

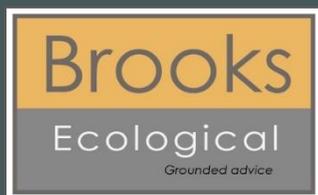


Biodiversity Net Gain Assessment

05/12/2023

Michael Scargill

Report Ref. ER-7249-02



Report reference	ER-7249-02 - Biodiversity Net Gain Assessment
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Date	05/12/2023
Report duration	In accordance with CIEEM (2019), unless otherwise stated the findings of this report remain valid for a period of 18 months. After this period advice should be sought on the scope of any updating work required.



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Introduction

1. Brooks Ecological Ltd was commissioned by Michael Scargill to carry out a Biodiversity Net Gain (BNG) Assessment of the proposed development Site at 4 Bronte Way, Mirfield.
2. The assessment applies to the parcel of land shown in Figure 1 opposite.
3. The assessment is informed by a Preliminary Ecological Appraisal Survey of the Site detailed in our report ER-7249-01.
4. At this time Brooks Ecological also carried out an assessment of the baseline value of the Site in relation to BNG.
5. Biodiversity Accounting metrics are used to quantify the value of a site in Biodiversity Units. This helps in assessing the ecological impacts of the proposed development and 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.
6. Our assessment has made use of the most up-to-date DEFRA Biodiversity Metric Calculation Tool (currently 4.0), and extracts from this have been used throughout the report. The full spreadsheet has been provided digitally as file BM-7249-01 and should be submitted as part of the application.

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



Part 1

Pre-development baseline

Habitats identified

7. Habitats present on-Site are outlined in Table 1, opposite. These are shown in relation to location and extent in Figure 2 overleaf.

Condition Assessment

8. Habitat condition has been assessed as part of the Preliminary Ecological Appraisal of the Site.
9. Information on condition assessments is provided in the Excel spreadsheet CA-7249-01 provided alongside this report.

Biodiversity Metric

10. Habitat types, conditions, and areas have been entered into the DEFRA Biodiversity Metric 4.0 Calculation Tool, alongside information on their strategic significance.
11. The DEFRA Biodiversity Metric 4.0 Calculation Tool is provided alongside this assessment, in Excel spreadsheet BM-7249-01.

Table 1 Habitat Types.

UK Habitats as per DEFRA Metric	Label Reference - see plan below	Distinctiveness	Condition assessment	See Condition Assessment sheet
Ornamental lake or pond	N/A	Low	Poor	18B
Bare ground	N/A	Low	Poor	22B
Developed land; sealed surface	N/A	Very Low	N/A	N/A
Introduced shrub	N/A	Low	N/A	N/A
Unvegetated garden	N/A	Very Low	N/A	N/A
Vegetated garden	N/A	Low	N/A	N/A
Urban tree	T1-2	Medium	Moderate	9B

Figure 2 The Site's habitats assigned to types used in the relevant DEFRA Biodiversity Metric. Labelled codes cross-reference to our condition assessment and description in the PEAR, which should be read in conjunction with this report.

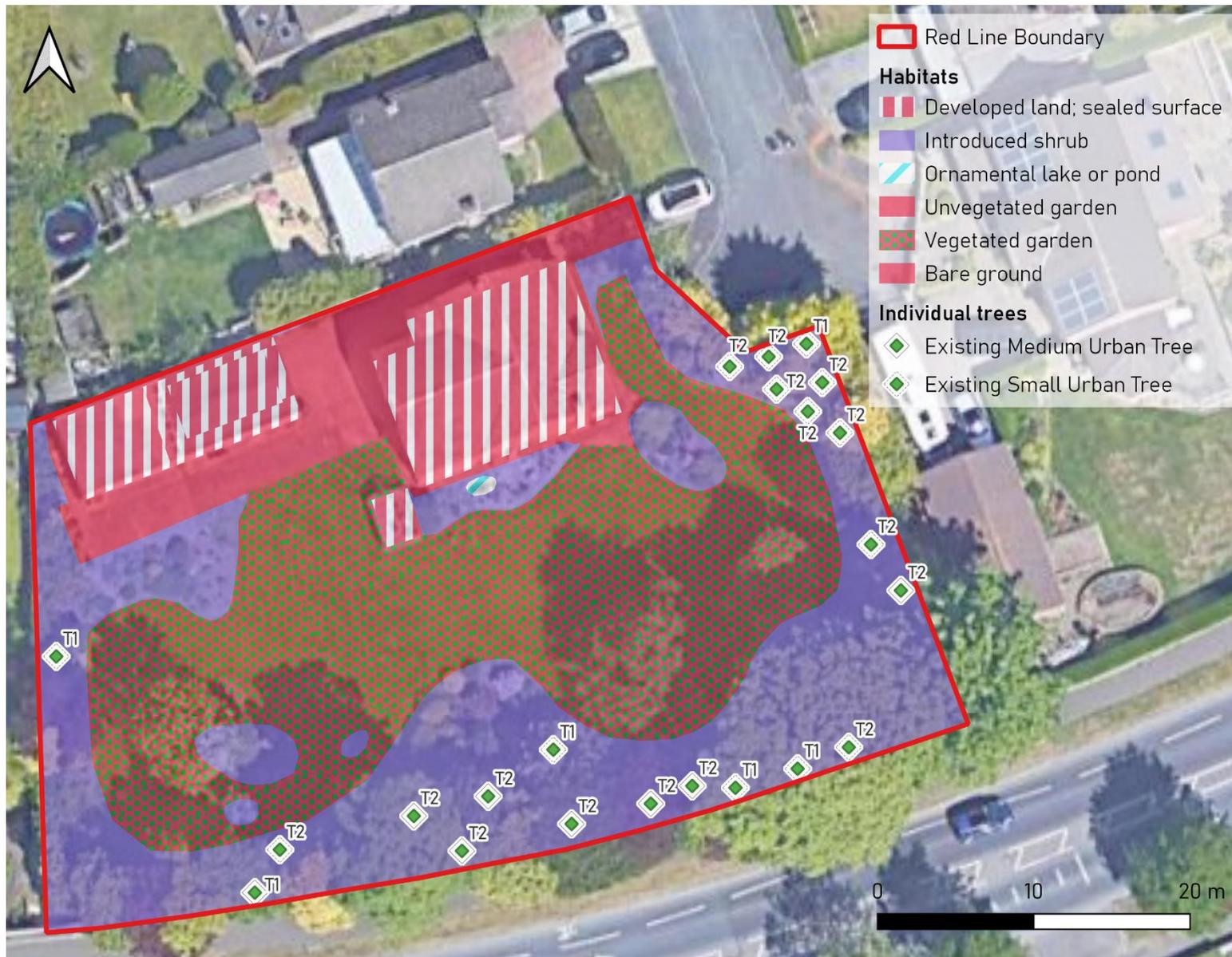


Figure 3 Extract from the DEFRA Biodiversity Metric 4.0 Calculation Tool showing entered information and resultant Biodiversity Units¹.

Project Name: 4 Bronte Way, Mirfield		Map Reference:						
A-1 On-Site Habitat Baseline								
Condense / Show Columns		Condense / Show Rows						
Main Menu		Instructions						
Ref	Broad Habitat	Existing area habitats		Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
		Habitat Type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units
1	Lakes	Ornamental lake or pond	0.0002	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.00
2	Urban	Bare ground	0.0007	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.00
3	Urban	Developed land, sealed surface	0.0227	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
4	Urban	Introduced shrub	0.0752	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.15
5	Urban	Unvegetated garden	0.0177	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
6	Urban	Vegetated garden	0.0747	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.15
7	Individual trees	Urban tree	0.3501	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	2.80
8	Total habitat area		0.54					3.10
	Site Area (Excluding area of Individual trees and Green walls)		0.19					

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 latest 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.

Habitat score

12. The Site has been assessed as having a baseline score of 3.10 Habitat Units. These break down as shown in Table 2, below.
13. As part of delivering a Net Gain for biodiversity, the BNG process requires that trading rules are complied with, such that loss of habitats is compensated for in a like-for-like or like-for-better fashion. This is based on habitat distinctiveness.
14. Once trading rules are complied with, the 'gain' component can come from any distinctiveness category.
15. In this case, as the proposals are for a 'small' development (under 10 housing units), Kirklees Local Plan requires only that a no net loss position be achieved, rather than a 10% net gain.

Table 2 Habitat Units split by distinctiveness on-Site.

Habitat distinctiveness	Units	Approach to compensation if lost
Very Low	0	No compensation required.
Low	0.30	Can be replaced with habitat of the same distinctiveness - this can include gardens and landscaping.
Medium	2.80	Can only be replaced with habitat from the same broad categories - in this case, individual trees .
High	0	Can only be replaced with the same habitat.
Very High	0	Bespoke compensation would be required.
Irreplaceable	0	Cannot be compensated.

Part 2

Post-development value

16. This section calculates the Biodiversity Unit value of the post-development Site and quantifies any gain or shortfall in Units.

Proposed habitats

17. Habitats present on-Site post-development have been based on the Landscape Strategy (Figure 4, opposite) dwg. LDP-23-P198-1001 rev. A (Studio 413, October 2023).

18. Planting types specified in the Landscape Strategy have been assigned a UK Habitat Classification description that best fits the target habitat.

19. Habitats assigned are shown in Figure 5 overleaf.

Condition assessment

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

Figure 4 Landscape Strategy dwg. LDP-23-P198-1001 rev. A (Studio 413, October 2023).



Post-development habitats

Habitat Score

21. The Site has been assessed as having a post-development score of 2.00 Habitat Units.
22. This score is based on our interpretation of the Landscape Strategy, as shown in Figure 5 opposite.
23. Houses and garages have been mapped as *developed land; sealed surface*, with driveways, paths and patios as *unvegetated garden*; neither score any Habitat Units.
24. Habitats within the garden of 4 Bronte Way have been mapped as 'retained' post-development, except the ornamental pond, which is replaced with *vegetated garden* (which scores the same Habitat Units).
25. Habitats within the gardens of the two new houses have been mapped as *vegetated garden*, which accounts for lawns, flowerbeds, newly planted trees, and newly planted hedgerows. Consequently these have not been mapped separately.
26. Areas of 'existing mature shrubs retained' within the two new gardens have been mapped as retained *introduced shrub*. Many of the existing trees within these areas have also been mapped as retained post-development, based on the location of trees mapped in the proposed site plan.

Figure 5 Post-development habitats.



DEFRA Metric² (Post-development)

27. This metric sets out the predicted score for the Site following the completion of development. This is based on the Landscape Strategy provided by the client.

Figure 6 On-Site habitat retention.

Project Name: 4 Bronte Way, Mirfield		Map Reference:										
A-1 On-Site Habitat Baseline												
Condense / Show Columns		Condense / Show Rows										
Main Menu		Instructions										
Ref	Broad Habitat	Existing area habitats		Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline	Retention category biodiversity			
		Habitat Type	Area (hectares)						Distinctiveness	Condition	Strategic significance	Total habitat units
1	Lakes	Ornamental lake or pond	0.0002	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.00	0	0	0.00	0.00
2	Urban	Bare ground	0.0007	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.00	0	0	0.00	0.00
3	Urban	Developed land, sealed surface	0.0227	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00	0.0145	0	0.00	0.00
4	Urban	Introduced shrub	0.0752	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.15	0.0367	0	0.07	0.00
5	Urban	Unvegetated garden	0.0177	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00	0.0084	0	0.00	0.00
6	Urban	Vegetated garden	0.0747	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	0.15	0.0132	0	0.03	0.00
7	Individual trees	Urban tree	0.3501	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	2.80	0.2239	0	1.79	0.00
8	Total habitat area		0.54					3.10	0.30	0.00	1.89	0.00
Site Area (Excluding area of individual trees and Green walls)			0.19									

² 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 latest 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.

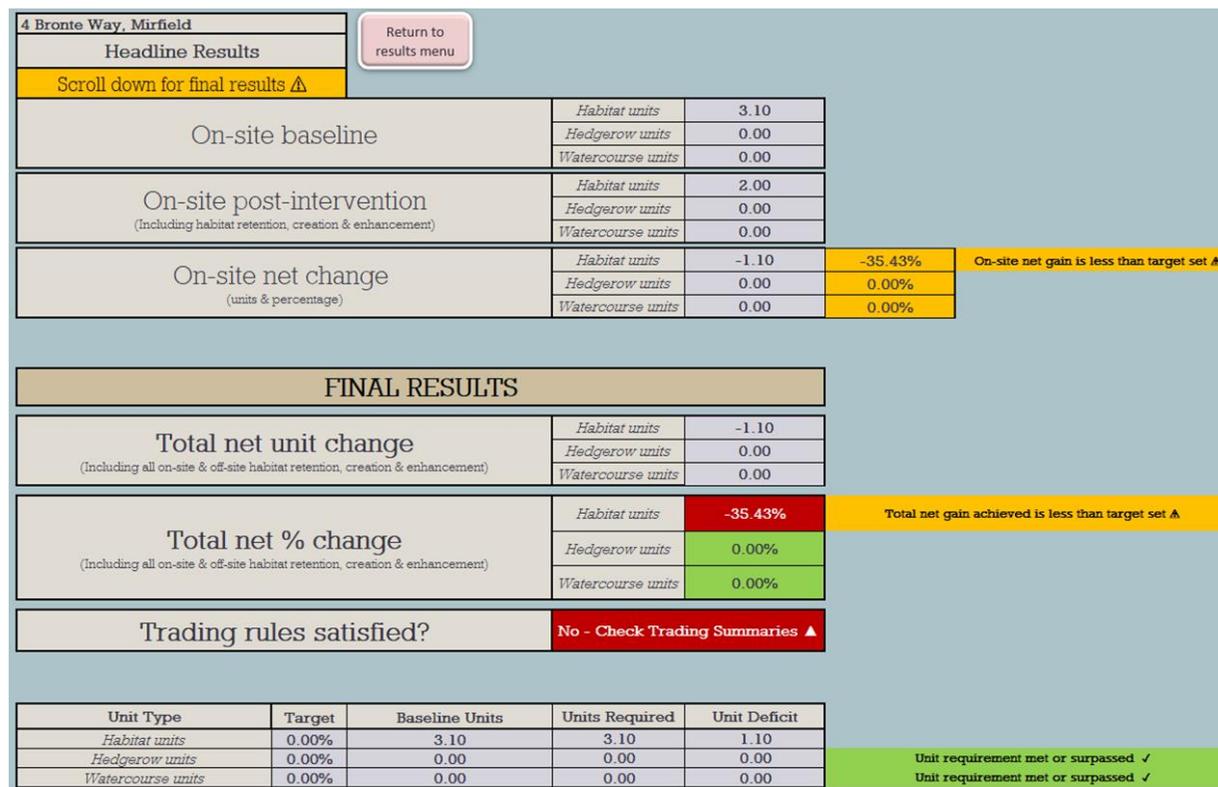
Figure 7 On-Site habitat creation.

Project Name: 4 Bronte Way, Mirfield Map Reference:										
A-2 On-Site Habitat Creation										
Condense / Show Columns			Condense / Show Rows							
Main Menu			Instructions							
Post development/ post intervention habitats										
Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Strategic significance	Temporal multiplier		Difficulty		Habitat units delivered
			Distinctiveness	Condition	Strategic significance	Standard or adjusted time to target condition	Final time to target condition (years)	Final difficulty of creation		
Urban	Developed land, sealed surface	0.0255	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied		0	Medium	0.00
Urban	Unvegetated garden	0.0347	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied		0	Low	0.00
Urban	Vegetated garden	0.0582	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied		1	Low	0.11
Total habitat area		0.12								0.11
Site Area (Excluding area of individual trees and Green walls)		0.12								

Biodiversity Gain Assessment

28. This exercise identifies an overall Loss of 1.10 Habitat Units (-35.43%).
29. Calculations for the change in Habitat Units have been based on the majority of the Site being enclosed as new private gardens, resulting in the loss of 1.21 Habitat Units present pre-development.
30. The retention of existing 'vegetated garden', introduced shrub, and urban trees accounts for 1.89 Units carried forward into the post-development phase.
31. Post-development calculations include Habitat Units gained through the creation of vegetated garden, which accounts for all newly-planted habitats, including hedgerows and trees.
32. In order to reach a No Net Loss position, the developer will need to supply an additional 1.10 Habitat Units. As outlined in the Biodiversity Net Gain Technical Advice Note produced by Kirklees Council in June 2021, minor developments (which includes residential developments of fewer than 10 dwellings and under 0.5ha in size, such as this one) are not held to the 10% Net Gain threshold and need only deliver a measurable net gain.
33. As this cannot be provided on-Site through the creation of additional habitat - which would be subsumed by the 'vegetated garden' habitat type - this must take place on off-Site land within the developer's ownership, or via a monetary contribution to the LPA or a third-party habitat bank, such as Environment Bank.
34. A copy of the Biodiversity Metric 4.0 Calculation Tool Excel spreadsheet (ref. BM-7249-01) has been provided with this report and should be submitted digitally as part of the application.

Figure 8 Biodiversity Metric Summary.



References

CIEEM (2019) Advice Note - On the Lifespan of Ecological Reports and Surveys

DEFRA (2023) Biodiversity Metric 4.0 Calculation Tool - macro-enabled

DEFRA (2023) Biodiversity Metric 4.0 - Technical Annex 1 - Condition Assessment Sheet and Methodology

DEFRA (2023) Biodiversity Metric 4.0 - Technical Annex 2 - Technical Information

DEFRA (2023) Biodiversity Metric 4.0 - User Guide

Appendices

The following reports/digital documents have been provided alongside this report and should be read in conjunction with it:

- Biodiversity Metric 4.0 Calculation Tool - BM-7249-01
- Biodiversity Metric 4.0 - Technical Annex 1- Condition Assessment Sheets CA-7249-01
- Preliminary Ecological Appraisal ER-7249-01