



Biodiversity Net Gain Matrix

By

ProHort Limited

Unit 16 Sutherland Institute

Lightwood Road

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Stoke-on-Trent

ST3 4HY

For

John Marsden

Plot of Land adjacent to 57 Grimshaw Lane

Failsworth

Manchester

M40 2AX

Date of Survey: 06/08/2024

1. Introduction

ProHort Limited have been commissioned by John Marsden to conduct a Biodiversity Net Gain Assessment for plot of land adjacent to 57 Grimshaw Lane, Failsworth, Manchester, M40 2AX on 06/08/2024 by Richard Weaver of ProHort Limited.

The building is to be developed and the Local Planning Authority has requested that a Biodiversity Net Gain (BNG) Assessment is completed to support the planning application. The development includes the construction of dwelling for the use as a short-term holiday let.

Metropolitan Borough of Oldham requires developments in the town 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 take into account species-specific measures which may nevertheless make meaningful contributions to gains in local biodiversity.

2. Site and Surroundings

The area surveyed was the plot of land at plot of land adjacent to 57 Grimshaw Lane, Failsworth, Manchester, M40 2AX. It is comprised of mainly bare ground, sealed surface and ruderal species scarcely spread over the site. Site access is via Grimshaw Lane.

The property is located in the centre of Failsworth at Grid Ref: SD86730002. The area surrounding the property is made up of commercial buildings to the west adjacent to Grimshaw Lane, child play space north of the site with residential buildings to the east. South of the site are more commercial buildings and a canal.

Larger areas of better habitat can be located approximately 1.2km at Clayton Vale (LNR) and 350m at priority deciduous woodlands.



Image 1: Site boundary in red lines

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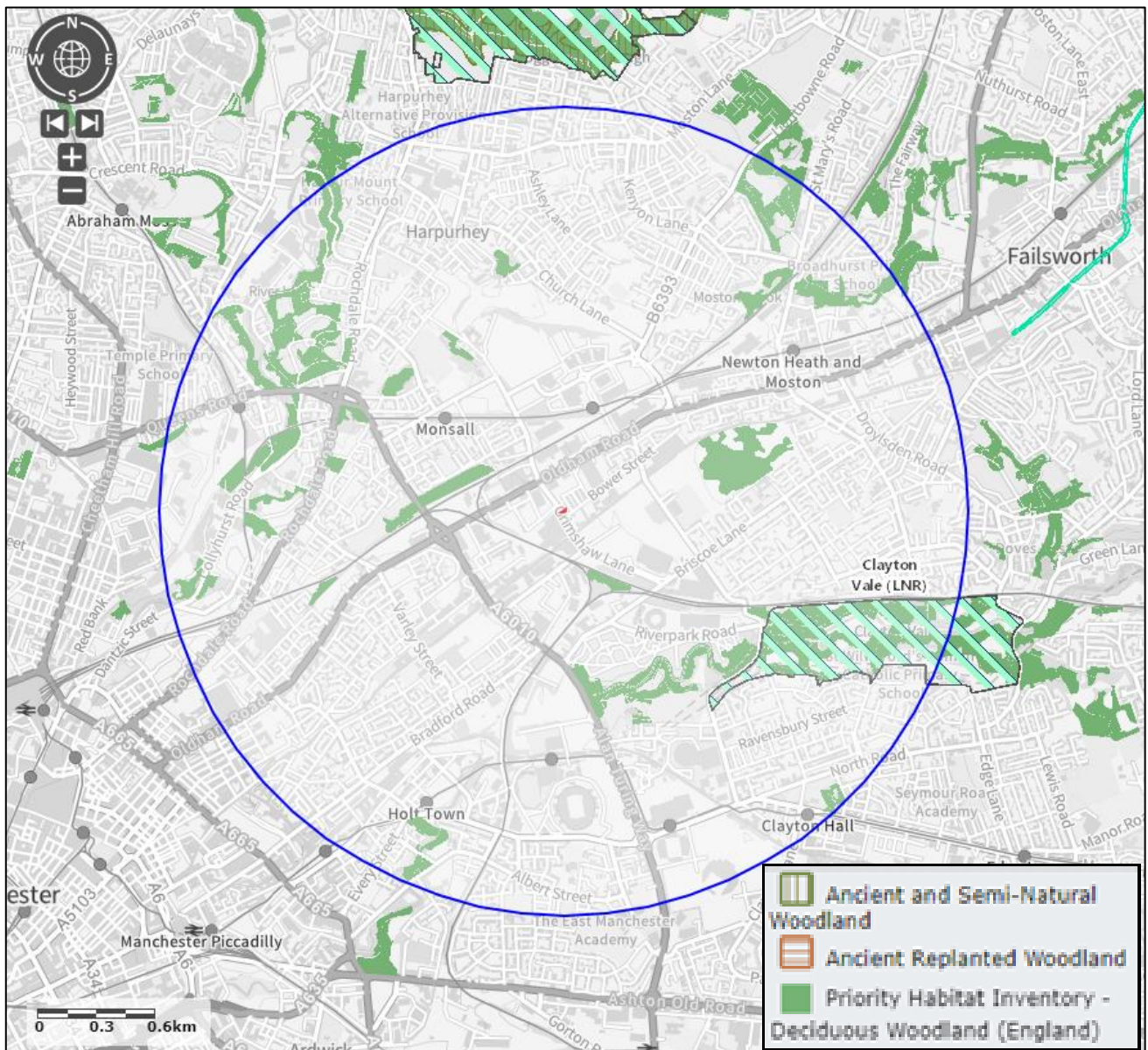


Image 2: Proximity of priority deciduous woodlands and LNR within a 2km radius

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3. Methodology

The pre-development (baseline) and post development (proposed) value of the habitats have been calculated using the DEFRA/Natural England's Biodiversity Metric 4.0 calculator. The methodology for determining habitat distinctiveness and condition values, follows the guidelines set out the User Guide and Technical Supplement for Biodiversity Metric 4.0.

The habitat mapping and condition assessments were undertaken by Owen Brown in 08/08/2024. The metric calculations were undertaken by the same ecologist.

4. Data Sources

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.

Boundary:

The boundary used for the BNG assessment is the red line application boundary for the project.

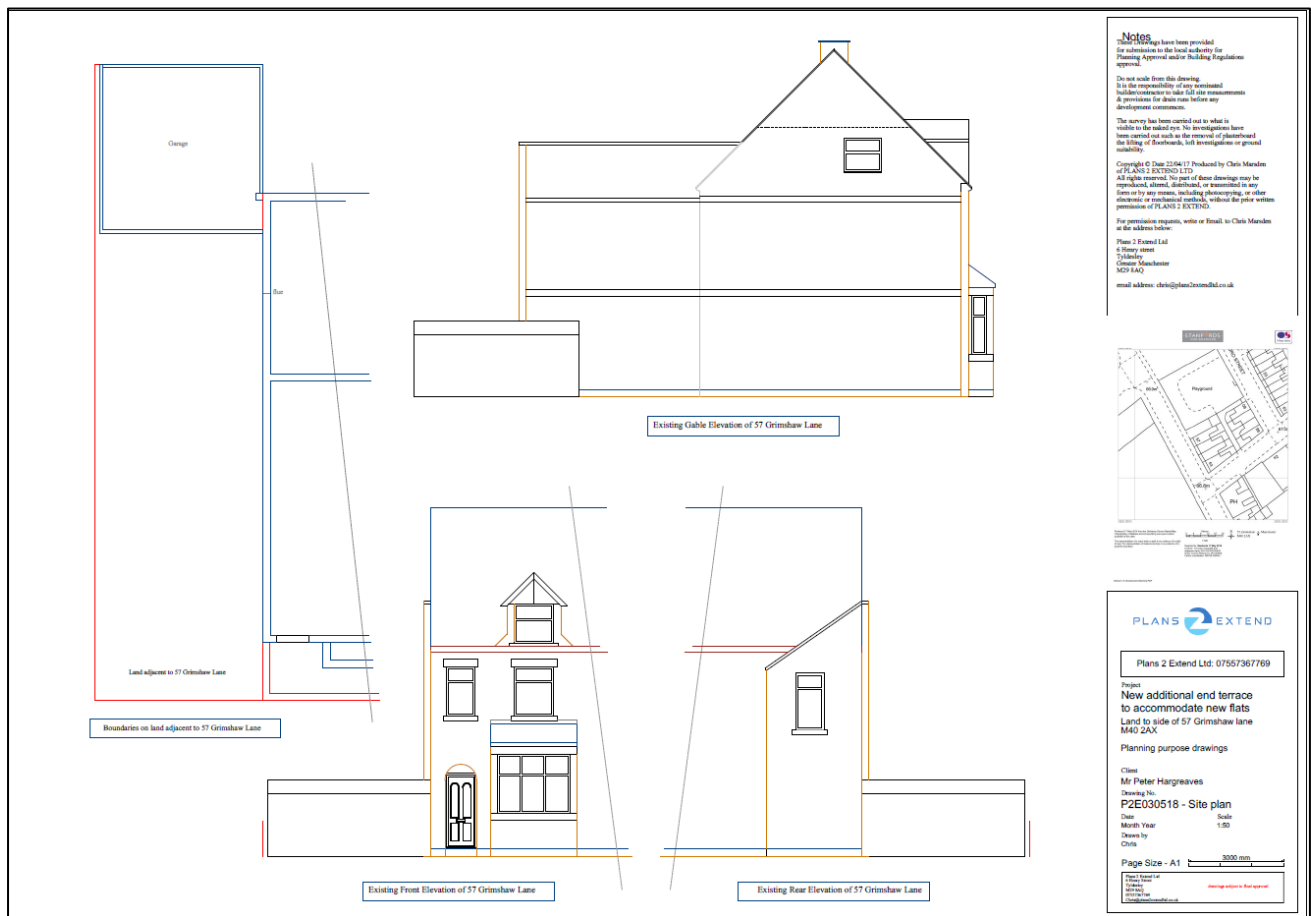


Image 3: Pre-development site plan

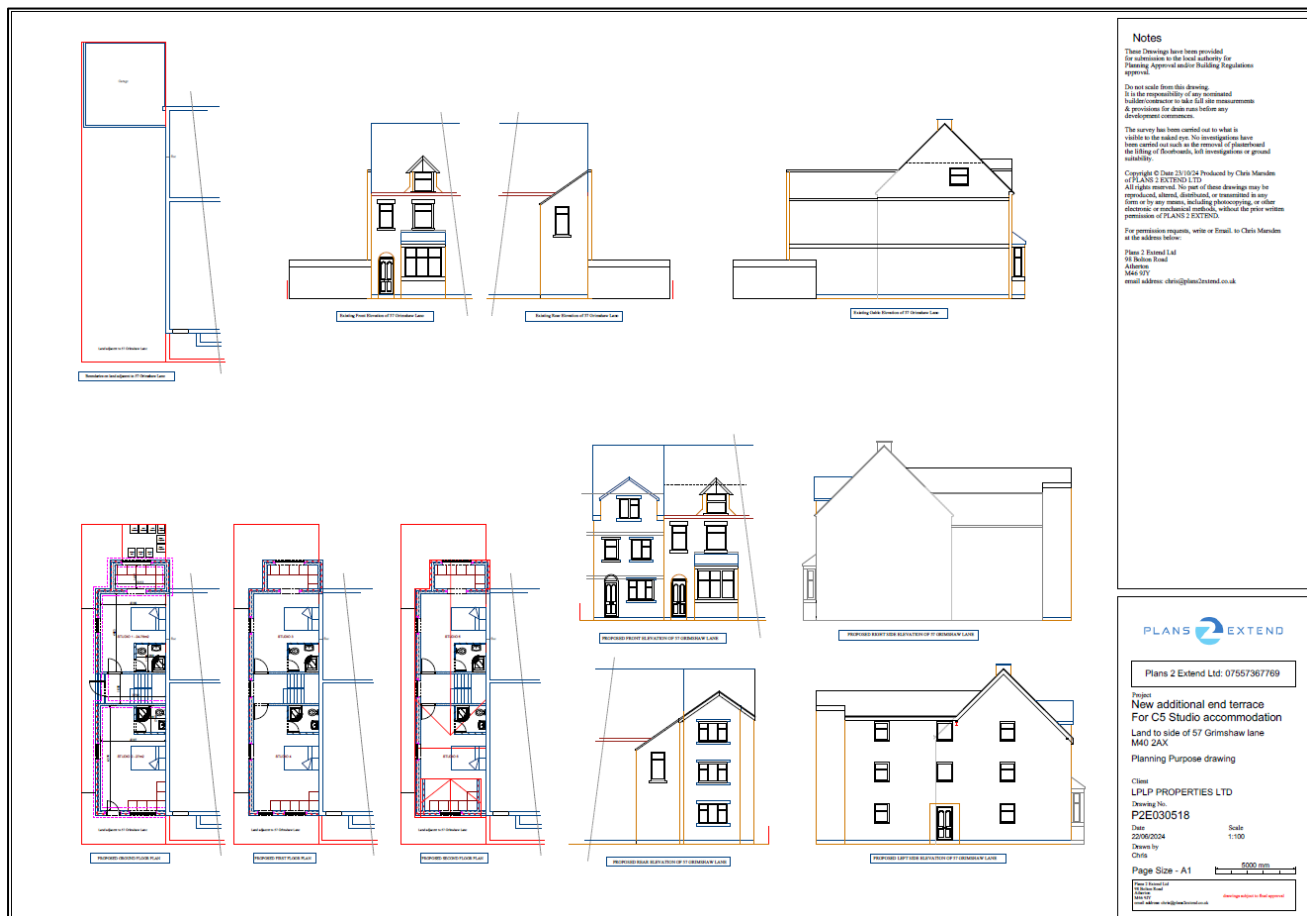


Image 4: Post-development site plan

Baseline Habitats:

In order to generate the site baseline habitat data (e.g. habitat type, condition), the following data survey was used; a phase 1 habitat survey 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.

5. Calculation of Baseline Habitats

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

6. Value of Baseline Habitats

The baseline habitats have been calculated using Biodiversity Metric 4.0 as having a baseline habitat of 0.0306 habitat units. A summary of the pre-development baseline habitat is summarised in the table below:

Broad Habitat	Habitat Type	Area (m ²)	Distinctiveness	Condition	Habitat Units	Strategic Significance
Urban	Developed land; sealed surface	30.2	Very low	N/A	0.00	Area/compensation not in local strategy/ no local strategy
Urban	Bare ground	55.8	Low	Moderate	0.02	Area/compensation not in local strategy/ no local strategy
Sparsely vegetated land	Ruderal	20.6	Low	Moderate	0.01	Area/compensation not in local strategy/ no local strategy

7. Report

A Biodiversity Net Gain Assessment using DEFRA Matrix 4.0 was commissioned for the plot of land to the side of 57 Grimshaw Lane, Failsworth, Manchester, M40 2AX by John Marsden to inform proposals for the construction of dwelling for the use as a short-term holiday let. Previous assessments have been used for reference for the BNG assessment of the habitat.

A further inspection was carried out by Owen Brown on 08/08/2024 to complete the BNG matrix. These surveys were undertaken to identify and to assess the impacts of the

development proposals for the site. The proposal involves the construction of dwelling for the use as a short-term holiday let. The development will not result in any measurable losses to the habitats as the site is in an urban context with most of the site dominated by the building footprint. It is concluded that development works can take place without the need for further surveys.

8. The Biodiversity Metric Results

For this development, which is of a relatively small scale and the site does not substantively affect any natural habitats, the Small Sites Metric Calculation Tool has been used. This Metric was considered to be appropriate for use in this case, since the site, and the development proposal are small-scale and the site does not support any notable habitats.

Using the metric, the site has been shown to support 0.0306 habitat units. Most of this value is comprised of bare ground and ruderal vegetation which will be retained or removed as part of the development. In order to achieve the 10% Biodiversity Net Gain, 0.00306 habitat units would be required, which would not result in meaningful habitat creation.

9. Achieving a Net Gain in Local Biodiversity

The development will not result in a measurable loss to local biodiversity, as the proposed development is to occur among a habitat which is not of much ecological value. Despite the limited space within site to create new habitats, enhancements of current habitats have been proposed, which will increase the biodiversity net gain.

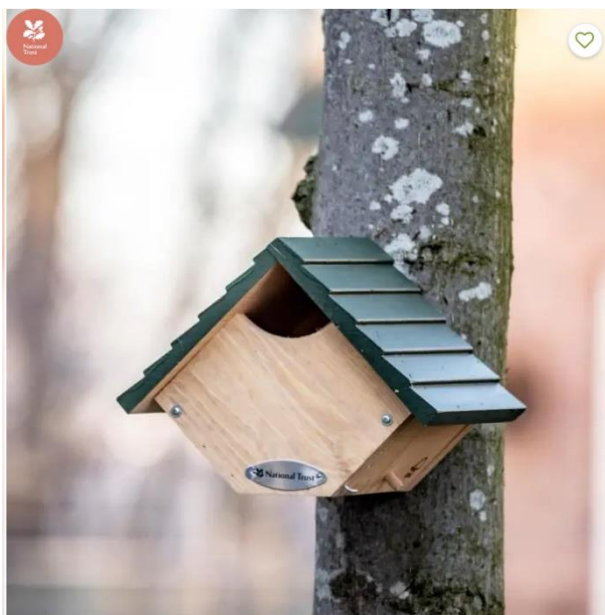
Enhancements for birds, reptiles and amphibians are recommended. It is proposed that 1 bird nesting box is installed on the new building or trees. The recommended height for bird boxes and the bat box is between 2-4m, attached to a wall, fence or tree, to ensure that they're out of reach from predators. The recommended direction to place a bird box is between north and east, as this provides natural protection from direct sunlight, wind and rain.

Bird Boxes	Bat Boxes
Schwegler 1B 32mm - great, blue, marsh, coal and crested tit, redstart, nuthatch, collared and pied flycatcher, wryneck, tree and house sparrow	Schwegler 1FS large colony box – provides large internal space, allowing for high number of bats to congregate together and makes it very popular for accommodating large colonies in summer. Dimensions: 280mm x 440mm Weight: 10kg

 Dimensions: 23cm x 16cm, weight 3.6kg	
Schwegler 1B 26mm – blue, marsh, coal and crested tit and possibly wren. All other species are prevented from using the nest box due to the smaller entrance hole. Dimensions: 23cm x 16cm, weight 3.6kg 	Schwegler bat box 1FD – for small bats, occupied by small bats e.g. pipistrelle, daubentons bats and long-eared bats. Dimensions: 160mm x 360mm Weight: 4.8kg 
Tree Creeper nest box – mount on trees to encourage treecreepers to nest where natural nest sites are rare. Dimensions: 36cm x 13cm Weight: 0.8kg	



Robin and wren nest box – by putting up nest boxes such as this, which replicates a bird's natural nesting preference, you can encourage to breed near your home.



There is limited space within the site to create new habitats, but the planting of 2 small Hawthorn trees (*Crataegus monogyna*) will achieve the necessary 10% net gain needed for this proposal. It is recommended to plant one in the front and rear garden of the site. The trees must remain for 30 years as per the government guidelines for biodiversity net gain mitigation.

This is a fantastic tree for local wildlife, as hawthorn can support a variety of species. When it blossoms in May, it provides a food source for dormice, bees and other pollinating insects. The fruit are rich in antioxidants and last well into winter, keeping small mammals and birds such as redwings (6 records within 2km), fieldfares (1 record within 2km) and thrushes (70 records of song thrush and 66 records of mistle thrush within 2km) well fed. It is the foodplant of orchard ermine, pear leaf blister and other moth caterpillars.

The leaves, flowers, wood and fruit of hawthorn, are particularly attractive to local wildlife, while its dense thorny habit makes it an excellent habitat for nesting or roosting birds. This species can grow up to 8m (with a spread of 4-8m) but can be controlled by pruning.

The following table contains management operations that apply to individual tree planting, which should be undertaken to ensure that newly planted trees remain in a healthy, attractive and safe condition. It is recommended that the services of a suitably qualified landscape architect or arboricultural consultant should be obtained in the future, relating to any tree matters, including the inspection, reports and liaison with the local planning authority any proposed tree works.

Years 1-5	Years 6-30
- Inspect trees on regular basis to ensure healthy growth - Clear any weeds from around the trees, once at the end of summer - If herbicide is required, this should be non-residual and implemented by suitable qualified individuals in line with the current standards and regulations - Failed and/or diseased trees to be removed and replaced in the next planting season - Monitor the growth of trees and carry out formative pruning as necessary to lift canopy to a minimum of 3m and to ensure good form and vigour - Remove stakes and tree guards once establishment is deemed to be complete through site visits - Keep a minimum diameter of 1000mm free of grass and weed species in the first 2 years after planting.	- Continue to inspect on annual basis to check the condition of the trees and any remaining guards, ties and stakes to be replaced and/or removed as necessary to ensure successful establishment - Undertake works as recommended by the arboriculturist to ensure continued health and safety of trees - Carry out formative pruning as necessary to lift canopy to minimum 3m and ensure good form and vigour.

- During periods of prolonged dry weather, water as necessary according to species, size and recommended guidelines

10. On-Site Habitat Proposals

To achieve a 10% net gain, creating 41.15m² of vegetated garden, planting 2 urban trees and retaining 2m² of bare ground will deliver 0.0336 habitat units giving a net total of 0.0031 units (10.03%)

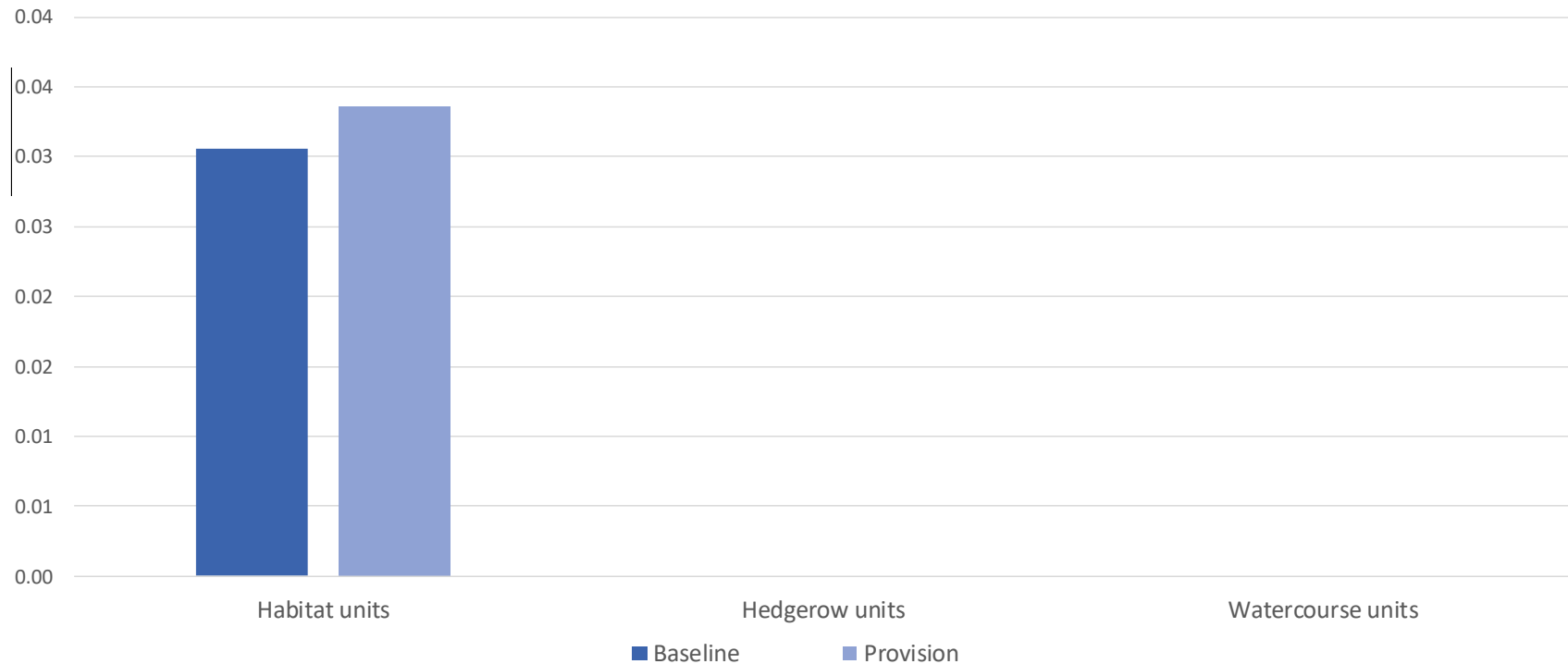
A summary of the proposed habitat units is show below:

Habitat Type	Area (m ²)	Distinctiveness	Condition	Habitat Units	Retained/enhanced/created	Time to target condition/years
Developed land; sealed surface	63.45	Very low	N/A	0.0000	Created	0
Vegetated garden	41.15	Low	N/A	0.0079	Created	1
Urban trees	81.39	Medium	Moderate	0.0249	Created	27
Bare ground	2	Low	Moderate	0.0030	Retained	0

11. Biodiversity Net Gain Matrix DEFRA 4.0: Excel Sheets

Site Name		Dwelling for Holiday Let	
Sheet Name		Headline Results	
Headline Results			
Headline		BNG Targets Met ✓	
Trading Rules		Trading Rules Satisfied ✓	
Next steps		Check for input errors/rule breaks present in the metric ⚠	
Baseline Units	Habitat units	0.0306	
	Hedgerow units	Zero Units Baseline	
	Watercourse units	Zero Units Baseline	
Post-development Units	Habitat units	0.0336	
	Hedgerow units	0.0000	
	Watercourse units	0.0000	
Total net unit change	Habitat units	0.0031 ✓	
	Hedgerow units	0.0000	
	Watercourse units	0.0000	
Total net % change	Habitat units	10.03% ✓	
	Hedgerow units	% target not appropriate	
	Watercourse units	% target not appropriate	

Chart 1 - Unit change by habitat group



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12. Biodiversity Net Gain Matrix: Data

1a. Baseline habitats

Ref	Habitat		C. Strategic significance	Areas (m ²)			Baseline results			
	A. Broad Habitat	B. Habitat type		D. Total Area	E. Area retained	F. Area enhanced	Total habitat units onsite	Area Lost	Units lost	
1	Urban	Developed land; sealed surface	Area/compensation not in local strategy/ no local strategy	30.20			0.00	30.20	0.000	
2	Urban	Bare ground	Area/compensation not in local strategy/ no local strategy	55.80	2.00		0.02	53.80	0.022	
3	Sparsely vegetated land	Ruderal/Ephemeral	Area/compensation not in local strategy/ no local strategy	20.60			0.01	20.60	0.008	
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Trees	Individual trees	Urban/rural tree	Formally identified in local strategy	0.00	0.00		0.0000	0.00	0.0000	
				Totals (areas excl trees, green walls and intertidal hard structures)	106.60	2.00	0.00	0.0306	104.60	0.0298
				Error Check 1	Areas Acceptable ✓					
				Error Check 2	Areas Acceptable ✓					
				Error Check 3	Areas Acceptable ✓					

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1b. Habitats to be created

Ref	A. Broad Habitat	B. Habitat type	Condition Assessment		D. Strategic significance	E. Total Area (m ²)	Habitat units created onsite
			Acceptable condition options	C. Targeted condition			
1	Urban	Developed land; sealed surface	N/A - Other	N/A - Other	Area/compensation not in local strategy/ no local strategy	63.45	0.0000
2	Urban	Vegetated garden	Condition Assessment N/A	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	41.15	0.0079
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20							
Trees	Individual trees	Urban/rural tree	Moderate	Moderate	Area/compensation not in local strategy/ no local strategy	81.39	0.0249
					Totals (areas excl trees, green walls and intertidal hard structures)	104.60	0.0328
					Error Check 4	Areas Acceptable ✓	

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1d. - Tree area calculator

Tree size (Diameter at breast height)	A. Total number of trees pre development	B. Number of trees retained (but not enhanced)	C. Number of new trees planted post development	Areas		
				Area pre development	Area retained	Area of new trees planted post development
Small - DBH ≤ 30cm			2	0	0	81
Medium - DBH > 30 to ≤ 60cm				0	0	0
Large - DBH > 60 to ≤ 90cm				0	0	0
Very Large - DBH > 90cm				0	0	0
Total	0	0	2	0	0	81

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