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FAO Steve Bourne

MULLER PROPERTY GROUP

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Dear Steve,

Biodiversity Net Gain Design Stage Report - Pendle Mill, Clitheroe.

SUMMARY

A Biodiversity Net Gain calculation was required to meet National Planning Policy Framework (NPPF, Para 170(d) and Para 175(d)) and the Ribble Valley Core strategy Key Statement EN4. The proposed development site baseline condition is of low ecological value, with a low number of urban trees on site. The BNG Metric 3.0 tool was used to calculate the baseline habitats, to compare with those of the final proposed development, the results of which are yet to be determined. This has now been updated to the Metric 4.0 and recalculated.

By adding in tree planting, wildflower areas and enhancements to the areas along the boundaries once the construction is complete, the project will achieve 113% Biodiversity Net Gain, together with added hedgerow BNG units.

INTRODUCTION

Background

Further to the Ecological surveys (Preliminary Ecological Appraisal PEA Preliminary Bat Roost Assessment PRA, BEK 2022) an assessment was required to determine the Biodiversity Net Gain of the site at Pendle Mill, Clitheroe. Full project description, and survey outcomes are described in the above documents.

Scope of the Report

The assessment takes into consideration the local and national planning policy and strategy relevant to the site, the baseline ecological condition of the site, and the proposed development plans and the enhancement plan, and to meet the requirements of The National Planning Policy Framework (2021) and standards set in the CIEEM/CIRIA *Biodiversity Net Gain. Good Practice Principles for development a practical guide.*

METHODOLOGY

Desk and Field Study Methods

- Habitats are described using the UK Habitat Classification System methods and codes (converted from JNCC Phase 1 codes where necessary), and condition assessed according to the Biodiversity Metric 4.0 Auditing and Accounting for Biodiversity Condition Assessment Sheets.
- Areas were measured using Google Earth and the clients own landscape plans.
- Surveys and assessment were carried out by C Edmondson MSc MRSB, consultant ecologist with 10yrs field survey experience and Natural England Class 2 bat licence holder.
- Survey methods used are described in detail in the PEA & PRA reports for this site. The data collected during the PEA & PRA surveys have been used to inform this report.

Approach to BNG

BNG Principles: BNG is achieved through 10 principles, the first of which is the Mitigation Hierarchy. This Hierarchy will be followed at each stage of the development.

BNG Metric: The DEFRA Biodiversity Net Gain Metric 4.0 was used to:

- Assess the biodiversity unit value of an area of land.
- Demonstrate biodiversity net gains or losses in a consistent way.
- Measure and account for direct impacts on biodiversity.
- Compare proposals for the site - such as creating or enhancing habitat on-site or off-site.
- The metric assesses existing habitats and planned new habitats created by a development or land change.

BNG Urban tree helper was used to calculate the unit value of trees present on site and post development.

Limitations

There were no limitations to this report.

BASELINE SITE CONDITIONS

Site Description

The site comprises a retail store, warehousing and associated car parking area and service yard with the majority of the area being buildings and hard standing. There is 1 individual specimen tree present in the rear service yard which will be removed. Beyond the boundary to the north and east are 19 trees and a linear area of ruderal herbs which may be adversely affected by the development. The brook is carried beneath the site via a culvert.

Important Ecological Features:

- There were no Priority Habitats or protected plant species recorded on site.
- Further surveys were carried out to determine presence/absence of bats as per the PRA (BEK, 2022). Low numbers of common and widespread bats were recorded with a single day roost in the building. Mitigation and enhancement will follow through the Natural England Protected Species Mitigation Licence once planning is granted.

Baseline Metric Calculations

Using the Metric 4.0 BNG Calculation tool, the development shows a baseline habitat unit total of 0.83 (table showing calculations at Appendix.1).

The “urban tree helper” tool was used to determine the area of individual urban trees. A full Habitat Baseline Plan is included at Appendix 2.

Table 1: Habitats at baseline calculation

Site Features:	Code (UKHABS)	Area ha/length/no.
Buildings / Hardstanding tarmac	u1b5, 90	0.39ha
Brook	r2	74m
C3.1 Tall Ruderal (around the boundary)	u1a, 16	0.02ha
A2 Dense Ivy scrub	h3	Target note only
Medium sized trees (no.)	Urban tree	18
Large sized trees (no.)	Urban tree	1

BNG GOOD PRACTICE PRINCIPLES FOR DEVELOPMENT

BNG is achieved through 10 principles, the first of which is the Mitigation Hierarchy. This Hierarchy will be followed at each stage of the development.

Principle 1: Mitigation Hierarchy

- 1: Avoid Biodiversity Loss e.g. Finding alternative sites, changing development plans etc
- 2: Minimise any loss
- 3: Mitigate for any loss
- 4: Compensate

Table 2: Hierarchy Measures

<p>1: Avoidance The CSBI defines avoidance as ‘Measures taken to anticipate and prevent adverse impacts on biodiversity before actions or decisions are taken that could lead to such impacts’.</p>	<p>The results of the Ecological appraisal at Table 2 show that there are no priority habitats present within the site boundaries, nor is the site within or close enough to cause damage to any local, national or internationally designated sites.</p> <ul style="list-style-type: none"> • Habitats present: Urban trees, ruderal herbs, culvert. • Condition: Moderate • Distinctiveness: Medium <p>Measures to avoid pollution to local sites will be implemented according to current EA Pollution Prevention Guidance.</p>
<p>2. Minimise</p>	<p>Implementing tree protection zones around those trees to be retained Retaining as many native trees as possible on site</p>
<p>3. Mitigation</p>	<p>Replacing lost habitat on site e.g planting native trees at a ratio of a minimum of 2:1 Planting native berry producing shrub species, and late flowering shrubs to replace lost ivy. Introducing areas of native and locally relevant wildflower species in the landscaping and on the boundary to enhance areas of ruderal herb.</p>
<p>4. Compensation</p>	<p>A greater number of trees will be planted than lost. A more diverse mosaic habitat will be created within the development.</p>

Principle 2: Avoid losing biodiversity that cannot be offset by gains elsewhere:

Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.

No Priority Habitats or Irreplaceable habitats are present on site.

Principle 3: Be Inclusive and Equitable

Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Biodiversity Net Gain. Achieve net gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.

- Engage with Ribble Rivers Trust to secure protection of Shaw Brook, and the Primrose Naure Reserve group, as Shaw Brook ultimately feeds into Mearley Brook and Primrose Lodge.

Principle 4: Address Risk

- This is addressed within the metric and methodology set out within this document.

Principle 5: Make a measurable Net Gain Achievement

- This will be achieved through the landscape plan and Biodiversity enhancement plan.

Principle 6: Achieve the best outcomes for biodiversity:

- This proposal is trading a low value, built environment for a more diverse mixed environment, with enhancements for birds and bats.
- The brook and retained trees will be protected throughout the development, and in the same condition as pre-works.

Principle 7: Be additional:

- This proposal aims to achieve a greater BNG than the required 10%.

Principle 8: Create a net gain legacy:

To be achieved through the “Next steps”:

- Project Implementation Construction Plan incorporating the Biodiversity Enhancement Plan.
- Biodiversity Net Gain Audit Report.
- Biodiversity Net Gain Management and Monitoring Plan.

Principle 9: Optimise sustainability & prioritise biodiversity:

- By implementing the enhancements and proposed SUDS in the landscaping plan this development will improve the sustainability of the site.

Principle 10: Be transparent:

- Communicate all Biodiversity Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

PROPOSED DESIGN

The Site proposals includes the following features in the landscape plan: (full proposal drawings at Appendix 3). Area measurements provided by landscape design.

Site Features:	Area /length/no.	BNG Units
Buildings/ Hard standing/ tarmac	2730m ²	0
Amenity lawn	870m ²	
Planting (ornamental)	116.6498m ²	.019
Wildflower areas	164m ²	0.11
Hedgerows (length)	See below	
Mixed native hedge	199.49	0.67
Beech hedge	36.48	0.12
Single sp. ornamental	49.77	0.05
Small sized trees (no.) Planted at 12-14cm girth, 350-425cm height to reach <30cm in 27yrs	12	0.0570
Medium sized trees to reach >30cm in 27yrs	2	0.0733

Site Features Retained:	Code (UKHABS)	Area ha/length/no.
Buildings / Hardstanding tarmac	u1b5, 90	0
Culvert	-	74m
C3.1 Tall Ruderal – hedgerow ground species added in as enhancement	u1a, 16	0.02
A2 Dense Ivy scrub	h3	0

In addition to the above the biodiversity enhancements will follow the guidelines of the PEA (BEK, 2022) & bat mitigation licence and will include:

- Bird boxes
- Bat boxes
- Insect bricks and hotels

BIODIVERSITY NET GAIN CALCULATION

The project shows 113% net gains as follows:

On-site baseline	<i>Habitat units</i>	0.33	
	<i>Hedgerow units</i>	0.00	
	<i>Watercourse units</i>	0.01	
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.71	
	<i>Hedgerow units</i>	0.84	
	<i>Watercourse units</i>	0.01	

On-site net change (units & percentage)	<i>Habitat units</i>			0.38	113.55%			
	<i>Hedgerow units</i>			0.84	N/A			
	<i>Watercourse units</i>			0.00	0.00%			

The full results are shown in the BNG Metric, provided as a separate document.

Assumptions made for the purpose of the calculation:

- All “planting” will include native shrub.
- All native hedgerows will be mixed species (unless where stated e.g beech)
- All trees over the red line boundary to the north and east will be retained.
- Amenity grass will be managed lawn
- Wildflower areas will be maintained annually to retain species.
- The areas around the boundaries currently classed as “Tall ruderal herb” will be re-planted/sown with native British hedgerow ground cover species.

Any changes to the above assumptions will require a re-calculation of the metric.

NEXT STEPS

The following are required to implement the 10 Principles of Biodiversity Net Gain

- Project Implementation Construction Plan incorporating the Biodiversity Enhancement Plan.
- Biodiversity Net Gain Management and Monitoring Plan.
- Biodiversity Net Gain Audit Report.

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- National Planning Policy Framework, 2021
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APPENDIX 1

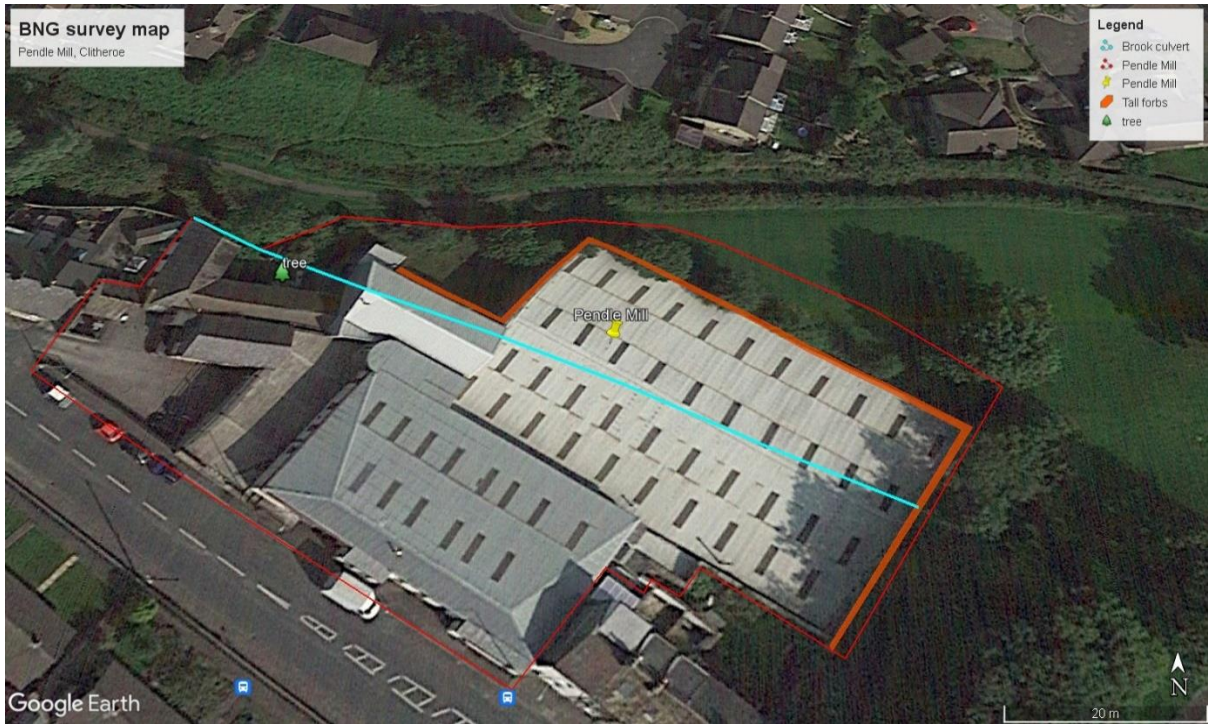
BNG Metric Output

Pendle Mill					
Headline Results					
Scroll down for final results ▲					
On-site baseline	<i>Habitat units</i>	0.33			
	<i>Hedgerow units</i>	0.00			
	<i>Watercourse units</i>	0.15			
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Habitat units</i>	0.71			
	<i>Hedgerow units</i>	0.84			
	<i>Watercourse units</i>	0.15			
On-site net change (units & percentage)	<i>Habitat units</i>	0.38			
	<i>Hedgerow units</i>	0.84			
	<i>Watercourse units</i>	0.00			
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	0.38			
	<i>Hedgerow units</i>	0.84			
	<i>Watercourse units</i>	0.00			
FINAL RESULTS					
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>	0.38			
	<i>Hedgerow units</i>	0.84			
	<i>Watercourse units</i>	0.00			

Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Habitat units</i>		113.55%
	<i>Hedgerow units</i>		N/A
	<i>Watercourse units</i>		0.00%
Trading rules satisfied?			Yes ✓
Unit Type	Target	Baseline Units	Units Required
<i>Habitat units</i>	10.00 %	0.33	0.37
<i>Hedgerow units</i>	10.00 %	0.00	0.00
<i>Watercourse units</i>	10.00 %	0.15	0.16
Unit Deficit			
			0.01

APPENDIX 2

Baseline Plan



Appendix 3

Proposed Landscape Plan

