



Biodiversity Net Gain Assessment

Land Adjacent to Gravesend Veterans Club, Clarence Place, Gravesend, Kent, DA12

1LB

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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 Eddie Powell to undertake a Biodiversity Net Gain (BNG) Assessment at Land Adjacent to Gravesend Veterans Club, Clarence Place, Gravesend, Kent, DA12 1LB (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of a single dwelling divided into flats (hereafter referred to as “the proposed development”).

- The baseline habitat is 0.83 units; comprised of 0.04 bramble scrub units, 0.04 modified grassland units, 0.03 small tree units and 0.52 medium tree units.
- The post-development habitat is 0.62 units.
- The development results in a -25.40% net loss in habitat units.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Eddie Powell to undertake a Biodiversity Net Gain (BNG) Assessment at Land Adjacent to Gravesend Veterans Club, Clarence Place, Gravesend, Kent, DA12 1LB (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of a single dwelling divided into flats (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:

- Statutory Metric: BNG Metric – Land adjacent to Gravesend veterans club.
- Preliminary Ecological Appraisal and Preliminary Roost Assessment (PEA/PRA), Arbtech Consulting Ltd, 2024.

1.2 Site Location, Geology and Landscape Context

The site is located at National Grid Reference TQ 6487173485 and has an area of approximately 0.03ha. the site is characterised by an amenity garden with scattered trees located in the northern and southern peripheries of the site. 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 Environment Act (2021) is mandatory as of February 2024. The requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2021). Furthermore, BNG is a requirement of Gravesham Borough Council local policy.

The Statutory Metric is the widely accepted tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development to determine the overall change in biodiversity value because of the proposed development. The Statutory 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 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 PEA/PRA (Arbtech Consulting Ltd, 2024). A baseline habitat plan is provided in **Appendix 3**.

Habitat Classification

The PEA/PRA 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 Metric.

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory 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 Gravesham Borough Council local policy

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by Proposed Site Plan 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 Site Plan.

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.

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 Metric spreadsheet as well as the relevant condition assessment sheets found in the Statutory 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 Gravesham Borough Council local policy

2.3 Limitations

No known limitations.

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
Heathland and shrub	0.0112 ha	Bramble scrub	N/A	Low strategic significance
Grassland	0.0189 ha	Modified grassland	Poor – see PEA	Low strategic significance
Individual trees	0.0285 ha	Seven small trees on site	Moderate – see PEA	Low strategic significance
Individual trees	0.0651 ha	Four medium trees on site	Moderate – see PEA	Low strategic significance

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	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.0132 ha	Creation of building and hardstanding	N/A	Low strategic significance
Grassland	0.0169 ha	Modified grassland – retained	Poor – see PEA	Low strategic significance
Individual trees	0.0244 ha	Six small trees on site – retained	Moderate – see PEA	Low strategic significance
Individual trees	0.0489 ha	Three medium trees on site – retained	Moderate – see PEA	Low strategic significance

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Statutory Metric. The headline results are presented in **Appendix 5**.

Areas of Habitat

The baseline habitat value of the site is 0.83 units, comprising 0.04 units of scrub, 0.04 units of modified grassland, 0.23 units of small trees, and 0.52 units of medium trees.

The post development habitat value of the site is 0.62 units, comprising the removal of two sycamore tree, removal of the scrub, and the creation of developed land.

This results in a net change in biodiversity of -25.40% (i.e. a net loss).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a -25.40% net loss in habitat 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:

- Retention and enhancement of scrub
- Retention of all trees on site
- Enhancement of grassland condition from 'poor' to 'good'

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 Statutory Metric there is a unit deficit of **0.29 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

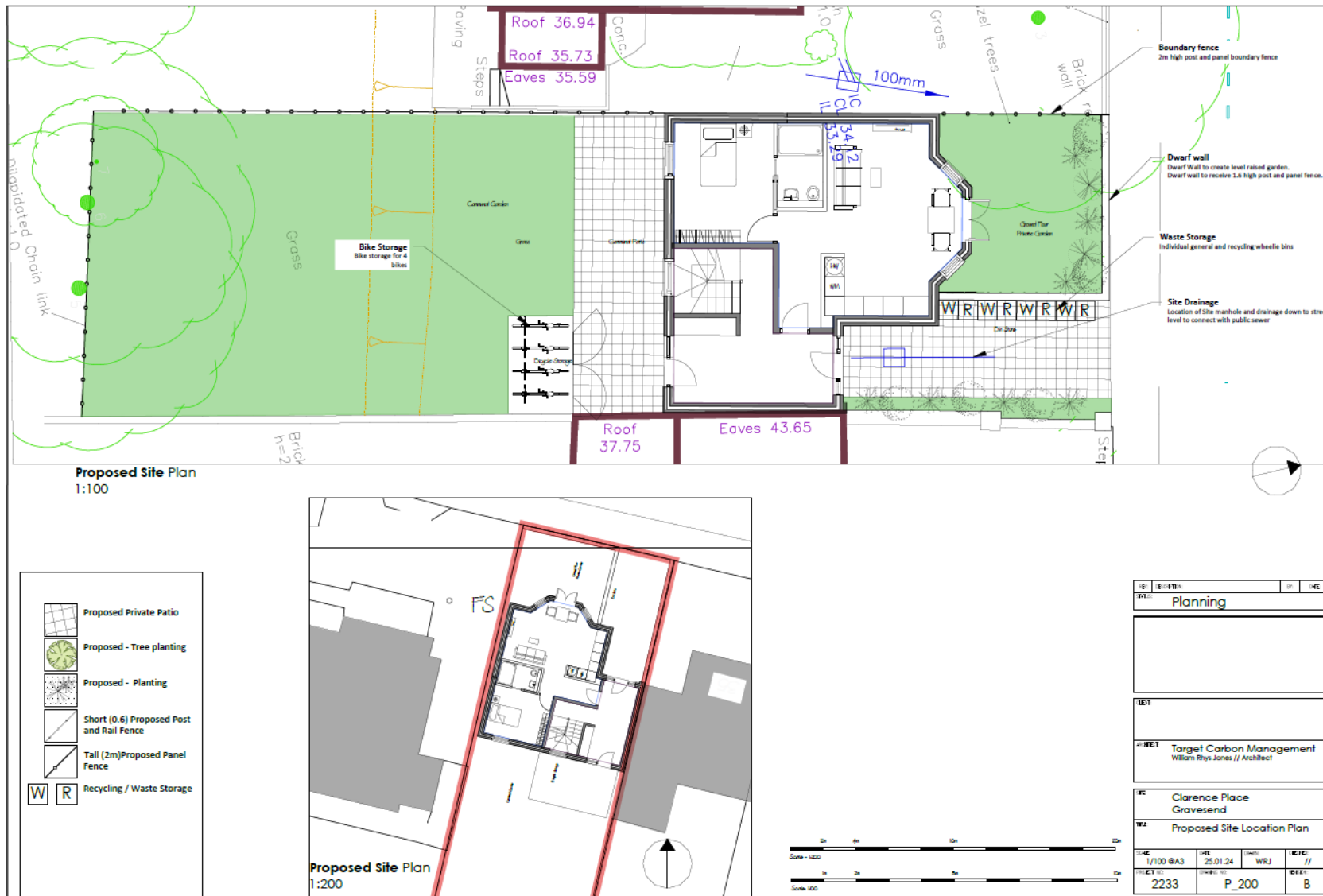
A Biodiversity Net Gain (BNG) Management Plan must be produced for the site. This should include recommendations for the implementation, management and monitoring of the site for at least 30 years.

5.0 Bibliography

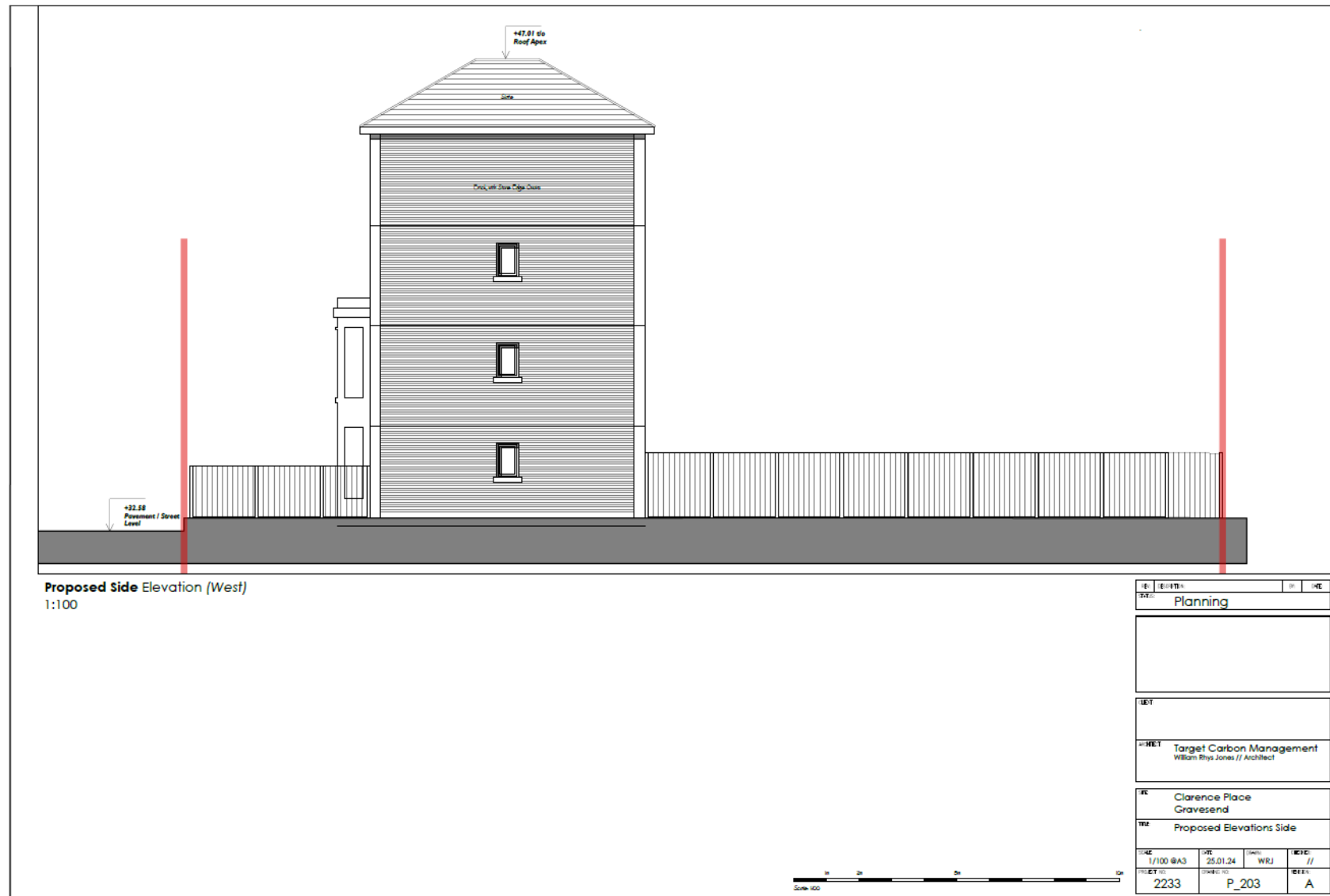
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- Natural England (2023). The Biodiversity Metric 4.0 Technical Annex 2 – Technical Information (JP039).
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

Appendix 1: Proposed Development Plan



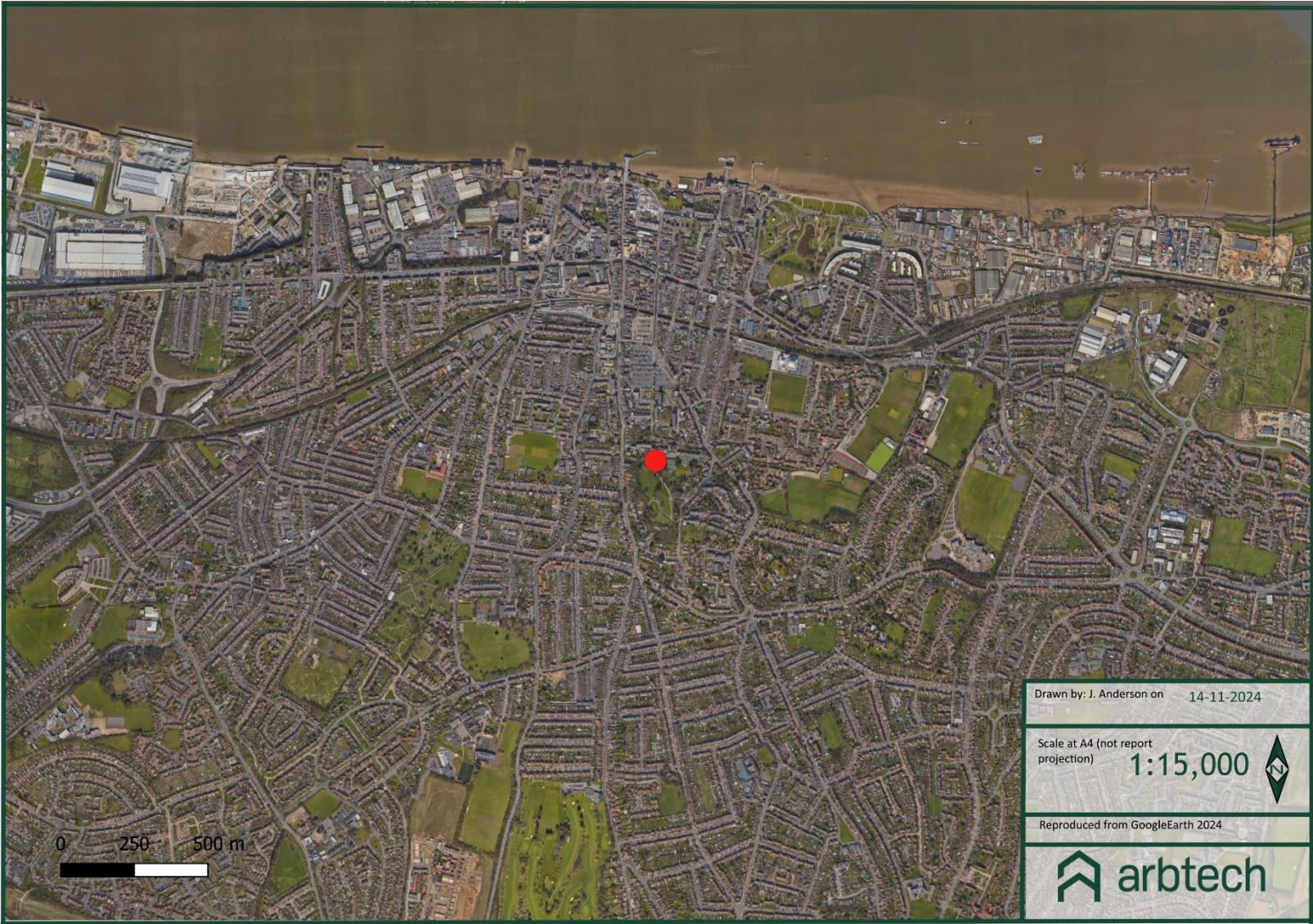








Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5: Headline BNG Results

The Statutory Metric is provided as a separate excel spreadsheet.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-0.21	Total net gain achieved is less than target set ▲	
	Hedgerow units	0.00		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	-25.40%	Total net gain achieved is less than target set ▲	
	Hedgerow units	0.00%		
	Watercourse units	0.00%		
Trading rules satisfied?	No - Check Trading Summaries ▲			
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.83	0.91	0.29
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00
				No additional hedgerow units required to meet target ✓
				No additional watercourse units required to meet target ✓