

Biodiversity Net Gain Assessment

Eastmere Stables, Eastergate Lane, Eastergate, Chichester, West Sussex PO20 3SJ

Eastmere Paddock Ltd.

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Industry Guidelines and Standards

This report has been written with due consideration to:

- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management, Construction Industry Research and Information Association & Institute of Environmental Management and Assessment (2019). Biodiversity Net Gain – Good Practice Principles for Development.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate.

The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Limited was instructed by Eastmere Paddock Ltd. to undertake a Biodiversity Net Gain (BNG) Assessment at Eastmere Stables, Eastergate Lane, Eastergate, Chichester, West Sussex PO20 3SJ (hereafter referred to as “the site”). The survey was required to inform a planning application for the erection of 9 residential dwellings with associated hard and soft landscaping (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The current proposed plan results in a **10.56% net gain in habitat units**. This is more than the 10% target of biodiversity net gain but **does not pass trading rules**.

The current proposed plan results in a **69.30% net loss in hedgerow units**. This is less than the 10% target of biodiversity net gain.

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping could be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain. However, the site is not subject to biodiversity net gain legislation as the development application was submitted prior to the 2nd April 2024 when BNG became mandatory for developments of 9 dwellings or less.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Eastmere Paddock Ltd. to undertake a Biodiversity Net Gain (BNG) Assessment at Eastmere Stables, Eastergate Lane, Eastergate, Chichester, West Sussex PO20 3SJ (hereafter referred to as “the site”). The survey was required to inform a planning application for the erection of 9 residential dwellings with associated hard and soft landscaping (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

This report should be read in conjunction with the following documents:

- Defra Statutory Biodiversity Metric. (BNG 1&2 – Eastmere Stables, PO20 3SJ)(Arbtech 2024).
- Baseline Habitat Condition Assessment (BHCA)(Arbtech 2024).
- Arboricultural Impact Assessment (AIA)(Arbtech 2024).

1.2 Site Location, Geology and Landscape Context

The survey site is centred on National Grid Reference SU 95206 06086 and has an area of approximately 0.7ha. The site comprises buildings, modified grassland, introduced shrubs and trees located north of Eastergate approximately 9km east of Chichester. The surrounding landscape comprises a mosaic of agricultural and suburban residential developments associated with the towns of Fontwell and Eastergate. A site location plan is provided in Appendix 2.

1.3 BNG Informative

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline situation. In order to achieve BNG, a project must be able to demonstrate that it has followed all 10 of the Principles of Biodiversity Net Gain (as outlined in the *British Standard 8683:2021 Process for Designing and Implementing Biodiversity Net Gain*).

The legalised Environment Act (2021) requires developments in England to demonstrate a measurable net gain in biodiversity and sets a target of a minimum of 10% BNG for all developments. It also stipulates that a management plan with a minimum 30-year term, should be adopted to ensure biodiversity net gain can be delivered. The requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2023).

The DEFRA Statutory Biodiversity Metric is the widely accepted tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development in order to determine the overall change in biodiversity value as a result of the proposed development. The Statutory Biodiversity Metric has separate BNG assessments for areas of habitat, hedgerows and watercourses. The biodiversity value of a site should be maximised. However, it may not always be possible to achieve a 10% biodiversity net gain within a site and therefore the Statutory Biodiversity Metric can also account for offsite habitat creation, where land is available. Alternatively, developers can seek to provide an agreed financial contribution to an appropriate third party (such as the Local Authority, the UK Government or another landowner) to deliver the required biodiversity net gain elsewhere on their behalf.

2.0 Methodology

2.1 *Baseline Biodiversity Value*

The baseline BNG Calculation was informed by the baseline habitat condition assessment (BHCA)(Arbtech 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The BHCA (Arbtech 2024) classified the habitats on site according to The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023).

Habitat Area/Length

The area or length of each habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of a similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or lost (i.e. destroyed by proposed development).

Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 8-1 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric (Natural England, 2023).

Strategic Significance

Strategic significance was assigned for each habitat based upon a review of the following:

- Ecological value
- Function within the landscape
- Any site or habitat allocations under the Adopted Arun Local Plan 2018

2.2 *Post Development Biodiversity Value*

The post development BNG Calculation was informed by the proposed landscape plan (Millstone Landscape Ltd, October 2024) which is included in Appendix 1. A post development habitat plan is provided in Appendix 4.

Habitat Classification

Proposed habitats were translated to their equivalents in the UK Habitat Classification using The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023) and the information provided within the proposed landscape plan (Millstone Landscape Ltd, October 2024).

Habitat Area/Length

The area or length of each proposed habitat was calculated using qGIS software. In calculating the area or length of each habitat, habitats which occur as two or more isolated parcels across the site were combined, where they were deemed to be of similar composition and condition. Distinctions were made between habitats to be retained (i.e. left as found in baseline), enhanced (i.e. improved condition) or newly created.

Areas of scattered trees were calculated using the Tree Helper tool within the Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 8-1 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

Target habitat condition for each proposed habitat was determined assessed using the Temporal Multipliers Tool and the Enhancement Temporal Multipliers Tool included in the Statutory Biodiversity Metric spreadsheet as well as the relevant condition assessment sheets found in the Statutory Biodiversity Metric User Guide (Natural England, 2023). This is based on the assumption that a 30-year management plan will be adopted for the site.

Strategic Significance

Strategic significance was assigned for each proposed habitat based upon a review of the following:

- Likely ecological value
- Function within the landscape
- Any site or habitat allocations under the Adopted Arun Local Plan 2018

2.3 Limitations

It was not considered that there were any significant limitations to the completion of this assessment.

3.0 Results

3.1 Baseline Habitats

Table 1 details the baseline habitats present within the site along with their area/length, condition and strategic significance.

Table 1: Baseline Biodiversity Value

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.092 ha	As described in the BHCA.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Artificial unvegetated, unsealed surface	0.363 ha	As described in the BHCA.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Introduced shrub	0.025 ha	As described in the BHCA.	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy
Modified grassland	0.240 ha	As described in the BHCA.	Poor	Area/compensation not in local strategy/ no local strategy
Urban tree	0.053 ha	As described in the AIA.	Moderate	Area/compensation not in local strategy/ no local strategy
Line of trees	0.044 km	As described in the AIA.	Poor	Area/compensation not in local strategy/ no local strategy

3.2 Post Development Habitats

Table 2 details the post development habitats present within the site along with their area/length, condition and strategic significance.

Table 2: Post Development Biodiversity Value

Habitat	Area / Length	Description	Target Condition	Strategic Significance
Developed land; sealed surface	0.327 ha	As shown on the landscape plan.	N/A - Other	Area/compensation not in local strategy/ no local strategy
Vegetated garden	0.329 ha	As shown on the landscape plan.	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy
Introduced shrub	0.005 ha	Area to the south of the site which will be planted with ornamental shrubs as shown on the landscape plan.	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy
Modified grassland	0.018 ha	Area to the southeast of the site	Poor	Area/compensation not in local strategy/ no local strategy
Other neutral grassland	0.043 ha	Area to the central north of the site which will be managed as a communal meadow area.	Moderate - Can be achieved by ensuring the habitat is a good example of the UK Habs definition and meets an additional 2 or 3 of the following criteria: <ul style="list-style-type: none"> - Varied sward height with >20% above 7cm and >20 below 7cm. - Cover of bare ground is between 1-5% of total grassland. 	Area/compensation not in local strategy/ no local strategy

			<ul style="list-style-type: none"> - Cover of bracken is <20% of total grassland and cover of scrub is <5%. - There is no presence of invasive species and species indicative of suboptimal condition account for <5% cover of total grassland. 	
Urban tree	0.033 ha	8 small trees to be planted not within vegetated garden areas as shown on the landscape plan.	Poor	Area/compensation not in local strategy/ no local strategy
Non-native and ornamental hedgerow	0.028 km	Hedgerow along the border of the communal grassland area to the north of the site.	Poor	Area/compensation not in local strategy/ no local strategy

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Statutory Biodiversity Metric calculation tool. The headline results are presented in Appendix 5.

Areas of Habitat

The baseline habitat value of the site is 0.95 units, comprising 0.05 units of introduced shrub, 0.48 units of modified grassland and 0.42 units of urban trees.

The post development habitat value of the site is 1.06 units, comprising 0.63 units of vegetated garden, 0.01 units of introduced shrubs, 0.03 units of modified grassland, 0.29 units of other neutral grassland and 0.09 units of urban trees.

This results in a net change in biodiversity of 10.56% (i.e. a net gain).

Hedgerows

The baseline hedgerow value of the site is 0.09 units, comprising line of trees.

The post development habitat value of the site is 0.03 units, comprising non-native and ornamental hedgerow.

This results in a net change in biodiversity of -69.30% (i.e. a net loss).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 10.56% net gain in habitat units. This is more than the 10% target of biodiversity net gain but does not pass trading rules.

The current proposed plan results in a 69.30% net loss in hedgerow units. This is less than the 10% target of biodiversity net gain.

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain.

4.2 Landscaping

To maximise the biodiversity value of the site itself, the following alterations to the current landscaping proposals could be considered:

- Enhancement of the other grassland to the southeast of the site to good condition other neutral grassland.
- Planting of more trees at approximately >0.01 unit per small, planted tree.
- Replacing the ornamental hedgerow proposed with mixed native hedgerow.
- Retention of trees which are currently proposed for removal.

Should these alterations be incorporated this BNG Assessment will need to be updated to accurately reflect the change in biodiversity value of the site pre- and post-development.

4.3 Biodiversity Offsetting

If the landscaping plans are not altered or if the above alterations still do not deliver a 10% net gain, the deficit will need to be delivered in a suitable offsite location i.e. biodiversity offsetting.

According to the Defra Statutory Biodiversity Metric there is a unit deficit of 0.07 hedgerow units and 0.05 habitat units and this will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

The mechanism for securing this off-setting will need to be proposed to, and confirmed by the LPA e.g., purchasing conservation credits through a registered provider, habitat creation directly through the client owned or LPA offered land or a financial contribution towards another provider such as a local nature reserve or park. As well as the creation of new habitats, this should also secure the management of the proposed habitats to help achieve the desired condition for at least 30 years. This would be linked to the application through a planning obligation Section

106 (S106) agreement. The proposed habitat compensation should be of an appropriate distinctiveness to meet the trading rules of BNG. An ecology survey of the baseline habitat of any off-site land will be required to inform the baseline conditions of any land subject to off-site compensation measures.

4.4 Post Development

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping could be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain. However, the site is not subject to biodiversity net gain legislation as the development application was submitted prior to the 2nd April 2024 when BNG became mandatory for developments of 9 dwellings or less.

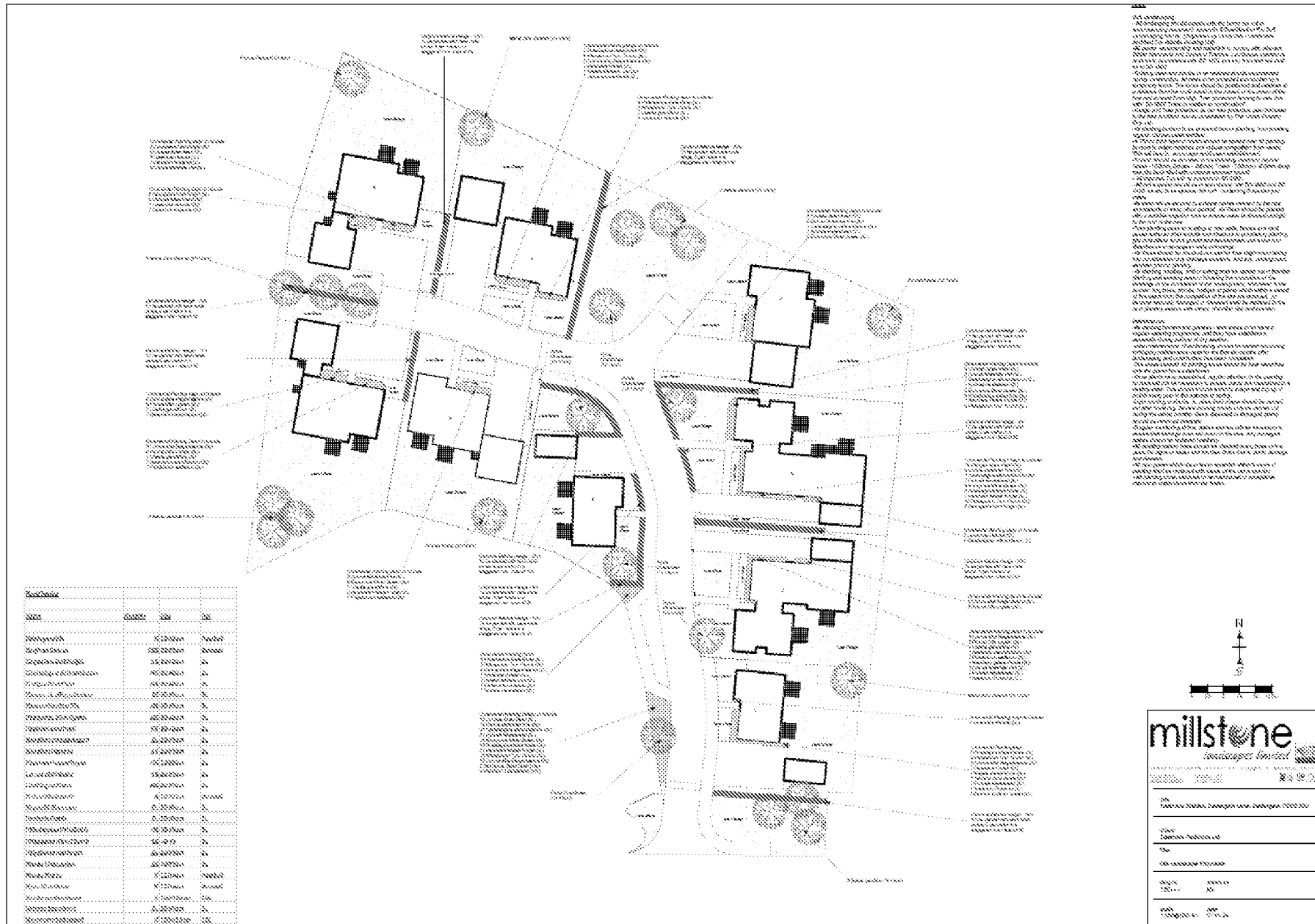
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- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 1 - Condition Assessment Sheets and Methodology (JP039).
- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 2 – Technical Information (JP039).
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

Appendix 1a: Proposed Development Plan



Appendix 1b: Proposed Landscape Plan



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5: Headline BNG Results

The Defra Statutory Biodiversity Metric is provided as a separate excel spreadsheet.

FINAL RESULTS				
Total net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	0.10		
	Hedgerow units	-0.08		
	Watercourse units	0.00		
Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	Habitat units	10.58%		
	Hedgerow units	-89.30%		
	Watercourse units	0.00%		
Trading rules satisfied?		No - Check Trading Summaries ▲		

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.95	1.05	0.00
Hedgerow units	10.00%	0.09	0.10	0.01
Watercourse units	10.00%	0.00	0.00	0.00

Total net gain achieved is less than target set ▲

No additional area habitat units required to meet target ✓

No additional watercourse units required to meet target ✓