



## Biodiversity Net Gain Assessment

### Barnsley Road, Goldthorpe

Hoover Ltd

Report Reference: ER-5805-01

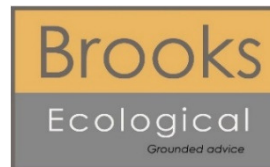
29/10/2021

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|---------------------|----------------------------------------------------------------|
| Report Title:       | Biodiversity Net Gain Assessment<br>Barnsley Road, Goldthorpe  |
| Report Reference:   | ER-5805-01                                                     |
| Written by:         | David Lovett MBiolSci (Hons) ACIEEM<br>Ecologist               |
| Technical Review:   | Micah Duckworth BA MSc MCIEEM CSJK<br>Biodiversity Manager     |
| QA:                 | Dominic Greenwood BSc (Hons)<br>Graduate                       |
| Approved for Issue: | Peter Brooks BSc (Hons), MA, MCIEEM, CEnv<br>Managing Director |
| Date:               | 29.10.2021                                                     |

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Unit A, 1 Station Road, Guiseley,  
Leeds, LS20 8BX  
**01943 884451**  
[admin@brooks-ecological.co.uk](mailto:admin@brooks-ecological.co.uk)  
[www.brooks-ecological.co.uk](http://www.brooks-ecological.co.uk)  
Registered in England Number 5351418



## Introduction

1. Brooks Ecological was commissioned by Hooper Ltd to complete a Biodiversity Net Gain (BNG) Assessment of the proposed development Site at Barnsley Road, Goldthorpe. The assessment applies to the parcel of land shown in Figure 1 opposite, which is being submitted as a reserved matters application for 43 units.
2. The assessment is informed by an Ecological Impact Assessment carried out by Whitcher Wildlife Ltd in September 2020 and by an updating walkover survey by Brooks Ecological in October 2021. To conform with DEFRA's Biodiversity Metric 3.0, habitats have been mapped in accordance with the UK Habitats Classification.
3. 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.
4. 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-line)



## Pre-development Baseline

### Habitats identified

5. The Site supports the following habitats:
  - g4 – Modified Grassland
  - h3d – Bramble Scrub
  - 351 – Vacant/Derelict Land
  - u1b – Developed Land; Sealed Surface
  - h2a – Hedgerow
  - w1g6 – Line of Trees
  - Secondary Habitat – 10 – Scattered Scrub
  - Secondary Habitat – 16 – Tall Herb
6. Each habitat is mapped in the figure opposite.

### Condition Assessment

7. 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

8. The Site has been assessed as having a baseline score of 2.68 Habitat Units and 1.13 Hedgerow Units.

Figure 2 Habitat map – pre-development.



## DEFRA Metric (Baseline)<sup>1</sup>

9. 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.

| Barnsley Road, Goldthorpe |                     |                                  |                      |                 |             |                                                   |                                                                 |                     |
|---------------------------|---------------------|----------------------------------|----------------------|-----------------|-------------|---------------------------------------------------|-----------------------------------------------------------------|---------------------|
| A-1 Site Habitat Baseline |                     |                                  |                      |                 |             |                                                   |                                                                 |                     |
| Condense / Show Columns   |                     |                                  | Condense / Show Rows |                 |             |                                                   |                                                                 |                     |
| Main Menu                 |                     |                                  | Instructions         |                 |             |                                                   |                                                                 |                     |
| Ref                       | Habitats and areas  |                                  |                      | Distinctiveness | Condition   | Strategic significance                            | Suggested action to address habitat losses                      | Ecological baseline |
|                           | Broad habitat       | Habitat type                     | Area (hectares)      | Distinctiveness | Condition   | Strategic significance                            |                                                                 | Total habitat units |
| 1                         | Grassland           | Modified grassland               | 1.1                  | Low             | Poor        | Within area formally identified in local strategy | Same distinctiveness or better habitat required                 | 2.53                |
| 2                         | Heathland and shrub | Bramble scrub                    | 0.0179               | Medium          | Poor        | Within area formally identified in local strategy | Same broad habitat or a higher distinctiveness habitat required | 0.08                |
| 3                         | Urban               | Vacant/derelict land/ bareground | 0.0295               | Low             | Poor        | Within area formally identified in local strategy | Same distinctiveness or better habitat required                 | 0.07                |
| 4                         | Urban               | Developed land; sealed surface   | 0.0537               | V Low           | N/A - Other | Within area formally identified in local strategy | Compensation Not Required                                       | 0.00                |
| 5                         |                     |                                  | 1.20                 |                 |             |                                                   |                                                                 | 2.68                |

<sup>1</sup> Our report provides an estimate of the sites 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.

## B-1 Site Hedge Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

| Baseline ref | Hedge number | UK Habitats - existing habitats |           | Habitat distinctiveness | Habitat condition | Strategic significance                            | Suggested action to address habitat losses | Ecological baseline  |
|--------------|--------------|---------------------------------|-----------|-------------------------|-------------------|---------------------------------------------------|--------------------------------------------|----------------------|
|              |              | Hedgerow type                   | Length KM | Distinctiveness         | Condition         | Strategic significance                            |                                            | Total hedgerow units |
| 1            | 1            | Native Hedgerow                 | 0.109     | Low                     | Good              | Within area formally identified in local strategy | Same distinctiveness band or better        | 0.75                 |
| 2            | 2            | Native Hedgerow                 | 0.035     | Low                     | Moderate          | Within area formally identified in local strategy | Same distinctiveness band or better        | 0.16                 |
| 3            | 3            | Line of Trees                   | 0.047     | Low                     | Moderate          | Within area formally identified in local strategy | Same distinctiveness band or better        | 0.22                 |
| 4            |              |                                 |           |                         |                   |                                                   |                                            |                      |
| 5            |              |                                 |           |                         |                   |                                                   |                                            |                      |
| 6            |              |                                 |           |                         |                   |                                                   |                                            |                      |
| 7            |              |                                 |           |                         |                   |                                                   |                                            |                      |
| 8            |              |                                 |           |                         |                   |                                                   |                                            |                      |
|              |              |                                 | 0.19      |                         |                   |                                                   |                                            | 1.13                 |

## Post-development Baseline

### Proposed Habitats

10. Habitats present on-site post-development have been based on the Landscape Masterplan DR-5805-001 produced by Brooks Ecological.
11. Planting types specified in the Landscape proposal have been assigned a UK Habitat Classification description that best fits the target habitat.
12. Habitats assigned are shown in Figure 4 overleaf.

### Condition Assessment

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

### Habitat Score

14. The Site has been assessed as having a post development score of 1.53 Habitat Units and 1.22 Hedgerow Units (see tables overleaf).

**Figure 3** Landscape Masterplan - 5882-99-001 Landscape Masterplan Rev H



## Post-development Baseline

### Habitat Score

15. The Site has been assessed as having a post development score of 1.53 Habitat Units and 1.22 Hedgerow Units.
16. This score is based on our interpretation of the landscape masterplan as shown opposite.
17. For areas of housing, homes and gardens have not been mapped but are assigned as 70% developed land : 30% gardens based on guidance in DEFRA 3.0 (2021). This is shown on the map as suburban mosaic of developed/natural surface.
18. Roads and pathways have been classed as developed land; sealed surface.
19. Trees planted within the Site along roads and pathways have been classed as "urban trees" of medium size.
20. Grassland areas are classed as 'other neutral grassland' on the basis that seeding can be easily rationalised in detailed planting plans to achieve this outcome.
21. A sustainable urban drainage feature has been classed accordingly, as this feature is included in the UK Habitat Classification.
22. Hedgerow scores are based on the provision of new native hedgerows.

**Figure 4** Post Development Habitats as Mapped



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

|                         |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
|-------------------------|------------------|-------------------|-----------|-------------------------|-------------------|---------------------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------|-----------------------|-------------------|-------------------|
| B-2 Site Hedge Creation |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| Condense / Show Columns |                  |                   |           | Condense / Show Rows    |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| Main Menu               |                  |                   |           | Instructions            |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| Baseline ref            | New hedge number | Proposed habitats |           | Habitat distinctiveness | Habitat condition | Strategic significance                            | Temporal multiplier                           |                                      | Difficulty risk multiplier   | Hedge units delivered | Comments          |                   |
|                         |                  | Habitat type      | Length km | Distinctiveness         | Condition         | Strategic significance                            | Standard or adjusted time to target condition | Final time to target condition/years | Final difficulty of creation |                       | Assessor comments | Reviewer comments |
| 1                       |                  | Native Hedgerow   | 0.209     | Low                     | Poor              | Within area formally identified in local strategy | Standard time to target condition applied     | 1                                    | Low                          | 0.46                  |                   |                   |
| 2                       |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| 3                       |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| 4                       |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| 5                       |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
| 6                       |                  |                   |           |                         |                   |                                                   |                                               |                                      |                              |                       |                   |                   |
|                         |                  |                   | 0.21      |                         |                   |                                                   |                                               |                                      |                              | 0.46                  |                   |                   |

## Net Gain Assessment

24. This exercise identifies an overall Net Loss of 1.15 Habitat Units (-42.83 %), and a Net Gain of 0.09 Hedgerow Units (+7.68 %).
25. Calculations for the change in Habitat Units has been based on the entire Site being cleared of existing vegetation and land reprofiled, which results in the loss of all 2.68 Habitat Units present pre-development. Post-development calculations include Habitat Units gained through the creation of private gardens and planting within Public Open Space (POS) which includes wildflower grassland, a sustainable urban drainage feature and tree planting.
26. A very small net gain in Hedgerow Units is achieved by planting circa. 0.2km of new native hedgerow around proposed housing units. This is in addition to the retention of native hedgerow along the northern edge of the Site.
27. The client has been provided with a copy of the Biodiversity Metric 3.0 Calculation Tool excel spreadsheet. This can be made available for review if required.

Barnsley Road, Goldthorpe

Headline Results

Return to results menu

|                                                                                                                                  |                            |         |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------|
| On-site baseline                                                                                                                 | Habitat units              | 2.68    |
|                                                                                                                                  | Hedgerow units             | 1.13    |
|                                                                                                                                  | River units                | 0.00    |
| On-site post-intervention<br>(Including habitat retention, creation & enhancement)                                               | Habitat units              | 1.53    |
|                                                                                                                                  | Hedgerow units             | 1.22    |
|                                                                                                                                  | River units                | 0.00    |
| On-site net % change<br>(Including habitat retention, creation & enhancement)                                                    | Habitat units              | -42.83% |
|                                                                                                                                  | Hedgerow units             | 7.68%   |
|                                                                                                                                  | River units                | 0.00%   |
| Off-site baseline                                                                                                                | Habitat units              | 0.00    |
|                                                                                                                                  | Hedgerow units             | 0.00    |
|                                                                                                                                  | River units                | 0.00    |
| Off-site post-intervention<br>(Including habitat retention, creation & enhancement)                                              | Habitat units              | 0.00    |
|                                                                                                                                  | Hedgerow units             | 0.00    |
|                                                                                                                                  | River units                | 0.00    |
| Total net unit change<br>(including all on-site & off-site habitat retention, creation & enhancement)                            | Habitat units              | -1.15   |
|                                                                                                                                  | Hedgerow units             | 0.09    |
|                                                                                                                                  | River units                | 0.00    |
| Total on-site net % change plus off-site surplus<br>(including all on-site & off-site habitat retention, creation & enhancement) | Habitat units              | -42.83% |
|                                                                                                                                  | Hedgerow units             | 7.68%   |
|                                                                                                                                  | River units                | 0.00%   |
| Trading rules Satisfied?                                                                                                         | No - Check Trading Summary |         |

## 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