FIELDOLOGY WORKS LTD
RURAL GRANTS AND ECOLOGY EXPERTS

BIODIVERSITY NET GAIN REPORT

Park Farm, Whalley Road, Barrow, Nr Clitheroe BB7 9YS.

REPORT CONTROL SHEET

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1. INTRODUCTION

1.1. SCOPE & PURPOSE

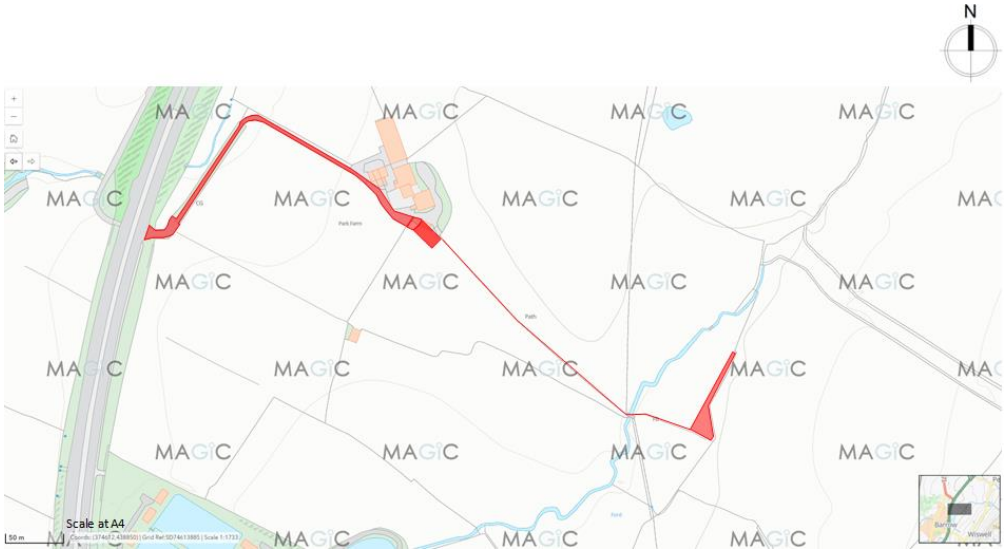
1.1.1. Fieldology Works Ltd was commissioned by Mr D Warbrick to prepare a Biodiversity Net Gain (BNG) Assessment for Park Farm, Whalley Road, Barrow, Nr Whalley.

1.1.2. The author of this report is Julie Wickington BSc (Hons), MA (Hons) at Fieldology Works Ltd. Julie is highly experienced at managing schemes and has produced many ecological reports to inform planning management plans.

1.1.3. This report has been written broadly following the Biodiversity Net Gain Report and Audit Templates (CIEEM, 2021).

1.2. LOCATION

1.2.1. Please refer to Figure 1.1 for the site location.



1.3. OBJECTIVES

1.3.1. The report has been produced to document the methods, results and conclusions of a BNG Assessment undertaken based on the proposed development for the site to fulfil the following:

- Ensure that the mitigation hierarchy has been applied;
- Identify the baseline habitats present and provide a condition assessment;
- Identify the post development habitats on site, assess the possible target condition and provide an indication of the likely importance of those habitats;
- Calculate the overall change in biodiversity score from pre- post development;
- Provide design recommendations to maximise potential net gain achievable; and,
- Provide an indication of likely outcomes and indicative cost as required.

1.4. PLANNING CONTEXT

1.4.1. Paragraph 174(d) of the revised National Planning Policy Framework (2021) states that "Planning policies, and decisions should contribute to and enhance the natural and local environment by… minimising impacts on and providing net gains for biodiversity…"

1.4.2. The Government 25-year Environment Plan states that the government will "embed environmental net gain principle for development."

2. METHODS

2.1. EXISTING HABITAT (BASELINE)

2.1.1. A site walkover and condition assessment of the site was undertaken by Julie, at Fieldology Works Ltd on 21st February 2025. The On-site Baseline Plan (Ref: DW001) illustrates the habitats to be incorporated into the proposal.

2.1.2. The methods were based on the standard methodology as detailed by UK HAB Methodology to assess the habitats present.

2.2. PLANNING LAYOUT (POST-DEVELOPMENT)

2.2.1. The On-Site Creation and Enhancement Plan (Ref: DW002 illustrates the habitats to be incorporated within the site.

2.3. THE STATUTORY BIODIVERSITY METRIC

2.3.1. The BNG calculation was undertaken utilising The Statutory Biodiversity Metric Calculation Tool (2024) (full calculation available in Appendix). The calculation was performed by a technically competent and experienced ecologist as detailed in British Standard BS8683 – Suitably qualified person –definition in BS8683:2020.

2.3.2. The Biodiversity Metric uses habitat features as a proxy measure for capturing the value and importance of nature. The metric takes into account the size, ecological condition, location and proximity to nearby 'connecting' features. The metric enables assessments to be made of the present and forecast future biodiversity value of a site.

2.3.3. To minimise the impacts of this proposed development and to produce a 10% net gain, the mandatory mitigation hierarchy has been adopted. This sequence is as follows:

- On-Site units - Delivered through habitat creation/enhancement via landscaping/green infrastructure.
- Off-site units - Delivered off-site through habitat creation/enhancement, including via habitat banks, with public and private landowners.
- Statutory Credits - Delivered through large-scale habitat projects delivering high-value habitats which can also provide long-term nature-based solutions.

This development can provide the biodiversity net gain On-Site.

2.4. HABITAT SCORING

2.4.1. The Biodiversity Statutory Metric supplies reference documents and user guides in which to accurately evaluate and assess the different habitats on site. The methodology for the baseline and post development calculations are demonstrated in the following sections.

2.4.2. Baseline Units - To assess the quality of a habitat and therefore calculate the units scored the Biodiversity Statutory Metric utilises three scoring factors as detailed below.

2.4.3. Condition - The condition of a habitat is assessed utilising the Condition Sheets provided for each habitat type. These list positive indicators for each habitat and indicate how many of these indicators need to be present to meet certain thresholds of condition. These condition sheets can be found in the Biodiversity Statutory Metric habitat condition assessment sheets with instructions tool Technical (Natural England Joint Publication, 2021).

2.4.4. Distinctiveness - The distinctiveness of each habitat (area and linear) is automatically assigned by the tool, based upon national records of the occurrence and rarity of each habitat (Biodiversity Statutory Metric).

2.4.5. Strategic Significance - The idea of strategic significance works at a landscape scale. It gives additional unit value to habitats that are in preferred locations for biodiversity and other environmental objectives. Strategic significance utilises published local plans and objectives to identify local priorities for targeting biodiversity and nature improvement, such Nature Recovery Areas, local biodiversity plans, National Character Area objectives and green infrastructure strategies. Upon review of the statutory and non-statutory designations using (Magic Maps) and Lancashire County Council's, Local Nature Recovery Strategy (Accessed 27.02.25), the site has

been considered as “Area/compensation not in local strategy/ no local strategy”. See Appendix for Magic Maps 500m Buffer Zone).

2.4.6. Post Development Units - Additional factors are implemented when assessing post development habitats.

- Difficulty of Creation/Enhancement;
- Temporal Risk “Time to target condition”; and,
- Spatial Risk (when offsite mitigation is necessary).

2.5. LIMITATIONS OF ASSESSMENT

2.5.1. Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The conclusions and recommendations detailed in this report are based upon the site redline and blueline boundaries (as appropriate) and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

2.5.2. Habitat areas (predevelopment) have been measured using online mapping, and therefore will not be completely accurate.

2.5.3. The Site Layout Plan used for post development areas is indicative in nature and does not constitute a detailed landscape plan.

3. BASELINE CONDITIONS

3.1. CONDITION ASSESSMENT

3.1.1. The following section summarises the condition assessment based on the condition sheets present within the Statutory Biodiversity Metric.

MODIFIED GRASSLAND

3.1.2. Approximately 0.0763 ha of modified grassland g4, 614 (permanent agricultural grassland), 102 sheep grazed. is located within the site. It was assessed as scoring a ‘Poor’ condition based on passing 5 criteria, excluding the essential species criteria.

- Across the habitat parcels, there are 5 species present (an essential criterion for the condition assessment). Species found in habitat parcels 1, 2 and 3: Perennial Rye Grass (Lolium perenne), Creeping Bent (Agrostis stolonifera), Couch grass (Elymus repens), Creeping Buttercup (Ranunculus repens) and Common nettle (Urtica Dioica).

Note in Parcel 1, prior to 2020, this area is showing as modified grassland, at the time of the site visit an artificial surface has been made in this area. For the metric it has been assumed that this area was modified grassland. Across all parcels, Couch Grass (Elymus repens) is the predominant grass species, producing a dense mat over the sward, this is likely to limit grassland and flower diversity, the understorey sward is gappy. The Sward height was not varied, all was intensively grazed by sheep, no scrub is present.

URBAN LAND

3.1.3 The access to the site is from the highway (A59) an artificial, unvegetated, unsealed surface. The total area is 0.1099 ha all of this area is being retained and no compensation is required.

SUMMARY

3.1.3. Table 3.1 summarises the baseline habitats, condition assessment and area size.

Table 3.1 Habitat Type and Condition Assessment (pre-development)

HABITAT TYPE	CONDITION ASSESSMENT	AREA SIZE (HA)
Modified Grassland	Poor	0.0763
Artificial, unvegetated, unsealed surface	N/A	0.1099

3.2. RETAINED AND ENHANCED HABITATS

3.2.1. A total area of 0.050 ha of modified grassland is proposed to be enhanced.

3.2.2. In the urban areas (artificial, unsealed, unvegetated surface), 0.1099 Ha will be retained.

3.3. LOST HABITATS

3.3.1. 0.0263 ha of Modified Grassland will be lost in this project.

3.4. PRE- DEVELOPMENT HABITAT BASELINE

3.4.1. Please refer to Table 3.4 summarising the Habitat Baseline for the calculation, demonstrating habitats to be retained, enhanced and/or lost.

Table 3.2 Habitat Baseline

	On site baseline	Retained	Enhanced	Lost
Habitat (Area) Units	0.15	0	0.10	0.05

4. HABITAT CREATION

4.1. INTRODUCTION

Please refer to the On-Site Habitat Creation and Enhancement Plan (DW002) for full details of the proposed development and habitats.

The following sections detail the condition assessments that the habitats will be required to meet to achieve their target condition. This can be achieved through the production of a Habitat Management and Monitoring Plan with a commitment to maintain the BNG for at least 30 years. The proposed on-site enhancements are not classed as 'significant on-site enhancements' and it is deemed that a legal agreement is not required for this proposal. However, the LPS may have require a legal agreement for wider planning policy reasons.

4.2. MODIFIED GRASSLAND

1.1.1. A total of 0.050 Ha of modified grasslands are to be enhanced within the scheme. They will target a "Moderate" habitat condition by seeking to meet the following condition criteria:

- The parcel represents a good example of its habitat type, dominated by a few fast growing grasses ((Rye-grasses (*Lolium Spp*), Timothy (*Phleum pratense*), Cock's-foot (*Dactylis glomerata),* rested Dog's Tail (*Cynosurus cristatus*) and Yorkshire Fog *(Holcus lanatus*)) and, typically 9 or more vascular plant species present per m sq. The nine species will typically exclude: Creeping thistle (*Cirsium arvense*), Spear Thistle (*Cirsium vulgare*), Curled Dock (*Rumex crispus*), Broad-leaved dock (*Rumex obtusifolius*), Creeping Buttercup (*Ranunculus repens*), Greater plantain (*Plantago major*) white clover (*Trifolium repens)* and Cow Parsley (*Anthriscus sylvestris*).
- Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% is more than 7 cm) creating microclimates that provide opportunities for insects, birds and small mammals to live and breed.
- Grass over greater than 75%, cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.
- Cover of bracken (*Pteridium aquilinum*) and scrub is less than 20% and cover of scrub (including bramble (*Rubus fruticosus agg*.) is less than 5%.
- There is an absence of invasive non-native plant species.

4.3 URBAN

Artificial unvegetated unsealed surfaces are proposed (0.010) and a new building will be created (0.0223 Ha).

SUMMARY

4.3. Metric

This report and the DEFRA Statutory Biodiversity Metric submitted have demonstrated that the proposed habitat creation create a net gain of biodiversity within the site of +10.26% in habitat units and an increase in Hedgerow Units of 0%. The trading rules have been satisfied.

Figure 5.1 On site net % changed

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.02
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	11.42%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

5.2 NEXT STEPS

To achieve the BNG within the grassland site a change in habitat condition from 'moderate' to 'good' is required. It is recommended that the following steps are undertaken to maintain the enhancement and creation of these habitats.

5.2.1 HABITAT MANAGEMENT PLAN

An adequate management plan is to be written and initiated to benefit the Site, comprising the following methods:

GRASSLAND

1. A 'conservation style' cut of the grassland once a year at during September. Removal of cuttings is key, as the current Site. Old cuttings add nutrients back to into soil, enabling coarse grasses to become dominant at the expense of nutrient poor loving species indicative of other lowland acidic grassland swards. Therefore, the removal of cuttings after a cut is to be a management priority and a core part of achieving 'moderate' condition.
2. A regular once yearly cut should also reduce scrub build-up. By cutting in September, it reduces the opportunity for invasive species to flourish as much due to the reduced

temperatures and sunlight levels. This, in combination with step 3 below, creates the opportunity for native flower species to colonize more easily the following year.

3. Remove invasive scrub over winter. Whilst the grassland is currently in poor condition, it could quite easily be enhanced/created by removing the invasive scrub patches that may encroach from the surrounding areas. The scrub removal, targeting species such as bramble, as well as tree saplings, should be undertaken using manual or brush cutters in November. The scrub should be removed to as close to ground level as is possible.
4. Timings of the cuts are also important. Cutting is to occur late enough in the season to enable all forbs to flower and set seed. Earlier cuts within April, May or June are not to occur, as these may hinder flowering and subsequent seed set of forbs present on Site. It should be noted that if subsequent management differs from the suggested actions above, then the grassland site is unlikely to obtain the improved habitat condition score of 'moderate' and subsequently the Site is unlikely to achieve the necessary 10% BNG required.

5. BIBLIOGRAPHY

- CIEEM (2021) Biodiversity Net Gain Report and Audit Templates.
- DEFRA (2024) The Biodiversity Metric 4: Auditing and Accounting for Biodiversity: Metric
- DEFRA (2024) The Biodiversity Metric 4: Auditing and Accounting for Biodiversity. Condition Assessment Sheets (Excel Format)
- Biodiversity Net Gain - Strategic Significance (arcgis.com)

6. APPENDICES

File references for attachments

Statutory_Biodiversity_Metric_Condition_Assessments-_Feb24 DW

Statutory_Biodiversity_Metric_Condition_Assessments-_Feb24 DW

The_Statutory_Biodiversity_Metric_Calculation_Tool_-_Macro_disabled_tool_DW.xlsx

On Site Baseline Ref DW001

On Site Creation & Enhancement Ref DW002

Magic Maps 500m Buffer Zone.

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