Hannah Upshall BSc (Hons)
Graduate Ecologist
Email: hannahupshall@arbtech.co.uk
Arbtech Consulting Ltd
arbtech.co.uk

Biodiversity Net Gain Assessment

Survey site:

27 Wheatley Drive, Longridge, Preston, Ribble Valley, Lancashire, PR3 3TT

Client:

Mr and Mrs Croasdale-Wood

Survey date:

14th May 2025

Project:

This report is prepared to inform a planning application with Ribble Valley Borough Council. The proposal is described as:

Rebuild of previous dwelling after gas explosion destroyed majority of previous dwelling. (Application ref: 3/2025/0050)

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.

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. obtained from third parties has not been independently áverified 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. Second 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 Mr and Mrs Croasdale-Wood to undertake a Biodiversity Net Gain (BNG) Assessment at 27 Wheatley Drive, Longridge, Preston Ribble Valley, Lancashire, PR3 3TT (hereafter referred to as "the site"). The assessment was required to inform a planning application for the rebuild of a former dwelling, the majority of which was destroyed in a gas explosion (hereafter referred to as "the proposed development").

Areas of Habitat

The baseline habitat value of the site is **0.02 units**, comprising 0.02 units of vegetated garden.

The post development habitat value of the site is **0.03 units**, comprising 0.03 units of vegetated garden.

This results in a net change in biodiversity of **97.95%** (i.e. a net gain).

The current proposed plan results in a **97.95% net gain** in habitat units. This is more than the 10% target of biodiversity net gain. The proposed development is therefore anticipated to surpass the minimum target of 10% biodiversity net gain and thus is compliant with legislation (Environment Act 2021).

Contents

1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Mr and Mrs Croasdale-Wood to undertake a Biodiversity Net Gain (BNG) Assessment at 27 Wheatley Drive, Longridge, Preston Ribble Valley, Lancashire, PR3 3TT (hereafter referred to as "the site"). The assessment was required to inform a planning application for the rebuild of a former dwelling, the majority of which was destroyed in a gas explosion (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:

- Defra Statutory Biodiversity Metric
- Preliminary Ecological Appraisal (PEA) for 27 Wheatley Drive, PR3 3TT (Arbtech, 2025).

1.2 Site Location, Geology and Landscape Context

The site is located at National Grid Reference SD 60863 37800 and has an area of approximately ~0.037 hectares. The site comprises an area of derelict land, which was once occupied by a dwelling. The dwelling suffered a gas explosion and as such, significant damage occurred, with demolition of the remaining structure occurring, following safety concerns, under a prior demolition notice. All that remains present at the site are three young to semi-mature trees, and small patches of grassland, that previously formed areas of garden, associated with the previous dwelling. The site is bound by Wheatley Drive to the south, with dwellings to the north, east and west. The site is located within the town of Longridge, 9km north-east of Preston. The wider landscape is dominated by urban development, associated with Longridge. 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. 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 PEA (Arbtech, March 2025). 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 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 Ribble Valley Borough Council Local Plan (2008).

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by a Proposed Development Plan (Architectural Designs, 2024) 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 Development Zoning.

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 Ribble Valley Borough Council Local Plan (2008).

2.3 Limitations

No limitations encountered.

3.0 Results

3.1 Historic Baseline Habitats

Table 1 details the historic baseline habitats present (before the former dwelling and gardens was destroyed) along with their area/length, condition and strategic significance.

Table 1: Baseline Biodiversity Value taken from the PEA (Arbtech, 2025) and Google Earth data showing the baseline habitat before the former dwelling and gardens was destroyed.

Habitat	*Area / Length*	*Description*	*Condition Assessment*	*Distinctiveness*	*Strategic Significance*
Area based					
Artificial unvegetated, unsealed surface. **Historically sealed surface**	0.03 ha	The site is dominated by an area of unvegetated surface, where the former dwelling once occupied. Since the clearance of the site, all that remains is turned over ground, with no associated vegetation present within the area. This area is of minimal ecological value.	**N/A**	**V.Low**	**Low** Area/compensation not in local strategy.
Vegetated garden	0.0078 ha	On the northern and southern boundaries of the site exist two small patches of grassland, that previously formed lawned areas of the former dwelling. Given the sites former use as a dwelling, whereby this grassland was located within a vegetated garden, the species composition of the grassland is low and includes: (Dominant): perennial rye grass (*Lolium perenne*). (Abundant): white clover	**N/A**	**Low**	**Low** Area/compensation not in local strategy.

		(*Trifolium repens*) (Occasional): creeping buttercup (*Ranunculus repens*), broad-leaved dock (*Rumex obtusifolius*), and common nettle (*Urtica dioica*). There are approximately 3 vascular plant species per square metre on average. The sward height is consistently short across the parcel, ranging from 4cm-8cm, with less than 20% of the area more than 7cm, due to disturbance, trampling and demolition of the former dwelling. No scrub or bracken is present in the parcel. Physical damage across the grassland parcel is less than 10% of the total area of grassland, and the total cover of bare ground does not exceed 10%. No invasive Schedule 9 plant species were noted			
Individual Trees	**Not included within the metric as small trees within gardens**	On the northern and southern boundaries of the site, within the patches of grassland are three trees, with species including two cherry and one ash. All of the trees are small, with DBHs below 30cm.	**N/A**	**N/A**	**N/A**

	are exempt.				

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 within the table below, which is based on the assumption that a 30-year management plan will be implemented for the site.

Table 2: Post Development Biodiversity Value

Habitat	Area / Length	Description	Target Condition	Distinctiveness	Strategic Significance
Area based					
Developed land; sealed surface	0.0215 ha created	Proposed residential dwelling.	**N/A**	**V. Low**	**Low** Area/compensation not in local strategy.
Vegetated garden	0.016 ha created	Associated garden.	**N/A**	**Low**	**Low** Area/compensation not in local strategy.

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 5.

Areas of Habitat

The baseline habitat value of the site is **0.02 units**, comprising 0.02 units of vegetated garden.

The post development habitat value of the site is **0.03 units**, comprising 0.03 units of vegetated garden.

This results in a net change in biodiversity of **97.95%** (i.e. a net gain).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a **97.95% net gain** in habitat units. This is more than the 10% target of biodiversity net gain. The proposed development is therefore anticipated to surpass the minimum target of 10% biodiversity net gain and thus is compliant with legislation (Environment Act 2021).

5.0 Bibliography

- Arbtech (2025) Preliminary Ecological Appraisal.
- Architectural Designs (2024). Proposed Plans.
- 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).
- Ribble Valley Borough Council (2008). Local Plan.
- 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: Historic Baseline Habitat Plan

Appendix 4: Post Development Habitat Plan

Appendix 5: 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*	97.95%
	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%	0.02	0.02	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 ✓

Limitations and Copyright

Legal

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.

Version control			
Status	**Issue**	**Name**	**Date**
Draft	0.1	Hannah Upshall BSc (Hons), MSc, Graduate Ecologist	16/05/2025
Proof	0.2	Georgina Rennie BSc (Hons), Msc, Consultant Ecologist	21/05/2025
Final	0.3	Hannah Upshall BSc (Hons), Graduate Ecologist	08/05/2025