

Brooks

Ecological

Grounded advice

Woolley Colliery Road, Darton



Biodiversity Net Gain Assessment

Report Ref. ER-8088-02A

18/12/2024

Gleeson

Report reference	ER-8088-02A - Biodiversity Net Gain Assessment (Baseline)
Author	Christopher Shaw BSc (Hons) MCIEEM Principal Ecologist
Technical Review	Sam Kitching BSc (Hons) MCIEEM Principal Ecologist
QA	Mary Fleming BSc MSc Assistant Ecologist
Authorised	Christopher Shaw BSc (Hons) MCIEEM Principal Ecologist
Date	18/12/2024
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.



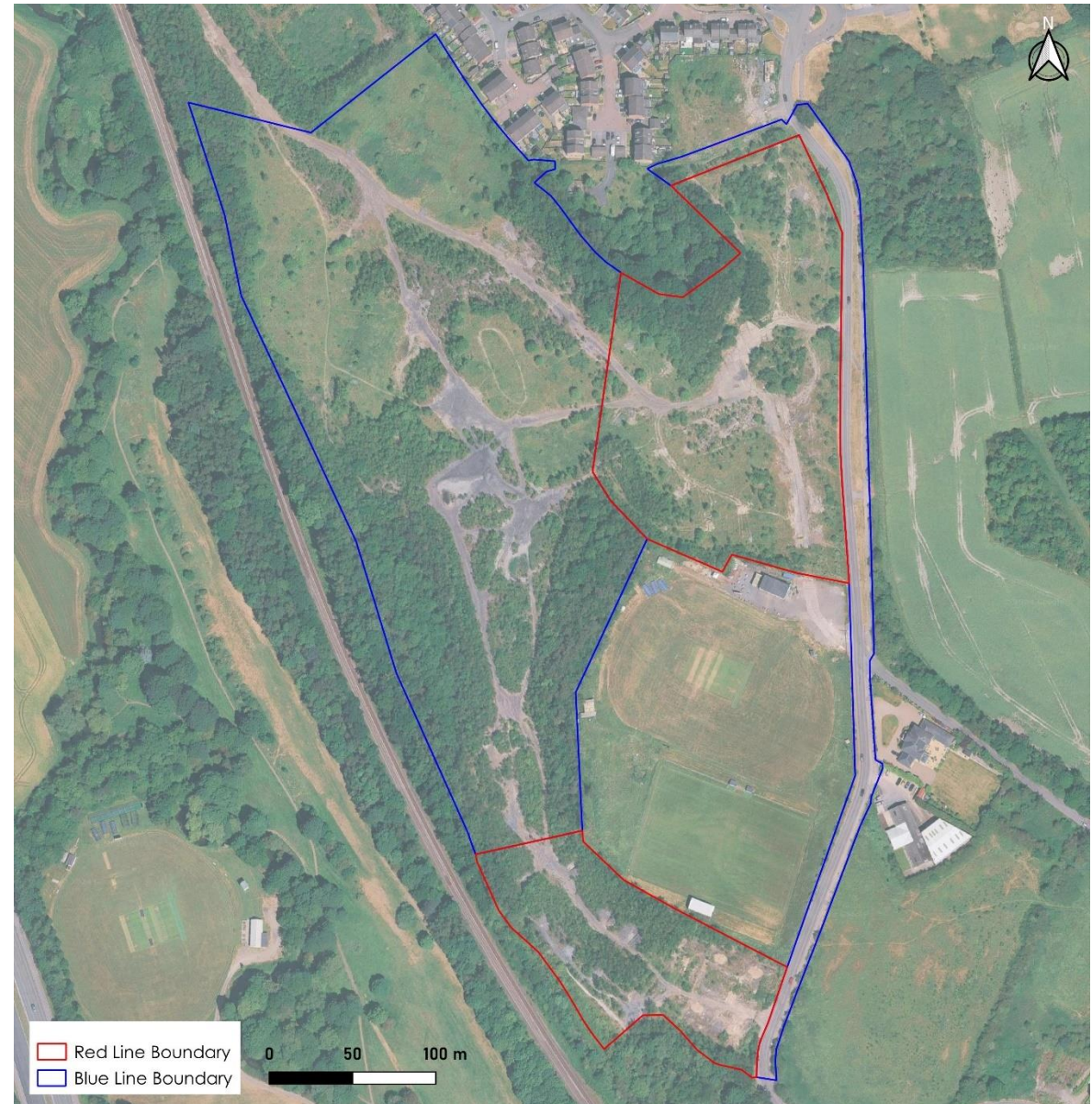
Brooks Ecological Ltd has prepared this report for the sole use of Gleeson. The information which we have prepared and provided is in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report does not constitute legal advice. The report is in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party except the person, company, agent or any third-party for whom the report is intended without the prior written permission of Brooks Ecological Ltd. This report presents a snapshot of the site at the date it was surveyed; the conditions and the species recorded present, or likely absent, can change rapidly. Resurvey is recommended to any third-party seeking reliance on this report. The content of this report may, in part, be based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third-party has not been independently verified by Brooks unless otherwise stated in the report. This report is the copyright of Brooks Ecological Ltd. Unauthorised reproduction or usage by any person is prohibited.

Unit A, 1 Station Road, Guiseley, Leeds, LS20 8BX
Phone: 01943 884451
01943 879129
www.brooks-ecological.co.uk
Registered in England Number 5351418

Introduction

1. Brooks Ecological Ltd was commissioned by Gleeson to carry out a Biodiversity Net Gain (BNG) Assessment of the proposed development Site at Woolley Colliery Road, Darton.
2. The assessment applies to the parcels 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-8088-01.
4. 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.
5. 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.
6. For the purposes of metric calculations, the Site area has been measured using GIS against the provided red line boundary as 4.22ha, with a further 8.15ha of land within the blue line boundary.

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



Pre-development baseline

Habitats identified

- 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

- Habitat condition has been assessed as part of the Preliminary Ecological Appraisal of the Site.
- Information on condition assessments is provided in the Excel spreadsheet CA-8088-01 provided alongside this report.

Strategic Significance

- A Local Nature Recovery Strategy (LNRS) has not yet been published for Barnsley. However, given the Site's location alongside the River Dearne corridor (which is mapped under the Wakefield Wildlife Habitat Network), land within the Site is mapped as 'location ecologically desirable but not in local strategy'.

Irreplaceable Habitat

- Irreplaceable habitats have not been found on-Site

Habitat Degradation

- There is no evidence on Site or in aerial mapping of the Site which suggests that it has been deliberately degraded.

Biodiversity Metric

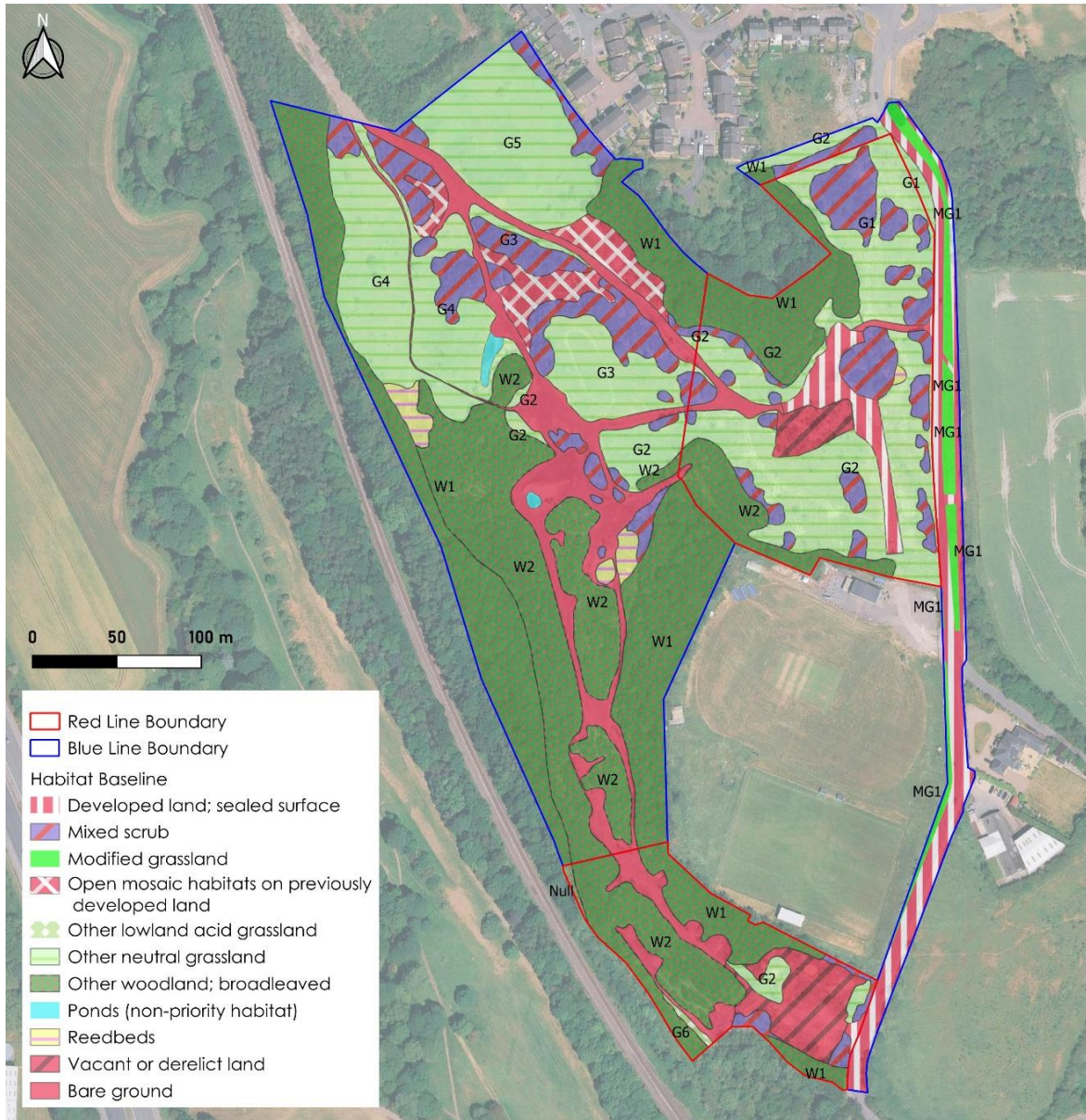
- Habitat types, conditions, and areas have been entered into the Statutory Biodiversity Metric Calculation Tool alongside information on their strategic significance.

- The Statutory Biodiversity Metric Calculation Tool (published 23/07/2024), is provided alongside this assessment, in Excel spreadsheet BM-8088-02, and may be useful in investigating design options for the Site.

Table 1 Habitat Types (Red and Blue line land).

Habitat	Label ref.	Distinctiveness	Condition	See Condition Assessment sheet
Developed land; sealed surface	-	Very low	N/A	N/A
Bare ground	-	Low	Poor	22B
Vacant/Derelict Land	-	Low	Moderate	22B
Modified Grassland	MG1	Low	Poor	5B
Other neutral grassland	G1	Medium	Good	6B
	G2-4		Medium	
	G5		Poor	
Other lowland acid grassland	G6	Medium	Moderate	6B
Mixed scrub	-	Medium	Moderate	20B
Other broadleaved woodland	W1	Medium	Moderate	24B
	W2		Poor	
Ponds (non-priority)	-	Medium	N/A	N/A
OMHPDL (Open Mosaic Habitat on Previously Developed Land)	-	High	Moderate	22B
Reedbed	-	High	Moderate	23B

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



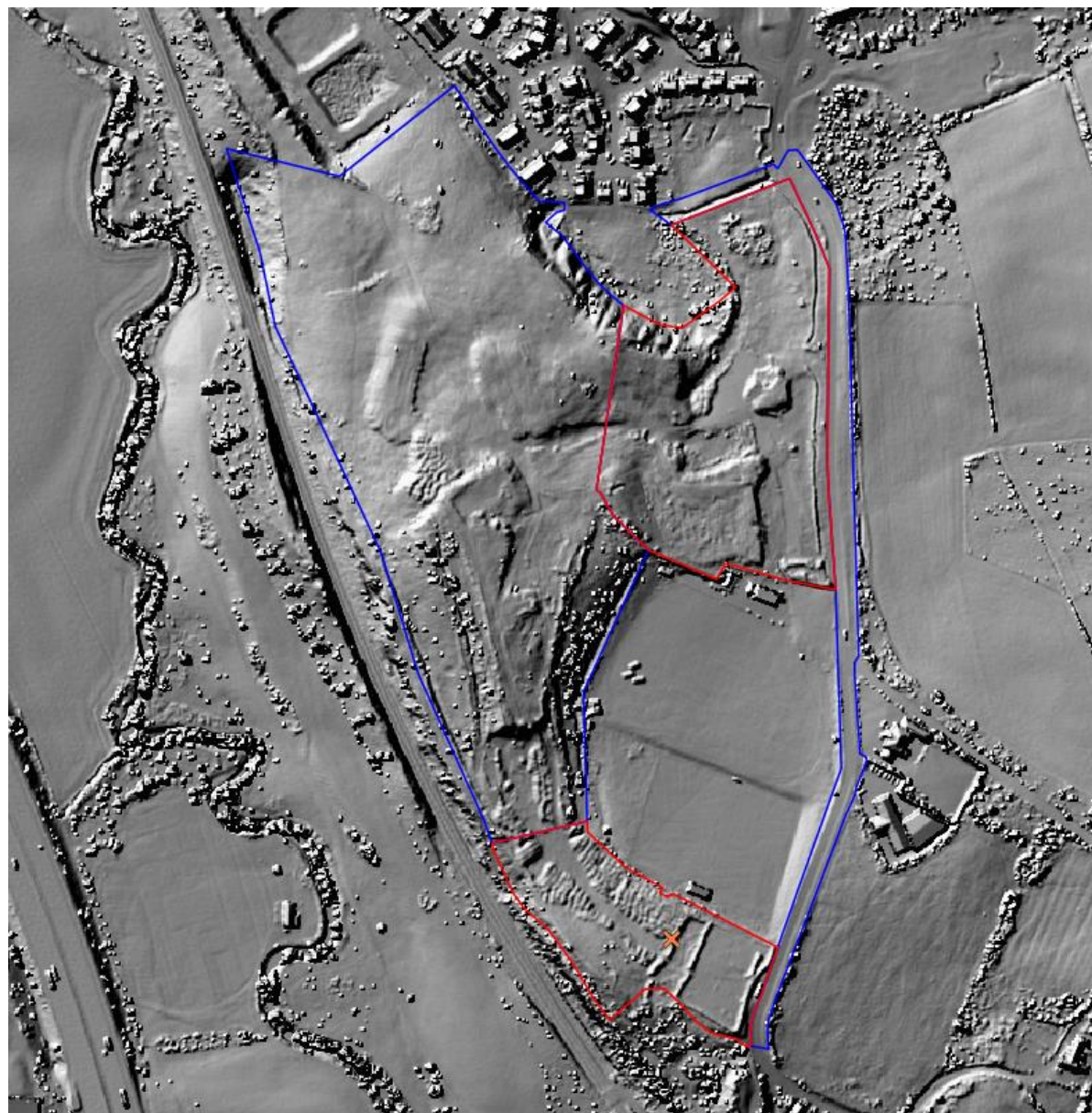
Site Topography/Lidar

15. The Site has a varied and complex topography, owing to its historic land use. To aid in visualization of the Site's layout, a Lidar plan is provided in the figure opposite, which shows more clearly the Site's landforms.
16. The lowest points are found along the eastern boundary, along Woolley Colliery Road. Land is then relatively level within much of the red line boundaries, raising higher to the north and west.
17. The highest point is found towards the centre of the blue line land, with land often falling rapidly in many places, including within the woodland to the west of the cricket pitch, and along the railway embankments to the west.

National Character Area (NCA)

18. All land within the red and blue line boundary falls within the same NCA: Nottinghamshire, Derbyshire and Yorkshire Coalfield
19. The Spatial risk multiplier '*Compensation inside LPA boundary or NCA of impact site*' has therefore been applied to any habitat creation or enhancement works within the blue line boundary.

Figure 3 General topography of the Site; contains Government Open Data.



Trading Rules

- 20. 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.
- 21. Once trading rules are complied with, the ‘gain’ component can come from any distinctiveness category.

Habitat Unit Score

- 22. The Site’s development land (red line boundary) has been assessed as having a baseline score of 27.90 Habitat Units.
- 23. The Site’s biodiversity offsetting land (blue line boundary) has been assessed as having a baseline score of 48.91 Habitat Units.
- 24. These break down as shown in Table 2, below.

Table 2 Habitat Units broken down by distinctiveness at this Site

Distinctiveness	Units		Approach to compensation if lost
	Red line	Blue line	
Very Low	0	0	No compensation required.
Low	2.21	2.33	Losses must be replaced with area habitat units of the same or higher distinctiveness.
Medium	25.61	41.34	Losses must be replaced by area habitat units of either medium distinctiveness habitats within the same broad habitat type, or any habitat from a higher distinctiveness from any broad habitat type.
High	0.08	5.24	Losses must be replaced with area habitat units of the same habitat type.
Very High	0	0	Priority should be given to replacing losses with area habitat units of the same habitat type.

Hedgerow Unit Score

- 25. There are no Hedgerow Units on Site.

Watercourse Unit Score

- 26. There are no Watercourse Units on Site.

Post-development value¹

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

Proposed habitats

- 28. Habitats present on-Site (red line) post-development have been based on the Detailed Landscape Proposals (Sheets 1 - 3) dwg. 4101/1 rev. - (Rosetta Landscape Design, Sept. 2024).
- 29. Planting types specified in the Landscape Masterplan have been assigned a UK Habitat Classification description that best fits the target habitat.
- 30. Habitats proposed offsite (blue line) are in keeping with the previous Ecological Design Strategy that was agreed with Barnsley Council under a separate Outline Planning Application for Rouse Homes.
- 31. Habitats assigned are shown in Figure 5 overleaf.

Condition Assessment

- 32. The condition assessment for each proposed habitat is based on what is realistic and achievable for the Site, based on the Landscape Masterplan.
- 33. Achieving these conditions scores may be reliant on specific, ecologically-driven management recommendations. These can be outlined in a Biodiversity Enhancement and Management Plan (BEMP) or similar.

Figure 4 Proposed Sketch Layout



¹ Please see assumptions section at end of report

Post-development habitats

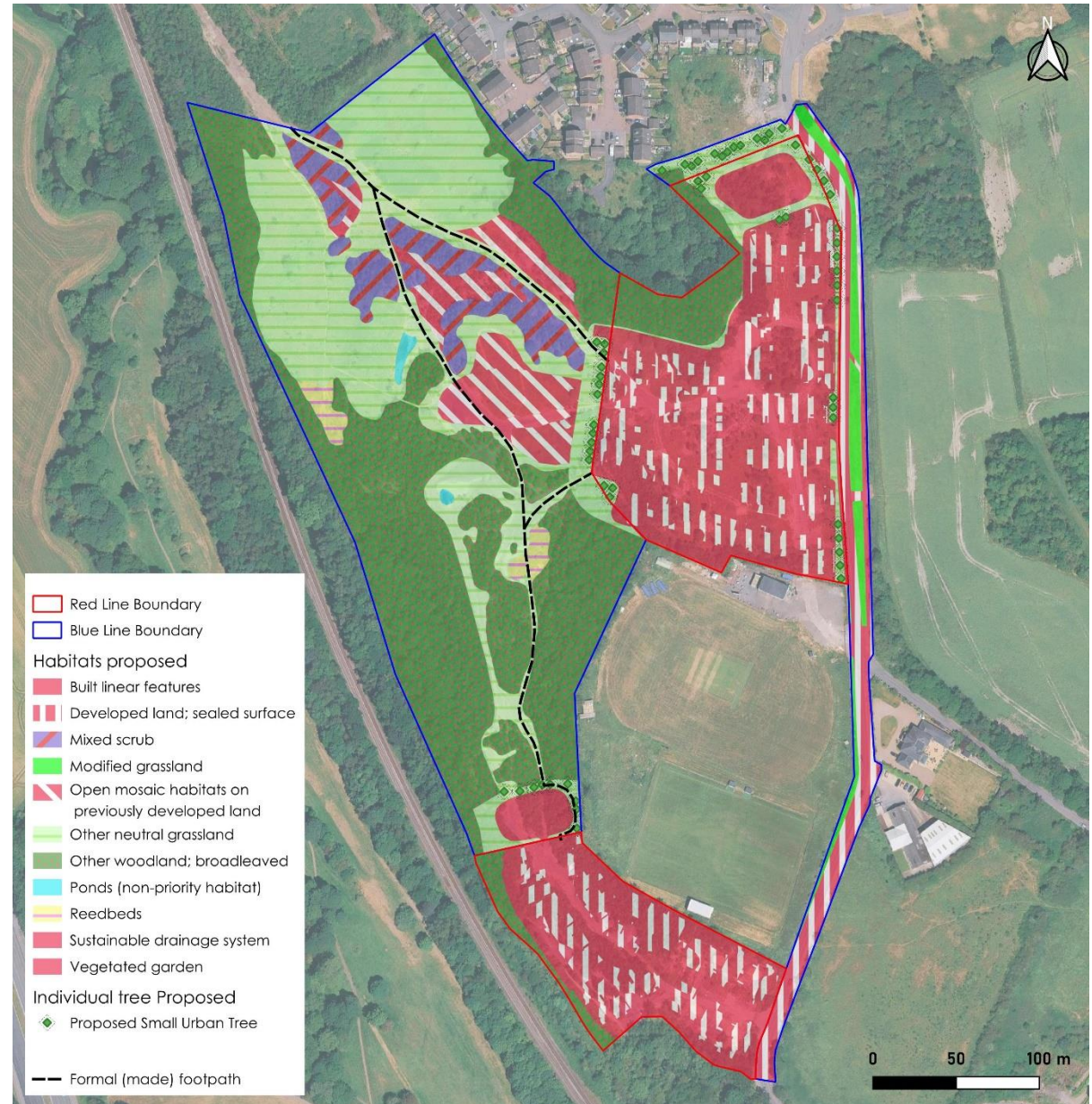
Habitat Score (onsite)

34. The Site has been assessed as having a post-development score of 9.36 Habitat Units
35. This score is based on our interpretation of the Landscape Masterplan, as shown in the figure opposite.
36. Calculations for the change in Habitat Units have been based on the entire Site (excluding an area of mature woodland) being cleared of existing habitats and land reprofiled. Roads and houses are then mapped as Built linear feature and developed land sealed surface, respectively. Private gardens (front and rear) are mapped as Vegetated gardens and POS are mapped as Other neutral grassland with individual trees planted. SUDS basins are mapped as such.

Habitat Score (off site)

37. The offsite land (blue line) has been assessed as having a post-development score of 77.01 Habitat Units.
38. This is based on most of the habitats being retained and enhanced to good condition.
39. Formal 'made' footpaths will be installed, which then allow the bare ground areas (created through recreational pressure) to be seeded as grassland.
40. A large area of OMHPDL will be created within the centre of the blue line land, and managed as the main butterfly mitigation area.

Figure 5 Post-development habitats.



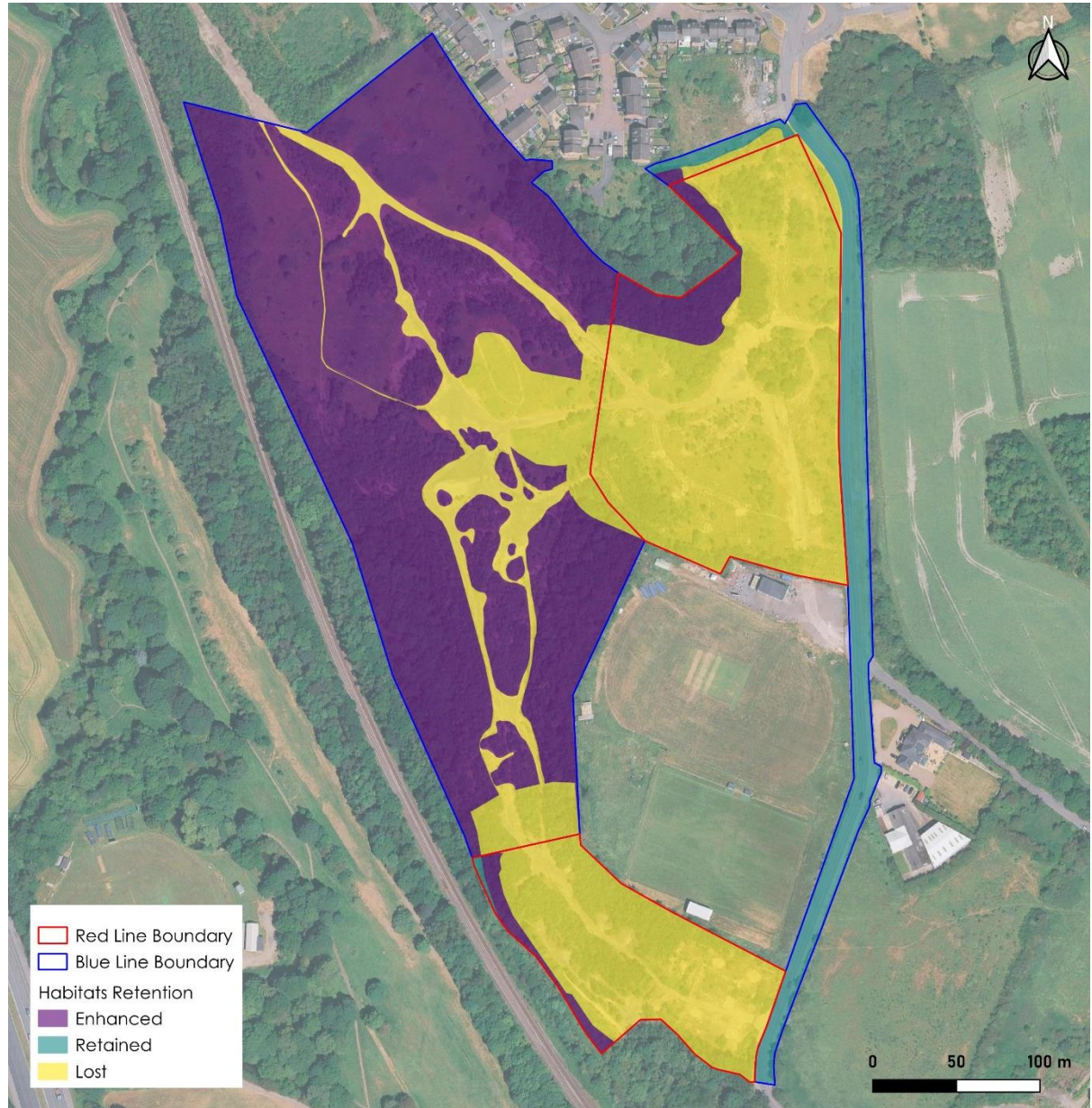
Habitat Retention

41. The plan opposite shows the areas of the Site which it will be possible to retain without impact. This information allows us to see which areas can be identified as retained or enhanced in the metric calculations.
42. This plan is based on information provided by the developer who will have considered / consulted their team on requirements to provide (amongst other things) Site compounds, to store and move materials, to install drainage, flood storage, access and services - all with suitable easements.
43. At this stage metric calculations assume that it will be possible to fence off and protect the areas shown opposite from any impacts of Site clearance and construction and that any enhancement can be carried out alongside relevant phases of the proposed development.

The BNG Hierarchy

44. The project's engagement with the Mitigation Hierarchy is set out in Appendix 1.

Figure 6 Habitat retention.



Change in Unit Value

- 45. The Statutory Metric has been used to calculate the net unit change for the Site and associated proposed offsetting land; this has predicted an overall net gain of 9.55 Habitat Units (34.24%).
- 46. A copy of the Statutory Biodiversity Metric Calculation Tool Excel spreadsheet (ref. BM-8088-02) and Condition Assessment sheets (CA-8088-01) have been provided with this report and should be submitted digitally as part of the application.

Trading Rules

- 47. Habitat types are separated out into distinctiveness categories (Very Low to Very High) which dictate what mitigation/compensation is required for their loss. This assessment is separate to the 'net unit change' score quoted above.
- 48. Trading rules have been satisfied.

Requirements for Planning

- 49. There is mandatory requirement for all developments to demonstrate at least a 10% net gain in each unit measurement, as well as to satisfy Trading rules. A standard planning condition will be imposed on all decision notices to ensure this is met.
- 50. The proposed development can demonstrate a >10% net gain and satisfies Trading Rules.
- 51. A Net Gain Plan and Habitat Monitoring and Management Plan will be required to discharge relevant pre-start planning conditions.
- 52. The scheme will make use of blue line land; this will need to be registered with Natural England and provision should be made by the LPA and developer to secure the necessary gains through legal agreement - planning condition (for on Site gains), planning obligation or conservation covenant (for off-Site gains) - see further information section at the end of the report for more information on this

Figure 7 Biodiversity Metric Summary.

FINAL RESULTS				
Total net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	9.55		
	<i>Hedgerow units</i>	0.00		
	<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>	34.24%		
	<i>Hedgerow units</i>	0.00%		
	<i>Watercourse units</i>	0.00%		
Trading rules satisfied?		Yes ✓		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
<i>Habitat units</i>	10.00%	27.90	30.69	0.00
<i>Hedgerow units</i>	10.00%	0.00	0.00	0.00
<i>Watercourse units</i>	10.00%	0.00	0.00	0.00

Assumptions

53. Establishment of the post development value of the Site at this stage is necessarily based on several assumptions which we have set out below, please provide the additional information required against each if this is available:

	Factor	Information Required
1	<p><u>Timing</u></p> <p>The BNG metric includes options to identify habitat creation which is deferred (by 2 years after it is lost) or habitat which is created in advance (elsewhere prior to its loss from Site). These are subject to multipliers and will affect your ultimate BNG score.</p> <p>Unless you have told us otherwise, we have assumed a 2-year build programme and a delay of 2 years between loss of habitat and creation of new. Calculations will need to be re-run if changes to the project plan result in a change to this figure.</p>	<p>Please provide a realistic timescale for the period between loss of habitat (Site clearance) and the completion of new on-Site habitat areas.</p>
2	<p><u>Phasing</u></p> <p>Unless you have told us otherwise, we have assumed that development will not be phased (in planning terms) and that habitat will be lost and created in a single phase.</p>	<p>Please confirm whether development will be phased.</p>
3	<p><u>Habitat Retention</u></p> <p>Areas mapped for retention are based on the AIA which shows areas of retained trees. All other areas are assumed to be lost to generate the required development platform.</p>	<p>A clear retention plan will be required to finalise the Net gain plan and HMMP.</p>
4	<p><u>Other limiting factors</u></p> <p>Ecological conditions are likely to be the primary factors determining the potential of the site to deliver Biodiversity Units, these would normally be established through a Preliminary Ecological Appraisal (PEA). Where a PEA has not been carried out, we have assumed that ecological factors are not limiting. Where a PEA has been carried out by a third party, we have assumed that the information provided is suitable and accurate.</p> <p>There are other limiting factors falling outside of the remit of ecological assessment which could also affect delivery, these may not be apparent to us at this stage. As part of any future management plans produced to deliver Biodiversity Units it will be necessary to assess information on (though not limited to) the following factors - any of which could have a bearing on the site's potential:</p> <ul style="list-style-type: none"> • Designated Sites (these may have been considered if desk-study has been part of the scope) • Protected and Notable Species (these may have been considered if desk-study has been part of the scope) • Invasive and Non-native Species • Land tenure and public access • Climate 	<p>Provide information and reports or references any of the factors which you know will be, or could be, limiting in terms of habitat creation.</p>

	Factor	Information Required
	<ul style="list-style-type: none"> • Geology / topography • Agricultural land status • Soils and substrates • Contaminated Land • Hydrology and Drainage • Flood Risk • Landscape Character and Designations • Historic Environment and Earth Heritage • Services and Infrastructure • Land ownership <p>These factors may be outside of the remit of this report (especially where a PEA has not been produced) and the expertise of an ecologist. We cannot be responsible for the impact of any of these factors on the potential of the site to deliver Biodiversity Units. Where other information is not made available, we have assumed they are not limiting</p>	

References

Chartered Institute of Ecology and Environmental Management (CIEEM). 2019. *Advice note: on the lifespan of ecological reports and surveys*. Winchester: Chartered Institute of Ecology and Environmental Management. [Online]. Available from: <https://cieem.net/resource/advice-note-on-the-lifespan-of-ecological-reports-and-surveys/>

Department for Levelling Up, Housing and Communities. 2023. *National Planning and Policy Framework*. London: Her Majesty's Government. [Online]. Available from: https://assets.publishing.service.gov.uk/media/65819679fc07f3000d8d4495/NPPF_December_2023.pdf

The Statutory Biodiversity Metric User Guide. 2024. London: Department for Environment, Food and Rural Affairs (Defra). [Online]. Available from: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

The Statutory Biodiversity Metric Calculation Tool (macro-enabled). 2024. London: Department for Environment, Food and Rural Affairs (Defra). [Online]. Available from: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

The Statutory Biodiversity Metric Condition Assessments. 2024. London: Department for Environment, Food and Rural Affairs (Defra). [Online]. Available from: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

Appendices

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

- Appendix 1 of this report sets out the project's engagement with the BNG Hierarchy
- BM-8088-02 - Statutory Biodiversity Metric Calculation Tool
- CA-8088-01 - Statutory Biodiversity Metric Condition Assessments
- ER-8088-01 - Preliminary Ecological Appraisal

Further information

Further useful information is available on legal agreements to secure Biodiversity Gains at:

- <https://www.gov.uk/guidance/legal-agreements-to-secure-your-biodiversity-net-gain>
- <https://naturalengland.blog.gov.uk/2024/03/04/securing-off-site-biodiversity-net-gain-expert-legal-perspectives/>

Appendix 1 - BNG Hierarchy

Level of Hierarchy	Advice provided at PEA/BNG Baseline Stage	Response in designs
<i>First</i> Avoid	<p>Clearance of Medium-distinctiveness habitats - namely other neutral grassland, mixed scrub, and woodland - should be avoided wherever possible, and minimised where it is not avoidable.</p> <p>Of the medium distinctiveness habitats, the mature broadleaved woodland (W1) is of greatest value, and should be retained wherever possible.</p> <p>A small pocket of reedbed (high distinctiveness habitat) is located in a central location. This will be difficult to retain, given its location, but material from it could be retained and used to create similar habitat elsewhere, by way of compensation.</p>	Woodland W1 is shown to be largely retained. This will need to be adequately protected during construction.
<i>then</i> Enhance	Retained habitats on-Site should be enhanced where possible as an important source of Habitat Units post-development. The woodland presents the greatest opportunities for enhancement, with scope to increase the condition from Moderate to Good.	Onsite woodland will be enhanced to Good condition. Blue line land will be the main focus of enhancement.
<i>then</i> Create	<p>Any residual loss of Units should be made up for with Habitat Units generated through the creation of new habitats on-Site.</p> <p>Units may be generated through specific ecologically targeted habitat creation, such as wildflower grassland, and standard amenity habitats, such as amenity grassland and ornamental shrub.</p>	<p>New habitats will be created on site in the form of vegetated gardens and grassland planting within POS.</p> <p>New habitats will also be created within blue line land.</p>
<i>then</i> Offset	<p>If a 10% Net Gain cannot be achieved on-Site, any remaining deficit will need to be compensated for off-Site.</p> <p>The scheme benefits from the availability of blue line land within the wider colliery.</p>	Blue line land will be used to generate a >10% net gain for the project.