Biodiversity Net Gain Assessment

8-9 Grange Farm, Hospital Road, Sutton Bridge, PE12 9YR

Mrs Mary Stone

Status	Issue	Name	Date
Draft	0.1	Kelly Clarke (Dip H.E), Consultant Ecologist	05/02/2025
Reviewed	0.2	Kelly Clarke (Dip H.E), Consultant Ecologist	11/02/2025
Final	1.0	Kelly Clarke (Dip H.E), Consultant Ecologist	11/02/2025
Updated	1.1	Kelly Clarke (Dip H.E), Senior Ecologist	17/12/2025

Arbtech Consultant's Contact Details:

Kelly Clarke
Consultant Ecologist
Tel: 07512 321517 **Email:** kellyclarke@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.

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 Mrs Mary Stone to undertake a Biodiversity Net Gain (BNG) Assessment at 8-9 Grange Farm, Hospital Road, Sutton Bridge, PE12 9YR(hereafter referred to as "the site"). The assessment was required to inform planning application H18-0979-24 with the South Holland District Council for the conversion and change of use of outbuilding to kennels (hereafter referred to as "the proposed development").

Areas of Habitat

The baseline habitat value of the site is 0.23 units, comprising 0.23 units of modified grassland and buildings (no value). The post development habitat value of the site is 0.25 units, comprising the retention of 0.18 units of modified grassland and buildings (no value), as well as the creation of 0.07 units of individual trees, gravel driveway (no value) and hard standing (no value). This results in a net change in biodiversity of **+10.88%**.

Table 1. *BNG net change summary*

Unit Type	Baseline Units	Units Required to Meet Target	Post Development Units	Net Loss/Gain	Unit Deficit
Habitat Units	0.23	0.25	0.25	**+10.88%**	Target achieved
Linear Units	N/A	N/A	N/A	N/A	N/A
Watercourse Units	N/A	N/A	N/A	N/A	N/A

The current proposed plan results in a **+10.88%** net gain in habitat units. This is more than the 10% target of biodiversity net gain and therefore compliant with current legislation (Environment Act 2021) and current planning policies (National: National Planning Policy Framework, 2023; Local: South East Lincolnshire Local Plan).

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 Mrs Mary Stone to undertake a Biodiversity Net Gain (BNG) Assessment at 8-9 Grange Farm, Hospital Road, Sutton Bridge, PE12 9YR(hereafter referred to as "the site"). The assessment was required to inform planning application H18-0979-24 with the South Holland District Council for the conversion and change of use of outbuilding to kennels (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:

- Biodiversity Metric Calculation Tool - 8-9 Grange Farm, PE12 9YR
- PEA-PRA - 8-9 Grange Farm, Hospital Road, Sutton Bridge, Spalding PE12 9YR

1.2 Site Location, Geology and Landscape Context

The survey site is centred on National Grid Reference TF 50272 22197 and has an area of approximately 0.133ha. The site comprises a block of stables, surrounded by an area of species-poor grassland. Arable fields border the site to the north and east, with residential development to the west and Hospital Road to the south. The wider landscape comprises intensively managed agricultural land with limited ecological value. The River Nene is located ~1.6km northwest and the Wash is located ~5.3km north of the site. The site is located on a bedrock geology of Ampthill Clay Formation – Mudstone, overlain with loamy and clayey soils of coastal flats with naturally high groundwater. 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) states biodiversity net gain is mandatory for sites over 0.5ha as of February 2024. The requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2021). 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 the Preliminary Ecological Appraisal (Arbtech Consulting Ltd, 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The Preliminary Ecological Appraisal 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 8-1 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 South East Lincolnshire Local Plan

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the development 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 development 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 Statutory Biodiversity Metric. Class sizes for urban trees are set out in Table 8-1 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 South East Lincolnshire Local Plan

2.3 Limitations

The Preliminary Ecological Appraisal was completed outside of the optimal survey period (April to October) for ground flora, 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. This is not anticipated to impact the outcome of the survey, due to the low value and small area of habitats on site.

3.0 Results

3.1 Baseline Habitats

Table 2 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 2: *Baseline Biodiversity Value*

Baseline Biodiversity Value				
Area Based Habitats (A-1)				
Habitat	**Area/Length**	**Description**	**Condition Assessment**	**Strategic Significance**
Urban: Developed land; sealed surface	0.02ha	There is one building present within the site, it is a U-shape building, formerly utilised as stables	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).
Grassland: Modified grassland	0.113ha	There is an area of grassland present at the site, that was formerly utilised as a horse paddock. The sward is extremely species-poor, and limited in its structure, being consistently maintained at a height of approximately 9cm, throughout. The area is dominated by a ryegrass mix, with an extremely limited herbaceous layer, comprising creeping buttercup (R), white clover (R), teasel (R) and dandelion (R). Towards the rear of the building, within the area of grassland, some physical damage is present, through storage of a tractor and pile of bricks. Within this area to the rear, some scrub, including bramble, with common nettles, are sparsely present.	**Poor**: passes 4 of 7 criteria, fails essential criterion A. Assessed using the 'Grasslands Low Distinctiveness' habitat type condition sheet.	**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).

3.2 Post Development Habitats

Table 3 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 0.2ha of modified grassland.

***Table 3**: Post Development Biodiversity Value*

Post Development Biodiversity Value					
Area Based Habitats					
	Habitat	**Area/Length**	**Description**	**Condition Assessment**	**Strategic Significance**
Retained (A-1)	**Urban:** Developed land; sealed surface	0.02ha	The existing building will be converted.	See "Baseline Biodiversity Section" above.	
	Grassland: Modified grassland	0.088ha	The majority of the grassland on site is due to be retained.	See "Baseline Biodiversity Section" above.	
Created (A-2)	**Urban:** Developed land; sealed surface	0.01ha	Extension to the existing building.	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).
	Urban: Artificial unvegetated, unsealed surface	0.014ha	Proposed gravel driveway and customer parking.	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).
	Individual trees: Rural trees	0.0244ha	A total of six small native trees will be planted around the grassland on site.	**Moderate**: passes 4 of 6 criteria. Assessed using the 'Individual tree' habitat type condition sheet.	**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).

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Biodiversity Metric Calculation Tool - 8-9 Grange Farm, PE12 9YR. The headline results are presented in Appendix 6.

Areas of Habitat

The baseline habitat value of the site is 0.23 units, comprising 0.23 units of modified grassland and buildings (no value). The post development habitat value of the site is 0.25 units, comprising the retention of 0.18 units of modified grassland and buildings (no value), as well as the creation of 0.07 units of individual trees, gravel driveway (no value) and hard standing (no value). This results in a net change in biodiversity of **+10.88%**.

4.0 Recommendations to Deliver BNG

4.1 Discussion

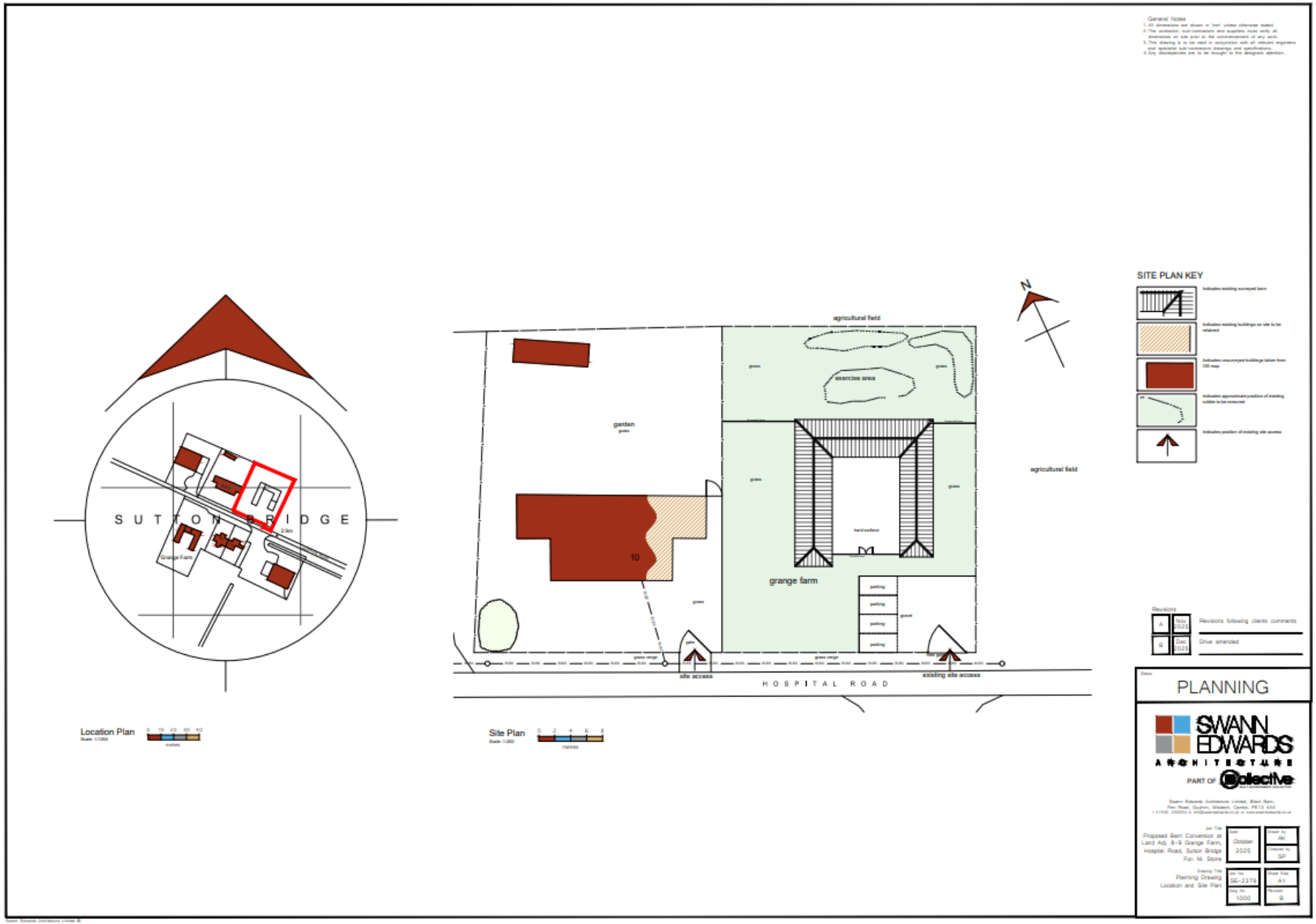
The current proposed plan results in a **+10.88%** net gain in habitat units. This is more than the 10% target of biodiversity net gain and therefore compliant with current legislation (Environment Act 2021) and current planning policies (National: National Planning Policy Framework, 2023; Local: South East Lincolnshire Local Plan).

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

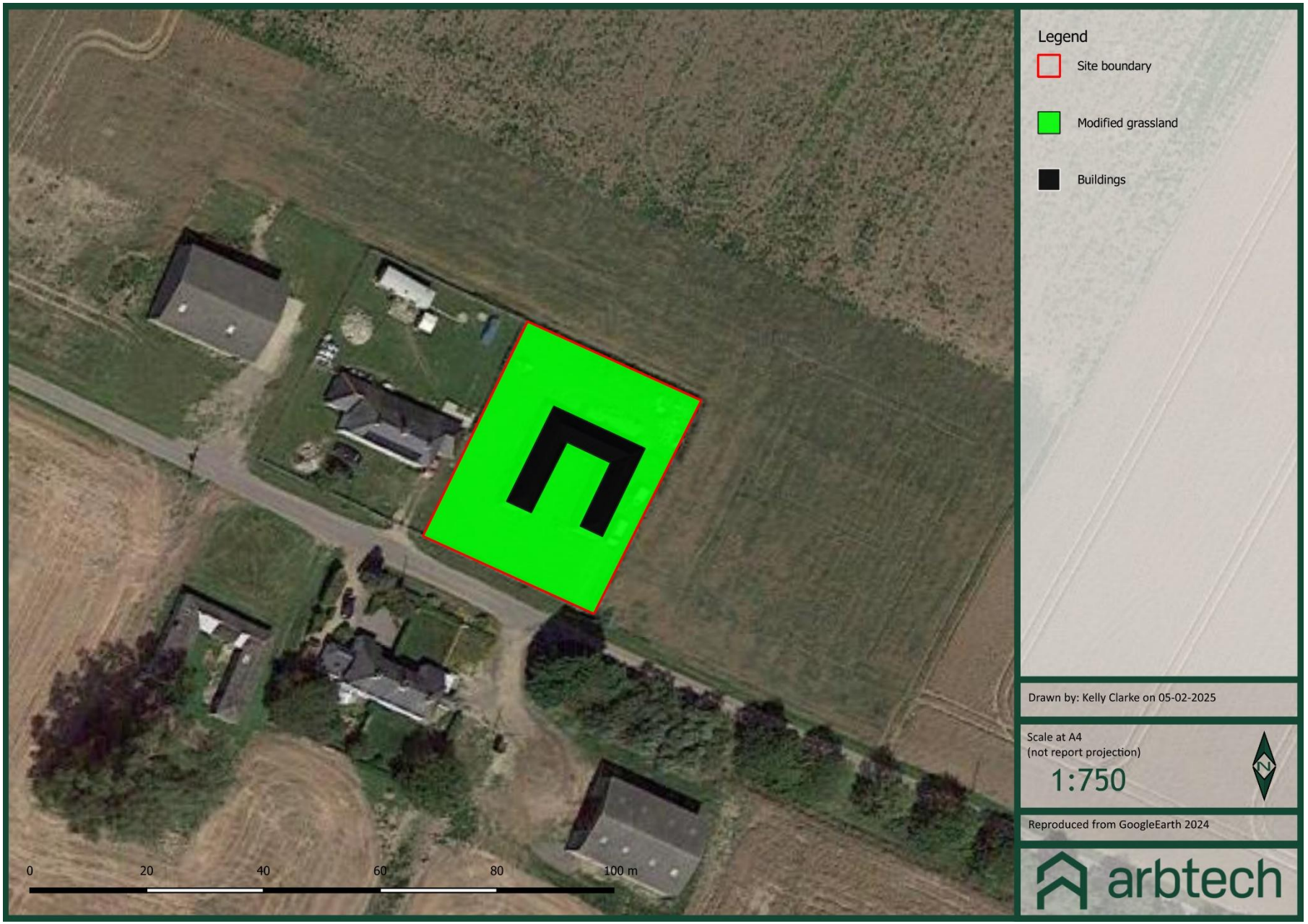
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.
- CIEEM-CIRIA-IEMA (2019) Biodiversity Net Gain – Good Practice Principles for Development.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit. http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Natural England (2023). The Statutory Biodiversity Metric (JP039).
- Natural England (2023). The Statutory Biodiversity Metric User Guide (JP039).
- Natural England (2023). The Statutory Biodiversity Metric Technical Annex 1 - Condition Assessment Sheets and Methodology (JP039).
- Natural England (2023). The Statutory Biodiversity Metric 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 5a: Habitat Condition Assessment Sheets - Baseline

Modified Grassland Condition Assessment

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
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.**	No	Less than 6m per metre squared.
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	Sward height is not varied.
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).	Yes	More than 20%
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	Less than 5% physical damage.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].	Yes	Less than 10% bare ground.
F	Cover of bracken *Pteridium aquilinum* is less than 20%.	Yes	Less than 20% cover of scrub.
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).	Yes	No invasive species.
		Essential criterion achieved (Yes or No)	No
		Number of criteria passed	4

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	✓

Appendix 5b: Habitat Condition Assessment Sheets - Proposed

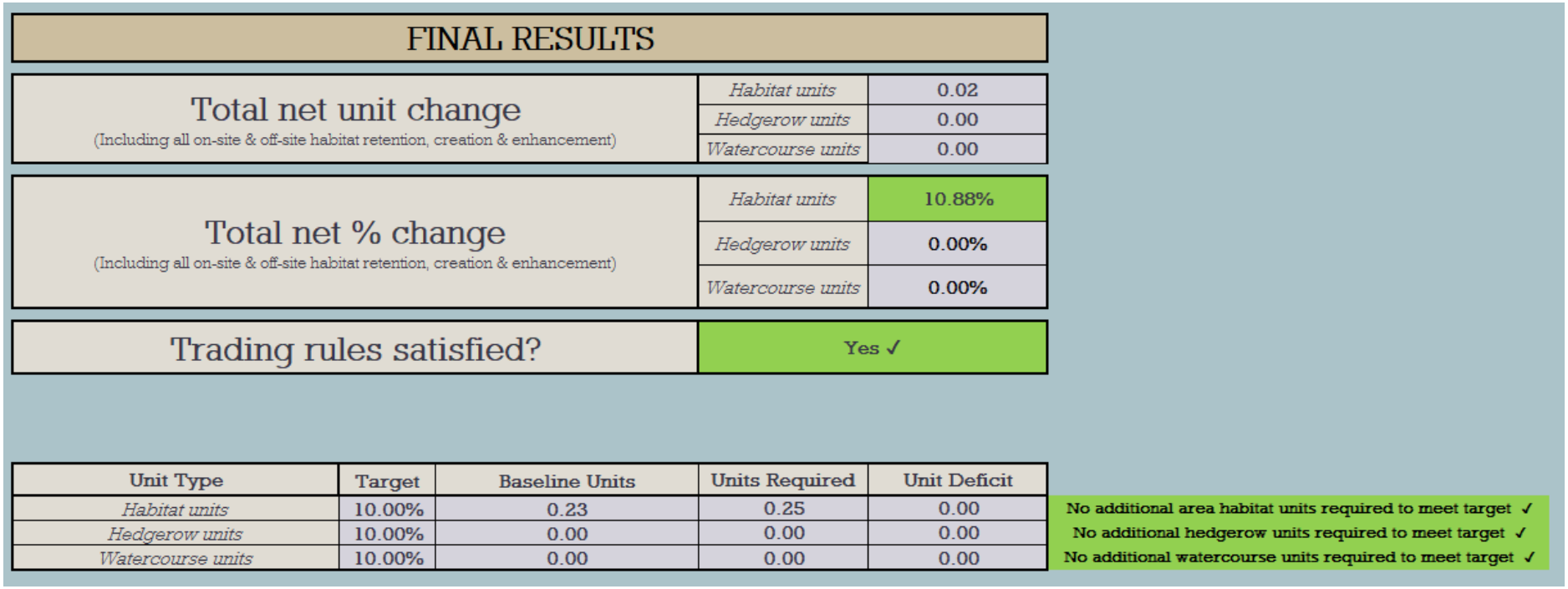
Individual Trees Condition Assessment

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	Yes	
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Yes	Individual trees automatically pass this criterion.
C	The tree is mature (or more than 50% within the block are mature)[1].	Yes	
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	No	Some damage is expected.
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	No ecological niches.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	
	Number of criteria passed	4	

Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 5 or 6 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	✓
Passes 2 or fewer criteria	Poor (1)	

Appendix 6: Headline BNG Results

The Defra Statutory Biodiversity 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*	0.02
	Hedgerow units	0.00
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	10.88%
	Hedgerow units	0.00%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	0.23	0.25	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	0.00	0.00	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓