Biodiversity Net Gain Assessment

Ham Polo Club, Petersham Road, Petersham, Richmond upon Thames, Greater London TW10 7AH

Laura Cole

Status	Issue	Name	Date
Draft	0.1	Jamie-Lee Anderson BSc (Hons), Consultant Ecologist	28/08/2024
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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

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 Laura Cole to undertake a Biodiversity Net Gain (BNG) Assessment at Ham Polo Club, Petersham Road, Petersham, Richmond upon Thames, Greater London TW10 7AH (hereafter referred to as "the site"). The assessment was required to inform a planning application for the proposed new sand arena for winter polo and other equestrian activities (hereafter referred to as "the proposed development").

- The baseline habitat is 1.88 units; comprised of 1.88 units modified grassland units and developed land, sealed surface units (no value). The baseline hedgerow value is 0.36 units; comprised of 0.17 non-native hedgerow units and 0.19 native hedgerow units. The baseline off-site value is 3.09 units; comprised of modified grassland.
- The post-development habitat is 2.08 units. The post-development hedgerow value is 1.03 units.
- The development results in a 28.54% net gain in habitat units and a 186.40% net gain in hedgerow units.

Contents

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Laura Cole to undertake a Biodiversity Net Gain (BNG) Assessment at Ham Polo Club, Petersham Road, Petersham, Richmond upon Thames, Greater London TW10 7AH (hereafter referred to as "the site"). The assessment was required to inform a planning application for the proposed new sand arena for winter polo and other equestrian activities (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- Ham Polo Club V2

- Preliminary Ecological Appraisal (PEA), Arbtech Consulting Ltd, 2024.

1.2 Site Location, Geology and Landscape Context

The site is located at National Grid Reference TQ 17605 73261. The ownership boundary is approximately 11.5 ha and the site boundary is approximately 0.6ha. the site is situated in the London borough of Richmond upon Thames. 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 London Borough of Richmond upon Thames 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 (Arbtech Consulting Ltd, 2024). 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 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 London Borough of Richmond upon Thames 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 London Borough of Richmond upon Thames local policy

2.3 Limitations

None known.

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. An assessment of the actual condition for each habitat (where relevant) is provided in Appendix 5 (where necessary).

Table 1a: Baseline Biodiversity Value – proposed development site

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.161 ha	Running track	N/A	Low strategic significance
Grassland	0.942 ha	Modified grassland	Poor – see Appendix 5	Low strategic significance
Hedgerow	0.171km	Non-native ornamental hedgerow	N/A	Low strategic significance
Hedgerow	0.085km	Native hedgerow	Poor – see PEA	Medium strategic significance

Table 1b: Baseline Biodiversity Value – proposed enhancement area

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Grassland	1.5455 ha	Modified grassland	Poor – see Appendix 5	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 2a: Post Development Biodiversity Value – proposed development site

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Developed land; sealed surface	0.1519 ha	Retained and created running track	N/A	Low strategic significance
Artificial unvegetated, unsealed surface	0.4672 ha	New sand arena	N/A	Low strategic significance
Grassland	0.3486 ha	Modified grassland – retained	Poor – see Appendix 5	Low strategic significance
Grassland	0.942 ha	Modified grassland – enhanced area	Good – expected to pass all criteria	Low strategic significance
Hedgerow	0.144km	Non-native ornamental hedgerow - retained	N/A	Low strategic significance

| Hedgerow | 0.085km | Native hedgerow – enhanced | Good – expected to pass all criteria | Medium strategic significance |
| Trees | 0.1221 ha | Planting of 30 new small trees | Poor – assumed, new planting | Low strategic significance |

Table 2b: Post Development Biodiversity Value – proposed enhancement area

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Grassland	1.42855 ha	Modified grassland – retained	Poor – see Appendix 5	Low strategic significance
Grassland	0.11695 ha	Other neutral grassland – enhanced	Good – expected to pass all criteria	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 6**.

Areas of Habitat

The baseline habitat is 1.88 units; comprised of 1.88 modified grassland units, and developed land, sealed surface units (no value).

The post-development habitat is 2.08 units; comprising the creation of the sand arena.

Offsite modified grassland baseline is 3.09 units; comprised of modified grassland. the post-development off site value is 3.78 units; comprised of the enhancement of a strip of modified grassland to other neutral grassland of good quality, and the retention of the remaining modified grassland.

This results in a net change in biodiversity of 28.54% (i.e. a net gain).

Hedgerows

The baseline hedgerow value is 0.36 units; comprised of 0.21 ornamental hedgerow units and 2.12 native hedgerow units.

The post-development hedgerow value is 1.03 units; comprising the loss of a small area of ornamental hedgerow and the enhancement of the native hedgerow.

This results in a net change in biodiversity of 186.40% (i.e. a net gain).

4.0 Recommendations to Deliver BNG

4.1 Discussion

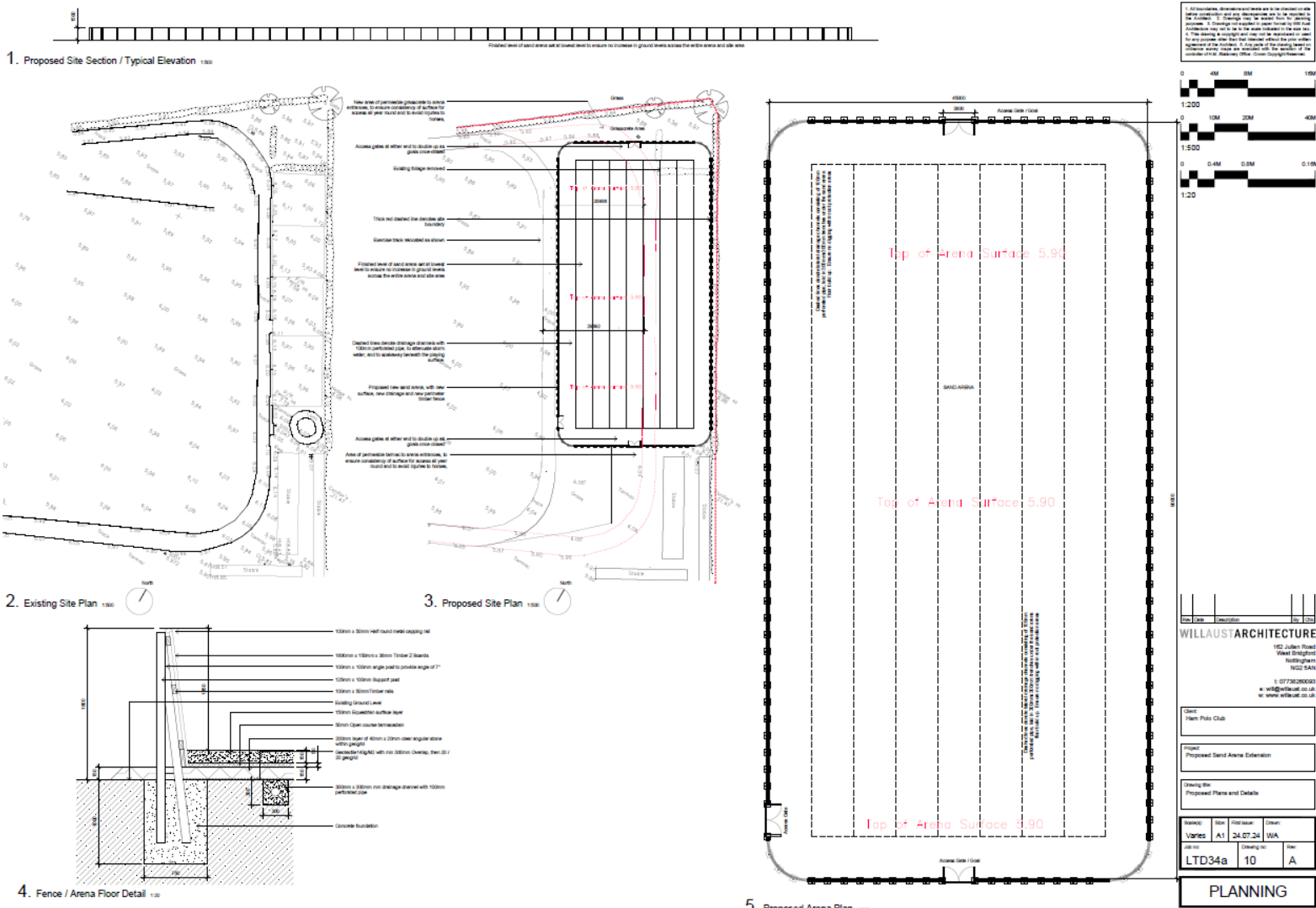The current proposed plan results in a 28.54% net gain in habitat units and a 186.40% net gain in hedgerow units. This is more than the 10% target of biodiversity net gain.

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.

5.0 Bibliography

- 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

1. Proposed Site Section / Typical Elevation 1:500

2. Existing Site Plan 1:500

3. Proposed Site Plan 1:500

4. Fence / Arena Floor Detail 1:20

5. Proposed Arena Plan 1:200

WILLAUST ARCHITECTURE

Client:
Ham Polo Club

Project:
Proposed Sand Arena Extension

Drawing title:
Proposed Plans and Details

Scale(s):	Size:	First Issue:	Drawn:
Varies	A1	24.07.24	WA

Job no:	Drawing no:	Rev:
LTD34a	10	A

PLANNING

Appendix 2a: Site Location Plan – ownership boundary

Drawn by: J. Anderson on 28-08-2024

Scale at A4 (not report projection) 1:25,000

Reproduced from GoogleEarth 2024

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Appendix 2b: Site Location Plan – proposed development site and enhancement site

Appendix 3a: Baseline Habitat Plan – proposed development area

Legend
- Site Boundary
- Modified grassland
- Sealed Surface
- Ornamental hedgerow
- Native hedgerow

Drawn by: J. Anderson on 04-09-2024

Scale at A4 (not report projection) 1:800

Reproduced from GoogleEarth 2024

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0 10 20 m

15

Appendix 3b: Baseline Habitat Plan – proposed enhancement area

Appendix 4a: Post Development Habitat Plan – proposed development area

Legend

- Site Boundary
- Proposed arena
- Post-development grassland
- Post-development sealed surface
- Ornamental hedgerow
- Hedge

Drawn by: J. Anderson on   06-09-2024

Scale at A4 (not report projection)   1:800

Reproduced from GoogleEarth 2024

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0   10   20 m
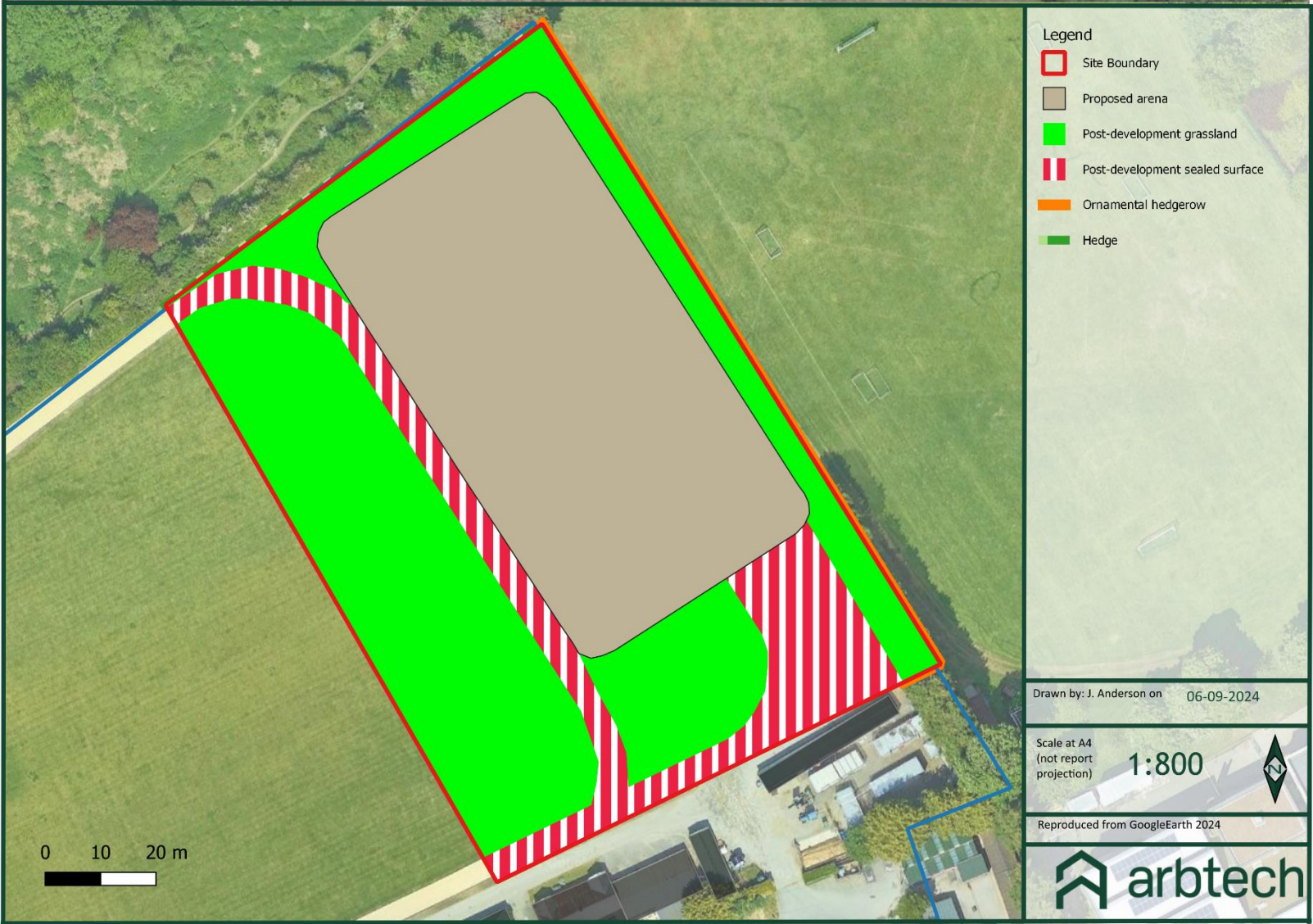
Appendix 4b: Post Development Habitat Plan – proposed enhancement area

Appendix 5: Habitat Condition Assessment Sheets – Baseline

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)

	Condition Assessment Criteria	Criterion passed (Yes or No)
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)^2.	No
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Yes
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Yes

Appendix 6: 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	0.54
	Hedgerow units	0.67
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	28.54%
	Hedgerow units	186.40%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	