

Biodiversity Net Gain Report

For:	Mr Liam Wardle
Site:	45 King Edward Street, Barnsley, South Yorkshire
Report Date:	4 th September 2024
Report Reference:	SQ-2281

Client:	Liam Wardle
Site Name:	45 King Edward Street, Barnsley
Report:	Biodiversity Net Gain Assessment
Survey Date:	28 th August 2023
Surveyed by:	Fern Harrison BSc (hons), MSc

Issue:	Revision:	Stage:	Date:	Prepared by:	Approved by:
1	-	Draft for review	4 th September 2024	Fern Harrison BSc (hons) MSc, Estrada Ecology Ltd	Natasha Estrada BSc (hons), Mrs, MCIEEM, Estrada Ecology Ltd
2	n/a	FINAL	4 th September 2024	Sam Toon BSc (hons), Estrada Ecology Ltd	Natasha Estrada BSc (hons), Mrs, MCIEEM, Estrada Ecology Ltd



1 Executive Summary

- 1.1 For the current proposed development scheme for the site, a net loss of -83.92% for area habitat units is calculated. A net gain of +109.21% for linear hedgerow habitat units is calculated.
- 1.2 The Trading Summaries for area habitats were not satisfied within the current development proposals.
- 1.3 Recommendations regarding mitigating the calculated net loss of area habitat units are outlined within the conclusion of this report.

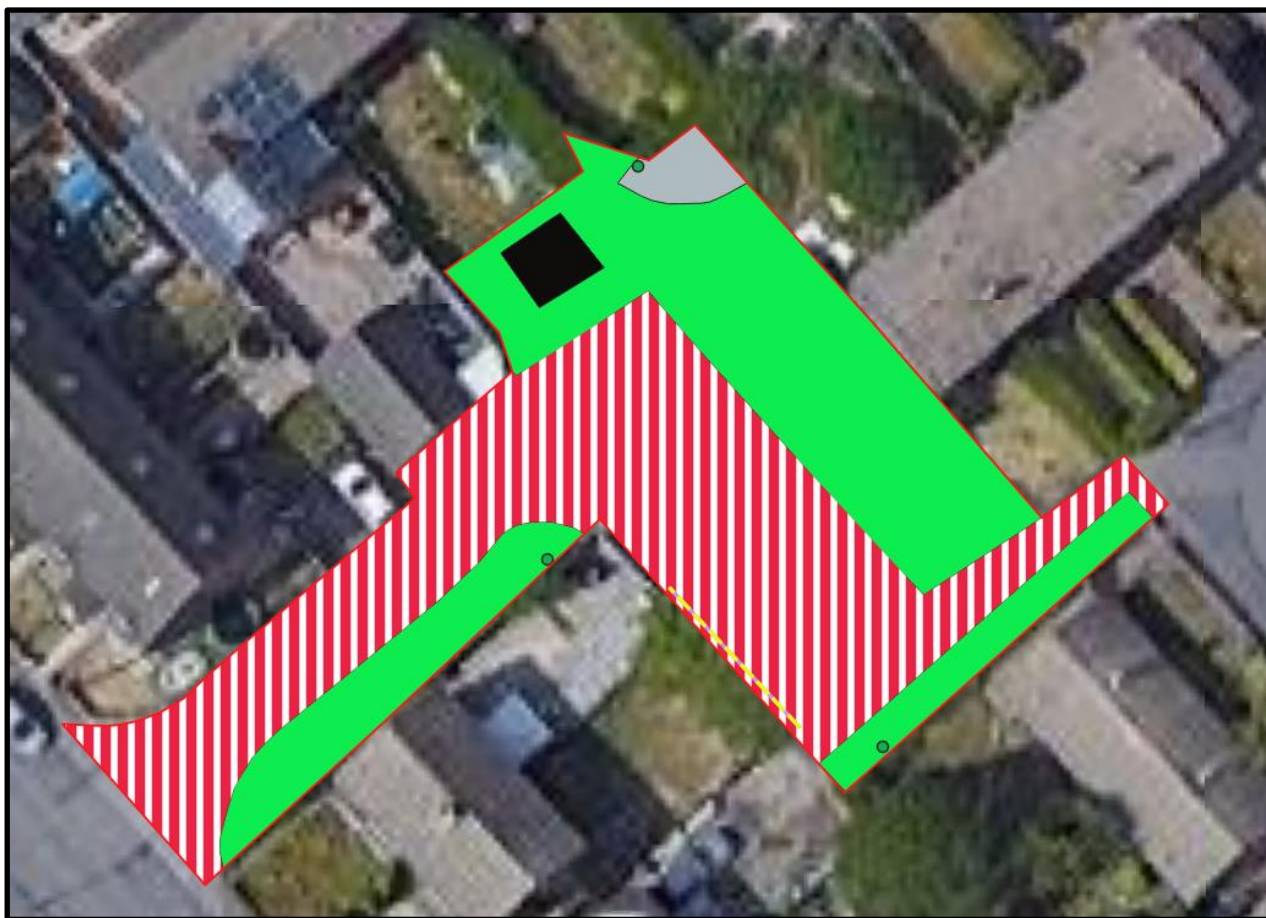
2 Introduction







- 2.1 Biodiversity Metric calculations were requested by the client to determine the extent of net loss, no net loss, or net gain for the Biodiversity Net Gain requirements of Barnsley Metropolitan Borough Council. The calculations were required for submission as part of a planning application, in accordance with local and national planning policies.
- 2.2 Biodiversity Metric calculations were therefore undertaken for baseline and post-development habitats for the development site, using the Defra Statutory Metric developed by DEFRA. This assessment evaluates the impact of current development proposals on existing biodiversity resources within the development site.

3 Baseline and Post Development Scheme Designs

- 3.1 The UK HABS habitat classification map in Figure 1 summarises the habitats identified via field survey undertaken in August 2024.
- 3.2 Figure 2 presents the summary of the Defra Statutory Metric calculations.
- 3.3 Details of the scheme design are given in Appendix 1.

Figure 1 : UK HABS Baseline Habitats Classification Map



UK HABS Symbolgy	UK HABS Habitat	Primary Code
	Developed Land ; Sealed Surface	u1b
	Modified Grassland	g4
	Ruderal	u1f
	Buildings	u1b5
	Individual Trees	-
	Native Hedgerow	h2

4 Methodology

- 4.1 The Environment Bill (2020) seeks to improve biodiversity through several means, including the introduction of a mandatory requirement for new developments to achieve a minimum of 10% biodiversity net gain, which will be managed as such for a minimum of 30 years after the development has been completed (Environment Bank, 2021). Key parts of the Environment Bill which relate to biodiversity net gain and its delivery are Part 6 Nature and Biodiversity and the supporting Schedule 14, particularly sections 9(3), 13(2), 14(2) and 15.
- 4.2 Baseline habitats were surveyed, and their condition assessed during a site assessment in August 2024 and based on the UK HABS Habitat Classification map (Figure 1). Post-development habitats were measured using QGIS version 3.34.5.
- 4.3 The Defra Statutory Metric was used to calculate biodiversity units for baseline and post-development habitats for the development site, to determine if the proposed development will be likely to achieve net loss, no net loss, or net gain of biodiversity units.
- Habitat areas were rounded, with the minimum mappable unit being one square meter. The canopy areas of Individual trees were calculated using the Urban Tree Helper tool. Linear habitat features such as hedgerows and ditches were measured in meters.
 - Habitats were assessed for their strategic significance at a landscape scale, using information from sources such as Local Plans, Biodiversity Action Plans, and Nature Recovery Areas to determine their significance within a specific landscape. If habitats weren't included within published



reports, significance was determined by their contribution to habitat connectivity and green corridors.

- 4.4 Biodiversity unit calculations are based on the retention and/or enhancement of existing habitats within the proposed scheme design, and the creation of new habitats. Biodiversity units for linear habitat features are calculated separately within the metric.

5 Limitations

- 5.1 Habitat areas are rounded up or down to the nearest whole value, with a minimal mappable unit of 0.0001 hectares. However, the overall total of site habitat area and biodiversity units within the Defra Statutory Metric are calculated and accurate to two decimal places.
- 5.2 Habitat areas used in the calculations are based on two-dimensional plans, and so will not necessarily take into account an increase in overall surface area as a result of slopes and banks.
- 5.3 No formal landscaping plan was submitted to inform the assessment. As a result, the scheme and plans were advised following input by the client and the assessing ecologist to determine which habitats would be present on-site post development.

6 UK HABS Habitat Classification Codes

- 6.1 The UK HABS habitat classifications used within the Defra Statutory Metric and applicable to the site are provided in Table 1 with their associated habitat codes.



Table 1 : UK HABS habitat classifications and codes

UK HABS Habitats		UK HABS Codes	
Predevelopment	Post development	Primary Code	Secondary Code
Modified Grassland	Developed Land, Sealed Surface	g4	10
Modified Grassland	Modified Grassland	g4	10
Ruderal/Ephemeral	Developed Land, Sealed Surface	u1f	81
Developed Land, Sealed Surface	Developed Land, Sealed Surface	u1b	-
Individual Trees	Developed Land, Sealed Surface	-	32
Native Hedgerow	-	h2	-
-	Native Hedgerow	h2	-

7 Biodiversity Net Gain

- 7.1 The total baseline habitat biodiversity units for the site were calculated at 0.17 units. The total linear hedgerow units for the site were calculated at 0.04 units. No river units were present at the baseline. No irreplaceable habitats are present at the baseline.
- 7.2 The total biodiversity units of on-site habitats post development are 0.03 units for area habitats and 0.08 for linear hedgerow units.
- 7.3 Under current development proposals, post-development habitats with their target conditions will result in a net loss of -83.92%, representing a loss of - 0.15 area habitat units. The post development linear hedgerow habitats will result in a net gain of +109.21% representing a gain of + 0.04 units.



7.4 As there is a net loss for area habitat units the trading summaries are not satisfied. See Table 2 for details of the trading summaries.

7.5 A summary of the metric results is provided in Figure 2.

Table 2. Trading Summaries for Area Habitats.

Broad Group	Habitat	Distinctiveness	Net Unit Change	Baseline Deficit Total
<i>Area Habitats:</i>				
Grassland	Modified Grassland	Low	- 0.06	-0.06
Sparsely Vegetated Land	Ruderal/Ephemeral		0	
Individual Trees	Urban Tree	Medium	-0.11	-0.11

Figure 2: Summary of Defra Statutory Metric.

FINAL RESULTS		
Total net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-0.15
	<i>Hedgerow units</i>	0.04
	<i>Watercourse units</i>	0.00
Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-83.92%
	<i>Hedgerow units</i>	109.21%
	<i>Watercourse units</i>	0.00%
Trading rules satisfied?	No - Check Trading Summaries ▲	

8 Overall Development

- 8.1 Overall, the proposals for the development site will result in a net loss of – 83.92% for area habitat units and a net gain of +109.21% in linear hedgerow units.
- 8.2 As there is a net loss for area habitat units the trading summaries are not satisfied.

9 Recommendations

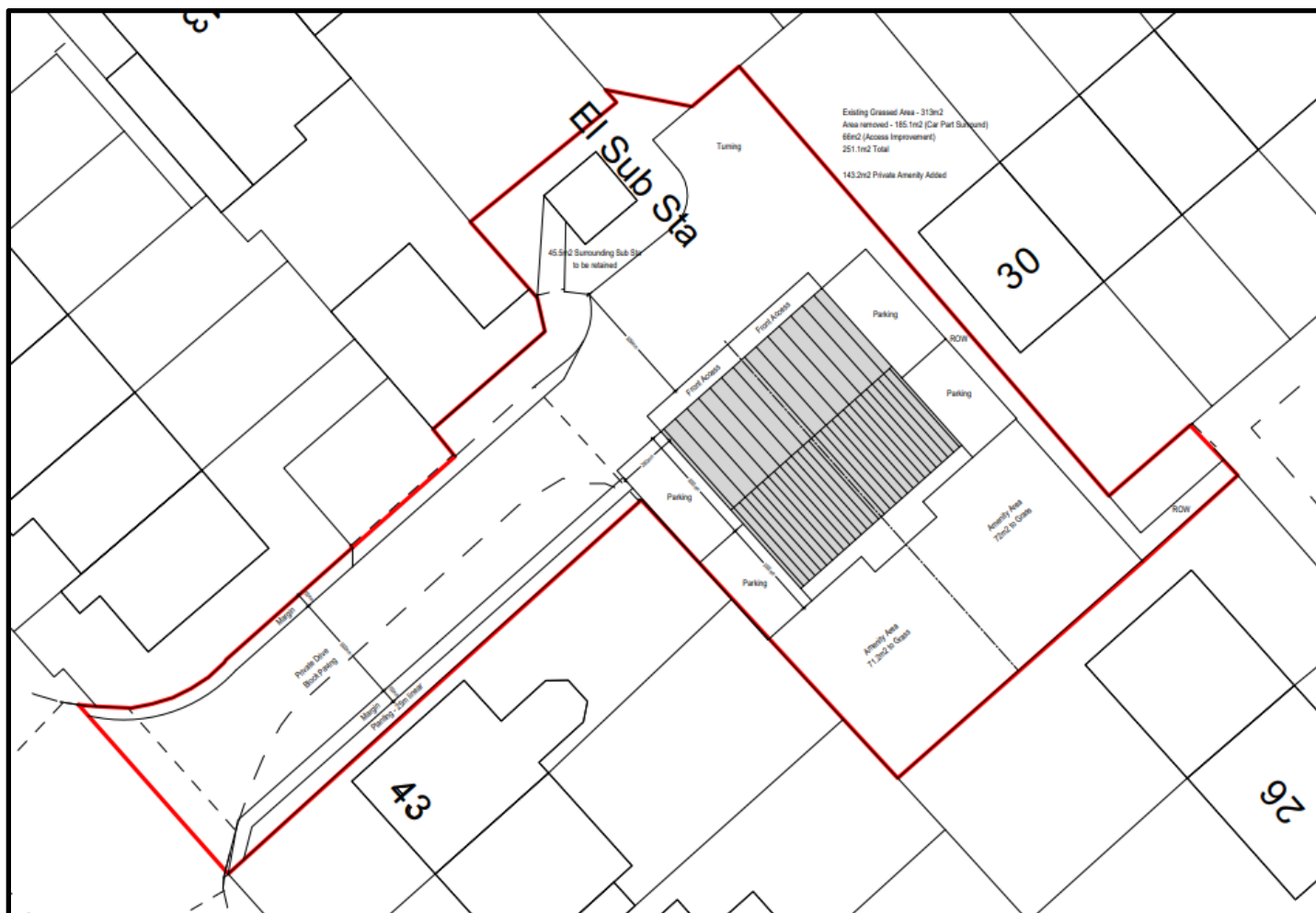
- 9.1 The post-development site is comprised of low and very-low distinctiveness habitats. The current development scheme does not provide suitable habitats to mitigate the loss in biodiversity units or to balance the Trading Summaries.
- 9.2 Under the current development proposals, an additional 0.16 area habitat units are required for the current development to achieve the required 10% net gain. Included within this amount is 0.06 low distinctiveness and 0.11 medium distinctiveness area habitats, which are required to satisfy the area habitat Trading Summaries.
- 9.3 Given the size of the proposed development and given that the majority of landscaping on site post development pertains to residential gardens, on site mitigation to reduce the calculated unit deficits are not considered feasible. As such, offsetting unit losses outside of the site is considered a likely requirement. To achieve the 10% net gain, following agreement with the Local Planning Authority (LPA), suitable offsetting providers such as the LPA, local wildlife trusts, or the Environment Bank should be consulted to discuss whether offsetting is achievable off site.



- 9.4 Trees proposed for planting within the areas of vegetated garden habitat cannot be incorporated into the metric calculations following Statutory Metric User Guidance (2024).
- 9.5 If no habitat banks are able to provide the offsetting requirements as detailed within this report, it may be possible that a S106 agreement can be arranged with the local authority, to satisfy the necessary net gain for the site.
- 9.6 The calculations in this report are based on target habitat conditions post-development and post-management, taking future land usage and public access into consideration.
- 9.7 It is recommended that an updated Biodiversity Net Gain report with updated calculations is completed should current development and landscaping proposals change in any way. An updated report will review habitat condition scores of habitats and will consider any changes in a final masterplan.



Appendix 1; Development Proposals



References:

Environment Bank (2015) *Biodiversity Impact Calculator – Guidance for Use*. Environment Bank.

Environment Bank (2016) *Biodiversity Accounting – An introduction*. Environment Bank.

Environment Bank (2021) *The Environment Bill and Biodiversity Net Gain Delivery*. [Online]. Accessed August 2024. Available at:
<https://www.environmentbank.com/blog/the-environment-bill-and-biodiversity-net-gain-delivery-what-planning-authorities-need-to-know/>

Natural England (2024) *Statutory Biodiversity Metric User Guide*.

UK HABS (2023) *The UK Habitat Classification : Habitat Definitions*. Version 2.0

