biodiversity units.

3.2. Baseline – Site Hedge Baseline

3.2.1. The status of existing hedgerows within the site, and a summary of their current conditions, are detailed at Table 3.2 below.

Table 3.2 Baseline hedgerow conditions

Ref	Habitat	Condition	Condition Assessment	Description
1	Native Hedgerow	Good	**Criteria Passed** A1, A2, B1, B2, C1, C2, D1, D2 **Criteria Failed** -	Located centrally.

3.2.2. Based on the extent of hedgerows within the site, and their current condition, existing hedgerows are assessed to provide **0.62** biodiversity units.

3.3. Proposed – Site Habitat Creation

3.3.1. Details of proposed habitat areas, and a summary of their targeted conditions, are detailed at Table 3.3 below.

Table 3.3 Proposed habitat details

Ref	Habitat	Condition	Condition Assessment	Description
1	Urban: Developed Land / Sealed Surface	N/A	The DEFRA 3.1 Metric automatically assigns the condition data.	Buildings / structures

2	Urban: Developed Land / Sealed Surface	N/A	The DEFRA 3.1 Metric automatically assigns the condition data.	Includes areas of hardstanding, such as roads and pavements etc.
3	Urban: Vegetated Garden	N/A	The DEFRA 3.1 Metric automatically assigns the condition data.	Includes rear gardens / lawns
4	Urban: Vegetated Garden	N/A	The DEFRA 3.1 Metric automatically assigns the condition data.	Includes front gardens / lawns
5	Urban: Introduced shrub	N/A	The DEFRA 3.1 Metric automatically assigns the condition data.	Ornamental planting associated with new properties
6	Grassland: Modified grassland	Moderate	**Criteria Targeted** 1,4,6,7	Comprising Emorsgate EM8, located in the eastern part of the site
7	Grassland: Modified grassland	Moderate	**Criteria Targeted** 1,4,6,7	Comprising Emorsgate EL1, located in the western part of the site
9	Urban: Urban tree	Poor	**Criteria Targeted** 1,6	A total of 27 medium sized trees are proposed throughout the site

3.3.2. Based on the extent of proposed habitats within the site, and their targeted conditions, proposed habitat areas are assessed to provide **6.57** biodiversity units.

3.4. Proposed – Site Hedge Creation

3.4.1. Details of proposed hedgerows, and a summary of their targeted conditions, are detailed at Table 3.4 below.

Table 3.4 Proposed hedgerow details

Ref	Habitat	Condition	Condition Assessment	Description
1	Native Species Rich Hedgerow	Good	**Criteria Targeted** A1, A2, B1, B2, C1, C2, D1, D2	Located across the site

3.4.2. Based on the extent of proposed hedgerows within the site, and their targeted conditions, proposed hedgerows are assessed to provide **0.63** biodiversity units.

3.5. Evaluation

3.5.1. A summary of the net biodiversity gains or losses resulting from the proposals is detailed at Table 3.6 below.

Table 3.6 Summary of Biodiversity Net Gains or Losses

	Biodiversity Unit Change	Percentage Change
Habitats	+0.79	+13.70%
Hedgerows	+0.01	+1.30%

3.5.2. Additional measures proposed under the consented scheme including faunal enhancements such as bat roost boxes, bird nest boxes, and new refuge features for hedgehogs will bring forward considerable additional biodiversity net gains that are unable to be reflected within the DEFRA 3.1 biodiversity calculator.

4. Conclusions

4.1 In order to address the stated requirements of Condition 10, relating to full planning permission ref: H22-0887-21, Allied Ecology has undertaken a Biodiversity Net Gain Assessment of the proposals utilising the DEFRA 3.1 biodiversity calculator. This assessment has established that Biodiversity Net Gain will be achieved under the proposals and as such, it is considered that relevant part of Condition 10 has been fully addressed.

Enclosed

Plan 22009-BNG1 – Baseline Habitats
Plan 22009-BNG2 – Proposed Habitats
Appendix 22009-1 – DEFRA 3.1 Biodiversity Headline Results Extract
DEFRA 3.1 Biodiversity Metric Excel File – **Available Upon Request**

Plan 22009-BNG1

Baseline Habitats



Key:

- Site Boundary
- Cropland: Cereal Crops (1.5155 ha)
- Grassland: Modified Grassland (1.3754 ha)
- Native Hedgerow (0.103 km)

Land to the North of High Road, Spalding, PE12 6JU

Baseline Habitats

22009/BNG1

May 2022

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Plan 22009-BN2

Proposed Habitats



Key:

- Site Boundary
- Urban: Developed Land / Sealed Surface (0.472 ha)
- Urban: Developed Land / Sealed Surface (0.8516 ha)
- Urban: Vegetated Garden (1.0324 ha)
- Urban: Introduced Shrub (0.0286 ha)
- Grassland Modified Grassland (0.3173 ha)
- Grassland Modified Grassland (0.1889 ha)
- Native Species Rich Hedgerow (0.08 km)

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Proposed Habitats

22009-BNG2

May 2022

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Appendix 22009-1

DEFRA 3.1 Biodiversity Metric Headline Results Extract

Land to the North of High Road, Spalding

Headline Results

Return to results menu

On-site baseline	*Habitat units*	5.78
	Hedgerow units	0.62
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	6.57
	Hedgerow units	0.63
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	13.70%
	Hedgerow units	1.30%
	River units	0.00%
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.79
	Hedgerow units	0.01
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	13.70%
	Hedgerow units	1.30%
	River units	0.00%
Trading rules Satisfied?		Yes ✓

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