

BIODIVERSITY NET GAIN ASSESSMENT (BNGA)

PROJECT NAME: Land at Fengate Road, Pinchbeck, Lincolnshire, PE11 3PU

PURPOSE: Prepared in order to inform a planning application

DATE: 3rd October 2024

1. Introduction

1.1. Background

- 1.1.1. Allied Ecology has been appointed to undertake a Biodiversity Net Gain Assessment in respect of the proposals at Fengate Road, Pinchbeck (grid reference TF 23223 24692).
- 1.1.2. The site is located in Pinchbeck, to the north of Spalding, and comprises modified grassland with an area of arable on its western aspect, as well as areas of ruderals, hardstanding and bare ground to the east. The site is located within a rural setting with further arable land on its northern, western and southern aspects and is bound Fengate Road to the south and commercial buildings to the east.

1.2. Ecological Survey Work

- 1.2.1. This Biodiversity Net Gain Assessment has been informed by ecological survey work undertaken at the site. Allied Ecology Ltd undertook an 'extended' habitat survey on the 23rd January 2024, based on the standard UK Habitat Classification¹ 'UK Hab' methodology. A habitat Condition Assessment Survey was also undertaken, based on the criteria set out within the Statutory Biodiversity Metric technical supplements.

1.3. Basis of Reporting

- 1.3.1. The following Biodiversity Net Gain Assessment is intended to establish whether the proposals are able to deliver a biodiversity net gain, and what that percentage net gain would be, utilising the 'Statutory Biodiversity Metric Calculation Tool' (SBMCT). This is the nationally recognised tool for demonstrating quantifiable net gains for biodiversity.
- 1.3.2. This report accompanies the SBMCT, providing a summary of the results of the SBMCT and clarifies the choice of habitat definitions, distinctiveness, habitat conditions and temporal factors (where appropriate).

1.4. Lead Surveyor and Author's Experience

- 1.4.1. The lead surveyor and author is Jonathan Byrd. Jonathan is a Chartered Ecologist (CEcol) and Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM), with over 16 years of relevant experience within an ecological consultancy setting and is suitably authoritative to assess the potential effects of the proposals on the habitats and faunal species present.
- 1.4.2. In addition to being an experienced botanical and habitat surveyor, Jonathan holds Natural England protected species survey licences for UK bats (Class 2 - CL17/CL18), Barn Owl (CL29),

¹ UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://www.ukhab.org>)

Great Crested Newt (CL08), Dormouse (CL10a), and White-clawed Crayfish (CL11). Jonathan also holds Natural England Mitigation Class Licences for bats (BMCL - CL21) and Badger (CL35), and has held or been named on numerous standard Natural England mitigation licences for the above species.

- 1.4.3. Jonathan has been undertaking and advising on Biodiversity Net Gain Assessments since 2017 and is suitably authoritative to assess these proposals. As such, the findings and assessments detailed within the Biodiversity Net Gain Assessment can be relied upon to inform the planning application.

2. Methodology

2.1. Habitat Survey

- 2.1.1. An 'extended' habitat survey was undertaken on the 23rd January 2024, based on the UK Habitat 'UK Hab; Classification methodology'², 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 Statutory Biodiversity Metric.

2.2. Condition Assessment Survey

- 2.2.1. In order to inform the coding of the Statutory Biodiversity Metric, each of the identified relevant habitats was subject to a Condition Assessment Survey on the 23rd January 2024.
- 2.2.2. A range of guidance documents have been utilised to inform the condition assessment of existing habitats within the site as well as the condition of habitats following completion of development, with 'The Statutory Biodiversity Metric – User Guide', 'The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology' and UK Hab 'The UK Habitat Classification – Version 2.0' being the primary guidance documents.
- 2.2.3. This approach 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. All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons. The habitat survey was undertaken outside the recognised optimal season, albeit given the nature of the habitats present (comprising largely buildings and hardstanding with agricultural habitats), it is considered that a proportionate level of assessment was able to be undertaken and the findings can be relied upon to inform an appraisal of their importance and likely impact of the proposals.
- 2.3.2. It is considered that a proportionate level of assessment was able to be undertaken and all assessment criteria were able to be assessed / distinguished. As such, it is considered that the habitat classification and 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 23219-BNGA1). The identified habitats, and their extents, are coded into the SBMCT, 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 masterplan layout / details (see Plan 23219-BNGA2) and input to the Statutory Biodiversity

² Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1

Metric, 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. In calculating the biodiversity net gains that can be delivered under the proposals, the mitigation hierarchy 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 harm must be reduced and only then compensated for as a last resort, when other potential design interventions have been exhausted.

3. Results

3.1. Baseline – Irreplaceable Habitats

- 3.1.1. None of the habitats present within the site are classified or characterised as representing an 'irreplaceable habitat'. As such, these assessment criteria are not considered further as part of the assessment.

3.2. Baseline – Habitat Degradation

- 3.2.1. No identified habitat degradation was recorded during the survey work undertaken, albeit the site is subject to regular and ongoing disturbance as part of its agricultural usage.

3.3. Baseline – On-Site Habitat Baseline

- 3.3.1. 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	Notes
1	Urban: Developed land; sealed surface	N/A-Other	SBMCT assigns the condition data for this habitat.	Existing building
2	Urban: Developed land; sealed surface	N/A-Other	SBMCT assigns the condition data for this habitat.	Hardstanding
3	Sparsely vegetated land: Ruderals and ephemerals	Poor	Criteria Passed A, B Criteria Failed C	A patch of developing ruderals adjacent to the building
4	Urban: Bare Ground	Poor	Criteria Passed A, B Criteria Failed C	Bare ground areas used for access and storage purposes
5	Cropland: Non-cereal crops	Condition Assessment N/A	SBMCT assigns the condition data for this habitat.	Existing pumpkin patch
6	Grassland: Modified grassland	Poor	Criteria Passed C, D, E, F, G Criteria Failed <u>A, B</u>	Existing modified grassland with a uniformly short sward height and fewer than 6-8 species per m ²
7	Grassland: Modified grassland	Poor	Criteria Passed C, D, E, F, G Criteria Failed <u>A, B</u>	Existing modified grassland with a uniformly short sward height and fewer than 6-8 species per m ²

8	Individual trees: Rural tree	Moderate	Criteria Passed A, B, D, F Criteria Failed C, E	Comprising a single medium sized tree in the south-eastern part of the site.
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3.3.2. Based on the extent of habitats within the site, and their current condition, existing habitats are assessed to provide **0.48** biodiversity units.

3.4. Proposed / Post-intervention – On-Site Habitat Creation and Enhancement

3.4.1. Details of proposed habitat creation and enhancement areas, and a summary of their targeted conditions, are detailed at Tables 3.2 and 3.3 below.

Table 3.2 Proposed habitat creation.

Ref	Habitat	Condition	Condition Assessment	Notes
1	Urban: Developed land; sealed surface	N/A-Other	SBMCT assigns the condition data for this habitat.	Proposed new structures and access infrastructure
2	Urban: Vegetated garden	Condition Assessment N/A	SBMCT assigns the condition data for this habitat.	Proposed areas of private gardens / lawns.
3	Grassland: Modified grassland	Good	Criteria Targeted <u>A</u> , C, D, E, F, G	Proposed new verges, located outside private curtilages managed to create a species-rich 'flowering lawn'.
4	Individual trees: Rural tree	Moderate	Criteria Targeted A, B, D, F	Comprising 7 new trees planted as a 'small' size class, located outside of proposed curtilages

Table 3.3 Proposed habitat enhancements.

Ref	Current Habitat and Condition	Enhanced Habitat and Condition	Condition Assessment	Description
7	Grassland: Modified grassland – Poor	Grassland: Modified grassland – Good	Additional Criteria Targeted: <u>A</u>	Enhanced through preparation and over-seeding, positive ecological management to increase the diversity of botanical species and structure of the grassland.

3.4.2. Based on the extent of retained, proposed, and enhanced habitats within the site, and their targeted conditions, post-intervention habitat areas are assessed to provide **0.56** biodiversity units.

3.5. Baseline – On-Site Hedge Baseline

3.5.1. The status of existing hedgerows within the site, and a summary of their current conditions, are detailed at Table 3.4 below.

Table 3.4 Baseline hedgerow conditions.

Ref	Habitat	Condition	Condition Assessment	Description
TL1	Line of trees – associated with a bank or ditch	Moderate	Criteria Passed B, D, E Criteria Failed A, C	Boundary features that would be entirely retained under the proposals.
TL2	Tree line	Moderate		

3.5.2. Based on the extent of ‘hedgerows’ within the site, and their current condition, existing ‘hedgerows’ are assessed to provide **0.45** biodiversity units.

3.6. Proposed / Post-intervention – On-Site Hedgerow Creation

3.6.1. Details of proposed hedgerow enhancement, and a summary of the targeted conditions, are detailed at Table 3.5 below.

Table 3.5 Proposed hedgerow creation

Ref	Habitat	Condition	Condition Assessment	Notes
1	Native hedgerow	Moderate	Criteria Targeted A1, A2, B1, B2, C1, C2, D1, D2	New hedgerow creation comprising locally appropriate native species, with condition assessed on a highly precautionary basis.

3.6.2. Based on the extent of retained and proposed hedgerows within the site, and their targeted conditions, post-intervention hedgerows are assessed to provide **0.60** biodiversity units.

3.7. Watercourses

3.7.1. No qualifying watercourses are present within the site, or located within 10m of the site boundary. As such, this habitat category is not assessed further.

3.8. Trading

3.8.1. All ‘Trading Rules’, for all SBMCT modules, are satisfied under the proposals.

3.9. Evaluation

3.9.1. 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	+0.08	+15.69%
Hedgerows	+0.15	+34.37%
Rivers	N/A	

- 3.9.2. Additional measures proposed under the scheme including faunal enhancements such as bat roost boxes and bird nest boxes, log piles, hedgehog domes and connectivity features for hedgehogs, will bring forward considerable additional biodiversity net gains that are unable to be reflected within the Statutory Biodiversity Metric. Nonetheless such measures are anticipated to contribute considerably to the biodiversity 'value' of the site and should be taken into account when considering the benefits of the proposals and the genuine faunal biodiversity net gains that these features represent.

4. Conclusions

- 4.1 Allied Ecology has undertaken a Biodiversity Net Gain Assessment of the proposals utilising the Statutory Biodiversity Metric. This assessment has established that the on-site proposals are able to deliver 10% net biodiversity gains in all relevant modules.

Enclosed

Plan 23219-BNGA1 – Baseline Habitats

Plan 23219-BNGA2 – Proposed Habitats

Appendix 23219-1 – Statutory Biodiversity Metric, Headline Results Extract

Statutory Biodiversity Metric Calculation Tool – **Available Upon Request**

Statutory Biodiversity Metric Baseline Condition Assessments – **Available Upon Request**

C:\Users\alle\OneDrive\Documents\1. Projects\23219 - Fengate Road\Graphics\23219 - Fengate Road.ogz



Key:

- Site Boundary
- Individual trees: Rural tree (1x small moderate condition) (0.0041ha)
- Line of trees - associated with bank or ditch (0.052km)
- Line of trees (0.06km)
- Urban: Developed land; sealed surface (0.0690ha)
- Urban: Developed land; sealed surface (0.0737ha)
- Sparsely vegetated land: Ruderal/Empheral (0.0446ha)
- Urban: Bare ground (0.0363ha)
- Cropland: Non-cereal crops (0.0307ha)
- Grassland: Modified Grassland (0.2822ha)



Fengate Road, Pinchbeck, PE11 3PU

Baseline Habitats

23219-BNGA1

October 2024


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Key:

 Site Boundary

Existing Habitat to be Retained

 Individual trees: Rural tree
(1x small moderate condition)
(0.0041ha)

 Line of trees - associated with
bank or ditch (0.052km)

 Line of trees (0.06km)

 Urban: Developed land; sealed surface
(0.0530ha)

Existing Habitat to be Enhanced

 Grassland: Modified grassland
(0.0124ha)

Proposed Habitat Creation

 Individual trees: Rural tree
(7x small moderate condition)
(0.0285ha)

 Native hedgerow (0.046km)

 Urban: Developed land; sealed surface
(0.1226ha)

 Urban: Vegetated garden (0.1646ha)

 Grassland: Modified grassland
(0.0137ha)



Fengate Road, Pinchbeck, PE11 3PU

Proposed Habitats

23219-BNGA2

October 2024


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Land at Fengate Road, Pinchbeck, Lincolnshire, PE11

Headline Results

Scroll down for final results 

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On-site baseline	Habitat units	0.48	
	Hedgerow units	0.45	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.56	
	Hedgerow units	0.60	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	0.08	15.69%
	Hedgerow units	0.15	34.37%
	Watercourse units	0.00	0.00%

Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%

Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.08	
	Hedgerow units	0.15	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.08	
	Hedgerow units	0.15	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	15.69%	
	Hedgerow units	34.37%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes 		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.48	0.53	0.00
Hedgerow units	10.00%	0.45	0.49	0.00
Watercourse units	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target 

No additional hedgerow units required to meet target 

No additional watercourse units required to meet target 



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