

Bents Farm, Crow Edge

Biodiversity Net Gain Assessment



June 2026



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Biodiversity Net Gain Assessment

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Executive Summary

Habitat Works Ltd was commissioned in June 2026 by Tanya Goldthorpe to undertake a Biodiversity Net Gain Assessment (BNGA) of an area of land associated with Bents Farm, Crow Edge, South Yorkshire, S36 4HB (central Ordnance Survey National Grid Reference (OS NGR) SE 19258 03858), hereafter referred to as 'the Site'.

This BNGA has been carried out to determine the potential change in biodiversity value of the Site based upon the proposed development and associated post development habitats, using the Department for Environment, Food & Rural Affairs (DEFRA) '*Statutory Biodiversity Metric User Guide*' (SBM) (February, 2024).

Baseline area-based habitats recorded within the application boundary of the Site include '*Grassland – Modified grassland*'. Post-development area-based habitat creation has been predicted to include '*Grassland – Modified grassland*', '*Urban – Developed land; sealed surface*', and '*Grassland – Other neutral grassland*'.

The current proposals result in a biodiversity value of 15.59 HU representing a net change of +1.57 HU equating to a gain of +11.16% achieving the 10% net gain requirement.

1. Introduction

1.1 Background

- 1.1.1 Habitat Works Ltd was commissioned in June 2026 by Tanya Goldthorpe to undertake a Biodiversity Net Gain Assessment (BNGA) of an area of land associated with Bents Farm, Crow Edge, South Yorkshire, S36 4HB (central Ordnance Survey National Grid Reference (OS NGR) SE 19258 03858), hereafter referred to as 'the Site', and as displayed in Figure 1.
- 1.1.2 This BNGA has been carried out to determine the potential change in biodiversity value of the Site based upon the proposed development and associated post development habitats, using the Department for Environment, Food & Rural Affairs (DEFRA) '*Statutory Biodiversity Metric User Guide*' (SBM) (February, 2024).
- 1.1.3 The Site boundary is detailed within the '*Plans and Elevations*' (Dwg No. 2026/0083, dated 2026). The proposals are for the replacement of an area of '*Grassland – Modified grassland*' with '*Developed land; sealed surface*' in the form of an agricultural building.
- 1.1.4 This report details the results of the BNGA using biodiversity metric calculations which have been completed following a site walkover in February 2026 and calculations of the post-development habitats taken from the '*Plans and Elevations*' drawing. The methodologies employed and all survey findings are described along with an evaluation and assessment of the biodiversity value of the Site. Any recommendations regarding ensuring Biodiversity Net Gain (BNG) are also detailed as required.

2. Methodology

2.1 Background

- 2.1.1 This BNGA uses the industry recognised best practice methodology within the (DEFRA) '*Statutory Biodiversity Metric User Guide*' (SBM) (February, 2024).
- 2.1.2 The Statutory Biodiversity Metric (SBM) uses habitat features as a measure for their importance and value to nature. The following information on each habitat are required for the metric input:
- Habitat type;
 - Irreplaceable habitat;
 - Area/length;
 - Habitat distinctiveness (automatically calculated);
 - Habitat condition; and,
 - Strategic significance.

2.2 Biodiversity Metric Inputs

Habitat Type

Baseline

- 2.2.1 The Site was surveyed on 9th June 2026 by Consultant Ecologist Ashleigh Brentnall BSc (Hons) and Seasonal Ecologist Madisyn Pett BSc (Hons).
- 2.2.2 The Site visit included an ecological walkover survey using the UK Habitat Classification (UKHab) system (Butcher *et al.*, 2020). The habitats present on the Site were identified and classified according to the UKHab system which closely aligns with the SBM. The baseline habitats are displayed in Figure 1.
- 2.2.3 The SBM uses a classification system based mainly on the UKHab with inputs from other systems including the Water Framework Directive (WFD) Lakes Typology (UKTAG, 2003); the European Nature Information System (EUNIS) habitat type hierarchical view (EEA, 2109; and Natura 2000 Annex I habitats (JNCC, 2019) in addition to further habitats specific to the SBM.

Post-Development

- 2.2.4 Proposals for the Site have been assessed, and habitats present post-development have been based upon the '*Plans and Elevations*' drawing and using best knowledge of the likely habitats to be created/retained/lost.
- 2.2.5 The post-development habitats were classified according to the habitat classification system used by the SBM.

Habitat Area/Length

- 2.2.6 The area/length of each baseline and post-development habitat type was mapped using QGIS 3.40.4 'Bratislava' Geographical Information System (GIS). Area habitats are recorded in hectares (ha) and linear habitats are recorded in kilometres (km) as per the SBM calculator.

Habitat Condition

Baseline

- 2.2.7 The condition of a habitat is the measure of the biological 'working order' of a habitat judged against the perceived ecological optimum for that habitat. The condition assessments were undertaken using the 'Statutory Biodiversity Metric – Technical Annexe 1: Condition Assessment Sheets and Methodology' spreadsheet (February 2024).

Post-Development

- 2.2.8 The condition that post-development habitats have been assigned is based upon reasonable assumptions of the likely habitat condition in line with the condition assessment criteria. The condition of each habitat was assessed and either calculated as 'Good', 'Moderate' or 'Poor', where appropriate. Within the SBM, some habitats are not suitable for condition assessment, and as such are automatically calculated as either 'Condition Assessment N/A' or 'N/A – Other'.
- 2.2.9 If a habitat type varied in condition within the Site, these habitats were mapped and recorded separately to allow this distinction.

Habitat Strategic Significance

- 2.2.10 The SBM accounts for whether the habitats are situated within an area locally identified as significant for nature conservation.
- 2.2.11 Data on the areas and habitats locally identified as significant for nature conservation were obtained from the following sources:
- Multi-Agency Geographical Information for the Countryside (MAGIC) website for mapped statutory designated sites (<https://magic.defra.gov.uk/MagicMap.aspx>); and,
 - Habitats listed within the Kirklees Biodiversity Action Plan (2007).

3. Biodiversity Metric Calculations

3.1 Background

- 3.1.1 Biodiversity metric calculations provide a numerical score for the value of existing habitats on the Site and their likely value post-development in Habitat Units (HU), Hedgerow Units (HeU) and Watercourse Units (WU) (where present and applicable), to quantitatively assess the impact of the proposed development.
- 3.1.2 Using the SBM, habitat values are calculated via the criteria described within Sections 2.1 and 2.2. This results in individual scores for each habitat, and subsequently baselines for HU, HeU and WU (where present and appropriate).
- 3.1.3 The post-development value can also be calculated for habitats where factors including time to target condition and difficulty of creation/enhancement are also taken into consideration. The values for area habitats and linear habitats are calculated separately. This provides an overall picture of the biodiversity net gain or loss because of a development. To achieve BNG, all three of HU, HeU and WU are treated individually, and individual gains cannot be combined to form an overall gain for the Site.

3.2 Trading Rules

- 3.2.1 The SBM considers distinctiveness as described earlier and using this data, SBM applies trading rules that require that any habitat loss is replaced on a 'like for like' or 'like for better' basis. The trading rules are detailed below in Table 1.

Table 1 – Trading Rules within the SBM

Distinctiveness Group	Trading Rules
Very High	Bespoke compensation likely to be required
High	Same habitat required
Medium	Same broad habitat or a higher distinctiveness habitat required
Low	Same distinctiveness or better habitat requires
Very Low	Compensation not required

3.3 Assumptions and Limitations

- 3.3.1 For strategic significance, all habitats on the Site (both baseline and post-development) have been considered '*Area/compensation not in local strategy/no local strategy*' as they do not qualify as priority habitats and are not identified on any strategic plans.
- 3.3.2 The quantification of biodiversity is one of several factors to be considered when assessing the impact of the proposed development on biodiversity. Note that this BNGA does not cover potential impacts of the proposed development on protected species and designated sites.

-
- 3.3.3 The information contained within this report is considered valid for a period of 24 months from the date of the survey visit (CIEEM, 2019). If the development has not commenced by February 2028, it is recommended that the Site is fully re-surveyed to determine if there have been any significant changes to baseline habitats within that timeframe.
- 3.3.4 The Site was surveyed outside of the peak botanical season, however given the habitats present on the Site, this was not considered to be a significant limitation to the findings of the habitat classification, or condition assessment for the vegetated areas on the Site.

4. Findings and Evaluation

4.1 Baseline Habitats

- 4.1.1 Baseline area-based habitats recorded within the application boundary of the Site include 'Grassland – Modified grassland' (see Figure 1).
- 4.1.2 The total area of land the within the application boundary of the Site has been calculated at 7.01 ha. The habitat type, distinctiveness, condition, area and HU of the area-based habitats are provided within Table 2. Baseline area-based habitats have a biodiversity value of 14.02 HU.

Table 2 – Site Baseline Area-based Habitats and Habitat Units

Habitat Type	Distinctiveness	Condition	Area (ha)	Habitat Units (HU)
Grassland – Modified grassland	Low	Poor	7.01	14.02
Total Habitat Units (HU)				14.02

4.2 Post-development Habitats

- 4.2.1 The following calculations present a version of the completed feasibility biodiversity metric calculations based upon the post-development proposals as show in the 'Plans and Elevations'. A summary of the calculations is provided in Appendix 2.
- 4.2.2 It is anticipated that the proposals will see the partial loss of existing 'Grassland – Modified grassland'.
- 4.2.3 Post-development area-based habitat creation has been predicted to include 'Urban – Developed land, sealed surface' and 'Grassland – Other neutral grassland' (see Figure 2).
- 4.2.4 The predicted area-based habitat type, distinctiveness, condition, area and HU of the area-based habitats are provided within Table 3. The post-development area-based habitats estimated a biodiversity value of 15.59 HU and are displayed within Figure 2.

Table 3 – Post-development Area-based Habitats Condition and Habitat Units

Habitat Type	Distinctiveness	Condition	Area (ha)	Habitat Units (HU)
Lost				
Grassland – Modified grassland	Low	Poor	0.03	-0.06
Retained				
Grassland – Modified grassland	Low	Poor	5.83	11.65
Created				

Urban – Developed land, sealed surface	V. Low	N/A– Other	0.03	0.00
<i>Enhanced</i>				
Grassland – Other neutral grassland	Low	Moderate	1.16	3.93
Total Habitat Units (HU)				15.59

4.3 Net Change in Biodiversity

- 4.3.1 Considering the reasonable assumptions and estimates made within this, the construction of the proposed development is predicted to result in a net unit change of +1.57 HU which is a net percentage change of +11.16 % as detailed in Table 4.

Table 4 – Summary of Biodiversity Net Gain Calculations

Habitat Type	Baseline Units	Post-development Units	Change in Units	% Change in Units
Habitat Units (HU)	14.02	15.59	+1.57	+11.16 %

5. Discussion and Recommendations

5.1 *Summary of Biodiversity Net Gain Delivery*

- 5.1.1 The current proposals result in a biodiversity value of 15.59 HU representing a net change of +1.57 HU equating to a gain of +11.16 % exceeding the 10% net gain requirement.

5.2 *Habitat Management and Monitoring*

- 5.2.1 The production of a Habitat Management and Monitoring Plan (HMMP) is recommended to ensure that the Site habitats deliver the habitat scores listed within the final design stage BNGA, to be agreed with the LPA, which will also serve to support protected and notable species. This includes management of post-development habitats to the condition required to deliver the BNG score specifies in accordance with the condition assessment methodology.

5.3 *BNG Good Practice Principles*

- 5.3.1 Appendix 1 details the BNG Good Practice Principles (CIEEM, CIRIA & IEMA, 2016) which should be adhered to when undertaking BNGAs in association with proposed developments. The actions within Appendix 1 should be considered throughout the design stage of a development at this Site.

6. References

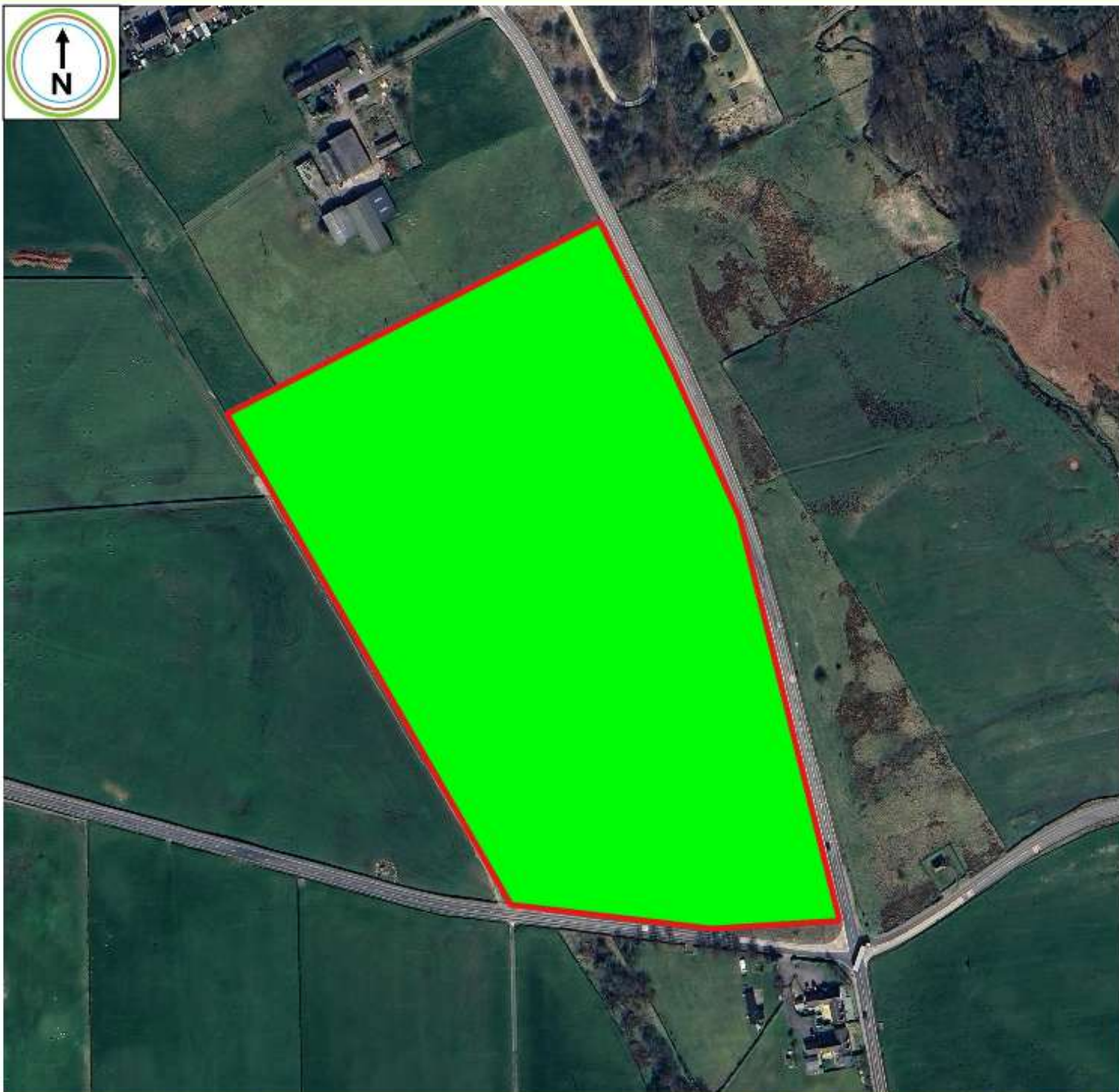
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Figure 1. Baseline Habitats Map



Legend

UKHab

 Site Boundary

 Grassland - Modified grassland



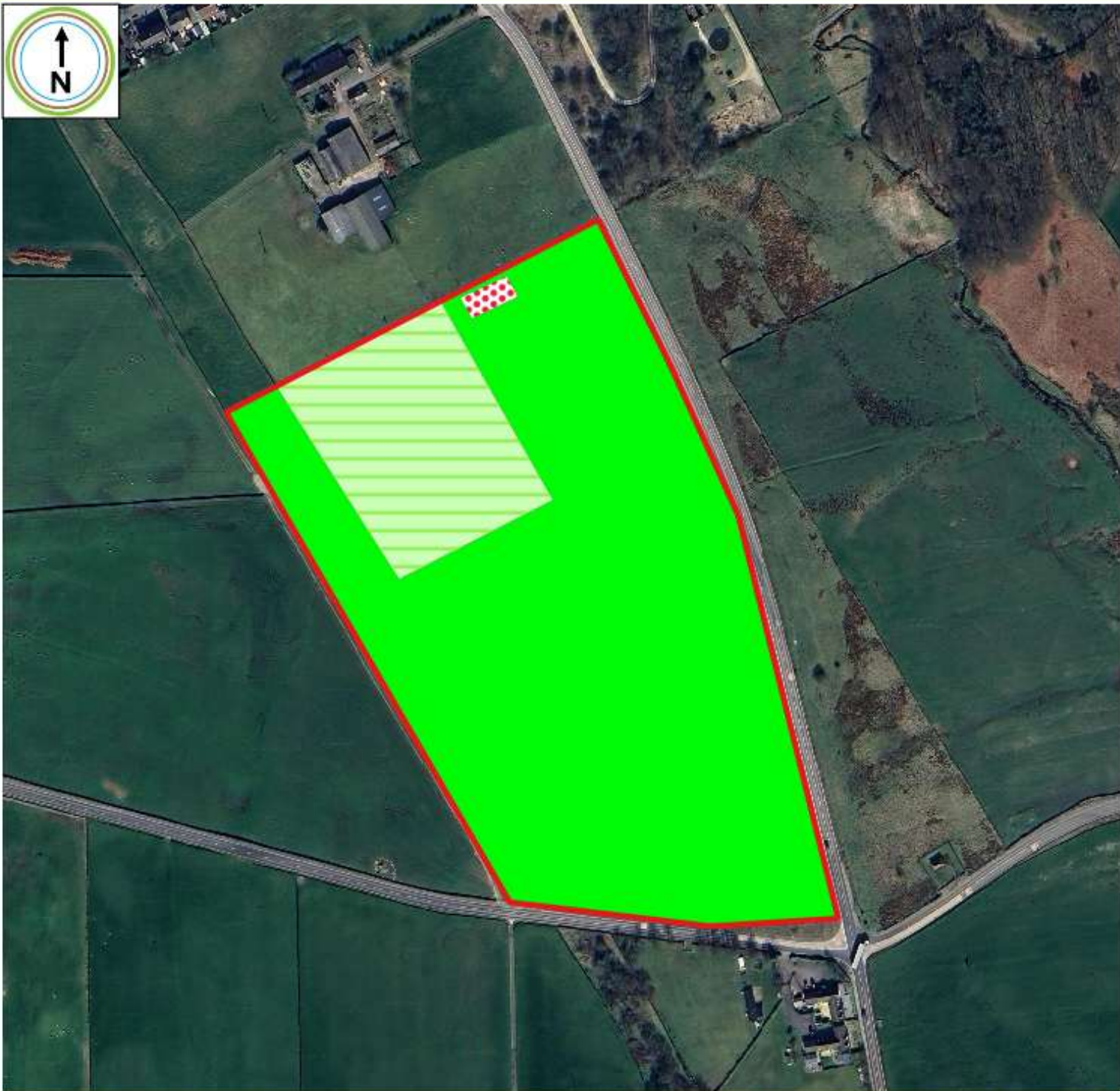
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Figure 1
Baseline Habitats Map

Figure 2. Post-development Habitats Maps



Legend

UKHab

-  Site Boundary
-  Urban - Buildings
-  Grassland - Modified Grassland
-  Grassland - Other Neutral grassland



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Figure 2
Post-Development Habitat Maps

Appendix 1. BNG Good Practice Principles

The BNG Good practice principles for development are based upon issued joint guidance from the Chartered Institute for Ecology and Environmental Management (CIEEM), the Construction Industry Research and Information Association (CIRIA) and the Institute for Environmental Management and Assessment (IEMA) (CIEEM, CIRIA & IEMA, 2019).

The Good practice principles for development outlines 10 principles which should be followed to ensure that BNG is undertaken in the most beneficial and appropriate manner possible. These principles are outlined in the table below.

Principle	Description
Principle 1. Apply the Mitigation Hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.
Principle 2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.
Principle 3. Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible, and share the benefits fairly among stakeholders.
Principle 4. Address risks	Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.
Principle 5. Make a measurable Net Gain contribution	Achieve a measurable, overall gain ¹ for biodiversity and the services ecosystems provide while directly contributing to wards nature conservation priorities. ¹ – Net Gain has been described as a measurable target for development projects where impacts on biodiversity are outweighed by a clear mitigation hierarchy approach to first avoid then minimise impacts, including through restoration and / or compensation. Adhering to these Net Gain principles (i.e. pursuing all principles together) will help in under-pinning good practice for achieving and sustaining Net Gain.
Principle 6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly-justified choices when: • Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses • Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation • Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels

	• Enhancing existing or creating new habitat • Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity
Principle 7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).
Principle 8. Create a Net Gain legacy	Ensure Net Gain generates long-term benefits by: • Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity² • Planning for adaptive management and securing dedicated funding for long-term management • Designing Net gain for biodiversity to be resilient to external factors, especially climate change • Mitigating risks for other land uses • Avoiding displacing harmful activities from one location to another • Supporting local-level management of Net Gain activities ² – Biodiversity compensation should be planned for a sustained Net Gain over the longest possible timeframe. For development in the UK, the expectation is that compensating sites will be secured for at least the lifetime of the development (e.g. often 25-30 years) with the objective of Net Gain management continuing in the future.
Principle 9. Optimise sustainability	Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.
Principle 10. Be Transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

Appendix 2. Biodiversity Metric Calculations Summary

Headline Results

Scroll down for final results ▲

Return to results menu

On-site baseline	Habitat units	14.02			
	Hedgerow units	0.00			
	Watercourse units	0.00			
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	15.59			
	Hedgerow units	0.00			
	Watercourse units	0.00			
On-site net change (units & percentage)	Habitat units	1.57	11.16%		
	Hedgerow units	0.00	0.00%		
	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	1.57			
	Hedgerow units	0.00			
	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	1.57			
	Hedgerow units	0.00			
	Watercourse units	0.00			
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	11.16%			
	Hedgerow units	0.00%			
	Watercourse units	0.00%			
Trading rules satisfied?	Yes ✓				
Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	14.02	15.42	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	0.00	0.00	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

