

Biodiversity Net Gain Assessment
Woolley Colliery Road

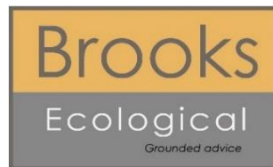
Rouse Homes Ltd

Report Reference: ER-6218-04A

06/09/2022

Report Title:	Biodiversity Net Gain Assessment Woolley Colliery Road
Report Reference:	ER-6218-04A
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Date:	Written 06/09/2022 Revised 07/09/2022 CS

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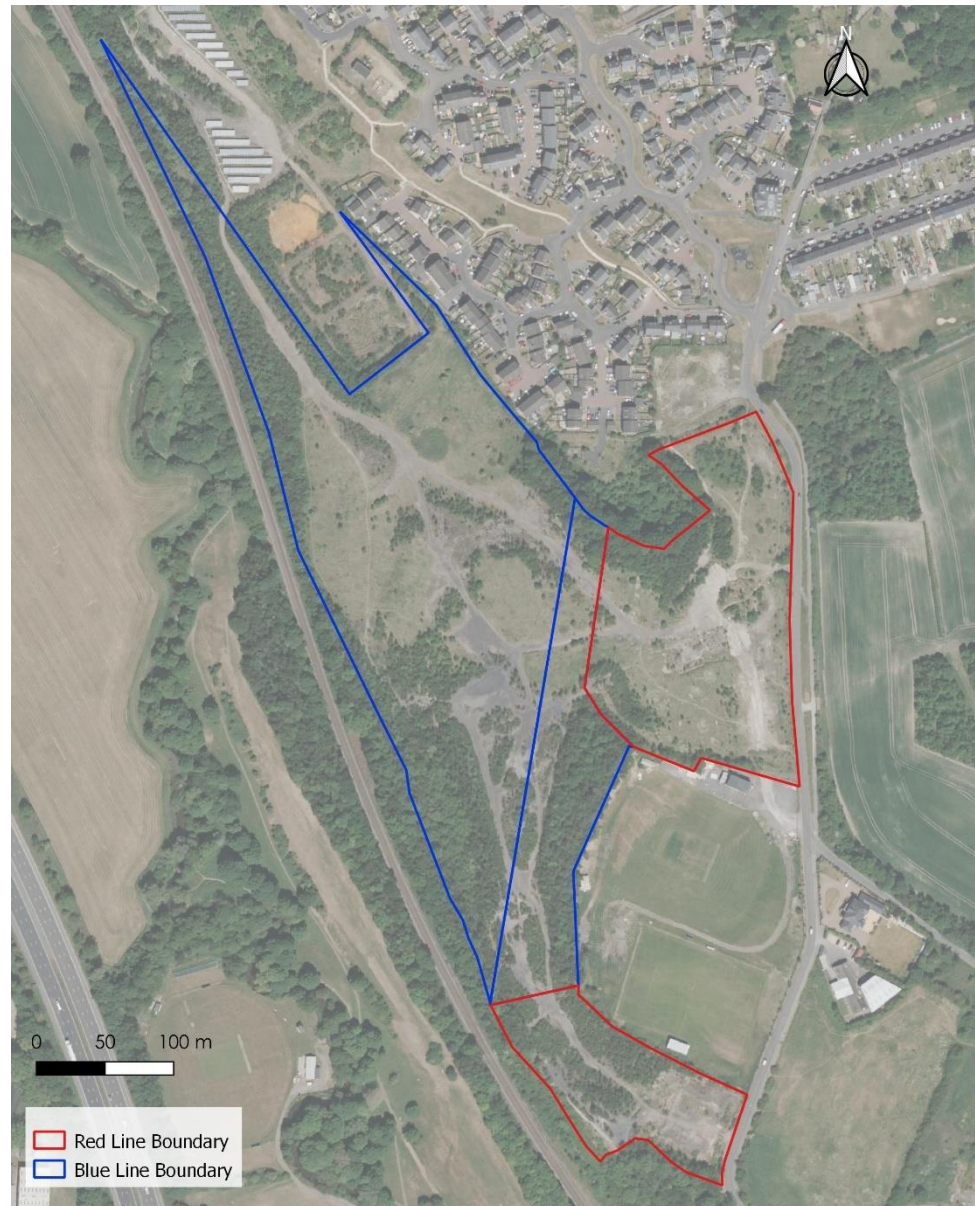
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Introduction

1. Brooks Ecological was commissioned by Rouse Homes Ltd to complete a Biodiversity Net Gain (BNG) Assessment of the proposed development Site at Woolley Colliery Road, Barnsley.
2. The assessment applies to the red and blue line land shown in Figure 1 opposite.
3. The aim of this assessment is to demonstrate that the Site could achieve an overall net gain, though using land within the red and blue line boundaries.
4. The assessment is informed by a Preliminary Ecological Appraisal carried out by Brooks Ecological in May 2022 (ref. ER-6218-01-A). To conform with DEFRA's Biodiversity Metric 3.0, habitats have been mapped in accordance with the UK Habitats Classification.
5. While an updated version of the Metric (3.1) has since been released, these calculations progress with Metric 3.0, under which the habitats were originally surveyed, as per DEFRA guidance.
6. 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.
7. 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.

Figure 1 Extent of BNG assessment (red- and blue-line boundary).



Pre-development Baseline

Habitats identified

8. The Site supports the following habitats:
 - u1c – Artificial unvegetated, unsealed surface
 - u1b – Developed land; sealed surface
 - h3h – Mixed scrub
 - g1d – Other lowland acid grassland
 - g3c – Other neutral grassland
 - w1g – Other woodland; broadleaved
 - 351 – Vacant/derelict land/bareground
9. Each habitat is mapped in Figure 2 opposite.

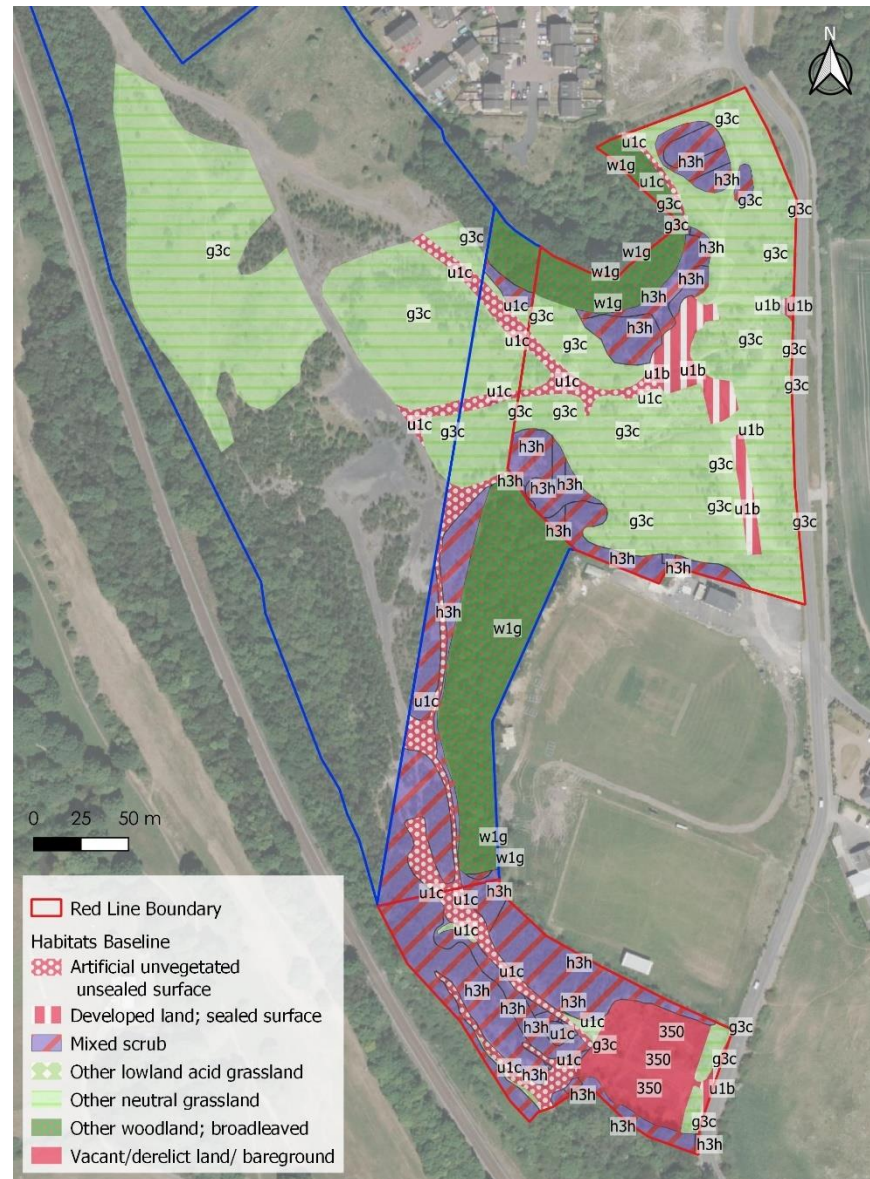
Condition Assessment

10. The condition assessment for each habitat is based on the available criteria set out in the DEFRA (2021) Biodiversity Metric 3.0 Technical Supplement.

Habitat Score

11. The Site has been assessed as having a baseline score of 16.03 Habitat Units; the blue line land has been assessed as having a baseline score of 15.50 Habitat Units.

Figure 2 Pre-development habitats.



DEFRA Metric¹ (Baseline)

12. 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.

6218 Woolley Colliery Road, Barnsley													
A-1 Site Habitat Baseline													
Condense / Show Columns				Condense / Show Rows									
Main Menu				Instructions									
Ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness		Condition		Strategic significance		Ecological baseline		Residual	
				Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Total habitat units	Area retained	Area enhanced			
1	Grassland	Other lowland acid grassland	0.0074	Medium	Poor	Area/compensation not in local strategy/ no strategy		Same broad habitat or a high distinctiveness habitat required		0.03	0	0	
2	Grassland	Other neutral grassland	1.937	Medium	Poor	Area/compensation not in local strategy/ no strategy		Same broad habitat or a high distinctiveness habitat required		7.75	0	0	
3	Heathland and shrub	Mixed scrub	1.2754	Medium	Poor	Area/compensation not in local strategy/ no strategy		Same broad habitat or a high distinctiveness habitat required		5.10	0	0	
4	Urban	Artificial unvegetated, unsealed surface	0.231	V.Low	N/A - Other	Area/compensation not in local strategy/ no strategy		Compensation Not Required		0.00	0	0	
5	Urban	Developed land; sealed surface	0.2019	V.Low	N/A - Other	Area/compensation not in local strategy/ no strategy		Compensation Not Required		0.00	0	0	
6	Urban	Vacant/derelict land/ bareground	0.3091	Low	Moderate	Area/compensation not in local strategy/ no strategy		Same distinctiveness or better habitat required		1.24	0	0	
7	Woodland and forest	Other woodland; broadleaved	0.2389	Medium	Moderate	Area/compensation not in local strategy/ no strategy		Same broad habitat or a high distinctiveness habitat required		1.91	0.15	0	
			4.20							16.03	0.15	0.00	

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. Where conversion to monetary value is required, it is always advisable to get calculations checked independently.

6218 Woolley Colliery Road, Barnsley										
D-1 Off Site Habitat Baseline										
Condense / Show Columns				Condense / Show Rows						
Main Menu				Instructions						
Habitats and areas				Habitat distinctiveness	Habitat condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline	Retained	
Baseline ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Total habitat units	Area retained	Area enhanced
1	Grassland	Other neutral grassland	0.8324	Medium	Poor	Area/compensation not in local strategy/ no strategy	Same broad habitat or a high distinctiveness habitat required	3.33	0	0.8324
2	Heathland and shrub	Mixed scrub	0.4067	Medium	Poor	Area/compensation not in local strategy/ no strategy	Same broad habitat or a high distinctiveness habitat required	1.63	0	0.3817
3	Urban	Artificial unvegetated, unsealed surface	0.2556	V.Low	N/A - Other	Area/compensation not in local strategy/ no strategy	Compensation Not Required	0.00	0	0.1023
4	Woodland and forest	Other woodland; broadleaved	0.7378	Medium	Moderate	Area/compensation not in local strategy/ no strategy	Same broad habitat or a high distinctiveness habitat required	5.90	0.7378	0
5	Grassland	Other neutral grassland	1.16	Medium	Poor	Area/compensation not in local strategy/ no strategy	Same broad habitat or a high distinctiveness habitat required	4.64	0	1.16
			3.39				Total Site baseline	15.50	0.74	2.48

Post-development Habitats

Proposed Habitats

13. Habitats present on-Site post-development have been based on the Sketch Masterplan dwg. 003_ produced by PDG Architectural (Figure 3, opposite).
14. Planting types indicated in the Sketch Masterplan have been assigned a UK Habitat Classification description that best fits the target habitat.
15. Habitats assigned are shown in Figure 4 overleaf.

Condition Assessment

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

Figure 3 – Sketch Masterplan (dwg. 003_).

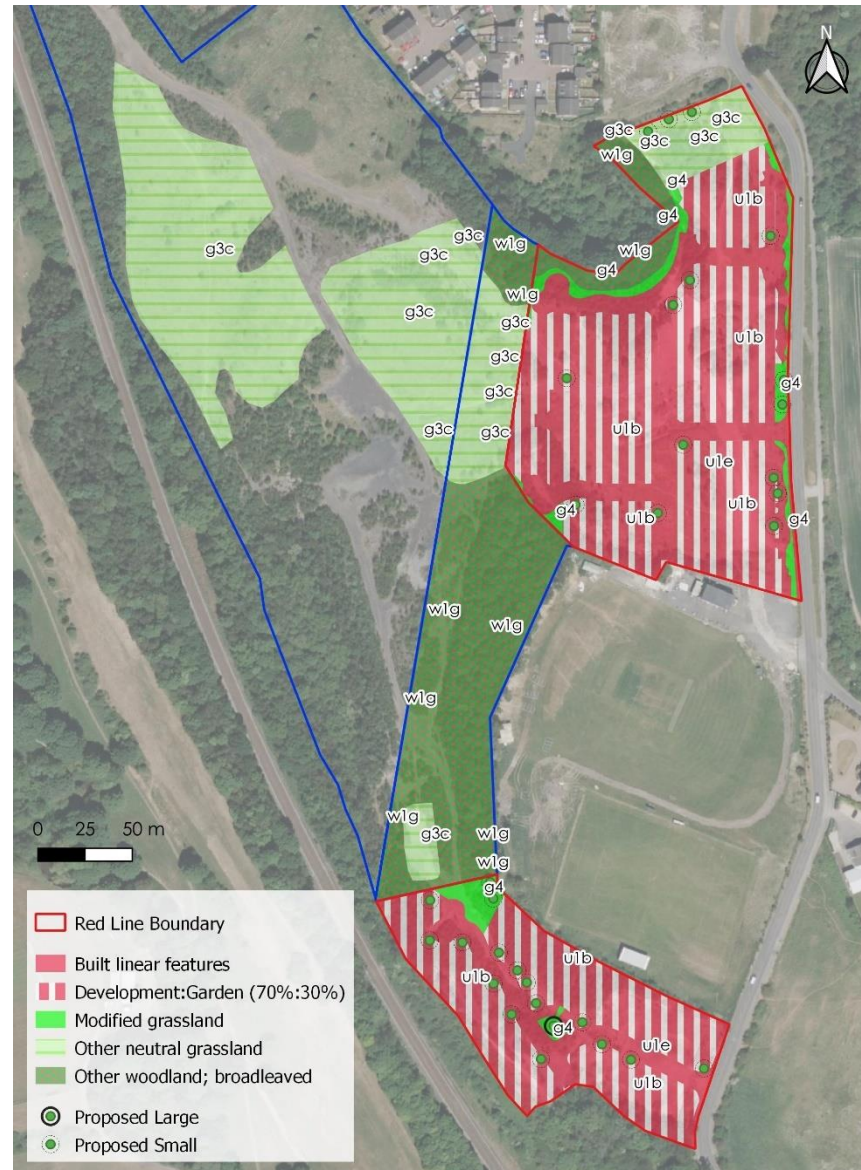


Post-development Habitats

Habitat Score

17. As the project is only at the Outline Planning stage, the post-development score can only ever be illustrative, with a final score only possible at Reserved Matters, once the Site Layout is fixed.
18. With this in mind, the Site has been assessed as having a post-development score of 5.32 Habitat Units, with the blue-line land scoring 27.83 Habitat Units.
19. This score is based on our interpretation of the Sketch Masterplan and Ecological Design Strategy, as summarised in Figure 4 opposite.
20. At this stage, areas of housing, homes and gardens have not been mapped individually but are assigned as 70% developed land : 30% gardens, following guidance in DEFRA 3.0 (2021).
21. 'Amenity areas' are mapped as modified grassland in good condition, representing a flowering lawn habitat; land in and around attenuation basins is mapped as other neutral grassland in moderate condition, representing wildflower grassland.
22. Scrub present in the blue-line area is currently dominated by young birch trees, so is mapped as being enhanced to other broadleaved woodland, partly through natural seral succession, extending the existing woodland habitat; grassland in this area is enhanced from poor to good condition.

Figure 4 Post-development habitats.



6218 Woolley Colliery Road, Barnsley											
D-2 Off Site Habitat Creation											
Condense / Show Columns			Condense / Show Rows								
Main Menu			Instructions								
Post development/ post intervention habitats											
Broad Habitat	Proposed habitat	Area ha	Distinctiveness	Condition	Strategic significance	Temporal risk multiplier			Difficulty	Spatial risk multiplier	Habitat units delivered
					Strategic significance	Standard or adjusted time to target condition	Final time to target condition/year	Final difficulty of creation		Spatial risk category	
Woodland and forest	Other woodland; broadleaved	0.1283	Medium	Moderate	Area of compensation not in local strategy/ no local strategy	Standard time to target condition applied	15	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.60	
Grassland	Other neutral grassland	0.05	Medium	Moderate	Area of compensation not in local strategy/ no local strategy	Standard time to target condition applied	5	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.33	
Total Length		0.18								0.94	

6218 Woolley Colliery Road, Barnsley														
D-3 Off Site Habitat Enhancement														
Condense / Show Columns			Condense / Show Rows											
Main Menu			Instructions											
Baseline ref	Baseline habitats	Prepared Habitat (Pre-Populated but can be overridden)		Change in distinctiveness and condition		Area ha	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty	Spatial risk multiplier	Habitat units delivered
	Baseline habitat	Prepared Broad Habitat	Prepared Habitat	Distinctiveness change	Condition change				Strategic significance	Standard or adjusted time to target condition	Final time to target condition/year		Spatial risk category	
1	Grassland - Other neutral grassland	Grassland	Other neutral grassland	Medium - Medium	Poor - Good	0.3324	Medium	Good	Area of compensation not in local strategy/ no local strategy	Check details - to show evidence habitat creation starts off local	14	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	7.37
2	Woodland and forest - Mixed broad	Woodland and forest	Other woodland; broadleaved	Medium - Medium	Poor - Moderate	0.2897	Medium	Moderate	Area of compensation not in local strategy/ no local strategy	Standard time to target condition applied	10	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	2.49
3	Urban - Artificial unvegetated, unvegetated surface	Grassland	Other neutral grassland	Very Low - Medium	Lower Distinctiveness Habitat - Good	0.1923	Medium	Good	Area of compensation not in local strategy/ no local strategy	Check details - to show evidence habitat creation starts off local	14	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	0.75
5	Grassland - Other neutral grassland	Grassland	Other neutral grassland	Medium - Medium	Poor - Good	1.16	Medium	Good	Area of compensation not in local strategy/ no local strategy	Check details - to show evidence habitat creation starts off local	14	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	10.28
						2.43								20.99

Net Gain Assessment

24. This exercise identifies that through using a relatively small amount of the blue line land available, a 10% gain in Habitat Units can be secured.
25. Calculations for the change in Habitat Units have been based on the entire red-line Site being cleared of existing vegetation and land reprofiled.
26. Post-development calculations include Habitat Units gained through the creation of private gardens and planting within Public Open Space (POS), which includes amenity grass, wildflower grassland, and ponds.
27. Off-Site calculations include the retention of existing woodland, enhancement of scrub to woodland, and enhancement of existing grassland to better condition. Some of this enhancement will be carried out in advance of development commencing.
28. The client has been provided with a copy of the Biodiversity Metric 3.0 Calculation Tool Excel spreadsheet (BM-6218-01). This can be made available for review if required.

6218 Woolley Colliery Road, Barnsley		Return to results menu	
Headline Results			
On-site baseline	Habitat units	16.03	
	Hedgerow units	0.00	
	River units	0.00	
On-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	5.32	
	Hedgerow units	0.00	
	River units	0.00	
On-site net % change <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	-66.82%	
	Hedgerow units	0.00%	
	River units	0.00%	
Off-site baseline	Habitat units	15.50	
	Hedgerow units	0.00	
	River units	0.00	
Off-site post-intervention <small>(Including habitat retention, creation & enhancement)</small>	Habitat units	27.83	
	Hedgerow units	0.00	
	River units	0.00	
Total net unit change <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	1.62	
	Hedgerow units	0.00	
	River units	0.00	
Total on-site net % change plus off-site surplus <small>(including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	10.12%	
	Hedgerow units	0.00%	
	River units	0.00%	

References

DEFRA (2021) Biodiversity Metric 3.0 Auditing and accounting for biodiversity Calculation tool

DEFRA (2021) Biodiversity Metric 3.0 Technical Supplement

DEFRA (2021) Biodiversity Metric 3.0 User Guide