



Biodiversity Net Gain Matrix

For

Peter Jackson

Well House Farm

Rudyard Road

Biddulph Moor

ST8 7JW

Reference: Q14140

Prepared by
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1. Introduction

ProHort Limited have been commissioned by Mr Peter Jackson to conduct a Biodiversity Net Gain Assessment for Well House Farm, ST8 7JW on 28th of February 2025.

The Local Planning Authority has requested that a Biodiversity Net Gain (BNG) Assessment is completed to support the planning application. The development includes a 40m x 20m all-weather menage to exercise horses for private use and associated landscaping.

Staffordshire Moorlands District Council requires developments in the area to achieve a net gain in biodiversity, with a minimum of a 10% gain compared to the pre-development value of the site. A quantitative measure of the base value of a Site for biodiversity, and the value of a Site post-development, is arrived at by using a recognised Biodiversity metric. Biodiversity metrics measure the value of a Site in terms of Biodiversity Units. Biodiversity Units are a proxy measure of biodiversity, arrived at by assessing the type, area and condition of semi-natural habitats on site. A limitation of the use of metrics is that they only measure habitat areas, and do not consider species-specific measures which may nevertheless make meaningful contributions to gains in local biodiversity.

2. Site and Surroundings

The area surveyed is a plot of land at Well House Farm, ST8 7JW (grid reference: SJ91395865), (Figure 1), hereafter referred to as the 'Site'. The Site is located in Biddulph Moor, west of Rudyard and South of Newton. The surrounding area is dominated by arable fields, woodland and small numbers of residential and commercial properties. Site access is off Rudyard Road.

The woodland over 600m to the northwest of the site is designated as priority habitat deciduous woodland and there are a number of priority deciduous woodland blocks within 2km of the Site. There are no designated sites within proximity to the Site. There are no water features in close proximity for the project area.

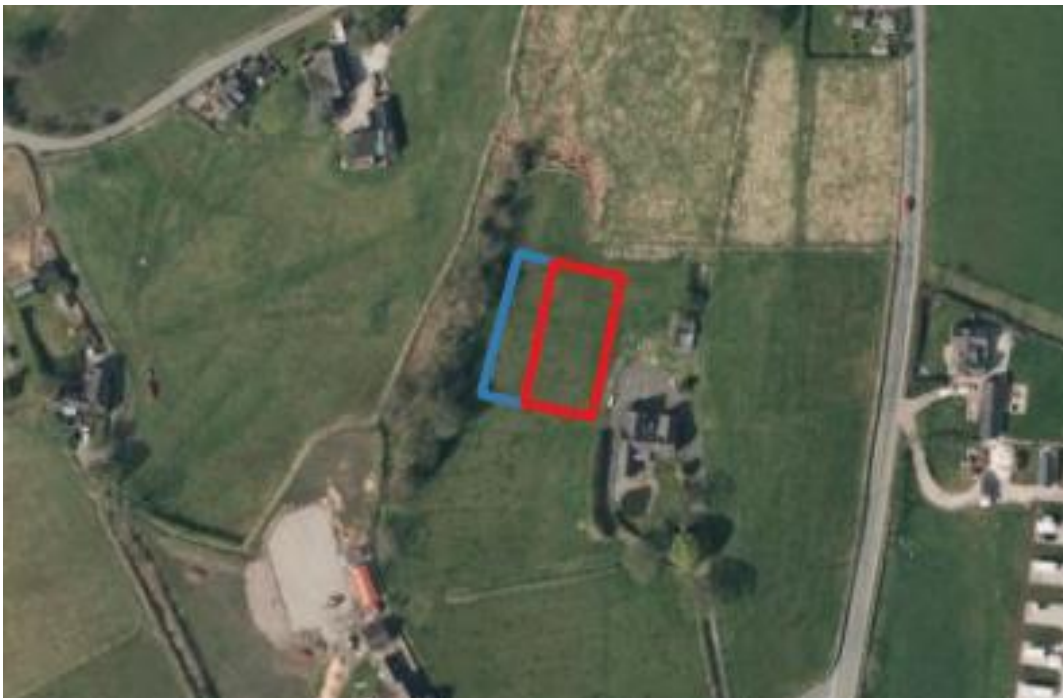


*Figure 1 – Red line boundary of the Site, Blue line boundary for offsite gains and the surrounding area.
Taken from Bing Maps (© 2025 Microsoft Corporation, © 2025 Maxar, ©CNES (2025) Distribution Airbus DS)*

3. Methodology

The pre-development (baseline) and post development (proposed) value of the habitats have been calculated using the DEFRA/Natural England's Statutory Biodiversity Metric calculator. The methodology for determining habitat distinctiveness and condition values, follows the guidelines set out in the User Guide and Technical Supplement for Biodiversity Metric.

The current assessment utilised the principles outlines in the 'Mitigation Hierarchy' denoting the steps involved in reaching the conclusions outstated in this report and preserving natural features and resources of importance. The 'Mitigation Hierarchy' states:

- **Avoid:** The easiest, cheapest and most desirable method of reducing potential impacts of the proposed development.
- **Minimise:** Where avoidance is not possible, measures can be taken to minimise the impacts of the proposed development.
- **Mitigate:** Where minimisation is not possible, measures can be taken to enhance/ create on Site habitats to compensate for potential losses caused by the proposed development.
- **Offset:** Where mitigation is not possible, on-site habitat loss must be compensated off site. This should be utilised as a last resort for compensating losses as it is the most risk involved, expensive and complex solution.

Site Boundary

The following data sources have been used to define the boundary for the BNG calculation and determine the relevant attributes for BNG (e.g. size, condition and habitat type) for the pre and post-development habitats.

The boundary used for the BNG assessment is the red line application boundary for the project (See Figure 2 for a detailed red line boundary).



*Figure 2 – Red line boundary of the Site and Blue line boundary for offsite gains
Taken from Bing Maps (© 2025 Microsoft Corporation, © 2025 Maxar, ©CNES (2025) Distribution Airbus DS)*

Baseline Habitats:

In order to generate the site baseline habitat data (e.g. habitat type, condition), a phase 1 habitat survey was undertaken, where the site was systematically walked over and the dominant habitat type in each area recorded. Dominant plant species were noted, as were any that are legally protected (Schedule 8 of the Wildlife and Countryside Act 1981), invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981. Additionally, 5 (1 meter-squared) quadrats were used to determine species richness on any grassland habitats and the other grassland conditions were estimated from a visual inspection of the site.

The information collected during the site visit was used to baseline any applicable habitats and satellite mapping was used to calculate habitat areas. The areas and conditions of any onsite habitats were inputted into DEFRA/Natural England's Statutory Biodiversity Metric calculator. The metric includes 3 broad categories of habitats and biodiversity units for which scores are calculated differently:

- Area habitats, such as grasslands, woodlands and ponds
- Linear hedgerows and lines of trees
- Linear rivers and ditches

4. Habitat Baseline

4.1. Habitat descriptions

All habitats within the Site's red line boundary are outlined below:

- Grassland g (Secondary code: 510 Bare ground)
- Modified grassland g4

No linear habitats were found within the red line boundary of the Site.

All habitats within the Site's blue line boundary are outlined below:

- Modified grassland g4

No linear habitats were found within the red line boundary of the Site.

The location of all baseline habitats can be seen in Appendix 1 and habitat descriptions are outlined in Table 1.

Table 1 – baseline habitat descriptions

Habitat Type	Habitat Description	Flora Species
Modified grassland	A short sward grassland that has been damaged by livestock. (Photograph 4 and 5)	Frequent: Perennial ryegrass (<i>Lolium perenne</i>), creeping buttercup (<i>Ranunculus repens</i>) Occasional: Broad-leaved dock (<i>Rumex obtusifolius</i>), winter grass (<i>Poa annua</i>) Rare: Common dandelion (<i>Taraxacum officinale</i>), common nettle (<i>Urtica dioica</i>)
Bare ground	Bare soil	-

4.2. Baseline Metric

The value of the on-site and off-site area baseline habitats was calculated using the Statutory Biodiversity Metric and is outlined in Tables 2 and 3 below.

Table 2 – On-site area habitat baseline calculation

Habitat	Notes	Area (ha)	Habitat Units	Area retained	Area enhanced	Units lost
Modified grassland	Failed criteria 'A'. Automatically 'poor' condition.	0.0545	0.11	0	0	0.11
Bare ground	Pass criteria C. 'Poor' condition achieved.	0.0255	0.05	0	0	0.05
Totals		0.08	0.16	0	0	0.16

The on-site area habitat baseline of 0.16 units must be enhanced by 10% resulting in at least a **0.18** unit baseline post intervention. If this cannot be achieved on-Site, then the remaining units will be achieved off-Site.

Table 3 – Off-site habitat baseline calculation

Habitat	Notes	Area (ha)	Habitat Units	Area retained	Area enhanced	Units lost
Modified grassland	Failed criteria 'A'. Automatically 'poor' condition.	0.054	0.11	0	0.054	0
Totals		0.054	0.11	0	0.054	0

The off-site area habitat baseline of 0.11 units must be enhanced by 10% resulting in at least a **0.12** baseline post intervention. If this cannot be achieved off-Site credits will need to be acquired.

5. Proposed Habitats

All habitats proposed within the Site's red line boundary are outlined below:

- Developed land, sealed surface u1b (created)

All habitats proposed within the Site's blue line boundary are outlined below:

- Modified grassland g4 (enhanced)
- Grassland g (Secondary code: 200 tree)

The location of these proposed habitats can be seen in Appendix 2.

In accordance with the Statutory Biodiversity Metric Guidelines, no creation or enhancement of habitats within the curtilage of a privately owned or tenanted dwelling is to be recorded. As these gains cannot be legally secured the area habitat will be classified as either 'vegetated garden' or 'unvegetated garden'.

We outline indicative suggestions on how such habitats may be established and should be treated as general guidelines. Explicit details and tailored plans should be created to establish the habitats in the relevant conditions. A Habitat Management and Monitoring Plan is recommended.

5.1. Developed land; sealed surface

A 40m x 20m all-weather menage to exercise horses for private use is proposed within the red line boundary of the Site. The menage will consist of woven and non-woven geotextile, silica sand and a riding surface.

5.2. Modified grassland

The modified grassland within the blue line boundary will be enhanced from a 'poor' to 'good' condition. It is predicted to meet criteria A, C, D, E, F, G.

To establish a modified grassland, the existing vegetation will be cut short, and a native wildflower and grass seed mix will be distributed around the area. This will then be rolled in to increase the likelihood of plant establishment. The wildflower and grass seed mix should be selected based on soil type of area and location of seed distributors.

5.2. Individual trees

4 Native trees will be planted offsite within the blue line boundary. The trees are to meet a 'moderate' condition and predicted to meet criteria A, C, D, E, F, G.

5.5. Proposed habitats metric

Table 4 – On-site area habitat proposal calculation

Habitat	Notes	Area (ha)	Habitat Units Delivered
<i>On-site habitat creation</i>	.		
Developed land, sealed surface	N/A	0.08	0
Totals		0.08	0

If all area habitats and conditions are met on-site post intervention, then a **100%** loss of biodiversity will occur.

Table 5 – Off-site habitat baseline proposal calculation

Habitat	Notes	Area (ha/m ²)	Habitat Units Delivered
<i>Off-site habitat creation</i>	.		
Rural tree	Predicted to reach 'moderate' condition meeting criteria A, B, F	0.0163	0.05
<i>Off-site habitat enhancement</i>			
Modified grassland	'Poor' to 'good' condition. Meeting criteria A, C, D, E, F, G.	0.054	0.23
Totals		0.07	0.28

If all area habitats and conditions are met off-site post intervention, then a **163.34%** uplift in biodiversity will be achieved.

6. Achieving a Net Gain in Local Biodiversity

Under the mandatory BNG regime, habitats determined by the LPA to constitute “significant on-site enhancements” must be retained, appropriately managed, monitored and reported on for a minimum of 30-years following completion of development, and this requirement must be legally secured by condition or S106 agreement

The application needs to be supported by clear, site-specific proposals e.g. details of long-term management and monitoring, a draft long-term management plan (Habitat Management and Monitoring Plan [HMMP]) - set out “initial” habitat creation and enhancement works and to demonstrate that appropriate management will be delivered so the predicted target conditions are achieved. In addition to

long-term management of these habitats, appropriate long-term management of retained habitats is required to ensure they do not decline / deteriorate in condition.

7. Conclusion

The development will not result in a measurable loss to local biodiversity.

There will be a total uplift of 10.26% biodiversity of area habitats. This will be achieved through the enhancement of the modified grassland habitat off-site from a 'poor' to 'good' condition by meeting criteria A, C, D, E, F, G. To establish a modified grassland, the existing vegetation will be cut short, and a native wildflower and grass seed mix will be distributed around the area. This will then be rolled in to increase the likelihood of plant establishment. The wildflower and grass seed mix should be selected based on soil type of area and location of seed distributors. Also, 4 small trees will be planted off-site within the blue line boundary. These will be a native species and will meet criteria A, B, F to achieve a 'moderate' condition.

8. Other recommended enhancements

A Biocube planter should also be placed within the Site to provide a habitat for a wide variety of species. This species intervention would enhance local biodiversity.

Appendix 1 Baseline Habitats Map



Appendix 2 Habitat Proposals



Appendix 3 Photographs



Photograph 1 – The central and western of the modified grassland showing physical damage caused by livestock and bare ground, looking west



Photograph 2 – The northern area of the modified grassland and bare ground, looking west



Photograph 3 – The northeastern of the bare ground, looking northeast



Photograph 4 – The southwestern of the modified grassland, looking west



Photograph 5 – Photo taken from the southwest corner looking northeast showing the modified grassland area in both the blue and red line boundary.