



BIODIVERSITY NET GAIN ASSESSMENT

- STATION WORKS, RADCLIFFE, GREATER MANCHESTER -

OCTOBER 2022

Biodiversity Net Gain Assessment

Station Works, Radcliffe, Greater Manchester

A report for

Jenkins Design Services

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EXECUTIVE SUMMARY

PENNINE Ecological were commissioned by Jenkins Designs, to undertake a biodiversity net gain (BNG) assessment for the proposed development at the former Station Works, Bury Road, Radcliffe, Greater Manchester. The assessment is in association with proposals for a newbuild social housing scheme comprising of 30 dwellings with associated access road, car parking, hardstanding, and landscaping.

The assessment includes the use of the Natural England Biodiversity Metric (version 3.1) tool to determine whether the proposals would result in a biodiversity net gain or loss. The assessment was completed using standard methodologies and there was no deviation from the recognised guidance.

The habitats encountered on site were of very low to medium distinctiveness according to the metric. The majority of the site is primarily the former factory floor (developed land; sealed surface) which is of very low distinctiveness. A small area of self-seeded secondary woodland comprising birch and willow is located along the northern perimeter of the site and is of medium distinctiveness.

Collectively the landscape proposals provide 0.48 habitat units. **This results in a 0.25 habitat unit / 108.18% net gain overall.**

However, when taking into account the above habitat enhancement and creation, there will be an overall **loss of 0.04 habitat units of woodland. The habitat trading rule for woodland has not been satisfied**

Table 1: Station Works, BNG Results

BNG Assessment Results		
	Units	%
Habitat Unit Results	+ 0.25	+ 108.18
Hedgerow Unit Results	+ 0.71	+ 100
Habitat Trading rules satisfied?	No	

The current proposals generate a notable BNG on site (+108%). However habitat trading rules have not been satisfied. The compensation for this very minor loss of woodland would need to be discussed with the planning officer (i.e. GMEU on behalf of the planning officer) to determine whether additional off-site compensation (in the form of a financial contribution) is necessary. Intrinsic site conditions must be considered when making this decision.

1. INTRODUCTION

1.1 BACKGROUND OF PROJECT

PENNINE Ecological were commissioned by Jenkins Designs, to undertake a biodiversity net gain (BNG) assessment for the proposed development at the former Station Works, Bury Road, Radcliffe, Greater Manchester. The assessment is in association with proposals for a newbuild social housing scheme comprising of 30 dwellings with associated access road, car parking, hardstanding, and landscaping.

The assessment has been undertaken to determine whether or not the development demonstrates an overall net gain or loss of biodiversity, in line with the current National Planning Policy Framework, 2021.

1.2 PURPOSE OF THIS REPORT

This document provides the results of the BNG assessment. The assessment includes the use of the Natural England Biodiversity Metric (version 3.1) tool to determine whether the proposals on-site would result in an overall net gain or net loss. This report follows the BNG guidance for Greater Manchester¹ and includes the following sections:

- Survey and assessment methodology.
- Results.
- Conclusions.
- Enhancement proposals.

¹ GMCA Biodiversity Net Gain Guidance for Greater Manchester (February 2021).

2. METHODOLOGY

2.1 UK HABITAT CLASSIFICATION BASELINE SURVEY

A UK Habitat Classification (UKHabs) (UKHab Ltd, 2020) survey was undertaken of the site by Pennine Ecological in September 2022.

The UKhab classification, habitat condition assessments and BNG assessment was undertaken by Patrick Leatham who is a Full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Patrick is a competent botanist with experience in UK Habitat Classification surveys and BNG assessment.

2.2 BIODIVERSITY METRIC V3.1 CALCULATOR TOOL

All habitats recorded within the footprint of the site during the September 2022 field survey were included in the Defra Biodiversity Metric 3.1 Metric Calculation Tool. This enabled an assessment of the baseline condition, expected habitat losses arising from the development and proposed on-site habitat mitigation following construction.

The following data sources have been used to undertake the assessment:

- Pennine Ecological (2022) – Station Works, Radcliffe, Greater Manchester: Preliminary Ecological Appraisal.
- Tel Landscape Architects (2022) – Station Works, Bury Road, Manchester: Soft Landscape Specification (Ref: MR22-112/101)

The metric calculation has been undertaken following the standard methodology (Panks et al., 2022) and in accordance with CIEEM good practice guidelines (CIEEM, 2019).

2.3 LIMITATIONS

The surveys and subsequent assessments have been undertaken with no constraints and there are considered to be no limitations to the overall BNG assessment.

3. BIODIVERSITY NET GAIN ASSESSMENT RESULTS

3.1 BASELINE HABITATS SUMMARY

The habitats encountered on site were of very low to medium distinctiveness according to the metric. The majority of the site is primarily the former factory floor (developed land; sealed surface) which is of very low distinctiveness. A small area of self-seeded secondary woodland comprising birch and willow is located along the northern perimeter of the site and is of medium distinctiveness. However it should be noted that this area of woodland / scrub is in poor condition due to its small size and limited floristic value. Other habitats on site include scattered introduced shrub comprising primarily of buddleia.

Habitats of low distinctiveness or above require compensation. Therefore the introduced shrub and self-seeded, secondary woodland on site require compensation (Panks et al, 2022).

In total, the surveyed habitats have a total habitat value of 0.23 habitat units. A summary of the baseline habitats and habitat unit information is provided in Table 2 below.

Table 2: Summary of the Habitats Baseline and Habitat Value

Habitat	Habitat Area (ha)	Habitat Unit Value	Area Retained (ha)	Area Enhanced (ha)	Habitat Unit Loss*
Other woodland; broadleaved	0.0089	0.04	0	0	0.04
Introduced Shrub	0.0964	0.19	0	0	0.19
Developed land; sealed surface	0.4723	0	0	0	0

*Habitat unit loss before mitigation.

3.2 BIODIVERSITY NET GAIN RESULTS

3.2.1 Habitat Units

All areas of self-seeded woodland and scrub will be removed from site.

The landscape proposals for the scheme include the implementation of small areas of wildflower meadow seed mix (0.032ha), ornamental/introduced shrub planting (0.0185ha), and modified grassland (0.0185ha). In addition, there will be 25 standard trees included within the scheme.

Collectively the landscape proposals provide 0.48 habitat units. **This results in a 0.25 habitat unit / 108.18% net gain overall.**

However, when taking into account the above habitat enhancement and creation, there will be an overall **loss of 0.04 habitat units of woodland. The habitat trading rule for woodland has not been satisfied.**

3.2.2 Hedgerow Units

There are no hedgerows currently on site. Approximately 185m of native hedge will be included around site. This results in a **0.71 hedgerow unit / 100% net gain overall**.

4. CONCLUSION AND ENHANCEMENT PROPOSALS

4.1 CONCLUSION

Based on the results of the Biodiversity Metric Calculator 3.1 (Panks et al., 2022), the development would result in a significant Biodiversity Net Gain overall. However the trading rules in relation to woodland have not been satisfied.

Table 3: Station Works, Radcliffe BNG Results

BNG Assessment Results		
	Units	%
Habitat Unit Results	+ 2.45	+ 272.51
Hedgerow Unit Results	+ 0.14	+ 62.48
Habitat Trading rules satisfied?	Yes	

4.2 HABITAT ENHANCEMENT PROPOSALS

The current document is a summary of net-gain calculations only and does not include detailed prescriptions for habitat creation and management. However an overview of measures to be undertaken in order to achieve net gain on-site is provided below.

4.2.1 Habitat Creation Measures

- Use of native tree species and native shrub species (e.g. apple, alder, bird cherry, oak, hazel, hawthorn) in the hedgerows. The native hedgerows should also include fruit bearing species such as hawthorn, cherry and holly. Blackthorn will not be included in the species mix as this species becomes rampant and homogenises areas of scrub habitat.
- Inclusion of wildflower seed mix (Emorsgate Seeds EM3 Special General Purpose Meadow Mixture) in communal areas as opposed to amenity grassland. This will encourage the use of the site by pollinators and other insects.

4.2.2 Habitat Trading Rules

The proposals include planting of 25 native trees. Despite this, there will be an overall loss of 0.04 woodland habitat units that cannot be compensated for on site.

The current proposals generate a notable BNG on site (+108%). The compensation for this very minor woodland habitat unit loss will need to be discussed with the planning officer (i.e. GMEU on behalf of the planning officer) to determine whether additional off-site compensation (in the form of a financial contribution) is necessary.

A number of considerations should be acknowledged by the planning officer / GMEU when making the decision:

- The existing woodland on site is self-seeded birch and willow woodland that has colonised a former factory site. The woodland has essentially formed within a hard standing substrate. The trees lack any age and maturity, with historic aerial imagery indicating that this thin strip of woodland has formed primarily within the last ten years. Due to its very small size, lack of floristic diversity and lack of variance in age, the woodland is in poor condition.
- The current proposals generate a notable net gain. Proposals to plant 25 trees, incorporate native hedgerow and sow wildflower mix are considered highly likely to improve the sites suitability for insects (pollinators) and birds and improve the overall biodiversity value of the site.
- Given the very minor overall loss of woodland habitat units (-0.04) and the significant gains in habitat units overall, in our professional opinion there is no requirement for additional compensation as the scheme already demonstrates a clear net gain and benefit to biodiversity when compared to the existing site condition.

REFERENCES

Greater Manchester Combined Authorities (GMCA) *Biodiversity Net Gain Guidance for Greater Manchester* (February 2021).

CIEEM (2019). Biodiversity net gain. Good practice principles for development; a practical guide. CIRIA publications

Pennine Ecological (2021). Preliminary Ecological Appraisal: Station Works, Bury Road, Radcliffe, Greater Manchester.

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The UK Habitat Classification (2020) System (<https://ukhab.org/>)

Appendix A: BNG Metric 3.1 Summary Results

On-site baseline	<i>Habitat units</i>	0.23
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.48
	<i>Hedgerow units</i>	0.71
	<i>River units</i>	0.00
On-site net % change (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	108.18%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	0.25
	<i>Hedgerow units</i>	0.71
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	108.18%
	<i>Hedgerow units</i>	100.00%
	<i>River units</i>	0.00%
Trading rules Satisfied?	No - Check Trading Summary ▲	

High Distinctiveness Summary

High Distinctiveness Units available to offset lower distinctiveness deficit

0.00

Unit Defecit; Like for like not satisfied

0.00

Medium Distinctiveness

Habitat Group	Group	On site unit change	Off Site unit Change	Project wide unit change	Cumulative Broad Habitat Change
Cropland - Arable field margins cultivated annually	Cropland	0.00	0.00	0.00	0.00
Cropland - Arable field margins game bird mix	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins pollen & nectar	Cropland	0.00	0.00	0.00	
Cropland - Arable field margins tussocky	Cropland	0.00	0.00	0.00	
Grassland - Other lowland acid grassland	Grassland	0.00	0.00	0.00	
Grassland - Other neutral grassland	Grassland	0.12	0.00	0.12	0.12
Grassland - Upland acid grassland	Grassland	0.00	0.00	0.00	0.00
Heathland and shrub - Blackthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Bramble scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Gorse scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hawthorn scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Hazel scrub	Heathland and shrub	0.00	0.00	0.00	
Heathland and shrub - Mixed scrub	Heathland and shrub	0.00	0.00	0.00	
Lakes - Ponds (Non-Priority Habitat)	Lakes	0.00	0.00	0.00	0.00
Lakes - Reservoirs	Lakes	0.00	0.00	0.00	0.00
Sparsely vegetated land - Other inland rock and scree	Sparsely vegetated land	0.00	0.00	0.00	0.00
Urban - Cemeteries and churchyards	Urban	0.00	0.00	0.00	0.28
Urban - Biodiverse green roof	Urban	0.00	0.00	0.00	
Urban - Urban Tree	Urban	0.28	0.00	0.28	-0.04
Woodland and forest - Other Scot's Pine woodland	Woodland and forest	0.00	0.00	0.00	
Woodland and forest - Other woodland, broadleaved	Woodland and forest	-0.04	0.00	-0.04	
Woodland and forest - Other woodland, mixed	Woodland and forest	0.00	0.00	0.00	0.00
Intertidal sediment - Littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00	
Intertidal sediment - Littoral sand	Intertidal sediment	0.00	0.00	0.00	
Intertidal Hard Structures - Artificial hard structures with Integrated Greening of Grey Infrastructure (IGGI)	Intertidal	0.00	0.00	0.00	
		0.37	0.00	0.37	

Medium Distinctiveness Summary

Medium Distinctiveness Units available to offset lower distinctiveness deficit	0.40
Medium Distinctiveness Broad Habitat Deficit to be offset by trading up	-0.04
Higher distinctiveness surplus units minus Medium Distinctiveness Broad Habitat Deficit	0.00
Cumulative surplus of units	0.40

Low Distinctiveness				
Habitat group	Group	On site unit change	Off Site Unit Change	Project wide unit change
Cropland - Cereal crops	Cropland	0.00	0.00	0.00
Cropland - Horticulture	Cropland	0.00	0.00	0.00
Cropland - Intensive orchards	Cropland	0.00	0.00	0.00
Cropland - Non-cereal crops	Cropland	0.00	0.00	0.00
Cropland - Temporary grass and clover leys	Cropland	0.00	0.00	0.00
Cropland - Cereal crops winter stubble	Cropland	0.00	0.00	0.00
Grassland - Modified grassland	Grassland	0.04	0.00	0.04
Grassland - Bracken	Grassland	0.00	0.00	0.00
Heathland and shrub - Rhododendron scrub	Heathland and shrub	0.00	0.00	0.00
Lakes - Ornamental lake or pond	Lakes	0.00	0.00	0.00
Sparsely vegetated land - Ruderal/Ephemeral	Sparsely vegetated land	0.00	0.00	0.00
Urban - Bioswale	Sparsely vegetated land	0.00	0.00	0.00
Urban - Allotments	Urban	0.00	0.00	0.00
Urban - Facade-bound green wall	Urban	0.00	0.00	0.00
Urban - Ground based green wall	Urban	0.00	0.00	0.00
Urban - Ground level planters	Urban	0.00	0.00	0.00
Urban - Other green roof	Urban	0.00	0.00	0.00
Urban - Intensive green roof	Urban	0.00	0.00	0.00
Urban - Introduced shrub	Urban	-0.16	0.00	-0.16
Urban - Rain garden	Urban	0.00	0.00	0.00
Urban - Actively worked sand pit quarry or open cast mine	Urban	0.00	0.00	0.00
Urban - Sustainable urban drainage feature	Urban	0.00	0.00	0.00
Urban - Vacant/derelict land/ bareground	Urban	0.00	0.00	0.00
Urban - Vegetated garden	Urban	0.00	0.00	0.00
Woodland and forest - Other coniferous woodland	Woodland and forest	0.00	0.00	0.00
Coastal saltmarsh - Artificial saltmarshes and saline reedbeds	Coastal saltmarsh	0.00	0.00	0.00
Intertidal sediment - Artificial littoral coarse sediment	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mud	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral muddy sand	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral mixed sediments	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral seagrass	Intertidal sediment	0.00	0.00	0.00
Intertidal sediment - Artificial littoral biogenic reefs	Intertidal sediment	0.00	0.00	0.00
Intertidal Hard Structures - Artificial hard structures	Intertidal	0.00	0.00	0.00
Intertidal Hard Structures - Artificial features of hard structures	Intertidal	0.00	0.00	0.00
Heathland and shrub - Sea buckthorn scrub (other)	Heathland and shrub	0.00	0.00	0.00
		-0.12		-0.12

Low Distinctiveness Summary	
Low Distinctiveness Net Change in Units	-0.12
Cumulative surplus of units	0.28