Biodiversity Net Gain Assessment

Site: LAND AT NHSBT, Unit D, South Yorkshire, S75 3FG

Ref: 241778 / E2

Client: NHSBT

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- October 2024 -

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EXECUTIVE SUMMARY

Indigo Surveys was commissioned by NHSBT to undertake a Biodiversity Net Gain (BNG) Assessment of Land at Unit D, Capitol Park.

The Biodiversity Net Gain (BNG) assessment was completed using the 'Statutory Biodiversity Metric' (Natural England, 2024). The local planning authority is Barnsley Metropolitan Borough Council. The recommendations are based on the site's current conditions as observed during the survey. The survey was carried out on the 8th of October 2024 arriving at 12:30. The weather was 17°C, sunny with scattered clouds and light winds (1/2 Beaufort Scale). No precipitation was encountered during the survey.

The baseline value of the site is 0.08 habitat units and 0.00 hedgerow units. The post-development future value of the site is expected to be 0.09 habitat units and 0.00 hedgerow units. This will result in a total net gain of 10.114% for habitat units and 00.00% for hedgerow units. The current proposals pass the trading rules of the DEFRA metric (Natural England, 2023) due to the proposed habitats achieving the same or better distinctiveness as the baseline.

The full calculation summary can be found in Appendix 3 and the metric will be submitted with the planning application for full review by the Local Planning Authority.

Amendments to the report and calculations must be made in the event of any design changes. A Landscape and Ecological Management Plan (LEMP) should be required to ensure the successful establishment and long-term management of retained and newly created habitats and hedgerows. This can be secured as a planning condition.

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1. INTRODUCTION

Background to the Development

The red line boundary is approximately 0.02 hectares and is primarily comprised of modified grassland. The proposed development site sits within the ownership boundary of Unit 6 in the bottom southwest corner of the commercial vehicle parking and delivery forecourt to the rear of the building. The proposed location sits adjacent to an existing storage canopy. The site is enclosed by a 1.8m high mesh security fence and runs adjacent to notable habitats including a hedgerow, mature trees and woodland habitats that are well-connected to the wider landscape. The red line boundary also includes a section of grassland to the north of the building, which is proposed for habitat enhancements, which is within the ownership boundary of the site.

The recommendations are based on the site's current conditions as observed during the survey. The survey was carried out on the 8th of October 2024 arriving at 12:30. The weather was 17°C, sunny with scattered clouds and light winds (1/2 Beaufort Scale). No precipitation was encountered during the survey.

Planning consent is to be sought from Barnsley Metropolitan Borough Council.

The proposals detailed above will be referred to throughout this report at the 'Proposed Development'. The Biodiversity Net Gain (BNG) assessment was completed using the 'Statutory Biodiversity Metric' (Natural England, 2024) based on the Proposed Site Plan (Drawing Number: BAR-ATK-XX-XX-DR-B-0004) by AtkinsRealis (September 2024).

2. AIMS AND METHODOLOGY

The purpose and aims of the assessment were to:

- Establish the baseline biodiversity value of the habitats on site.
- Establish the post-development value of the habitats on the site according to development plans to calculate a post-development value.
- Identify the requirement for further survey / assessment work, mitigation, compensation and / or assessment where necessary and propose solutions to meeting BNG targets.

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Good Practice Principles

Biodiversity net gain has been defined as 'development that leaves biodiversity in a better state than before, and an approach where developers work with local governments, wildlife grounds, landowners and other stakeholders in order to support their priorities for nature conservation (Baker, 2016). Good practice principles for developments should be applied to a development where possible including:

- Applying the mitigation hierarchy and being additional by achieving outcomes that exceed existing obligations.
- Avoiding biodiversity loss which cannot be offset elsewhere (e.g., irreplaceable habitats).
- Quantifying risk appropriately – e.g., is there a difficulty creating or enhancing specific habitats according to the site?
- Making a measurable net gain contribution that is calculated using appropriate metric and ensuring that the calculation are consistent and transparent with limitations and assumptions clearly identified.
- Ensure that the net gain design achieves the best outcome for biodiversity – this may require quantitative and qualitative assessment – and create a net gain legacy for long-term benefits.

Methodology

The BNG calculation tool used for this assessment is the 'Statutory Biodiversity Metric' (SBC) published in February 2024 by Natural England (Natural England, 2024). This tool objectively calculates the biodiversity losses and gains for habitats in relation to the proposed development. The SBC requires all habitat data to be categorised according to the UK Habitat Classification (Butcher et al., 2020) and this was most recently completed in October 2024.

All condition assessments were carried out at suitable times of the year. The habitats were then mapped into a digital map using QGIS coordinate reference systems OSGB 1936/National Grid and a baseline habitat map can be viewed in Appendix 1. Habitats recorded on site were measured using the derived areas (Ellipsoidal – EPSG 7001) with habitat areas provided in hectares and hedgerow areas provided in kilometres.

The type and condition of the habitats were assessed during the site survey. The distinctiveness of the habitats is pre-defined by the SBC. The following plans, policies and/or strategies were also viewed to determine whether the habitat has formally been identified in a strategy, the North Herts Ecological Maps (see Appendix 6), and UK Biodiversity Action Plans and Green

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Infrastructure Strategies. All calculations were inserted into the BNG calculator using the technical data.

Trading Summaries

The term trading up is a concept which requires conserving through offset components of biodiversity that are of a higher conservation priority (for example, they tend to be more irreplaceable and vulnerable and are harder to recreate) than those affected by the development project for which the offset is envisaged. For example, should non-irreplaceable habitats be lost or impacted as a result of the proposed development, it will be necessary to create or enhance habitats that are of the same or higher distinctiveness.

Assessment Limitations and Assumptions

A small number of limitations were noted but it is considered that an accurate assessment of the site's ecological value has been obtained:

- BNG assessments and calculations can only provide a proxy measure for the real long-term biodiversity changes that occur on any given site.
- The assessment does not give credit, in terms of a score / biodiversity units, to any actions that are taken as part of the development that add features to the site such as bird and bat boxes which support certain species groups. Such measures are beyond the scope of this report.
- The post-development future value of the site cannot yet be accurately determined, as the proposals for the development are still in progress. Without finalised plans, it is not possible to complete the necessary calculations for assessing the future biodiversity value.

Report Lifespan

Given the transient nature of the subject, the survey results are considered valid for up to 12 months.

3. SURVEY RESULTS AND EVALUATION

Site Habitat Baseline

The red line boundary is approximately 0.02 hectares and is primarily comprised of modified grassland. The proposed development site sits within the ownership boundary of Unit 6 in the

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bottom southwest corner of the commercial vehicle parking and delivery forecourt to the rear of the building. The proposed location sits adjacent to an existing storage canopy.

A plan of the existing habitats can be viewed in Appendix 1 and the condition assessments for these habitats are provided in Appendix 4, where applicable.

The baseline value of the site is 0.08 habitat units and 0.00 hedgerow units.

Table 1. Baseline Habitats and Corresponding Information. *Numbers are based on rounded figures, check the associated metric calculator for more information.

UK HABITAT	Area (ha)	Description (distinctiveness, condition, connectivity, and strategic significance)	Value (units)
Area Based Habitats			
Modified Grassland (g4)	**0.02**	**Area of grass where the proposed building will be constructed and area of grassland proposed for habitat enhancements included in the application boundary. Low distinctiveness, condition assessed as achieving moderate condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.**	**0.08**
Total Area (ha)	**0.02 Without trees / 0.02 With trees**	**Total Baseline Value (Habitat Units)**	**0.08**
Linear Based Habitats (km)			
-	**-**	**-**	**-**
Total Length (km)	**0.00**	**Total Baseline Value (Habitat Units)**	**0.00**

Future Baseline

The post-development habitats and corresponding future values are set out in the proposed habitat map (see Appendix 2). The condition assessments for the future habitats and hedgerows are provided in Appendix 3, where applicable. This has been based on the Proposed Site Plan (Drawing Number: BAR-ATK-XX-XX-DR-B-0004) by AtkinsRealis (September 2024).

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Table 2 outlines the value of the retained habitats and proposed habitat / hedgerow creation as per the development proposals.

Table 2. Future Baseline and Corresponding Habitats

UK HABITAT	Area (ha)	Description (distinctiveness, condition, connectivity, and strategic significance)	Value (units)
Area Based Habitats – Created			
Developed Land; sealed surface (u1b)	**0.01**	**Proposed building; with a sealed surface. Very low distinctiveness, condition assessment not required. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.**	**0.00**
Other Neutral Grassland (g3c)	**0.01**	**Wildflower turf is proposed in the habitat enhancement area. Medium distinctiveness, condition assessed to achieve a fairly poor condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.**	**0.05**
Urban Tree (Poor) (200)	**0.0122**	**Three small trees are proposed in the habitat enhancement area. Medium distinctiveness assessed as achieving poor condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.**	**0.03**
Total Area (ha)	**0.02 Without trees / 0.02 With trees**	**Total Baseline Value (Habitat Units)**	**0.09**
Linear Based Habitats (km)			
-		**-**	**-**
Total Length (km)	**0.00**	**Total Baseline Value (Habitat Units)**	**0.00**

Habitat Trading Requirements

The site passes the habitat trading requirements to provide the "same broad habitat or higher distinctiveness habitat" required by the trading standards of the SBC (Natural England, 2023).

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Assessment Results

	Habitat Value (units)	Hedgerow Value (units)
Baseline Value	0.08	0.00
Future value	0.09	0.00
Total net % change	**+10.11**	n/a
Trading Rules	Satisfied	n/a

4. RECOMMENDATIONS AND CONCLUSIONS

Indigo Surveys was commissioned by NHSBT to undertake a Biodiversity Net Gain (BNG) Assessment of Land at Unit D, Capitol Park.

The Biodiversity Net Gain (BNG) assessment was completed using the 'Statutory Biodiversity Metric' (Natural England, 2024) based on the Proposed Site Plan (Drawing Number: BAR-ATK-XX-XX-DR-B-0004) by AtkinsRealis (September 2024).

The baseline value of the site is 0.08 habitat units and 0.00 hedgerow units. The post-development future value of the site is expected to be 0.09 habitat units and 0.00 hedgerow units. This will result in a total net gain of 10.11% for habitat units and 00.00% for hedgerow units. The current proposals pass the trading rules of the DEFRA metric (Natural England, 2023) due to the proposed habitats achieving the same distinctiveness as the baseline.

The full calculation summary can be found in Appendix 2 and the metric will be submitted with the planning application for full review by the Local Planning Authority. Amendments to the report and calculations must be made in the event of any design changes.

A Landscape and Ecological Management Plan (LEMP) will be required to ensure the successful establishment and long-term management of retained and newly created habitats. This can be secured as a planning condition. Details of the managing agent or management company who will be responsible for the long-term stewardship and responsibility of the 30 year management schedule should also be provided.

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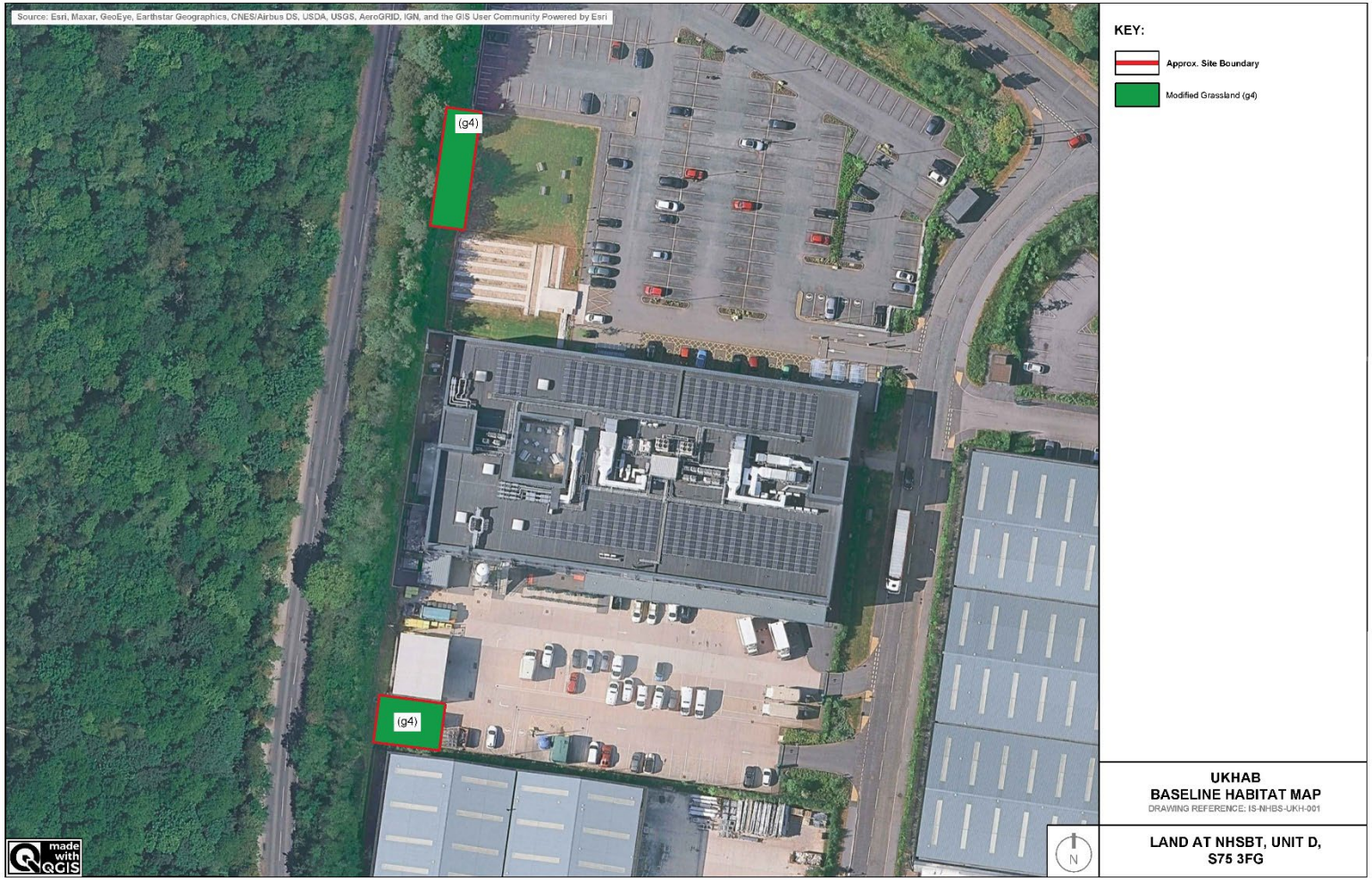
Appendix 1 – Baseline Habitat Map



Appendix 2 – Proposed Habitat Map

Appendix 3 – Biodiversity Net Gain Calculation Summary

Return to results menu

Headline Results

Scroll down for final results ⚠

On-site baseline	*Habitat units*	0.08	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.09	
	Hedgerow units	0.00	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Habitat units*	0.01	10.11%
	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*	0.01	
	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*	0.01
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	10.11%
	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%	0.08	0.09	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 ✓

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Appendix 4 – Condition Assessments for Baseline/Proposed Habitats

Baseline Habitats

Modified Grassland (Moderate)

	Condition Assessment Criteria	Pass or Fail
A	"There are 6-8 vascular plant species per m2 present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. *Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet. "*	P
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	F
C	"Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble Rubus fruticosus agg. may be present). *Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type."*	P
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	F
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)2.	F
F	Cover of bracken Pteridium aquilinum is less than 20%.	P
G	There is an absence of invasive non-native plant species3 (as listed on Schedule 9 of WCA4).	P
Final Condition (Passes on A,C,F & G but not B,D & E)		**Moderate**

Proposed Habitats

Other Neutral Grassland

	Condition Assessment Criteria	Pass or Fail
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relevant to the specific	F

	habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	P
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	F
D	Cover of bracken Pteridium aquilinum is less than 20% and cover of scrub (including bramble Rubus fruticosus agg.) is less than 5%.	P
E	Combined cover of species indicative of suboptimal conditions and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of the total area. *If any invasive non-native plant species (as listed on Schedule 9 of WCA5) are present, this criterion is automatically failed.*	P
Final Condition (Passes on B, D & E but not A, C & E)		**Poor***

**Habitat has been upgraded to a fairly poor condition, due to the use of wildflower turf and its located in a highly managed area by an on-site facilities team. A Landscape and Ecological Management Plan (LEMP) will be required to ensure successful establishment and long-term management*

Urban Tree (Poor)

Condition Assessment Criteria		**Pass or Fail**
A	The tree is a native species (or at least 70% within the block are native species).	P
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	P
C	The tree is mature (or more than 50% within the block are mature).	F
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And	F

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	there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	F
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	F
Final Condition (Passes on A & B but not C, D, E & F)		**Poor**

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END OF REPORT

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