Biodiversity Net Gain Assessment

45 Gloucester Street, Brighton and Hove, Brighton, BN1 4EW

Finntilly Properties LLP

Status	Issue	Name	Date
Draft	1	Chantae Wells BSc (Hons) MSc Consultant Ecologist	30/11/2023
Reviewed	1.1	Craig Williams, MSc, DIC, MRSB, Principal Ecologist	06/12/2023
Final	2	Chantae Wells BSc (Hons) MSc Consultant Ecologist	07/12/2023

Arbtech Consultant's Contact Details:

Chantae Wells
Consultant Ecologist
Tel: 07842417799 **Email:** Chantaewells@arbtech.co.uk
https://arbtech.co.uk

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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 Finntilly Properties LLP to undertake a Biodiversity Net Gain (BNG) Assessment at 45 Gloucester Street, Brighton and Hove, Brighton, BN1 4EW (hereafter referred to as “the site”). The assessment was required to inform a planning application for the erection of six new residential flats at the rear of the existing Victorian warehouse building, which will be renovated (hereafter referred to as “the proposed development”).

Due to the small size of the site, the baseline habitat value of the site is rounded down to 0.00 units, comprising 0.00 units of buildings, artificial unvegetated land and developed land, sealed surface.

The post development habitat value of the site is 0.00 units, comprising the addition of 0.00 units of building, creation of 0.00 units of green roof and 0.00 units of developed land, sealed surface. This results in a net change in biodiversity of 100% net gain. This is the default value where there are no habitat units present in the baseline. The actual increase in area units is 0.00386 due to the proposed 0.002ha green roof area, although this is rounded and displayed as 0 in the metric itself.

This is more than the 10% target of biodiversity net gain. The site is small and has no ecological value, therefore the addition of a small area of green roof constitutes biodiversity net gain.

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 to ensure that biodiversity net gain is delivered.

Contents

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Finntilly Properties LLP to undertake a Biodiversity Net Gain (BNG) Assessment at 45 Gloucester Street, Brighton and Hove, Brighton, BN1 4EW (hereafter referred to as "the site"). The assessment was required to inform a planning application for the erection of six new residential flats at the rear of the existing Victorian warehouse building, which will be renovated (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 Biodiversity Metric 4.0 Calculation Tool – BN14EW
- PEA Report for the site (Arbtech, 2023).

1.2 Site Location, Geology and Landscape Context

The site is located in Brighton and Hove, at National Grid Reference TQ31370471 and has an area of approximately 0.02 ha comprising a building, hard standing and a loose stone courtyard with potted shrubs. Brighton train station is ~530m north-west of the site. The wider landscape comprises residential houses and roads, with the English Channel ~1100m south. 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 still in a transitional phase and is not expected to become mandatory until November 2023. However, the requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2021). Furthermore, BNG is a requirement of the City Plan Part 1 Policy CP10 Biodiversity and City Plan Part 2 Policy DM37 Green Infrastructure and Nature Conservation.

The DEFRA Biodiversity Metric 4.0 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 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 Biodiversity Metric 4.0 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 Preliminary Ecological Appraisal (PEA) (Arbtech, 2023). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The PEA 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 Biodiversity Metric 4.0. Class sizes for urban trees are set out in Table 8-1 of the Biodiversity Metric 4.0 User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Biodiversity Metric 4.0 User Guide (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 Local Nature Recovery Strategy or designated site (SAC, SSSI, LNR, LWS, BOA)

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the proposed 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 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.

Areas of scattered trees were calculated using the Tree Helper tool within the Biodiversity Metric 4.0. Class sizes for urban trees are set out in Table 8-1 of the Biodiversity Metric 4.0 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 Biodiversity Metric 4.0 spreadsheet as well as the relevant condition assessment sheets found in the Biodiversity Metric 4.0 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 Local Nature Recovery Strategy or designated site (SAC, SSSI, LNR, LWS, BOA)

2.3 Limitations

There were no 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. A full condition assessment for each habitat (where relevant) is provided in Appendix 5a.

Table 1: Baseline Biodiversity Value

Habitat	Area (Ha)	Description	Condition Assessment	Strategic Significance
U1b – Developed land, sealed surface	0.003	The pavement in front of the building is comprised of hard-standing.	N/A	Area/compensation not in local strategy/ no local strategy
U1b5 -Buildings	0.027	There is a three-storey hipped building with a single storey extension with flat roof of corrugated metal on the east side and a two-storey extension with pitched roof on the west side.	N/A	Area/compensation not in local strategy/ no local strategy
U1c – Artificial unvegetated, unsealed surface	0.004	The courtyard is comprised of loose stone gravel with two potted ornamental shrubs. This area is used to store bikes and bins.	N/A	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. An assessment of the anticipated condition for each habitat (where relevant) is provided in Appendix 5b, which is based on the assumption that a 30 year management plan will be implemented for the site.

Table 2: Post Development Biodiversity Value

Habitat	Area (Ha)	Description	Target Condition	Strategic Significance
U1b – Developed land, sealed surface	0.009	The area within the site, around the building, will be comprised of hard-standing.	N/A	Area/compensation not in local strategy/ no local strategy
U1b5 -Buildings	0.009	The main part of the existing building will be retained, with the side extensions to be demolished and a new area of building to be erected.	N/A	Area/compensation not in local strategy/ no local strategy
Urban – Other green roof	0.002	A small area of the building will have a green roof.	N/A	

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Defra Biodiversity Metric 4.0. The headline results are presented in Appendix 6.

Areas of Habitat

Due to the small size of the site, the baseline habitat value of the site is rounded down to 0.00 units, comprising 0.00 units of buildings, artificial unvegetated land and developed land, sealed surface.

The post development habitat value of the site is 0.00 units, comprising the addition of 0.00 units of building, creation of 0.00 units of green roof and 0.00 units of developed land, sealed surface. This results in a net change in biodiversity of 100% net gain.

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 100% net gain in habitat units, which is the default value where there are no habitat units present in the baseline. The actual increase in area units is 0.00386 due to the proposed 0.002ha green roof area, although this is rounded and displayed as 0 in the metric itself.

This is more than the 10% target of biodiversity net gain. The site is small and has no ecological value, therefore the addition of a small area of green roof constitutes biodiversity net gain.

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 to ensure that biodiversity net gain is delivered.

4.2 Landscaping

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

- Addition of green roof on the retained area of the building
- Planting and maintenance of flower beds with species favoured by pollinator species
- Addition of an integrated bat box for crevice-dwelling species (a suitable example is Pro UK Build-in WoodStone Bat Box, or similar alternative brand).
- Addition of two integrated bird boxes (suitable example is Pro UK Rendered Build-In Swift Box, or similar alternative)

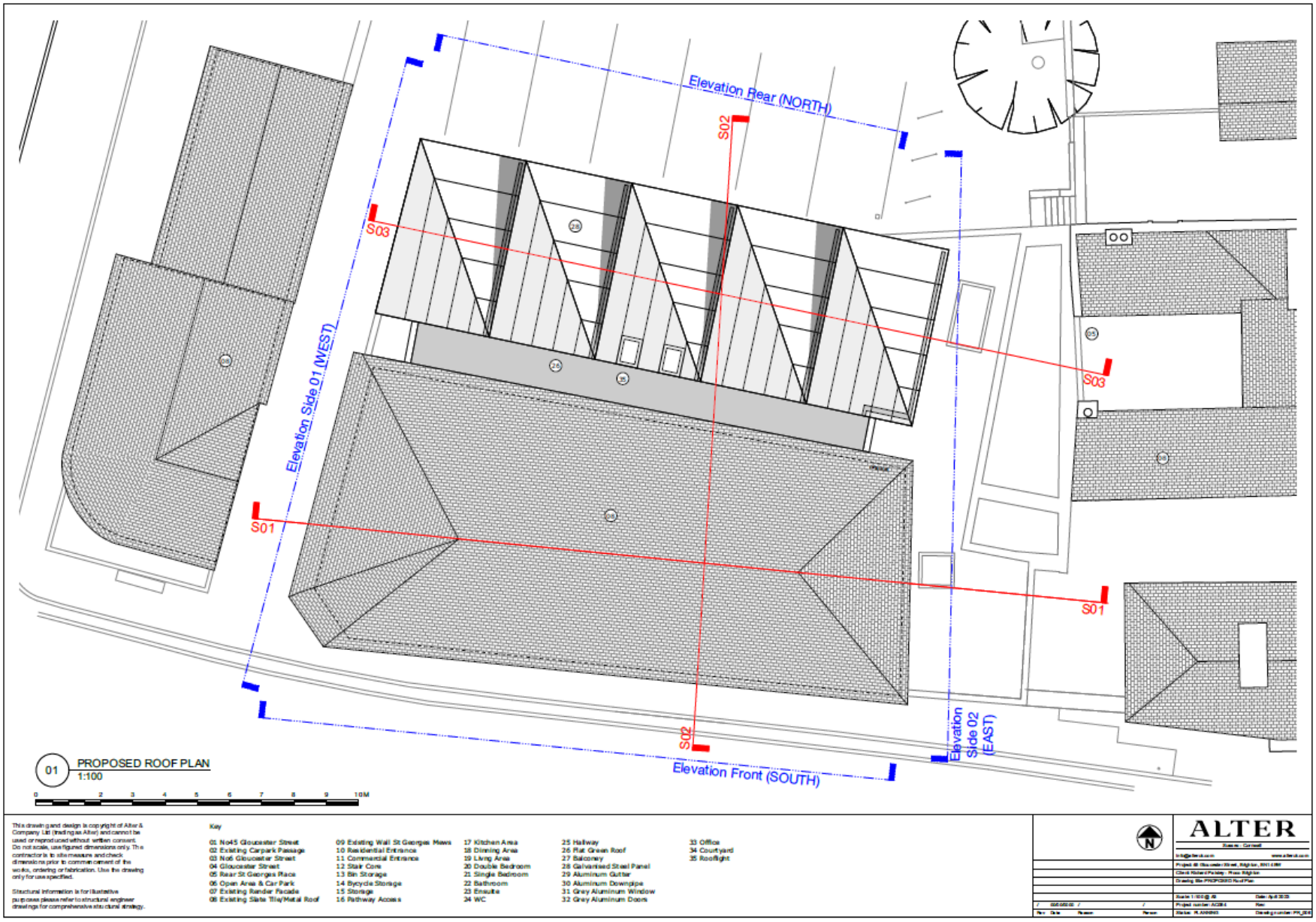
4.4 Post Development

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.

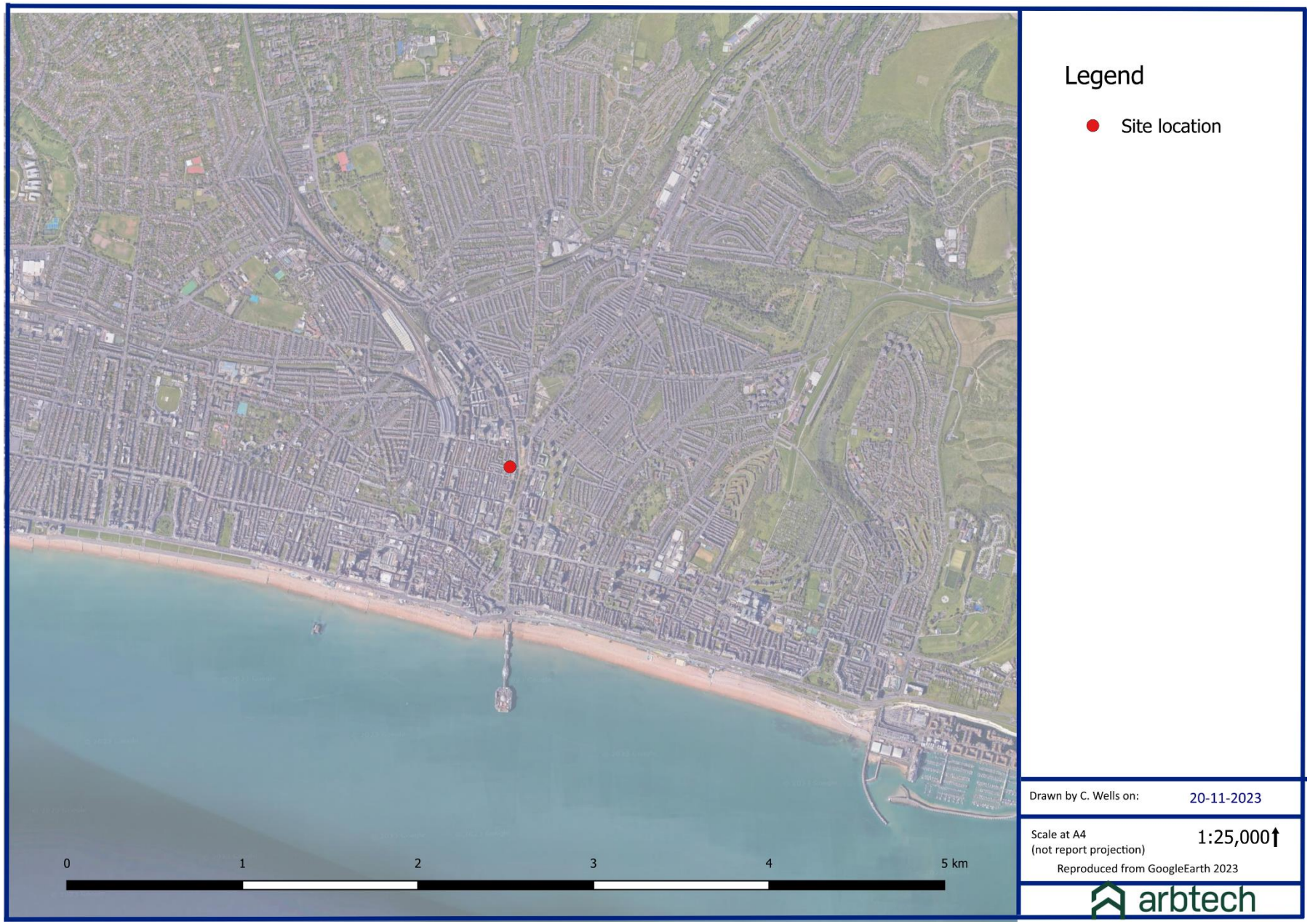
5.0 Bibliography

- Arbtech (2023) Preliminary Ecological Appraisal
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- CIEEM-CIRIA-IEMA (2019) Biodiversity Net Gain – Good Practice Principles for Development.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Natural England (2023). The Biodiversity Metric 4.0 (JP039).
- Natural England (2023). The Biodiversity Metric 4.0 User Guide (JP039).
- Natural England (2023). The Biodiversity Metric 4.0 Technical Annex 1 - Condition Assessment Sheets and Methodology (JP039).
- 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 Defra Biodiversity Metric 4.0 is provided as a separate excel spreadsheet.