

Biodiversity Net Gain Assessment



**Brimsole Barns, Brimstone Hill,
Meopham, Kent**

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Brimsole Barns, Brimsole Hill, Meopham

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0	First issue	10 th April 2025
A	Red line boundary revised	2 nd May 2025
B	Typo	21 st May 2025
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1.0 EXECUTIVE SUMMARY

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1 EXECUTIVE SUMMARY

- 1.1 The proposed development site sits within the footprint of Brimsole Farm. It currently comprises of two agricultural barns, a stable, carport and hardstanding and has a classification as Agricultural.
- 1.2 The site is approximately 0.11 ha with direct access from Brimstone Hill adjacent to Brimsole Farmhouse, stables and further barns to the east with The Cottage to the northern boundary.
- 1.3 The site already has Planning Approval for the conversion of the existing barns into two 3 bedroom dwellings with associated car ports, garden and landscaping, Application ref. 20231221, dated December 2023. This Biodiversity Net Gain Assessment supports the application for the demolition of aforementioned barns and replacement with two 3 bedroom dwellings.
- 1.4 A site visit was undertaken by Christina Odell on 13th March 2025 who has prepared this report. She is a Chartered Member of the Landscape Institute and received Biodiversity Metric V4 Training from the Chartered Institute of Ecology & Environmental Management. (CIEEM).
- 1.5 A Preliminary Ecological Appraisal (PEA) was undertaken in February 2025 by *Greenlink Ecology Limited* which informs this Biodiversity Net Gain Assessment (BNG).
- 1.6 Although the site would have qualified for assessment via the *Small Sites Metric*, as proposing only two houses within an overall curtilage of less than 0.5 hectares, the location set within an Area of Outstanding Beauty invalidates that option.
- 1.7 The assessment indicates that the current landscape design would result in a gain of 0.25 habitat units which equates to a 56.28% biodiversity net gain which is a fantastic improvement given the 10% minimum stipulated by the local planning authority.
- 1.8 There is also a net gain in hedgerow units of 0.21, resulting in 1078.58% uplift.

2 BIODIVERSITY NET GAIN – AN OVERVIEW

- 2.1 The National Planning Policy Framework¹ states that new development should protect and enhance the natural environment by “*minimising impacts on and providing net gains for biodiversity*”.

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2.2 This planning policy framework has been strengthened further by Biodiversity Net Gain (BNG)² becoming a mandatory requirement for all major developments since 12th February 2024, and for small sites from 2nd April 2024, as a result of provisions in the Environment Act 2021³. BNG is an approach to development that makes sure that habitat for wildlife is in a better state than it was before development.

2.3 Although the site would have qualified for assessment via the Small Sites Metric, as proposing only two houses within an overall curtilage of less than 0.5 hectares, the location set within an Area of Outstanding Beauty invalidates that option. Consequently, for the purposes of this planning application a Biodiversity Net Gain assessment has been undertaken using Biodiversity Metric 4.0⁴.

3 THE SITE

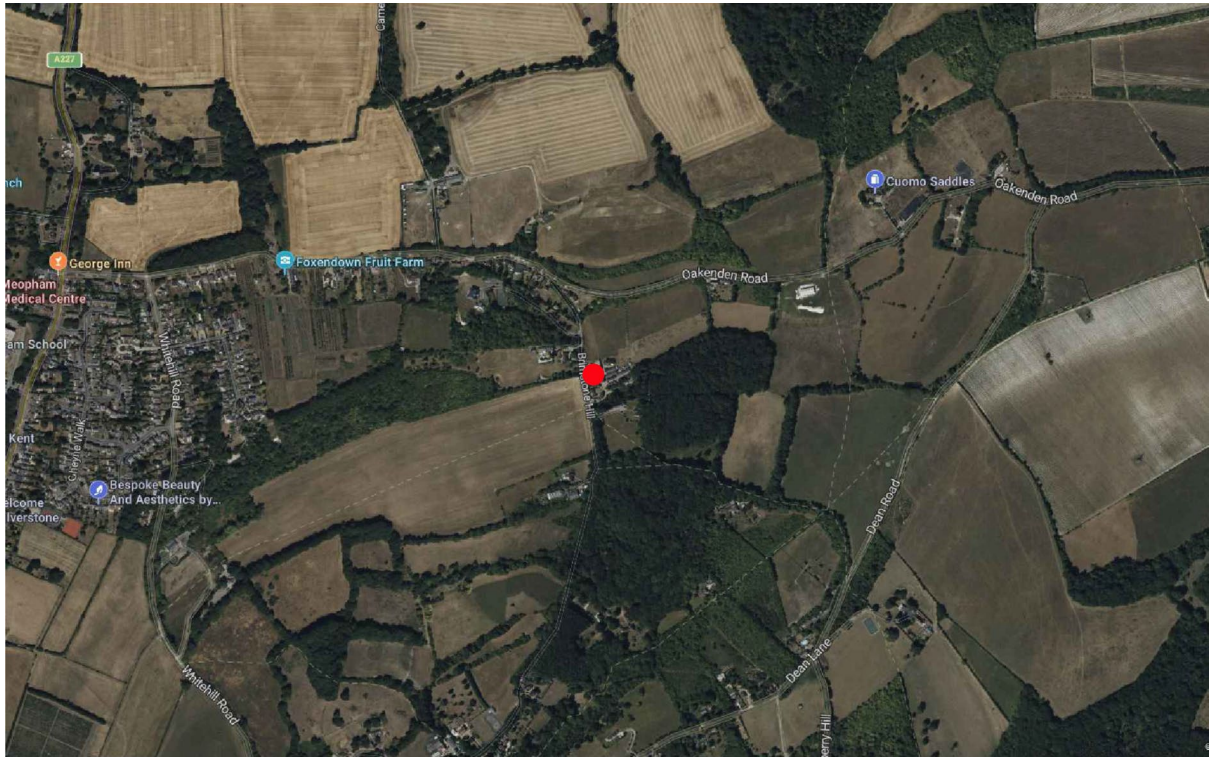


Fig.1: Aerial view of the site courtesy Bing Maps

3.1 The site location is shown in the above image with Brimstone Hill to the immediate west bordering site, Oakenden Road to the north and Brimstone Wood to the south-east.

3.2 Set within the Metropolitan Greenbelt, the site grid reference is TQ 6553 6583 and falls within Meopham Parish, but under the authority of the Gravesham Borough Council.

3.3 Approximately 0.11ha, and previously classified as Agricultural, the two barns and stables are disused. There are areas of associated hardstanding, gravel with ruderal

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vegetation, a dry pond surrounded by grass verges with hedgerows and immature trees.

- 3.4** The proposal is for the construction of 2 three bedroom dwellings with associated car parking and landscaping as shown in the Landscape Masterplan below.



Fig.2: Landscape Masterplan – Christina Odell, CMLI

4 METHODOLOGY

- 4.1** An initial desktop study, based on an examination of MAGIC⁵ - the Defra website providing geographic information about the natural environment. The results are as follows:-

- The site sits within the statutorily designated Kent Downs Area of Outstanding Natural Beauty (AONB).
- The closest Special Area of Conservation is The North Downs Woodland SAC, approximately 2km to the south-east.
 - The Halling to Trottscliffe Escarpment Site of Special Scientific Interest, SSSI also forms part of this area of 600+ acres of beech and yew woodland amongst a rich mosaic of scrub and unimproved grassland on steep slopes of chalk.
- Approximately 4.5km to the north east lies Cobham Woods SSSI. This 600+ acre site managed by the National Trust ⁶ 'is one of the very few ancient

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wood pastures still retaining its full structure of open grassland and mature trees.'

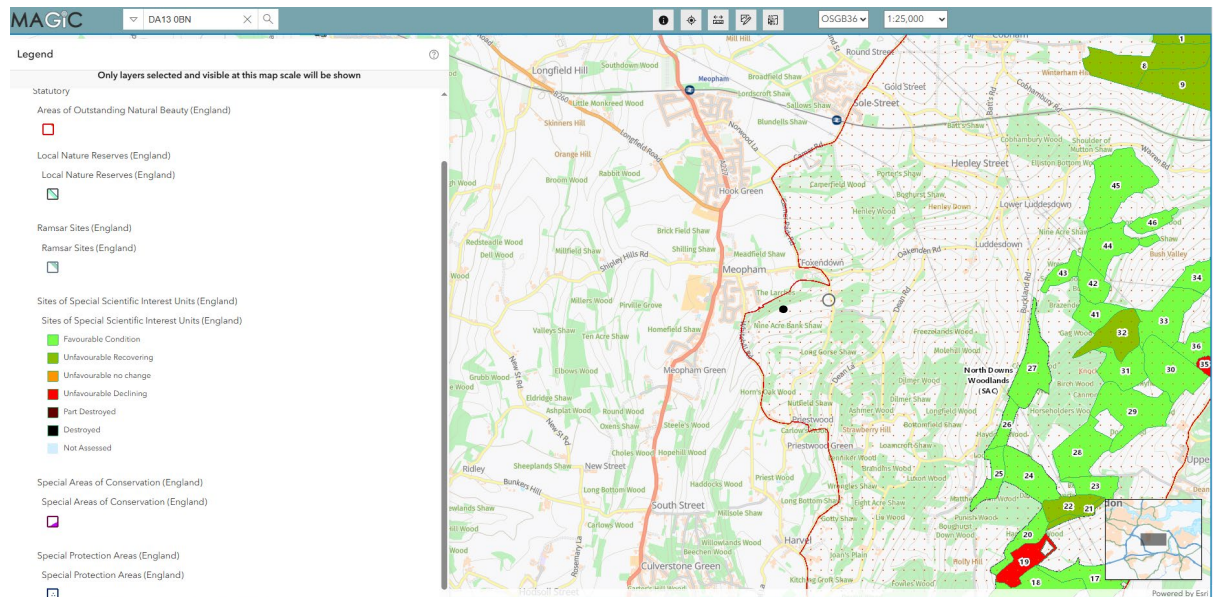


Fig.3: Designations Plan - MAGIC

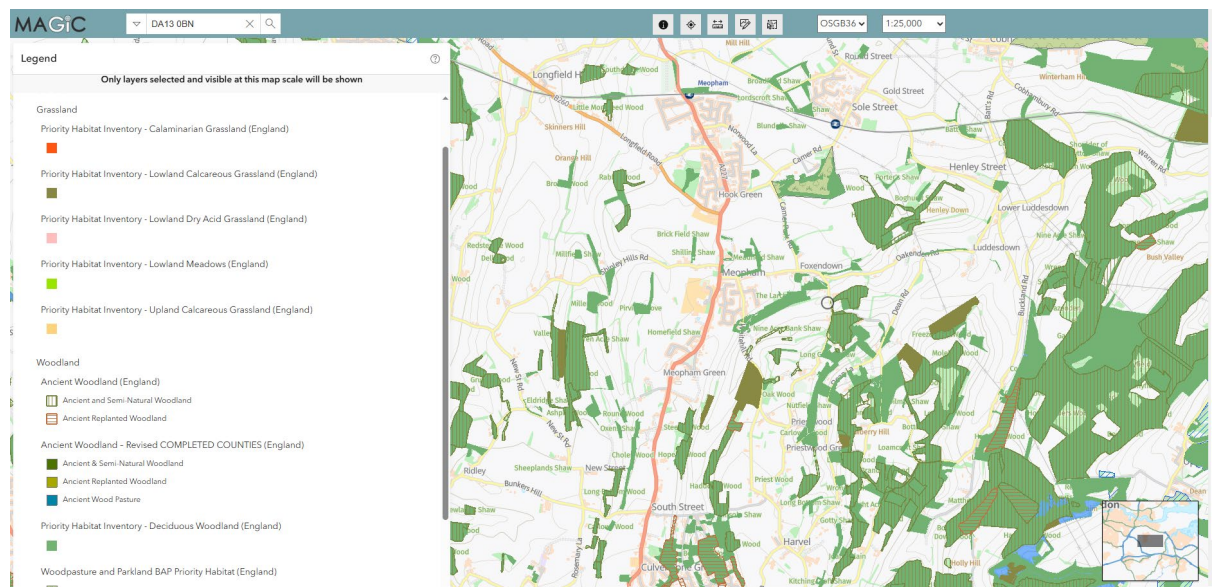


Fig.4: Priority Habitats Plan - MAGIC

4.2 The site has far more Priority Habitats within close proximity, as highlighted in the above plan. These are a 'list of 56 habitats identified as priority for biodiversity conservation in England based on the UK Biodiversity Action Plan.'¹² This was devised by the Joint Nature Conservation Committee, JNCC 1995-1999 and revised in 2007. This aids landowners and governing bodies to make informed decisions to help protect and enhance the natural environment.

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4.3 The majority of nearby Priority Habitats are identified as Ancient and Semi-Natural Woodland with a greater proportion to the east within the SSSIs. However, there are also some patches of Low Calcareous Grassland to the south and a parcel of Woodpasture and Parkland approximately 3km to the north.

4.4 A site visit was undertaken on 13th March 2025 to assess the habitats and potential landscape opportunities. The weather was overcast with intermittent drizzle.

4.5 Five distinct baseline habitats were recorded, in addition to the three buildings and patches of concrete sealed surface.

- *Sparsely vegetated urban land – u1f*

The driveway and parking area is a matrix of bare ground, mosses and grasses interspersed with nettle - *Urtica dioica*, dead nettle – *Lamium purpureum*, thistle – *Cirsium spp*, plantain – *Plantago spp*, Cleavers – *Galium aparine* and chickweed – *Stellaria media*.



- *Bioswale*

This concrete basin accommodates run-off from the road and environs. It is mainly dry throughout the year as pictured overleaf. Given the late winter / early spring site survey most species were dormant but a few were identified as: Common reed – *Phragmites australis*, Sedges – *Carex spp.*, Rush – *Juncus spp*, Flowering rush – *Butomus umbellatus*, Purple loosestrife – *Lythrum salicaria*.

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- *Individual trees – u1b & non-native hedge*

Three willow- *Salix spp*, two shown below along the roadside boundary with the cherry laurel – *Prunus laurocerasus* hedging. The other juvenile willow is situated by the carport on the eastern side of the dry pond.



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- *Modified grassland – g4*

Grass verge as shown below with evidence of meadow grass – *Poa annua*, Perennial ryegrass – *Lolium perenne*, meadow grass – *Poa pratensis*, dock – *Rumex obtusifolius*, dandelion – *Taraxacum officinale*, clover – *Trifolium repens*.



4.6 Interim Strategic Significance Guidance for BNG in Kent & Medway Guidance Note⁸ was used to determine Strategic Significant Value.

5 CALCULATIONS

5.1 The Biodiversity Metric 4.0 is used to determine the biodiversity value (measured in habitat units) of the development site before development (i.e. the baseline habitats) and the biodiversity value of the habitats that will be established on site, or offsite, as a result of the development (i.e. the proposed habitats). The biodiversity net gain, or loss, is the change, expressed as a percentage, in the number of post-development habitat units relative to the number of baseline habitat units.

Baseline Habitats

5.2 For the calculation of the baseline habitat units, reference to Greenlink Ecology's PEA⁹ in conjunction with a walkover undertaken on 13th March 2025 established areas. This transposed onto the OS plan as shown below:-

[illegible]

5.3 The baseline habitats are: *Buildings, Sealed surface, Modified grassland, Sparsely vegetated urban land, Bioswale, Non-native hedgerow and Urban trees.*

5.4 The *Strategic Significance* of these habitats was cross-referenced in *KCC Interim Guide* and as not listed, automatically assigned a *Low Strategic Significance*.

5.5 The metric automatically assigns habitats a Distinctiveness score based on their intrinsic value and rarity. The *Condition* of the habitat is determined by information gathered during the field survey. Some low value habitats are given a *default N/A Condition* status in the metric. A summary of the key factors determining the calculation of baseline habitat units is provided in *Table 1* overleaf.

Habitats	Area (ha)	Distinctiveness	Condition	Rationale for Condition
Developed land, sealed surface	0.0354	V.Low	N/A	Default condition in metric
Ruderal/ephemeral	0.0434	Low	Poor	Default condition in metric
Bioswale	0.0276	Low	Poor	Concrete base, minimal biodiversity in evident flora
Modified grassland	0.0076	Low	Moderate	Seeded over gravel, <10 species recorded per m2

Table 1

5.6 These key factors alongside other parameters including the three urban trees, results in a **total 0.25 baseline habitat units**. (For the full calculation, see the accompanying spreadsheet: *Statutory Biodiversity Metric BRIMSOLE BARNS.*)

5.7 The same exercise was undertaken for the hedgerows on site as can be seen below in Table 2. This generates 0.02 baseline hedgerow units.

Hedge Type	Length (km)	Distinctiveness	Condition	Rationale for Condition
Non-native hedgerow	0.018	V.Low	Poor	Cherry Laurel hedge with large gaps, some crown lifted

Table 2

Proposed Habitats

5.7 The proposed habitats have been informed by the Landscape Masterplan, ref. 2506-100 dated April 2025 by Christina Odell, CMLI, as shown in Fig 2, Page 6.

5.8 The proposed habitats are: *Bioswale, Introduced shrub, Vegetated garden, Urban trees and Ground based green wall.*

5.9 The metric automatically assigns proposed habitats a Distinctiveness score based on their intrinsic value and rarity. The likely future Condition of the proposed habitats is based on professional judgement informed by the context of the site and the objectives and intended outcome of the proposed landscaping proposals. A summary of the key factors determining the calculation of proposed habitat units is provided in Table 3 overleaf.

Habitats	Area (ha)	Distinctiveness	Condition	Rationale for Condition
Individual trees	0.0048	Medium	Moderate	Will be supported by 30 year management plan
Bioswale	0.0044	Low	Moderate	Will be supported by 30 year management plan
Ground based green wall	0.0051	Low	Moderate	Will be supported by 30 year management plan
Vegetated garden	0.0213	Low	N/A	Default condition in metric
Introduced shrub	0.0035	Low	N/A	Default condition in metric

Table 3

Hedge Type	Length (km)	Distinctiveness	Condition	Rationale for Condition
Species rich native hedgerow	0.029	Moderate	Moderate	Will be supported by 30 year management plan

Table 4

5.10 The additional hedgerows generate a **total of 0.19 proposed hedgerow units, representing a gain of 1078.58%.**

Enhanced Habitats

5.11 Given the particular site conditions, the bioswale will be enhanced (and extended) – see Table 5 below.

Habitats	Area (ha)	Distinctiveness change	Condition change	Rationale for Condition
Bioswale	0.0276	Low - Moderate	Low - Moderate	Overseeded with biodiverse pond edge UK native seed mix of 25 species. Will be supported by 30 year management plan

Table 5

5.12 These key factors result in a **total of 0.14 proposed habitat units** which is a **56.27%** biodiversity net gain. (For the full calculation, see the accompanying spreadsheet: *Statutory Biodiversity Metric BRIMSOLE BARNS.*)

Conclusions

5.13 The value of the baseline habitat units is 0.25

5.14 The value of the proposed habitat units is 0.40

5.15 The biodiversity net gain score is derived by taking the baseline total from the proposed total, dividing this by the baseline total, and multiplying by 100:

Habitat Net Gain

$$0.40 - 0.25 = 0.14$$

$$(0.14 / 0.25) \times 100 = 56.27\%^*$$

(*Actual results calculated to further decimal points)

5.16 The value of the hedgerow units is 0.02

5.17 The value of the proposed hedgerow units is 0.19

Hedgerow Net Gain

$$0.21 - 0.02 = 0.19$$

$$(0.19 / 0.02) \times 100 = 950\%^*$$

(*Actual results calculated to further decimal points)

5.18 Consequently, the proposals would result in a 56.27% biodiversity net gain based on the Biodiversity Metric 4.0 calculations – see Headline Results page from the metric overleaf.

Brimsole Barns		Return to results menu	
Headline Results			
Scroll down for final results ↴			
On-site baseline	Habitat units	0.25	
	Hedgerow units	0.02	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.40	
	Hedgerow units	0.21	
	Watercourse units	0.00	
On-site net change (units & percentage)	Habitat units	0.14	56.27%
	Hedgerow units	0.19	1078.58%
	Watercourse units	0.00	0.00%
Off-site baseline	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	Habitat units	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.14	
	Hedgerow units	0.19	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	Habitat units	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.14	
	Hedgerow units	0.19	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	56.27%	
	Hedgerow units	1078.58%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

Fig 4: Headline results from the Metric

5.19 Given that both the *NPPF* & *Gravesham Borough Council's* biodiversity net gain requirement is 10%, the proposals far exceed this as illustrated in the bar charts overleaf.

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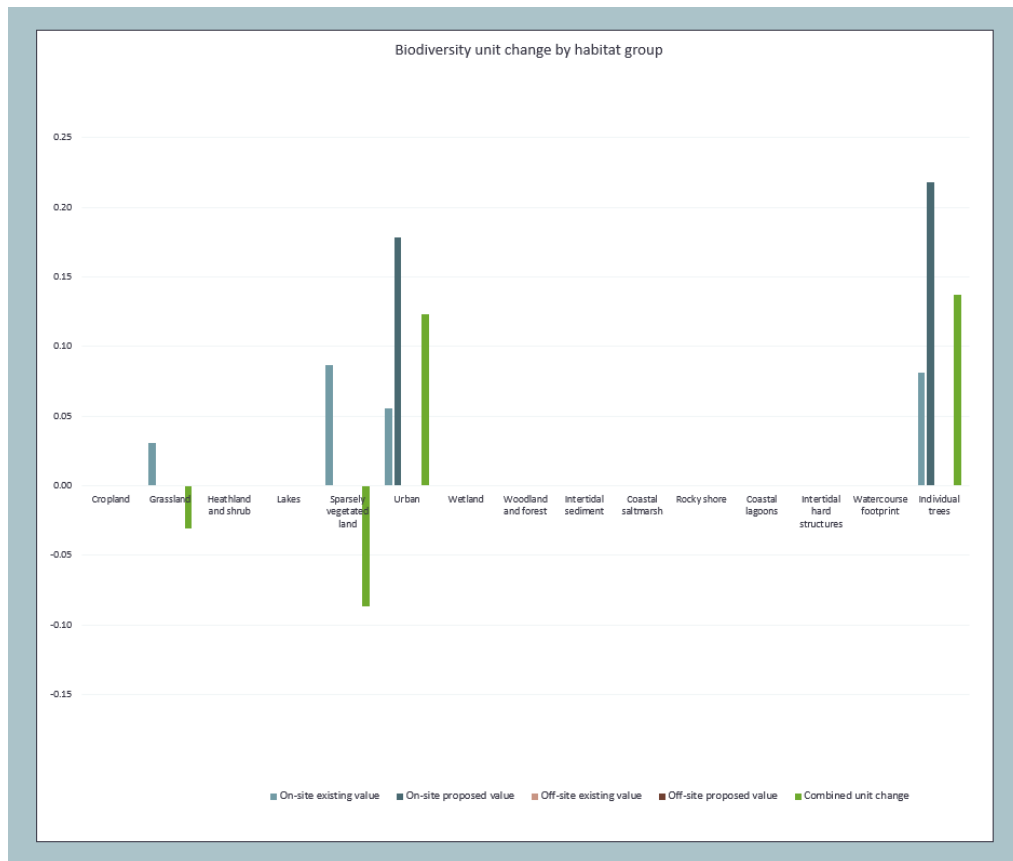


Fig 5: Graphical representation of Area Change by Habitat from the Metric

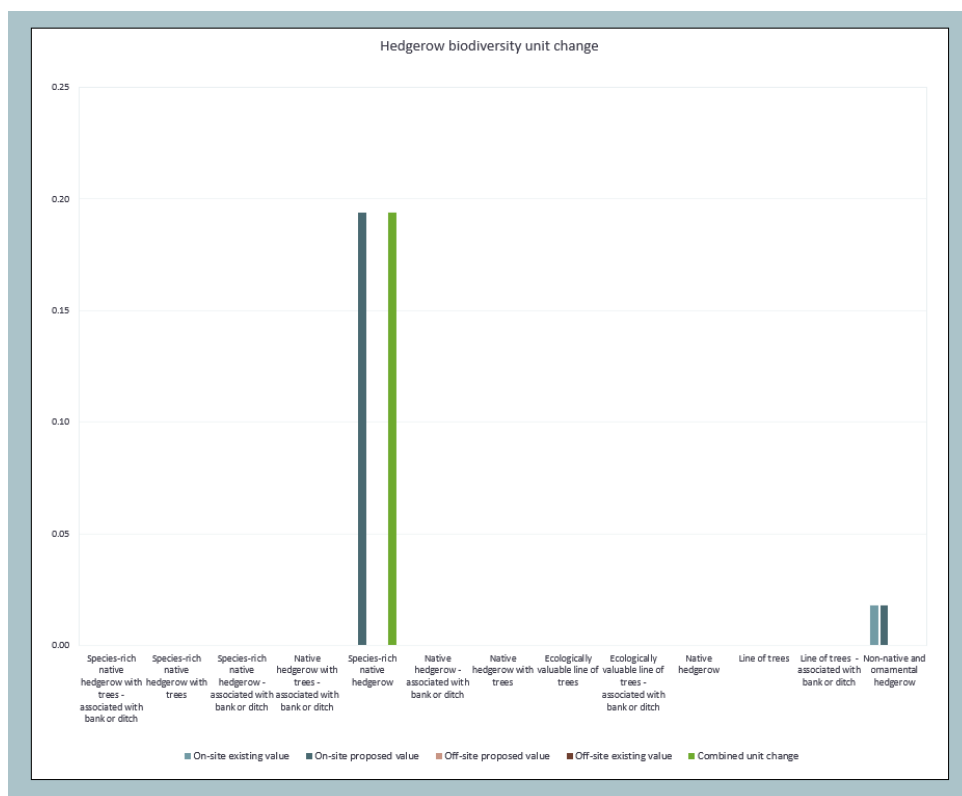


Fig 6: Graphical representation of Hedgerow Change from the Metric

- 5.19** Furthermore, the Trading Rules have been satisfied meaning that the gains made in habitats and hedgerows are of a 'like-for-like' or better basis.
- 5.20** In conclusion, developing this parcel of under-utilised previous agricultural land to a residential site with managed communal space generates a substantial biodiversity gain in terms of mixed native hedgerow, informal green walls, native trees and a revamped bioswale.
- 5.21** In conjunction with adherence to the accompanying 30 year management plan this development offers ecological enhancement to the local environment.

6 REFERENCES

1. National Planning Policy Framework – GOV.UK (www.gov.uk)
2. Biodiversity Net Gain – GOV.UK (www.gov.uk)
3. Environment Act 2021 (www.legislation.gov.uk)
4. Small Sites Metric Statutory Biodiversity Metric User Guide (www.publishing.service.gov.uk)
5. MAGIC – (www.defra.gov.uk)
6. National Trust (www.nationaltrust.org.uk)
7. UK Biodiversity Action Plan (www.jncc.gov.uk)
8. Biodiversity Net Gain Guidance Note – Interim Strategic Significance Guidance for BNG in Kent & Medway (www.makingspacefornaturekent.org.uk)
9. Preliminary Ecology Appraisal, ref: 23_1714_ReportX03_MF_AT by Greenlink Ecology dated 25/02/25