Biodiversity Net Gain Assessment

Flat 19-21 High Street, Markayte, St. Albans, Hertfordshire, AL3 8PG

GSP Architects

Status	Issue	Name	Date
Draft	1	Jonathan Stuttard, Senior Consultant BSc (hons) MSc	08/08/2022
Final	1.1	Jonathan Stuttard, Senior Consultant BSc (hons) MSc	08/08/2022

Arbtech Consultant's Contact Details:

Jonathan Stuttard
Senior Ecologist
Tel: 07842313164 **Email:** jonathanstuttard@arbtech.co.uk
Arbtech Consulting Ltd
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.
>
> This approach is enshrined in Government planning guidance, for example, paragraph 174 of the National Planning Policy Framework for England.
>
> 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 Ltd. was instructed by GSP Architects to undertake a Biodiversity Net Gain (BNG) Part 1 Assessment to determine the baseline biodiversity unit score for a development at Flat 19-21 High Street, Markayte, St. Albans, Hertfordshire, AL3 8PG (hereafter referred to as "the site"). The assessment was required to inform a planning application for the partial demolition and renovation of existing buildings on site to provide six new residential dwellings and associated infrastructure (hereafter referred to as "the proposed development").

The baseline biodiversity unit value of the site is **0.06 habitat units.** As such, in order to achieve the minimum target of 10% net gain in biodiversity as a result of the proposed development, the post-development biodiversity unit score will need to be greater than or equal to 0.066 habitat units.

It is recommended that a detailed landscaping scheme is designed for the site targeting areas within the public realm for ecological enhancement. Once landscaping plans have been finalised, a BNG Part 2 assessment can be undertaken to determine the biodiversity unit score post-development and subsequently confirm the change in biodiversity value of the site. Should the minimum 10% net gain in biodiversity not be achieved, recommendations for alterations to the proposed scheme can be made to help achieve the required 10% gain.

Contents

1.0 Introduction and Context

Arbtech Consulting Ltd. was instructed by GSP Architects to undertake a Biodiversity Net Gain (BNG) Part 1 Assessment to determine the baseline biodiversity unit score for a development at Flat 19-21 High Street, Markayte, St. Albans, Hertfordshire, AL3 8PG (hereafter referred to as "the site"). The assessment was required to inform a planning application for the partial demolition and renovation of existing buildings on site to provide six new residential dwellings and associated infrastructure (hereafter referred to as "the proposed development"). A proposed development plan is provided in **Appendix 1.**

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

- The Defra Biodiversity Metric 3.1 pertaining to the site (Arbtech Consulting Ltd. 2022); and
- The Preliminary Ecological Appraisal and Preliminary Roost Assessment pertaining to the site (Arbtech Consulting Ltd. 2022).

1.1 Site Context

The site is located at National Grid Reference TL 0516 9669 and has an area of 0.071ha. The site is characterised by a mixed-use building containing both commercial space and residential units alongside an associated driveway and outbuilding. Management at the site appears to have lapsed in recent years and each building shows signs of dilapidation and successional vegetation has colonised a section of the site. Habitats recorded on site include buildings, hardstanding, and dense scrub. The site is enclosed by Markayte High Street to the west, residential properties to the north and south, and the A5183 Road and associated vegetation to the east. A site location plan is provided in **Appendix 2.**

1.2 BNG Informative

BNG is a specific, measurable outcome of project activities that deliver demonstrable and quantifiable benefits to biodiversity compared to the baseline condition. 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.

The recently 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 2023. However, the requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF).

The DEFRA Biodiversity Metric 3.1 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 3.1 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 BNG Part 1 - Baseline Biodiversity Unit Value

The baseline BNG Calculation was informed by the PEA and PRA pertaining to the site (Arbtech Consulting Ltd. 2022); the baseline habitat plan is provided in **Appendix 3**.

Habitat Classification

The PEA and PRA classified the habitats on site according to the methodology set out in Phase 1 Habitat Survey Methodology (JNCC, 2010). For purposes of this BNG Calculation, identified habitats were translated to their equivalents in the UK Habitat Classification. This was achieved using a combination of The UK Habitat Classification Habitat Definitions Version 1.0 (The UK Habitat Classification Working Group, May 2018) and the G-9 Translation Phase 1 Tab included in the Biodiversity Metric 3.1 spreadsheet.

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).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Biodiversity Metric 3.1 Technical Supplement (Panks et al., 2022). The habitat condition assessments were based on the information provided within the PEA and PRA report, including the habitat descriptions, species lists, and site photographs.

Strategic Significance

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

- Ecological value (based on the PEA and PRA);
- Function within the landscape (based on a review of Google and OS imagery); and
- Any site or habitat allocations under the relevant Local Planning Policy and Biodiversity Action Plan.

3.0 Results and Evaluation

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 (ha) or Length (km)***	***Description***	***Condition Assessment***	***Strategic Significance***	***Biodiversity Unit Score***
Area Based Habitats					
JNCC Phase 1: Buildings and Hardstanding. **UK Habs Equivalent:** Urban: Developed Land; Sealed Surface.	0.057ha	The site is dominated by buildings hardstanding. Two buildings are present on site in the form of a mixed-use, brick-built building containing a ground floor hardware shop and first floor residential accommodation alongside a two-storey, brick-built outbuilding. Hardstanding is present in the form of concrete overlayed with gravel.	Condition is predetermined as N/A in accordance with the Biodiversity Metric 3.1 Technical Supplement.	Habitat classification is not included within any local strategic strategy.	0.00
JNCC Phase 1: Dense scrub **UK Habs Equivalent:** Heathland and shrub; Mixed scrub	0.014ha	A section of dense scrub is located within the southeast corner of the site. Vegetation management appears to have lapsed within this section of the site. As a result, successional vegetation has colonised. The dense scrub comprises a continuous distribution of bramble *Rubus fruiticosus* and common nettle *Urtica dioica.*	Mixed scrub condition was assessed using the Scrub Habitat Types Condition Sheet as detailed within Biodiversity Metric 3.1 Technical Supplement. The mixed scrub passes criteria 3 and fails criteria 1, 2, 4, & 5. The mixed scrub is therefore assessed to be of poor condition.	Habitat classification is not included within any local strategy but is considered ecologically desirable.	0.06

3.3 Baseline Biodiversity Value of the Site

Full details are provided in the Biodiversity Metric 3.1. The headline results as described below and are shown on **Figure 1**.

- The baseline biodiversity unit score: **Habitat Units**: 0.06 units; **Hedgerow Units:** n/a

Figure 1: A screenshot of the Biodiversity Metric 3.1 baseline result.

4.0 Conclusions and Recommendations

The baseline biodiversity unit value of the site is **0.06 habitat units.** As such, in order to achieve the minimum target of 10% net gain in biodiversity as a result of the proposed development, the post-development biodiversity unit score will need to be greater than or equal to 0.066 habitat units.

There is scope to achieve a net gain in biodiversity as a result of the proposed development. Each of the six proposed residential properties will include an enclosed vegetated garden. Each vegetated garden will be of value to ecology and will contribute to the post-development biodiversity unit score. However, please note that the future management of private residential gardens to benefit wildlife cannot be secured and their ecological value is subsequently limited within the Biodiversity Metric 3.1. It is therefore recommended that areas within the public realm are targeted for ecological enhancement to ensure a 10% gain in biodiversity is achieved post-development. Although small in extent, there is potential for new landscaping to be installed in these areas through the provision of new planting such as the creation of wildflower grassland, native shrub planting, and native tree planting.

It is recommended that a detailed landscaping scheme is designed for the site targeting areas within the public realm for ecological enhancement. Once landscaping plans have been finalised, a BNG Part 2 assessment can be undertaken to determine the biodiversity unit score post-development and subsequently confirm the change in biodiversity value of the site. Should the minimum 10% net gain in biodiversity not be achieved, recommendations for alterations to the proposed scheme can be made to help achieve the required 10% gain.

5.0 Bibliography

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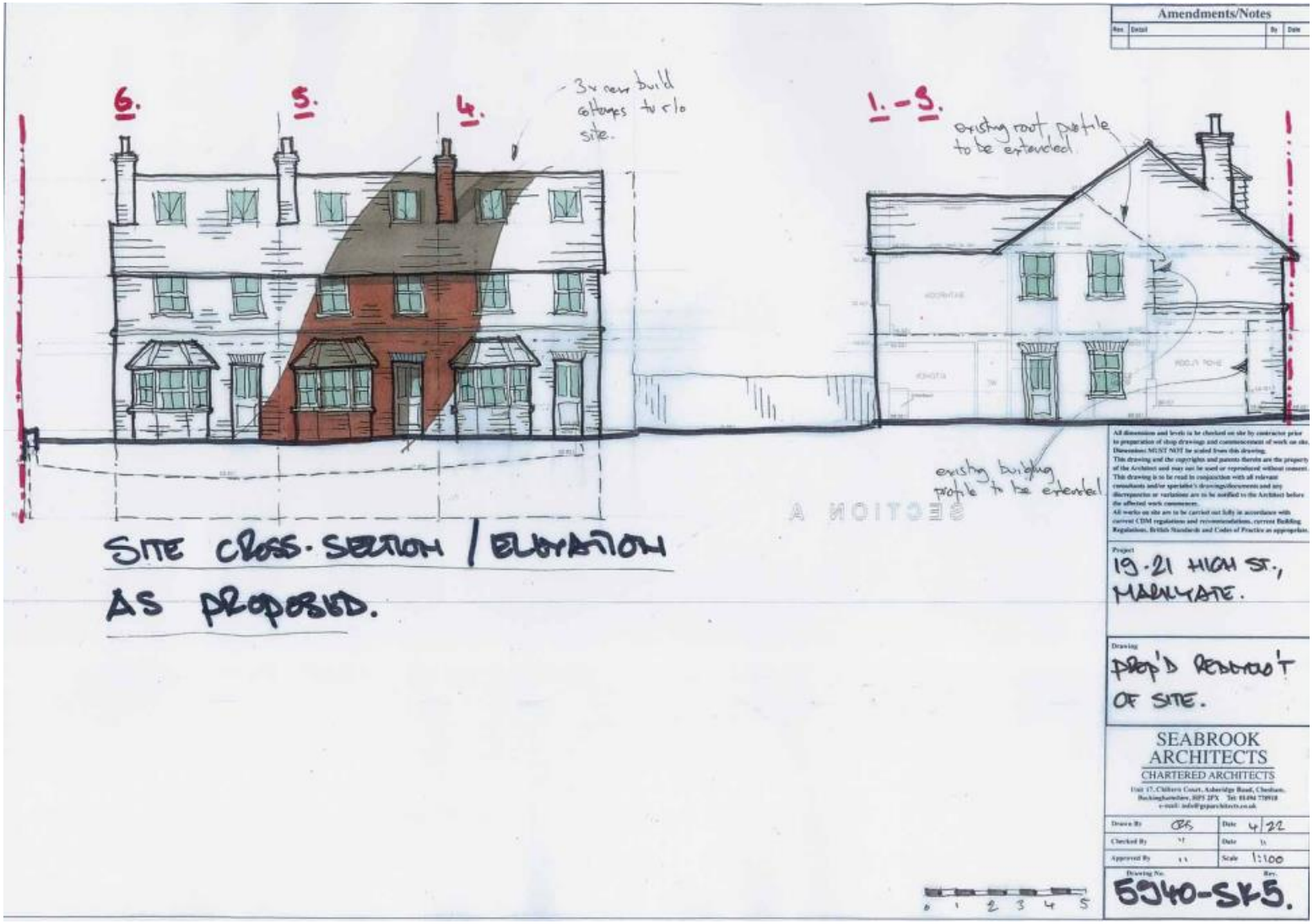
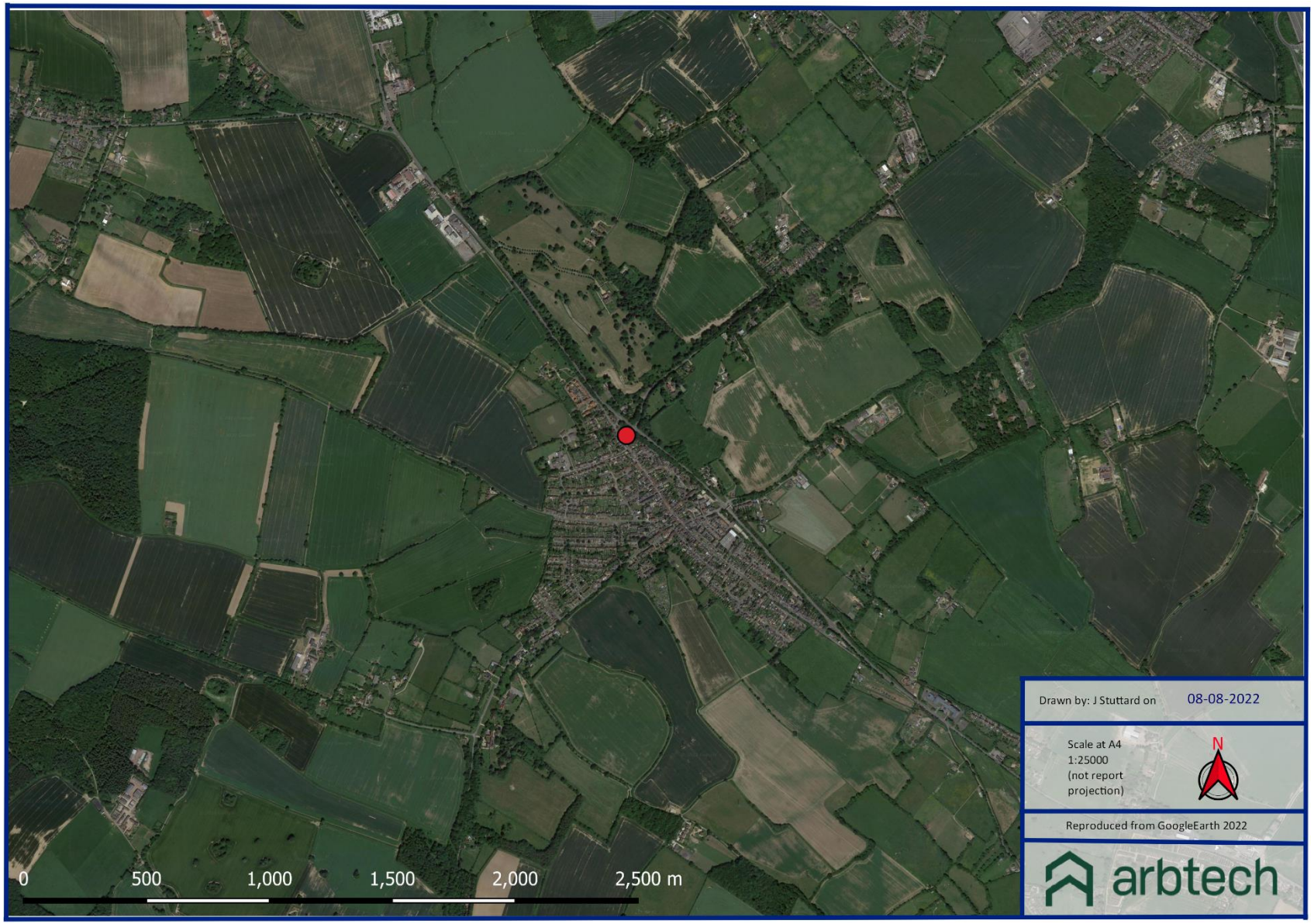
Appendix 1: Proposed Development Plans



Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan