



Biodiversity Net Gain Assessment

Site Office building, Crabbet Park Equestrian Centre, Tuner Hill Rd, Worth, Crawley

RH10 4ST

Peacock 5 Ltd

Status	Issue	Name	Date
Draft	1	Rebecca Gane BSc (Hons), Graduate Ecologist	05/03/2025
Reviewed	1.1	Robbie MacKenzie BSc (Hons), Technical Manager	13/03/2025
Final	2	Rebecca Gane BSc (Hons), Graduate Ecologist	13/03/2025

Arbtech Consultant's Contact Details:

Rebecca Gane BSc (Hons), Graduate Ecologist

Email: rebeccagane@arbtech.co.uk

<https://arbtech.co.uk>

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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 Peacock 5 Ltd to undertake a Biodiversity Net Gain (BNG) Assessment at Site Office building, Crabbet Park Equestrian Centre, Tuner Hill Rd, Worth, Crawley RH10 4ST (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of The demolition of the existing site office and construction of a new dwelling (hereafter referred to as “the proposed development”).

- The baseline habitat value is 0.11 units
- Post-development habitat value required to achieve a net gain: 0.12 units.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Peacock 5 Ltd to undertake a Biodiversity Net Gain (BNG) Assessment at Site Office building, Crabbet Park Equestrian Centre, Tuner Hill Rd, Worth, Crawley RH10 4ST (hereafter referred to as “the site”). The assessment was required to inform a planning application for the construction of The demolition of the existing site office and construction of a new 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:

- Statutory Metric.
- Preliminary Ecological Appraisal and Preliminary Roost Assessment (PEA/PRA), Arbtech Consulting Ltd, January 2025.

1.2 Site Location, Geology and Landscape Context

The site is located at National Grid Reference TQ 30548 37255 and has an area of approximately 0.08ha. It is situated within Crabbet Park Equestrian Centre, within the rural outskirts of east Crawley. The wider local landscape is of a mixed character. To the west of the site, the landscape is highly urban, consisting of residential development, small parcels of grassland and woodland. Whereas the remaining landscape to the north, east and south comprises of parcels of woodland, areas of grassland and scattered residential and commercial properties. 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, 2024).

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/PRA (Arbtech Consulting Ltd, 2024). A baseline habitat plan is provided in **Appendix 3**.

Habitat Classification

The PEA/PRA 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, 2024).

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 Crawley local policy

2.2 Limitations

The PEAPRA was undertaken within the suboptimal season for plant identification. However, as the habitats onsite are of low value, this is not considered to be a significant limitation. Similarly, the areas (such as brash piles, and pile of bricks) mapped within the PEA have been removed and the baseline habitat assigned as modified grassland, based on the survey findings and aerial imagery.

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 anticipated condition for each habitat (where relevant) is provided in Appendix 4 (where necessary).

Table 1: Baseline Biodiversity Value

Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
u1b5 - Buildings	0.009ha	Existing buildings	N/A	Low strategic significance Area/compensation not in local strategy/ no local strategy
u1c – Artificial unvegetated, unsealed surface	0.043ha	A linear area of planted shrub is present on the eastern portion of the boundary	N/A	Low strategic significance Area/compensation not in local strategy/ no local strategy
g4 – Modified grassland	0.021ha	The southwest corner is an area of vegetated land as a result of natural succession	Poor	Low strategic significance Area/compensation not in local strategy/ no local strategy
32 – Individual trees	0.0081ha	Two trees are located south of B1. T01 is a small ash and T02 is a small hazel.	Moderate	Medium strategic significance Location ecologically desirable but not in local strategy.

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Statutory Metric. The headline results are presented in **Appendix 5**.

Areas of Habitat

The baseline habitat value of the site is 0.11 units, comprising 0.04 units of modified grassland, 0.07 units of trees, buildings and unsealed surface (no value).

4.0 Recommendations to Deliver BNG

4.1 Discussion

To maximise the biodiversity value of the site itself, the following alterations to the current landscaping proposals could be considered:

- Planting of native and species-diverse forbs and flowering shrubs.
- Planting of fruit bearing hedgerows/trees outside.

Please note that habitats incorporated into private gardens cannot be included within the metric.

4.3 Biodiversity Offsetting

If the landscaping plans do not deliver a 10% net gain or any trading errors are present within the metric, the deficit will need to be delivered in a suitable offsite location i.e. biodiversity offsetting.

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 1: Proposed Plan



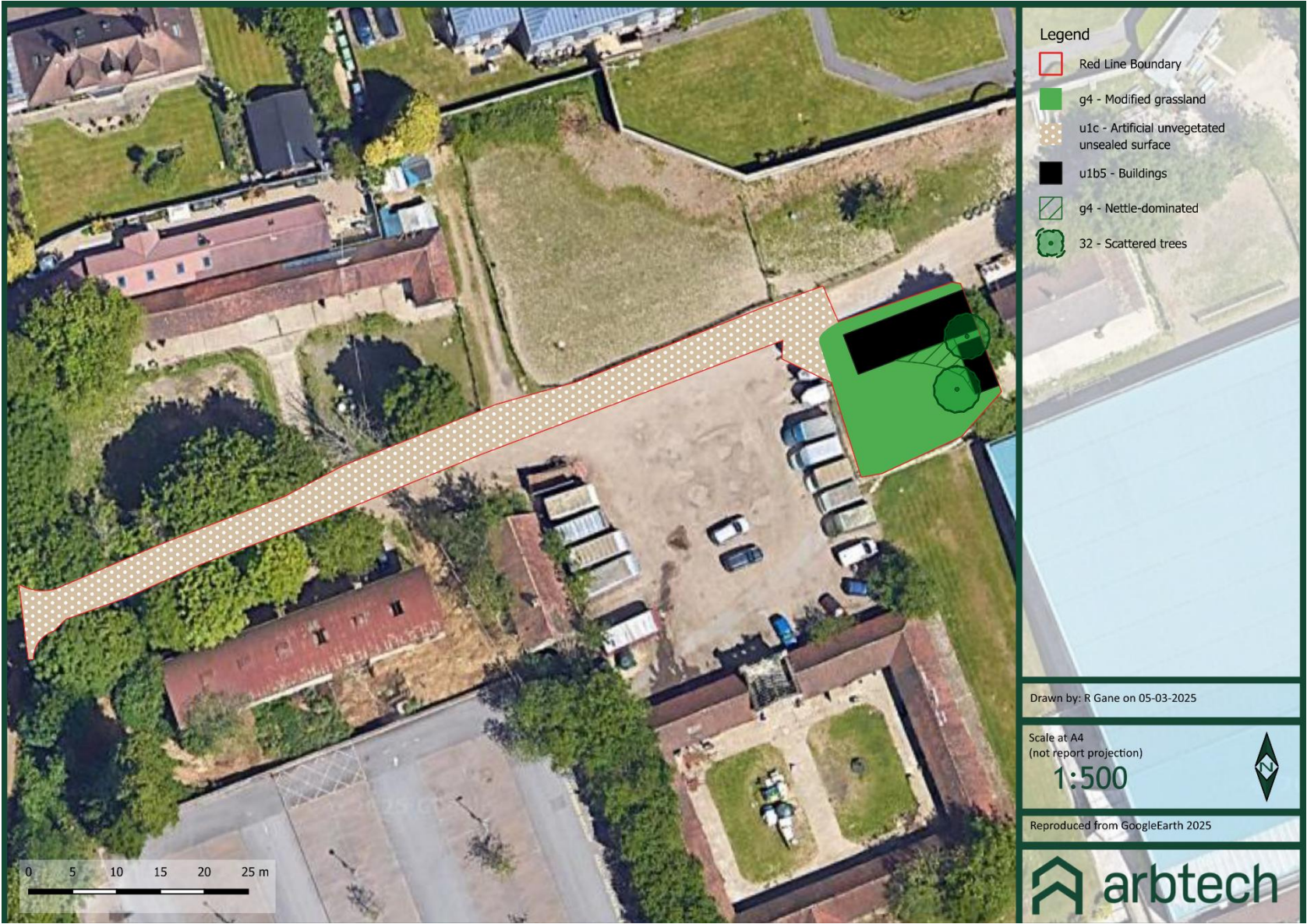
Rev	Date
 Gavin Jones Architecture	
Project Details	
Site Office Building	
Crabbet Park	
RH10 4SW	
Drawing Details	
Title: Proposed Front & Rear Elevations	
Job no. 038	Drawing no. 030
Scale: 1:100 @ A3	Date: Feb '24
Status: Planning	Rev: PL00



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Habitat Condition Assessment Sheets – Baseline

MODIFIED GRASSLAND					
Condition Assessment Criteria		Criterion passed (Yes or No)	Condition Assessment Result	Metric Score	Score Achieved x/√
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.	N	Good Passes 6 or 7 criteria including passing essential criterion A	3	
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.	Y	Moderate Passes 4 or 5 criteria including passing essential criterion A	2	
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present).	Y	Poor Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	1	√
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.	Y (assumed yes prior to works)	Score achieved:		POOR
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Y			
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y			
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Y			

INDIVIDUAL TREES					
Condition Assessment Criteria		Criterion passed	Condition Assessment Result	Metric Score	Score Achieved ×/√
A	The tree is a native species (or at least 70% within the block are native species).	Y	Good Passes 5 or 6 criteria	3	
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).	Y	Moderate Passes 3 or 4 criteria	2	√
			Poor Passes 2 or fewer criteria	1	
C	The tree is mature (or more than 50% within the block are mature) ¹ .	Y	Score achieved:	MODERATE	
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.	Y			
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N			
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	N			

Appendix 5: Headline BNG Results

The Statutory Metric is provided as a separate excel spreadsheet. Please note the 100% net loss is due to lack of proposed habitats within the metric.

FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-0.11	
		Hedgerow units	0.00	
		Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		Habitat units	-100.00%	Total net gain achieved is less than target set ▲
		Hedgerow units	0.00%	
		Watercourse units	0.00%	
Trading rules satisfied?		No - Check Trading Summaries ▲		
Area created must match area lost for both onsite and offsite ▲				
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	0.11	0.12	0.12
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00
				No additional hedgerow units required to meet target ✓
				No additional watercourse units required to meet target ✓