

Biodiversity Net Gain Assessment

Land off Rockingham Roundabout

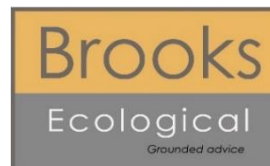
Gregory Projects (Barnsley) Limited

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11/08/2021

Report Title:	Biodiversity Net Gain Assessment Land off Rockingham Roundabout
Report Reference:	ER-3806-06D
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Introduction

1. Brooks Ecological was commissioned by Gregory Projects (Barnsley) Limited to complete a Biodiversity Net Gain (BNG) Assessment of the proposed development Site at land off Rockingham Roundabout.
2. The assessment applies to the development Site as defined by the red line boundary; see Figure 1 opposite.
3. To inform the assessment, a Preliminary Ecological Appraisal was carried out in February 2019 (Brooks Ecological Ltd.; R-3806-01 A).
4. So as to conform with DEFRA's Biodiversity Metric 2.0, habitats have been mapped in accordance with the UK Habitat Classification descriptions. While newer versions of the Metric have since been released, we have continued to use the version under which the Site was initially surveyed, as per DEFRA guidance.
5. Biodiversity Accounting metrics are used to quantify the value of a Site in Biodiversity Units, which helps in assessing the ecological impacts of the proposed development on the Site.
6. Biodiversity Units can help to inform avoidance, or on-Site mitigation levels required; or as a last resort can translate to a direct monetary value where compensation (off-Site) is required. Please be aware that they can significantly impact on costs and viability.

Figure 1 Extent of BNG Assessment.



Pre-development Baseline

Habitats identified

7. The Site supports the following habitats:
 - g4 – Modified grassland
 - g3c – Other neutral grassland
 - 310 – Amenity grassland
 - 351 – Vacant/derelict land/bareground
 - u1b – Developed land; sealed surface
 - w1g – Other woodland; broadleaved
 - HR8 – Native hedgerow
8. Each habitat is mapped in Figure 2 opposite.

Condition Assessment

9. The condition assessment for each habitat is based on the available criteria set out in The Biodiversity Metric 2.0 Auditing and Accounting for Biodiversity Technical Supplement Beta Edition.

Habitat Score

10. The Site has been assessed as having a baseline score of 14.64 Habitat Units and 0.08 Hedgerow Units (see tables overleaf).

Figure 2 Habitat map – pre-development.



DEFRA Metric (Baseline)¹

11. This metric sets out the baseline for the Site. Proposals should seek to achieve at least a 'no net loss' situation through **Avoiding** areas of higher value, **Mitigating** any loss on-Site through retention and enhancement, or habitat creation. The Local Planning Authority may require you to **Compensate** any residual loss elsewhere, either through direct works or an off-setting contribution.

Land at Rockingham Roundabout										
A-1 Site Habitat Baseline										
Condense / Show Columns				Condense / Show Rows						
Main Menu				Instructions						
Habitats and areas				Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline	Area retained
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units	
1	Grassland	Grassland - Modified grassland	0.0855	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.17	0
2	Grassland	Grassland - Other neutral grassland	2.7834	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	11.13	0
3	Urban	Urban - Amenity grassland	0.0031	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.01	0
4	Urban	Urban - Developed land; sealed surface	0.0017	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00	0
5	Urban	Urban - Vacant/derelict land/ bareground	0.5697	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	1.14	0
6	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.5477	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	2.19	0.1785
7										
8										
9										
10										
11										
Total site area ha			3.99					Total Site baseline	14.64	0.18

¹ Our report provides an estimate of the Site's value in Biodiversity Units. This is based on thorough assessment at the time of survey and using the information available at this time. In this assessment we have used the relevant version of DEFRA's Biodiversity Metric Tool, the UK Habitats Classification, and relevant guidance. This assessment requires subjective judgments to be made in terms of habitat type and condition and could be open to other interpretations. Reliance on the Unit Score, or conversion of this into a monetary value, would be at the developer's own risk.

Land at Rockingham Roundabout									
B-1 Site Hedge Baseline									
Condense / Show Columns				Condense / Show Rows					
Main Menu				Instructions					
UK Habitats - existing habitats				Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance		Ecological baseline
Baseline ref	Hedge number	Hedgerow type	length KM	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Total hedgerow units
1	1	Native Hedgerow	0.019	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.038
2	2	Native Hedgerow	0.019	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.038
3									
4									
5									
6									
7									
Total Site length/KM			0.04					Total Site baseline	0.08

Post-development Score

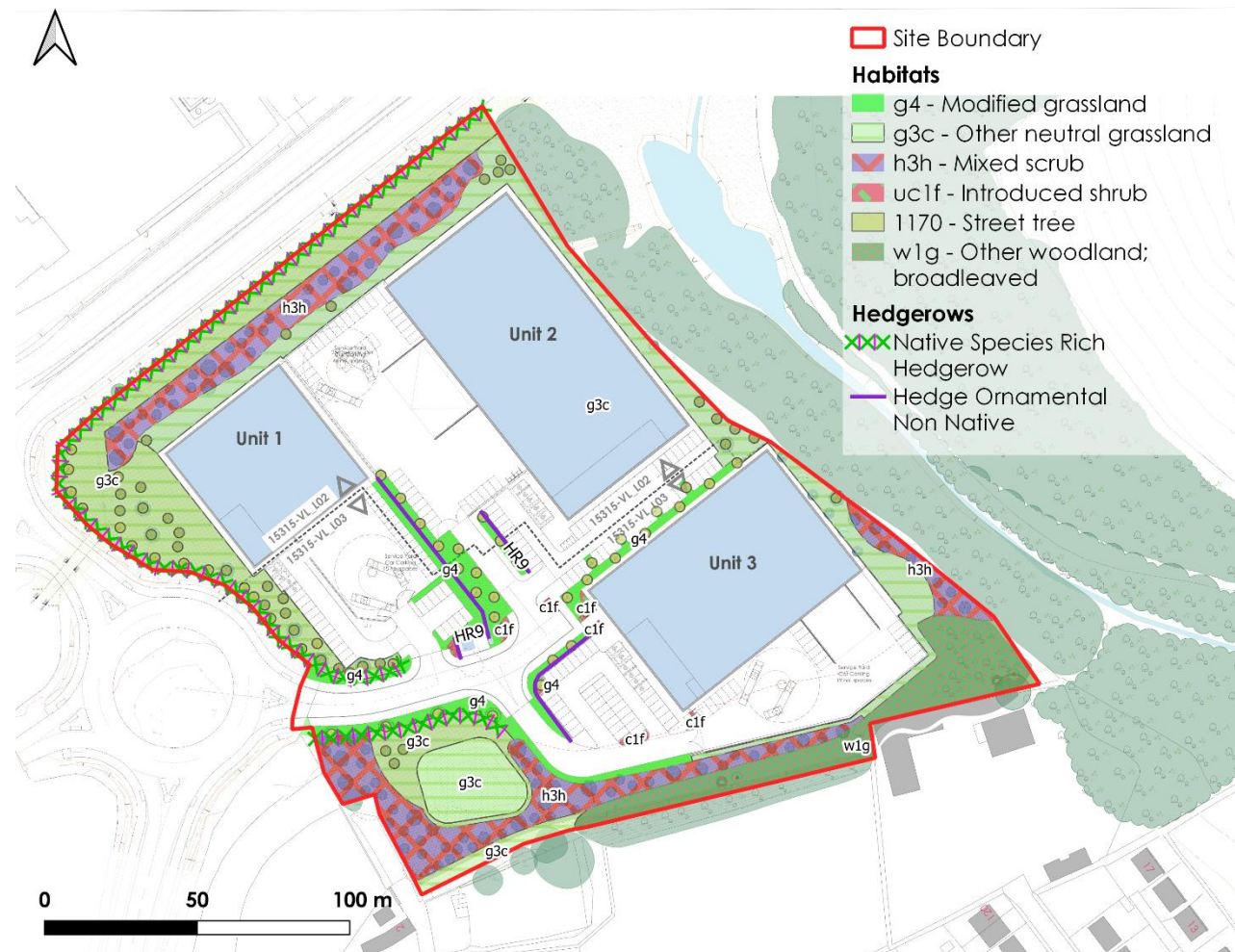
Proposed Habitats

12. Habitats present on-Site post-development have been based on the Landscape Masterplan produced by Vector Design Concepts, drawing 15315-VL_L01 Rev. H (September 2022) and the Ecological Impact Assessment produced by Brooks Ecological (ER-3806-05).
13. Planting types specified in the Landscape Masterplan have been assigned a UK Habitat Classification description that best fits the target habitat.
14. Area measurements for each of the planting types has been measured using QGIS mapping software.

Condition Assessment

15. The condition assessment for each proposed habitat is based on what is realistic and achievable for the Site, based on the Landscape Masterplan.

Figure 3 Habitat map – post-development.



DEFRA Metric (Post-development)

16. This metric sets out the predicted baseline for the Site following the completion of development. This is based on the Landscape Masterplan provided by the client.

Land at Rockingham Roundabout

A-2 Site Habitat Creation

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Post development/ post intervention habitats								
Proposed habitat	Area (hectares)	Distinctiveness	Condition	Ecological	Strategic significance	Temporal	Difficulty	Habitat units delivered
				Ecological connectivity	Strategic significance	Time to target condition/years	Difficulty of creation category	
Urban - Developed land; sealed surface	2.4973	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00
Grassland - Modified grassland	0.1584	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	0.44
Grassland - Other neutral grassland	0.7746	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	4.34
Heathland and shrub - Mixed scrub	0.3672	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	3	Low	2.64
Urban - Introduced shrub	0.0151	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	0.03
Urban - Street Tree	0.3459	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	27	Low	0.53
Totals	3.81							7.98

Land at Rockingham Roundabout										
B-2 Site Hedge Creation										
Condense / Show Columns				Condense / Show Rows						
Main Menu				Instructions						
				Multipliers						
				Spatial quality				Temporal multiplier	Hedge units delivered	
Baseline ref	New hedge number	Habitat type	Length km	Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance			
1		Hedge Ornamental Non Native	0.152	V.Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	0.00	
2		Native Species Rich Hedgerow	0.394	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	5	1.77	
3										
4										
5										
6										
7										
		Creation Length/KM	0.55							1.77

Net Gain Assessment

17. This exercise identifies an overall Net Loss of 5.95 Habitat Units (-40.61%), and a Net Gain of 1.69 Hedgerow Units (+2225.33%).
18. Calculations for the change in Habitat Units have been based on most of the Site being cleared of existing vegetation and the land reprofiled, apart from a small section of woodland in the southeast corner, which is retained post-development.
19. Additional post-development units are supplied by the planting of wildflower lawns, meadow-type grassland, and native mixed scrub, and urban trees throughout the site.
20. The net gain in Hedgerow Units is achieved by planting of native species-rich hedges along the boundaries; ornamental hedges surrounding parking areas accrue no Hedgerow Units.
21. The client has been provided with a copy of the Biodiversity Metric 2.0 Calculation Tool Excel spreadsheet (BM-3806-06E).

Land at Rockingham Roundabout

Headline Results

Return to results menu

On-site baseline	Habitat units	14.64
	Hedgerow units	0.08
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	8.69
	Hedgerow units	1.77
	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 & succession)	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)	Habitat units	-5.95
	Hedgerow units	1.69
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-40.61%
	Hedgerow units	2225.33%
	River units	0.00%