Rhiannon Jensen O'Brien BSc (Hons) MSc
Consultant Ecologist
Rhiannonjob@arbtech.co.uk
Arbtech Consulting Ltd
arbtech.co.uk

Biodiversity Net Gain Assessment

Survey site:

Land adjacent from 409 Broad Gate, Weston Hills Lincolnshire PE12 6DB

Client:

Halgarth Farms

Report date:

7th May 2025

Project:

This report is prepared to inform a planning application for:

Creation of one dwelling

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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 Halgarth Farms to undertake a Biodiversity Net Gain (BNG) Assessment at Land adjacent from 409 Broad Gate, Weston Hills Lincolnshire PE12 6DB (hereafter referred to as "the site"). The assessment was required to inform a planning application for the creation of one dwelling hereafter referred to as "the proposed development").

Habitat Value

The baseline habitat value of the site is 0.22 units, comprising 0.04 units of modified grassland and 0.18 units of cereal crops.
The post development habitat value of the site is 0.14 units, comprising the creation of buildings and hardstanding (no value), 0.14 units of vegetated garden.

Discussion

The current proposed plan results in a -35.96% net loss in habitat units. This is less than the 10% target of biodiversity net gain.

However, due to the majority the site being within residential curtilage, BNG guidance does not allow the creation or enhancement of habitats within private gardens as they cannot be legally secured. Thus additional enhancements on site have been exhausted and provision of units off site will be required.

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 0.10 habitat units and this will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

The mechanism for securing this off-setting will need to be proposed to, and confirmed by the LPA e.g., purchasing conservation credits though 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.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Halgarth Farms to undertake a Biodiversity Net Gain (BNG) Assessment at Land adjacent from 409 Broad Gate, Weston Hills Lincolnshire PE12 6DB (hereafter referred to as "the site"). The assessment was required to inform a planning application for the creation of one dwelling 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:

- BNG Metric- Land adjacent from 409 Broad Gate, PE12 6DB (Arbtech Consulting Ltd, 2025)
- PEA- Land adjacent from 409 Broad Gate, PE12 6DB (Arbtech Consulting Ltd, 2025)

1.2 Site Location, Geology and Landscape Context

The survey site is centred on National Grid Reference TF27872066 and has an area of approximately 0.118ha. The site comprises a relatively small area of grassland with a barn that is currently disused. The site is surrounded by arable fields with adjacent residential dwellings to the north and south along Broad Gate Road, an arable field is located adjacent to the east of the site. The wider landscape comprises predominantly arable fields densely located with a lack woodland or boundary hedgerows. Urban areas of Spalding are located approximately 2km north-west. 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, 2024). 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.

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 (Arbtech Consulting Ltd, 2025). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The PEA and BNG 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 (2019).

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by proposed plans 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 plans.

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 (2019).

2.3 Limitations

A review of MAGIC maps identified a drain along the southern boundary of the site, however during the site visit the ground was vegetated and dry with an even topography, in addition review of historic imagery shows the area to be of a similar dry nature, thus the drain on MAGIC maps is assumed to be incorrect.

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

Habitat	Area (ha)/ Length (km)	Description	Condition Assessment	Strategic Significance
Building	0.0034	One building is located on site.	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).
Artificial unvegetated unsealed surface	0.0046	A gravel track is located at the western entrance, grass has established in areas as mentioned below.	Habitat condition pre-determined as '***N/A***'.	Low Strategic Significance
Modified Grassland	0.0181	The site comprises a portion of grassland that has established around stored agricultural items and the gravel tracks through the sites centre. The grassland is of a generally low sward at approximately 10cm. Species include **abundant** meadowgrass sp. **frequent** common nettle, daisy, **occasional** red dead nettle, **rare** cleavers, dandelion, small flowered cranesbill, hairy bittercress, groundsel, borage, spear thistle, weld, willowherb sp., Yorkshire fog, cocks foot.	***Poor****: passes 4 of 7 criteria excluding essential criterion A.* Assessed using the 'Grasslands Low Distinctiveness' habitat type condition sheet.	Low Strategic Significance
Cereal Crops	0.092	To the east is an arable field, the field was ploughed during the survey containing no vegetation. From review of historical Google Earth imagery the field is frequently ploughed with some years containing cereal crops used for bales.	Habitat condition pre-determined as '***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. 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 modified grassland and cropland.

Table 2: Post Development Biodiversity Value

Habitat	Area (ha)/ Length (km)	Description	Target Condition	Strategic Significance
Building	0.0213	One dwelling and garage created	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).
Artificial unvegetated unsealed surface	0.0229	Gravel driveway up to dwelling created	Habitat condition pre-determined as '***N/A***'.	Low Strategic Significance
Vegetated garden	0.07307	Vegetated garden created, this includes the planting of 2 trees however these cannot be included in the metric following rules set by the BNG User Guide.	Habitat condition pre-determined as '***N/A***'.	Low Strategic Significance

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 0.22 units, comprising 0.04 units of modified grassland and 0.18 units of cereal crops.

The post development habitat value of the site is 0.14 units, comprising the creation of buildings and hardstanding (no value), 0.14 units of vegetated garden.

This results in a net change in biodiversity of -35.96% (i.e. a net loss).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a -35.96% net loss in habitat units. This is less than the 10% target of biodiversity net gain.

In order to achieve the required minimum 10% net gain in biodiversity 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 achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain.
However, due to the majority the site being within residential curtilage, BNG guidance does not allow the creation or enhancement of habitats within private gardens as they cannot be legally secured. Thus additional enhancements on site have been exhausted and provision of units off site will be required.

4.2 Biodiversity Offsetting

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 0.10 habitat units and this will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

The mechanism for securing this off-setting will need to be proposed to, and confirmed by the LPA e.g., purchasing conservation credits though 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.

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 (2024). The Statutory Biodiversity Metric (JP039).
- Natural England (2024). The Statutory Biodiversity Metric User Guide (JP039).
- Natural England (2024). The Statutory Biodiversity Metric Technical Annex 1 - Condition Assessment Sheets and Methodology (JP039).
- Natural England (2024). 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 5: Habitat Condition Assessment Sheets – Baseline

Habitat	Justification	Score
Modified grassland	There are less than 6-8 species per m2. While the habitat has a range of species present many are present infrequently or a group of plants present in one small area. Sward height is not varied There is less than 20% scrub. There is less than 5% damage Bare ground is more than 10% There is no bracken No invasive plant species are present.	**poor –** passes 4 criteria excluding essential criterion A.

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*	-0.08	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	-35.96%	Total net gain achieved is less than target set ▲
	Hedgerow units	0.00%	
	Watercourse units	0.00%	
Trading rules satisfied?		No - Check Trading Summaries ▲	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	0.22	0.24	0.10	
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 ✓