



Biodiversity Net Gain Assessment

Oaklands Farm, Slaugham Land, Haywards Heath, West Sussex RH17 5TJ

AGM Limited.

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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 AGM Limited. to undertake a Biodiversity Net Gain (BNG) Assessment at Oaklands Farm, Slaugham Land, Haywards Heath, West Sussex, RH17 5TJ (hereafter referred to as “the site”). The assessment was required to inform a planning application for the “Re-positioning and minor amendments to the owners/ managers house, already permitted under planning application (Reference No: DM/18/2071)” (hereafter referred to as “the proposed development”).

	Area units	Linear Units
% Change	+33.83	N/A as baseline is zero
Units required for a 10% net gain	0 units	0 units
Units required to satisfy trading rules	0.14 units of medium distinctiveness	N/A

Areas of Habitat

The baseline habitat value of the site is 1.74 units, comprising a total of 1.41 units modified grassland, 0.18 units other neutral grassland and 0.14 units bramble scrub, as well as sealed and unsealed surfaces and buildings which have no value.

The post development habitat value of the site is 2.33 units, comprising the creation of buildings and hardstanding (no value), vegetated garden (0.27 units), other neutral grassland (1.75 units), and urban trees (0.31 units).

This results in a net change in biodiversity of **33.83%, a net gain. Trading rules are not satisfied.**

Hedgerows

The baseline hedgerow value of the site is 0.00 units, comprising of no linear habitats.

The post development habitat value of the site is 0.77 units, comprising the creation of 0.77 units new native hedgerow.

This results in a net change in biodiversity of **+0.77 units.**

Recommended Scenario B

Scenario B proposes the retention of the existing 0.036 ha of bramble scrub, resulting in a 28.26% net gain, as well as satisfying trading rules.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by AGM Limited. to undertake a Biodiversity Net Gain (BNG) Assessment at Oaklands Farm, Slaugham Land, Haywards Heath, West Sussex, RH17 5TJ (hereafter referred to as “the site”). The assessment was required to inform a planning application for the “Re-positioning and minor amendments to the owners/ managers house, already permitted under planning application (Reference No: DM/18/2071)” (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 Biodiversity Metric Calculation Tool - Oaklands Farm, RH17 5TJ – Version 1.0
- Statutory Biodiversity Metric Calculation Tool - Oaklands Farm, RH17 5TJ – Scenario B
- Preliminary Ecological Appraisal Report for Oaklands Farm, RH17 5TJ – Version 1.0

1.2 Site Location, Geology and Landscape Context

The survey site is located to the west of Slaugham village, centred on National Grid Reference TQ 25047 27771 with an area of approximately 0.5 ha.

The development site comprises one dwelling (B1), a livestock shelter (B2), large areas of grassland, bare soil with piles of manure, a gravel driveway and some bramble scrub in the northwest corner. It is located within Oaklands Farm. The site is immediately surrounded by arable land, used as horse paddocks and as cropland. There are several sections of woodland, including immediately west of the site. Three large ponds (Mill Pond, Furnace Pond and Ashfold Pond) are found in the surrounding landscape. The River Ouse is found south of the site, connected to Mill Pond and splitting into several small streams as it heads east to west across the landscape. There are several small residential areas, including Slaugham village, though the surrounding area is primarily dominated by agricultural land.

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

The DEFRA Statutory Biodiversity Metric 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 Statutory Biodiversity 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 Preliminary Ecological Appraisal at Oaklands Farm, RH17 5TJ (Arbtech, 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The Preliminary Ecological Appraisal Report for Oaklands Farm, RH17 5TJ 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 Biodiversity Metric. Class sizes for urban trees are set out in Table 14 of the Statutory Biodiversity Metric User Guide (Natural England, 2023).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the 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
- Function within the landscape
- Any site or habitat allocations under the Adopted Mid Sussex District Plan 2014-2031

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the Draft General Arrangement & Landscape Strategy 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 Draft General Arrangement & Landscape Strategy.

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 14 of the 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 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
- Function within the landscape
- Any site or habitat allocations under the Adopted Mid Sussex District Plan 2014-2031

2.3 Limitations

The PEA survey was undertaken outside of the optimal season for surveying vegetation and as such the accuracy of botanical assessment and condition assessment data may be limited in terms of species visible and ground conditions at the time of survey. However, this is not considered a significant limitation given the mild conditions and the presence of sufficient indicator species to determine the habitats on site.

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

Type	Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Area-Based	u1b – Developed land; sealed surface with buildings (u1b5)	0.019 ha	All areas of developed land on site, including a residential dwelling, B1, a livestock shelter, B2, and associated hardstanding. This includes brick paving and a parking space.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	u1c – Artificial unvegetated, unsealed surface	0.193 ha	Two distinct areas of unsealed surface, the gravel driveway leading up to the residential dwelling in the centre of the site, and all areas of bare soil/mud with less than 10% vegetation cover in the northern half of the site.		
	g4 – Modified grassland	0.170 ha	Areas of modified grassland across the whole site that were found to be in good condition, including grassland surrounding the gravel driveway, and in the fenced horse paddocks. These areas are identified as G01 and G03 in the PEA.	Good condition: Passes 7 of 7 criteria AND essential criterion A	
		0.098 ha	Areas of modified grassland found in moderate condition, found in the northern half of the site surrounding areas of bare ground. These areas are identified as G02, G04 and G05 in the PEA.	Moderate condition: Passes 5 of 7 criteria AND essential criterion A	
	g3c – Other neutral grassland	0.046 ha	Other neutral grassland found directly north of the dwelling B1, as well as directly adjacent to the east and south of B2.	Poor condition: Passes 3 of 6 criteria AND fails essential criteria A and F	
	h3d – Bramble scrub	0.036 ha	Bramble scrub found in the northwestern corner of the site.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	

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. The proposed development will result in the loss of other neutral grassland, bramble scrub, developed land; sealed surface, and modified grassland.

Table 2: Post Development Biodiversity Value

Type	Habitat	Area (ha) / Length (km)	Description	Condition Assessment	Strategic Significance
Area-based	u1b – Developed land; sealed surface, with buildings (u1b5)	0.51 ha	Proposed new residential dwelling in the northern end of the site, with additional garage building and associated hardstanding areas.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Area/compensation not in local strategy/no local strategy and no evidence to suggest the habitat is of medium strategic significance (not part of a habitat corridor or steppingstone).
	u1c – Artificial unvegetated, unsealed surface	0.111 ha	Proposed new driveway and parking spots constructed of a gravel surface finish.		
	u1 – Vegetated garden [828]	0.140 ha	Proposed private garden area associated with the new dwelling, containing several new small trees		
	g3c – Other neutral grassland	0.261 ha	Proposed areas of grassland “seeded down with Wildflower & Grass Seed mix” to line the long driveway, outside of the private garden area.	Assumed to reach moderate condition within 10 years: passing 5 of 6 criteria AND essential criterion A BUT failing essential criterion F	
	Individual urban trees	0.102 ha	Proposed planting of 25 new small trees within the other neutral grassland lining the new driveway outside the private garden curtilage.	Assumed to reach moderate condition within 27 years: passing 4 of 6 criteria	

Linear-Based	h2a - Native hedgerow	0.196 km	Proposed native hedgerow to be planted along the eastern and southern border of the private garden, and east of the new gravel driveway.	Habitat assumed to reach good condition within 12 years: passing 7 of 8 criteria	
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3.3 Change in Biodiversity Value of the Site

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

Areas of Habitat

The baseline habitat value of the site is 1.74 units, comprising a total of 1.41 units modified grassland, 0.18 units other neutral grassland and 0.14 units bramble scrub, as well as sealed and unsealed surfaces and buildings which have no value.

The post development habitat value of the site is 2.33 units, comprising the creation of buildings and hardstanding (no value), vegetated garden (0.27 units), other neutral grassland (1.75 units), and urban trees (0.31 units).

This results in a net change in biodiversity of **33.83%, a net gain.**

Hedgerows

The baseline hedgerow value of the site is 0.00 units, comprising of no linear habitats.

The post development habitat value of the site is 0.77 units, comprising the creation of 0.77 units new native hedgerow.

This results in a net change in biodiversity of **+0.77 units.**

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a 33.83% net gain in habitat units, and the addition of 0.77 hedgerow units. Despite the site exceeding the minimum 10% uplift target on paper, trading rules are not satisfied. **Trading rules are a core principle of BNG, and failure to meet trading rules results in a failure to meet BNG.** Per the Statutory Biodiversity Metric User Guide, any loss of a habitat must be replaced on a like-for-like or like-for-better principle. At present, trading conditions are not satisfied for the loss of area-based habitats of medium distinctiveness: the removal of bramble scrub, a heathland and shrub habitat, was not compensated for as heathland and shrub habitats are not proposed.

In order to satisfy the trading rules 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 satisfy trading rules on site or to reduce off-site compensation requirements that may be required to satisfy trading rules.

4.2 Landscaping

To maximise the biodiversity value of the site itself and successfully satisfy trading rules, an alternative plan is proposed: Scenario B, as detailed below.

- Retain the existing 0.036 ha of bramble scrub (and plant 0.036ha less of other neutral grassland than originally proposed) and achieve a final net gain of +28.26%.

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 Defra Statutory Biodiversity Metric there is a unit deficit of 0.14 medium distinctiveness habitat units, and this will need to be provided to satisfy the trading rules.

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.

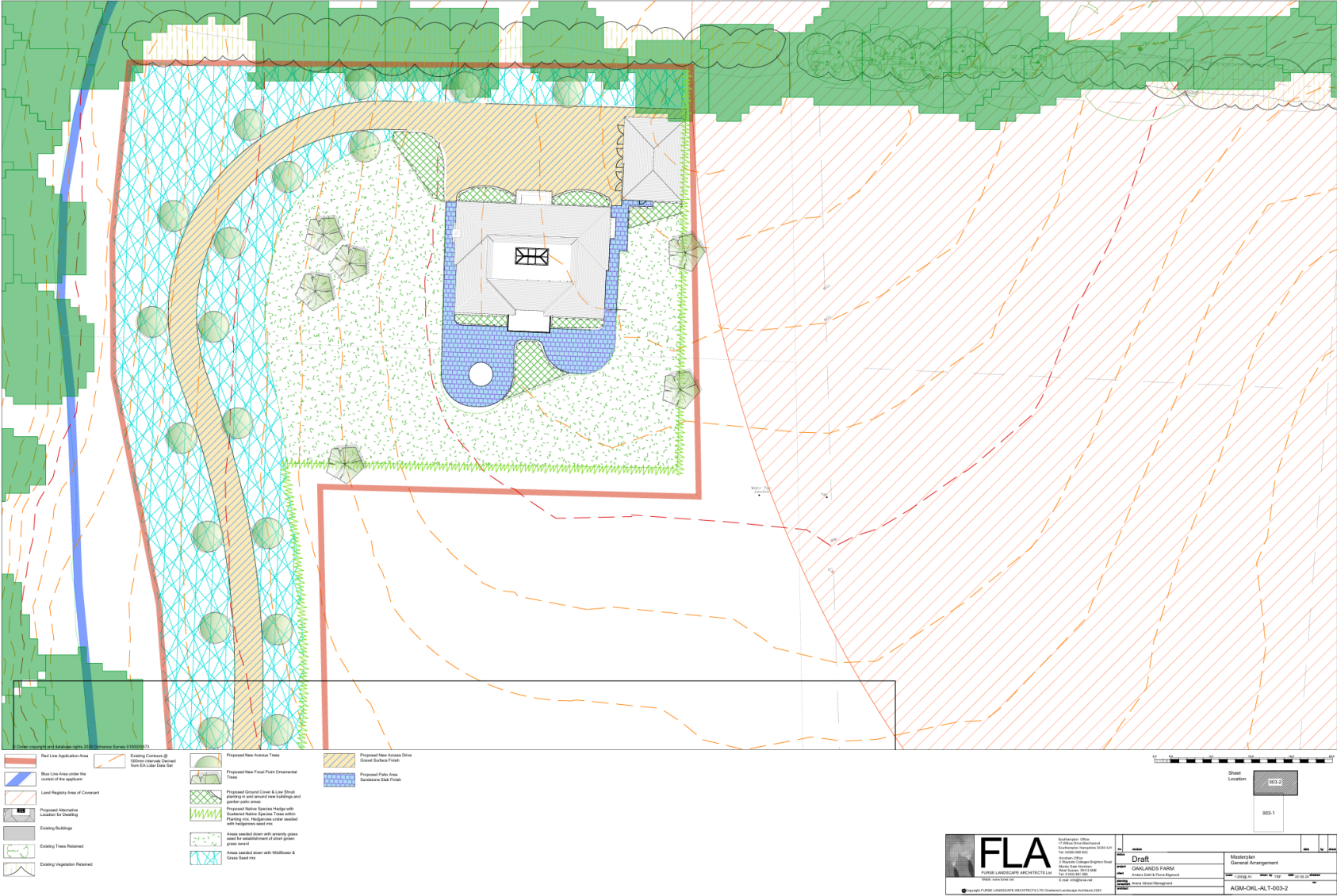
4.5 Design Statement

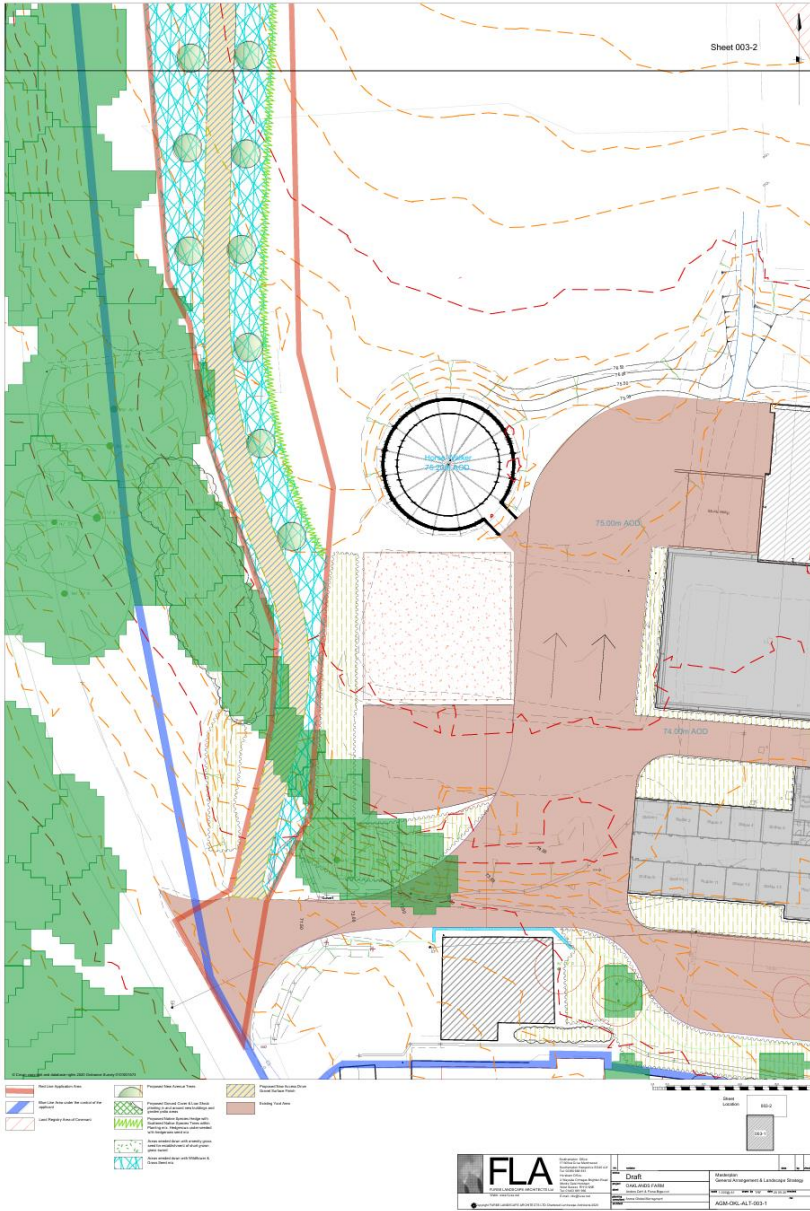
This report contains recommendations on measures for achieving BNG. These recommendations do not constitute a design for BNG. In submitting these recommendations, Arbtech Consulting has no Design Liability associated with these recommendations for BNG. The strategy sets out the criteria which the landscape team can use to design the creation and management of the site.

5.0 Bibliography

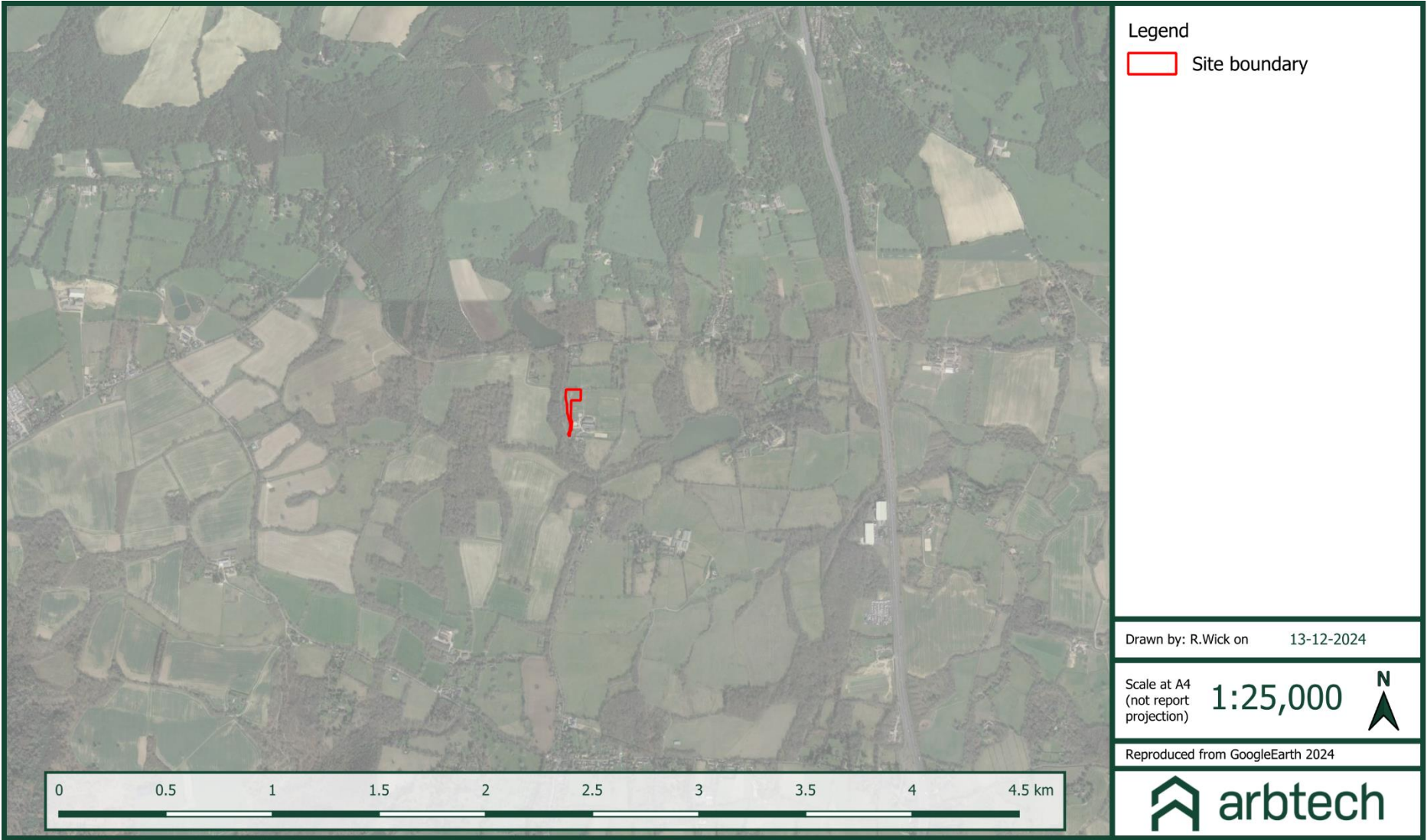
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http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
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- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

Appendix 1: Proposed Development Plan

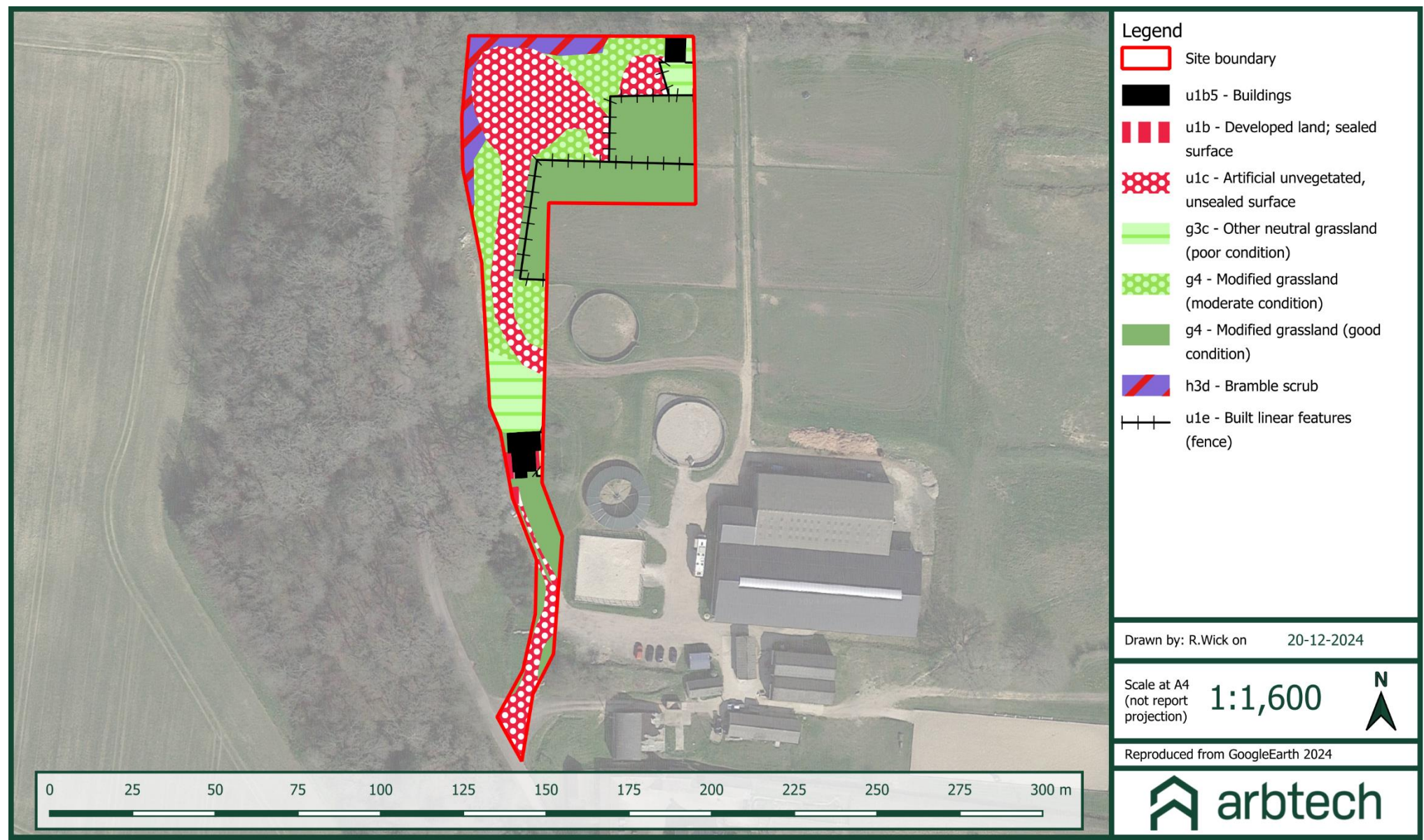




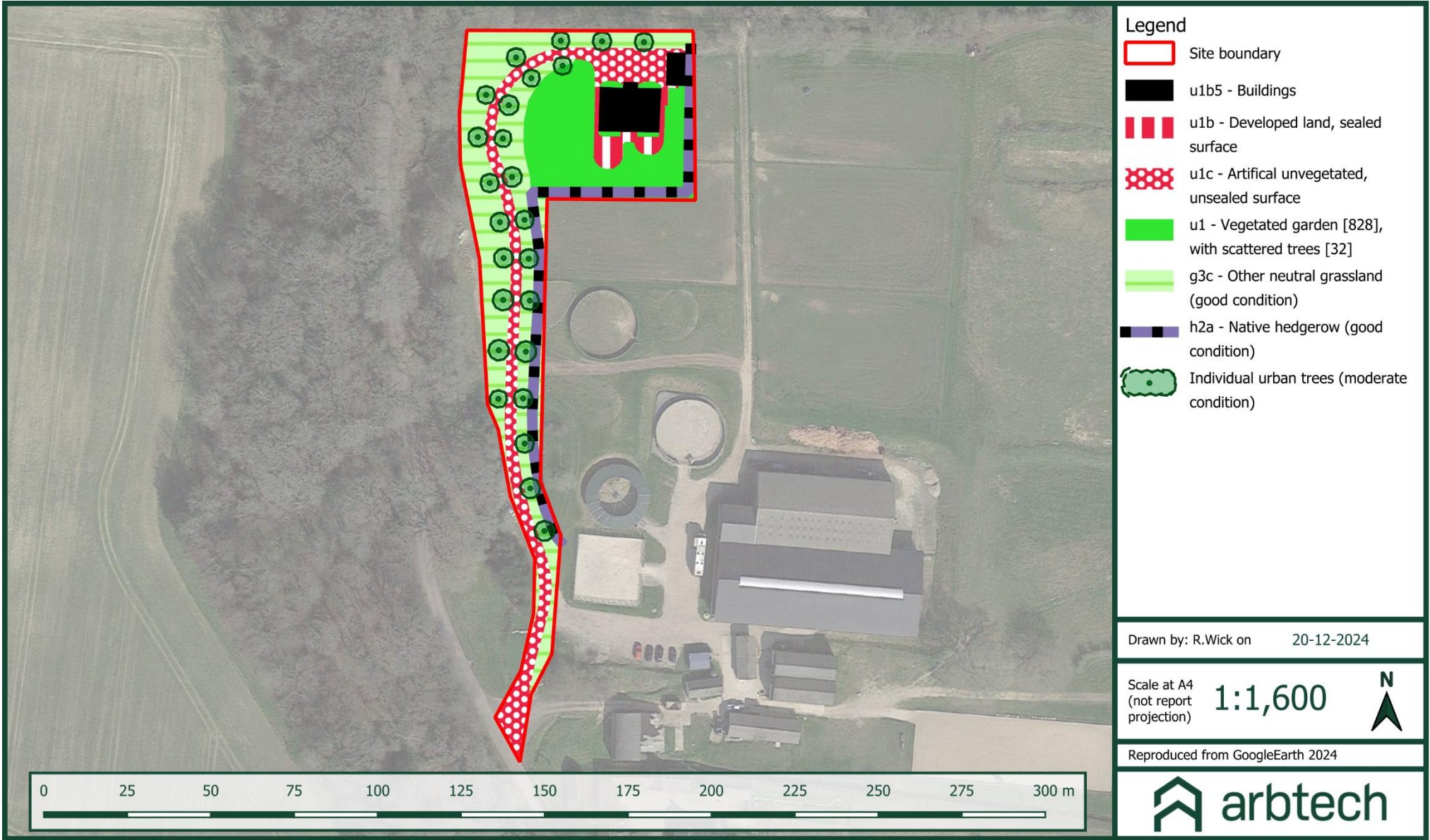
Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5a: Habitat Condition Assessment Sheets - Baseline

Type	UK Habitat Classification	Habitat Type	Criteria Aims		Notes
Area based	Grassland	Modified grassland (Parcels G01 and G03)	A	Y	Good condition: Passes 7 of 7 criteria AND passes essential criterion A
			B	Y	
			C	Y	
			D	Y	
			E	Y	
			F	Y	
			G	Y	
	Grassland	Modified grassland (Parcels G02 and G05)	A	Y	Moderate condition: Passes 5 of 7 criteria AND passes essential criterion A
			B	Y	
			C	Y	
			D	N	
			E	N	
			F	Y	
	Grassland	Modified grassland (Parcel G04)	G	Y	
			A	Y	Moderate condition: Passes 5 of 7 criteria AND passes essential criterion A
			B	N	
			C	Y	
			D	Y	
			E	N	
	Grassland	Other neutral grassland	F	Y	
			G	Y	
			A	N	Poor condition: Passes 3 of 6 criteria AND fails essential criteria A and F
			B	Y	
			C	Y	
			D	Y	
			E	N	
			F	N	

Appendix 5b: Habitat Condition Assessment Sheets - Proposed

Type	UK Habitat Classification	Habitat Type	Criteria Aims		Notes
Area-based	Trees	Individual urban trees	A	Y	Moderate condition: Passes 4 of 6 criteria
			B	Y	
			C	N	
			D	Y	
			E	N	
			F	Y	
	Grassland	Other neutral grassland	A	Y	Good condition: Passes 5 of 6 criteria AND passes essential criterion A BUT fails essential criterion F
			B	Y	
			C	Y	
			D	Y	
			E	Y	
			F	N	
Linear-based	Heathland and scrub	Native Hedgerow	A1	Y	Good condition: Passes 7 of 8 criteria, resulting in No more than 2 failures in total; AND No more than 1 failure in any functional group
			A2	Y	
			B1	Y	
			B2	Y	
			C1	N	
			C2	Y	
			D1	Y	
			D2	Y	

Appendix 6: Headline BNG Results

The Defra Statutory Biodiversity Metrics are provided as two separate excel spreadsheets.

Proposed:

FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.59	
	Hedgerow units	0.77	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	33.83%	
	Hedgerow units	N/A	0 baseline units - % cannot be calculated
	Watercourse units	0.00%	
Trading rules satisfied?	No - Check Trading Summaries ▲		

Scenario B:

FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.49	
	Hedgerow units	0.77	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	28.26%	
	Hedgerow units	N/A	0 baseline units - % cannot be calculated
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		