



Biodiversity Net Gain Assessment

Shinfield View Care Home, School Green, Shinfield, Reading RG2 9EH

Berkley Care Shinfield Ltd

Status	Issue	Name	Date
Draft	0.1	Jamie-Lee Anderson BSc (Hons), Consultant Ecologist	16/06/2025
Final	1	Jamie-Lee Anderson BSc (Hons), Consultant Ecologist	17/06/2025

Arbtech Consultant's Contact Details:

Jamie-Lee Anderson, BSc (Hons)
Consultant Ecologist
Tel: 07842 416966 **Email:** jamie-leeanderson@arbtech.co.uk
<https://arbtech.co.uk>

Limitations and Copyright

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

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 185 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 Berkley Care Shinfield Ltd to undertake a Biodiversity Net Gain (BNG) Assessment for a development at Shinfield View Care Home, School Green, Shinfield, Reading RG2 9EH (hereafter referred to as “the site”). The assessment was required to inform a planning application for: The construction of a two-storey side extension (hereafter referred to as “the proposed development”).

The proposed development is anticipated to result in the following:

- A 56.66% net gain in habitat units.
- A 67.92% net gain in hedgerow units.

It is noted that watercourse units are not applicable to this assessment.

The anticipated net gain is >10% and the proposed development is compliant with legislation (Environment Act 2021) or planning policy (National: NPPF 2023).

Contents

1.0 Introduction and Context..... 6

 1.1 Introduction 6

 1.2 Site Context 6

 1.3 BNG Informative 6

2.0 Methodology..... 8

 2.1 Baseline Biodiversity Value 8

 2.2 Post Development Biodiversity Value 9

 2.3 Limitations 9

3.0 Results and Evaluation..... 10

 3.1 Baseline Habitats..... 10

 3.2 Post Development Habitats..... 10

 3.3 Change in Biodiversity Value of the Site 11

4.0 Conclusions and Recommendations..... 12

 4.1 Discussion..... 12

 4.2 Landscaping 12

 4.3 Post Development 12

5.0 Bibliography..... 13

 Appendix 1: Proposed Development Plan 14

 Appendix 2: Site Location Plan..... 15

 Appendix 3: Baseline Habitat Survey Plan 16

 Appendix 4: Post-Development Habitat Plan 17

 Appendix 5: Headline Results..... 18

1.0 Introduction and Context

1.1 Introduction

Arbtech Consulting Ltd. was instructed by Berkley Care Shinfield Ltd to undertake a Biodiversity Net Gain (BNG) Assessment for a development at Shinfield View Care Home, School Green, Shinfield, Reading RG2 9EH (hereafter referred to as “the site”). The assessment was required to inform a planning application for: The construction of a two-storey side extension (hereafter referred to as “the proposed development”). The landscape plan which shows the extent of the proposed development is provided in **Appendix 1**.

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

- Defra Statutory Biodiversity Metric (Arbtech Consulting Ltd. 2025).
- The Preliminary Ecological Appraisal (PEA) (Arbtech Consulting Ltd. 2025).

1.2 Site Context

The survey site is centred on National Grid Reference SU 73387 67848 and has an area of approximately 0.51ha. The site comprises one building (B1), associated garden with introduced shrubs, scattered trees and a boundary hedgerow. It is situated within the village of Shinfield and is surrounded by residential properties and development with a new housing estate situated to the south-west of the site. Further afield, to the east and south are arable fields interspersed with woodland, to the north is the M4 motorway and the town of Reading and to the west are able fields. Aerial imagery shows the local landscape to have a semi-urban character, with arable fields characterising the local landscape to the east, south and west further afield. 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. Biodiversity Net Gain became mandatory for new developments (non-exempt) on 12th February 2024.

The DEFRA Statutory Biodiversity Metric is the latest version of the metric 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 Statutory Biodiversity Metric can also account for off-site 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. In accordance with the principles of the mitigation hierarchy, efforts have been made to avoid, minimize, and compensate for potential biodiversity impacts arising from the proposed development.

2.0 Methodology

2.1 Baseline Biodiversity Value

The baseline BNG calculation was informed by the PEA pertaining to the site (Arbtech Consulting Ltd. 2025); the baseline habitat plan is provided in **Appendix 3**.

Habitat Classification

The PEA classified the habitats on site according to the outdated JNCC Phase 1 survey technique. 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, 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 13 of the Draft Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

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

Strategic Significance

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

- Ecological value (based on the PEA);
- 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.

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the Proposed Plan, which is provided in **Appendix 1**. The habitat types present post-development have been illustrated on the plan 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, 2023).

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 13 of the Draft 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 Draft 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 (based on the development plans and professional judgement);
- Function within the landscape (based on the location of the proposed habitats and a review of Google and OS imagery); and
- Any site or habitat allocations under the relevant Local Planning Policy and Biodiversity Action Plan.

2.3 Limitations

There are no limitations to this assessment.

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 / Length	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.1725 ha	Existing building	N/A	Low strategic significance
Developed land; sealed surface	0.153 ha	Hardstanding	N/A	Low strategic significance
Urban	0.089 ha	Introduced shrub	N/A	Low strategic significance
Grassland	0.1163 ha	Modified grassland	Poor – see PEA	Medium strategic significance
Urban tree	0.0081 ha	Two small trees	Moderate – see PEA	Medium strategic significance
Urban tree	0.0651 ha	Four medium trees	Moderate – see PEA	Medium strategic significance
Hedgerow	0.103km	Non-native and ornamental hedgerow	N/A	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	0.1952 ha	Existing building with extension	N/A	Low strategic significance
Developed land; sealed surface	0.1421	Hardstanding	N/A	Low strategic significance
Urban	0.0118 ha	Proposed vegetated garden	N/A	Low strategic significance
Grassland	0.1817 ha	Modified grassland	Moderate – anticipated	Medium strategic significance
Urban tree	0.0977 ha	Proposed tree planting (24 small trees)	Moderate – anticipated	Medium strategic significance
Hedgerow	0.019km	Native hedgerow	Moderate – anticipated	Medium strategic significance
Urban tree	0.0081 ha	Two small trees – retained	Moderate – see PEA	Medium strategic significance
Urban tree	0.0651 ha	Four medium trees – retained	Moderate – see PEA	Medium strategic significance
Hedgerow	0.103km	Non-native and ornamental hedgerow – retained	N/A	Low strategic significance

3.3 Change in Biodiversity Value of the Site

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

Areas of Habitat

The baseline habitat value of the site is 1.08 units, comprising 0.18 units introduced shrub, 0.26 units modified grassland, 0.07 units small trees, 0.57 units medium trees, and developed land; sealed surface (no value).

The post development habitat value of the site is 1.69 units, comprising the creation of vegetated gardens, modified grassland, and trees planting and developed land; sealed surface.

This results in a net change in biodiversity of 56.66% (i.e. a net gain).

Hedgerows

The baseline hedgerow value of the site is 0.10 units, comprising 0.10 units non-native and ornamental hedgerow.

The post development habitat value of the site is 0.17 units, comprising the retention of the existing hedgerow and the additional planting of native hedgerow.

This results in a net change in biodiversity of 67.92% (i.e. a net gain).

4.0 Conclusions and Recommendations

4.1 Discussion

The current proposed plan results in a 56.66% net gain in habitat units, and a 67.92% net gain in hedgerow units. This is more than the 10% target of 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:

- Planting of native and species-rich plants

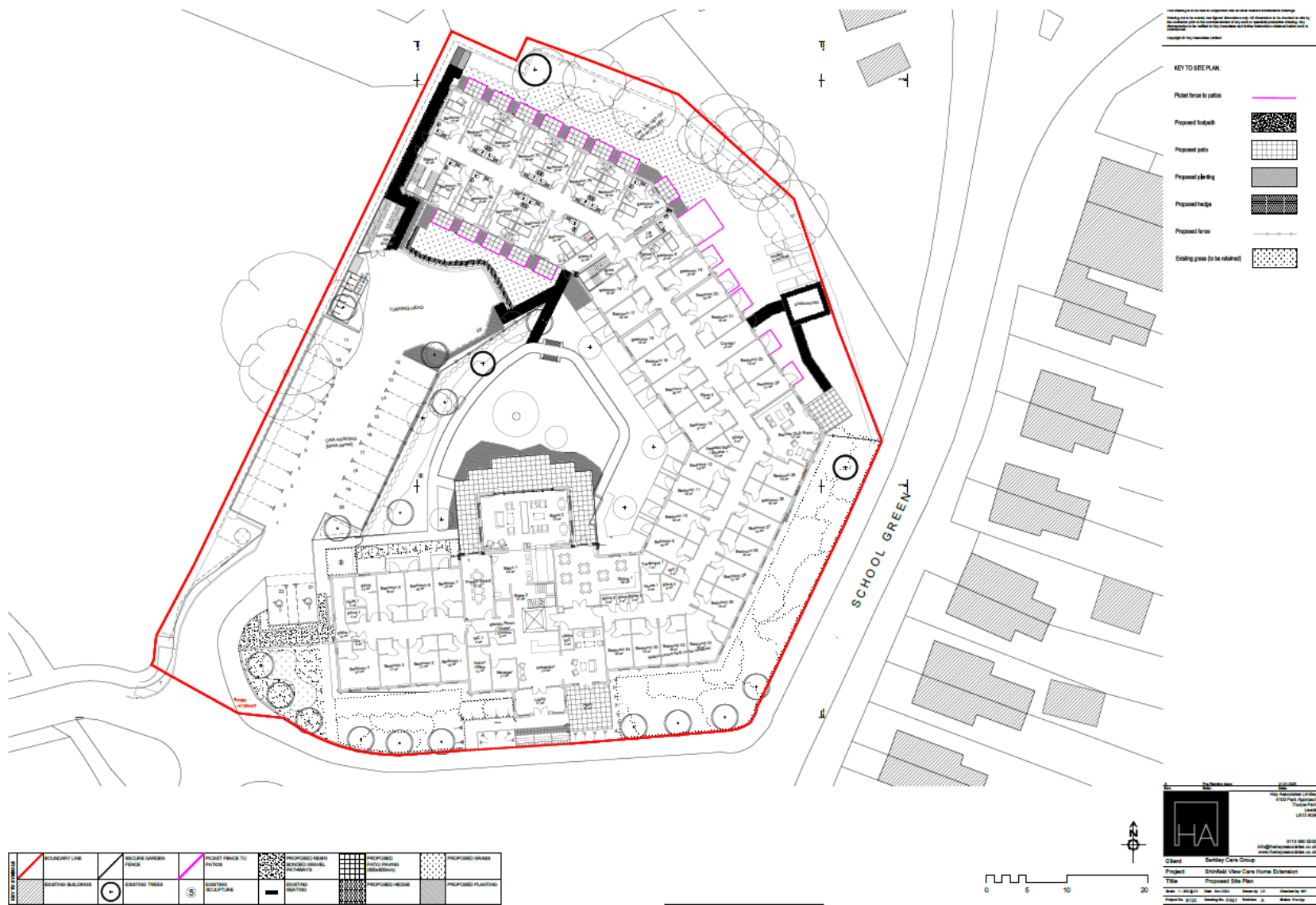
4.3 Post Development

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.

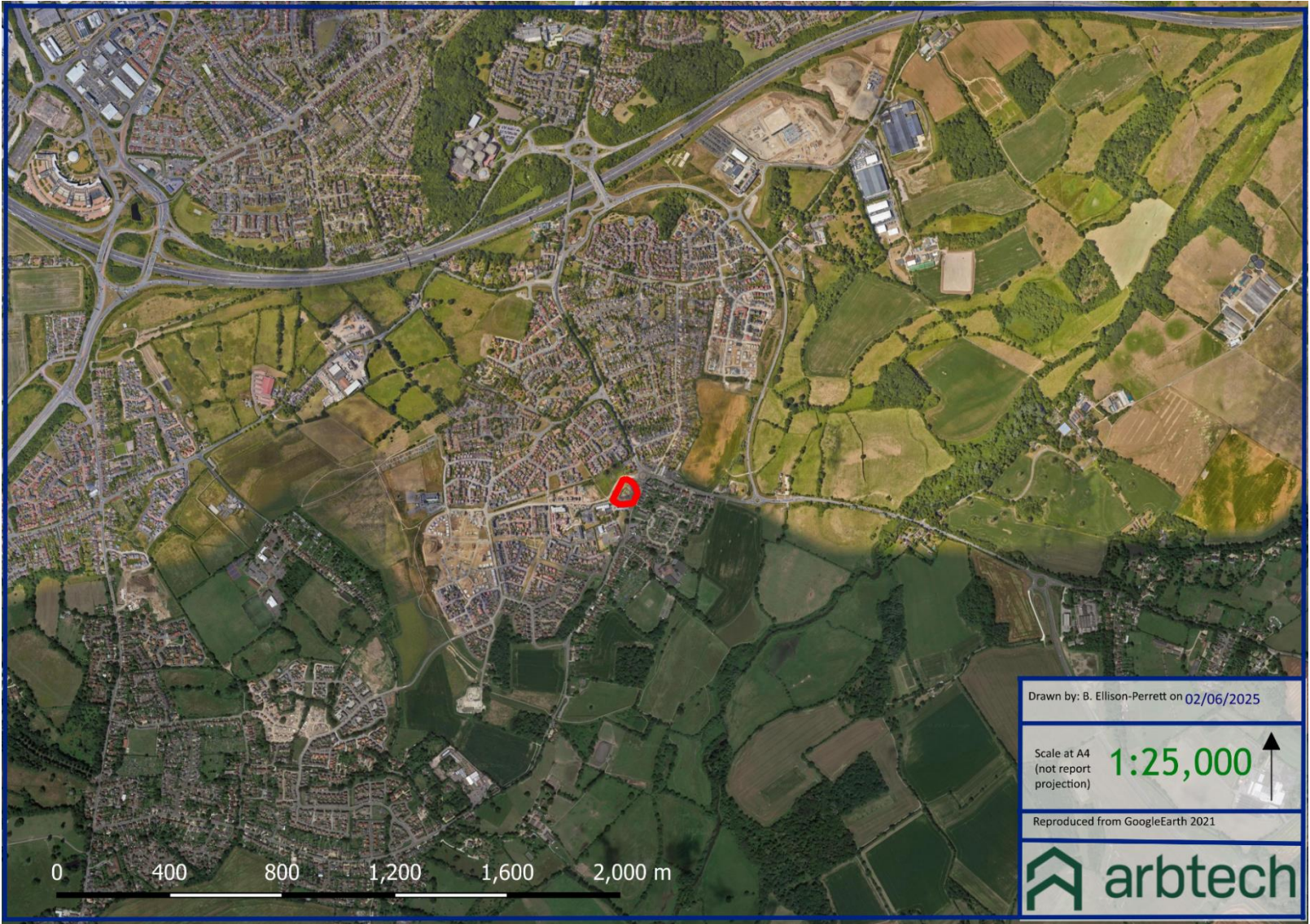
5.0 Bibliography

- Arbtech Consulting Ltd. (2025). Statutory Biodiversity Metric. Shinfield View Care Home.
- Arbtech Consulting Ltd. (2025). Preliminary Ecological Appraisal. Shinfield View Care Home.
- 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.
- Natural England (2023). The Draft Statutory Biodiversity Metric User Guide (November 2023). <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>
- Natural England (2023). The Statutory Biodiversity Metric (November 2023). <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>
- UK Habitat Classification Working Group (2023). UK Habitat Classification – Habitat Definitions V2.0.

Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Survey Plan



Appendix 4: Post-Development Habitat Plan



Appendix 5: Headline Results

FINAL RESULTS

Total net unit change

(Including all on-site & off-site habitat retention, creation & enhancement)

Habitat units 0.61*Hedgerow units* 0.07*Watercourse units* 0.00

Total net % change

(Including all on-site & off-site habitat retention, creation & enhancement)

Habitat units 56.66%*Hedgerow units* 67.92%*Watercourse units* 0.00%

Trading rules satisfied?

Yes ✓

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
<i>Habitat units</i>	10.00%	1.08	1.19	0.00
<i>Hedgerow units</i>	10.00%	0.10	0.11	0.00
<i>Watercourse units</i>	10.00%	0.00	0.00	0.00

No additional area habitat units required to meet target ✓

No additional hedgerow units required to meet target ✓

No additional watercourse units required to meet target ✓