

Biodiversity Net Gain Report

Survey site:

Boundary Farm, 620 Berryfield Lane, Melksham, SN12 6EF

Client:

David Guley

Report date:

11/08/2025

Project:

This report has been produced to support a planning application with Wiltshire Council. The proposal is described as: *'Redevelopment of existing pasture into a lake and wildlife-focused recreational area for residential use.'*

Status	Issue	Name	Date
Final	1.0	Laurence Wills ACIEEM BSc (Hons), Senior Ecologist	11/08/2025

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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.

This approach is enshrined in Government planning guidance, for example, paragraph 185 of the National Planning Policy Framework for England.

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 Ltd was instructed by David Guley to undertake a Biodiversity Net Gain (BNG) Assessment for a proposed development at Boundary Farm, 620 Berryfield Lane, Melksham, SN12 6EF (hereafter referred to as “the site”). Proposals for the site are described as *‘Redevelopment of existing pasture into a lake and wildlife-focused recreational area for residential use’*.

The proposed development is anticipated to result in a **301.01% net gain** in area-based habitat units. A gain for linear-based habitats is anticipated, however, a percentage gain cannot be calculated due to lack of baseline figure. It is noted that watercourse units are not applicable to this assessment. A minimum 10% net gain for area-based habitat units has been achieved, as such, the proposed development is considered compliant with legislation (Environment Act 2021).

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1.0 Introduction and Context

1.1 Introduction

Arbtech Consulting Ltd was instructed by David Guley to undertake a Biodiversity Net Gain (BNG) Assessment for a proposed development at Boundary Farm, 620 Berryfield Lane, Melksham, SN12 6EF (hereafter referred to as “the site”). Proposals for the site are described as ‘*Redevelopment of existing pasture into a lake and wildlife-focused recreational area for residential use*’ (hereafter referred to as the “Proposed Development”). A plan showing the proposed development is provided in **Appendix A**.

This report should be read in conjunction with the following documents:

- **Statutory Biodiversity Metric** - Completed in accordance with the proposed development (Arbtech Consulting Ltd, 2025).
- **Preliminary Ecological and Roost Appraisal** - Boundary Farm, SN12 6EF- v2-43128238- 29.07.25 (Arbtech Consulting, 2025).

1.2 Site Context

The site is situated on the outskirts of Melksham, Wiltshire (national grid reference: ST 89718 62831). The site comprises an open pasture field with limited structural diversity. Adjacent to the southern boundary are field margins supporting ruderal vegetation, with an industrial area also located to the south and a residential building to the southeast. Additional agricultural fields surround the site in all directions, with a well-connected network of hedgerows extending across the wider landscape. While the site itself is considered to provide limited opportunities for wildlife, the wider environment is assessed as offering moderate potential due to the presence of hedgerows and surrounding agricultural habitats.

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. Biodiversity Net Gain became mandatory for new developments (non-exempt) on 12th February 2024.

The DEFRA Statutory Biodiversity Metric is the latest version of the metric 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

Baseline Biodiversity Value and Habitat Degradation

A review of aerial imagery and previous landscape mapping (Google Earth, 2025) show evidence that the habitats onsite have not significantly been removed/become significantly degraded since the period of 20th January 2020. The current condition of the site, as surveyed in July 2025 (Arbtech Consulting Ltd, 2025), is therefore valid for use as the baseline for biodiversity net gain calculations. The baseline BNG Calculation is therefore directly informed by the Preliminary Ecological Appraisal. A baseline habitat plan is provided in **Appendix B** which shows the current habitat classification of the site during the period of June 2025. A table overleaf shows evidence of the habitat values in relation to the timescales:

Table 1.0: Habitat degradation onsite

September 2020	January 2025
	

Habitat Classification

The Preliminary Ecological Appraisal (PEA) classified the habitats on site according to UK Habitat Classification User Manual (UK Habitat Classification Working Group, 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, 2024).

Statutory Biodiversity Metric and Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024), if applicable. The habitats were calculated and entered into the Statutory Biodiversity Metric excel document published on 3rd July 2025.

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 within the Wiltshire Core Strategy (2015).

Report Limitations

No limitations are recorded.

Post Development Biodiversity Value

The post development BNG Calculation was informed by 'AH2025/58' (A Harlow and Sons, 2025), which shows the broad landscape proposals. The Proposed Site Plan is provided in **Appendix A**. Habitat coverage anticipated post-development is illustrated on the plan in **Appendix D**.

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, 2023).

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, 2024).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric Condition Assessment Supplement (Natural England, 2024). 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 (based on the development plans and professional judgement);
- Function within the landscape (based on the location of the proposed habitats and a review of Google and OS imagery); and
- Any site or habitat allocations within the Wiltshire Core Strategy (2015).

3.0 Results and Evaluation

3.1 Baseline Habitats

Table 1 details the baseline habitats present within the site along with their area/length, condition, and strategic significance. Condition assessment sheets (where applicable) are presented in **Appendix E**.

Table 1: Baseline Biodiversity Value

Habitat	Area (ha)/ Length(km)	Area Retained or Enhanced	Description	Condition Assessment	Strategic Significance
Area-based habitats					
Grassland: Modified grassland – g4 (101.81)	0.5187 ha	None	The site is dominated by modified grassland which is currently being used as pastoral land for cattle. The site was previously utilised as an arable field, however the exact timing on this is unknown. The habitat is fenced off towards the south, which has allowed for self-colonising species to occur along the boundary, however, these are of low ecological value. The habitat is bordered by a residential property to the southeast and an industrial unit to the south.	Poor: passes 3 of 7 criteria (fails essential criteria) Assessed using the 'Low grassland' 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 2 details the post development habitats present within the site along with their area/length, condition, and strategic significance.

Table 2: Post Development Biodiversity Value

Habitat (UK Habs)	Area (ha)/ Length(km)	Description	Target Condition	Strategic Significance
Area-based habitats				
Grassland: Other neutral grassland – <u>g3c</u>	0.3860 ha	The majority of the area will comprise a wildflower mix, which will be amongst the trees and around the body of water. This will be grown and managed to allow the grassland to develop natural niches for wildlife, such as a tall-varied sward.	Areas of new planting will comprise more than 8 vascular plants per m ² , including more than one grass species not associated with agriculture, to ensure the habitat reaches ' moderate '. Any scrub within the habitat will be managed and removed. Areas will be monitored and regulated to ensure no invasives or areas of bare ground develop.	Low Strategic Significance Not included within local strategy.
Lakes: Ponds (non-priority habitat) – <u>r1g (41)</u>	0.1257 ha	A pond will be within the central area of the site. This will be designed and managed for ornamental purposes with surrounding habitats and stocked with fish.	The pond will be monitored and maintained to ensure low turbidity, reduced duckweed (less than 10%), natural fluctuating levels, and no invasive species occur. This will achieve ' moderate ' condition.	Low Strategic Significance Not included within local strategy.
Urban: Artificial unvegetated, unsealed surface – <u>u1c</u>	0.007 ha	A small gravel path will lead from the residential dwelling in the southeast to the central area of the lake for access.	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	Low Strategic Significance Not included within local strategy.
Individual trees: Rural tree –	0.2199 ha	54 trees (both non-native and native) will be planted around the pond. The trees will be generally scattered to ensure an even spread and gaps for sunlight onto the grassland below.	Over the period of 30 years, the trees will be continually managed and encouraged to grow to develop full canopies for ' moderate ' condition. The species will be native and will have vegetation below, and it will be encouraged to allow natural ecological niches develop, rather than have the trees used for ornamental purposes.	Low Strategic Significance Not included within local strategy.
Linear-based habitats				
Hedgerow: Species rich native hedgerow – <u>h2a5</u>	0.163 km	The hedgerow will be planted on the borders of the site along the north and west. The hedgerows will create a barrier against harsh weather and help maintain a favourable micro-habitat on site.	The hedgerows will be grown with a target width and height of >1.5m with no significant gaps, undisturbed surrounding ground flora which is not associated with nutrient enrichment, and no invasive species. This will achieve ' good ' condition.	Low Strategic Significance Not included within local strategy.

3.3 Change in Biodiversity Value of the Site

Full details are provided in the Defra Statutory Metric. The headline results as described below.

- The baseline biodiversity unit score: **Area-Based Habitat Units:** 1.04; **Hedgerow Units:** N/A; **Watercourse units:** N/A.
- The post-development biodiversity unit score: **Area-Based Habitat Units:** 4.16; **Hedgerow Units:** 1.28; **Watercourse units:** N/A.
- The on-site net change in biodiversity units: **Area-Based Habitat Units:** 3.12; **Hedgerow Units:** 1.28; **Watercourse units:** N/A

This results in the following change in biodiversity value of the site:

- **Area Based Habitat Units:** **301.01%**
- **Hedgerow Units:** N/A (no baseline score)
- **Watercourse units:** N/A

4.0 Conclusions and Recommendations

4.1 Discussion

The proposed development is anticipated to result in a **301.01% net gain** in area-based habitat units. A gain for linear-based habitats is also anticipated, however, a percentage gain cannot be calculated due to lack of baseline figure. It is noted that watercourse units are not applicable to this assessment. A minimum 10% net gain for area-based habitat units has been achieved, as such, the proposed development is considered compliant with legislation (Environment Act 2021).

4.2 30-Year Management Plan

A BNG Management Plan must be produced for the site to comply with current guidance detailed within the Statutory Biodiversity Metric guidance documents. The management plan will provide best practice prescriptions for the implementation, management, and monitoring of the proposed landscaping for a minimum term of 30 years to ensure the site is developed in accordance with the BNG Assessment. It is anticipated that a BNG Management Plan will be produced prior to any development activity that incorporates the selected option for biodiversity off-setting and subsequently demonstrates a compliant BNG.

5.0 Bibliography

- A Harlow and Sons (2025). AH2025/58
- Arbtech Consulting Ltd. (2025). The_Statutory_Biodiversity_Metric_Calculation_Tool Boundary Farm, SN12 6EF v1
- Arbtech Consulting Ltd. (2025). Preliminary Ecological and Roost Appraisal - PEA Boundary Farm, SN12 6EF v1
- 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.
- Google Earth. (2025).
- Natural England (2024). The Statutory Biodiversity Metric User Guide. <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>.
- UK Habitat Classification Working Group (2023). UK Habitat Classification – Habitat Definitions V2.0.

Appendix A: Proposed Development Plan



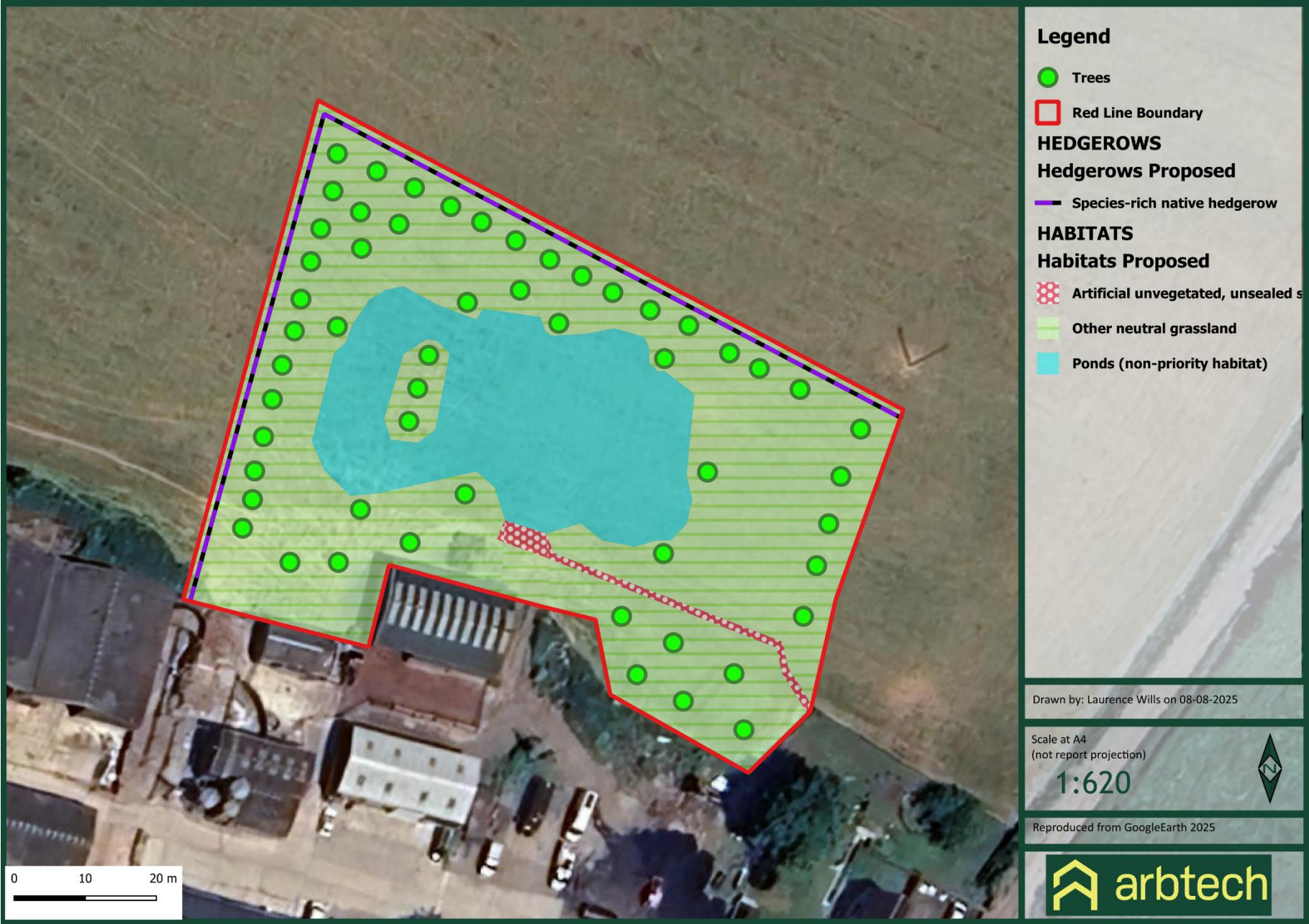
Appendix B: Site Location Plan



Appendix C: Baseline Habitat Survey Plan



Appendix D: Post-Development Habitat Plan



Appendix E: Habitat Condition Assessments

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	On site	Survey date and Surveyor name	24/07/2025 - Laurence Wills ACIEEM BSc (Hons)
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference	ST 89718 62831	Habitat parcel reference	
Habitat Description			
ukhab – UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m² 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. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No	Occurance is not higher than 4 per m2.
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	
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). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	None present
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	Approx. 10% damage due to poaching and vehicles.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Yes	Some present but not above 10% of the area.
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes	None present
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes	None present
Essential criterion achieved (Yes or No)			No
Number of criteria passed			3
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)	X	

Appendix F: Headline BNG results

Boundary Farm, SN12 6EF

Headline Results

Scroll down for final results ▲

Return to results menu

On-site baseline	Area habitat units	1.04			
	Hedgerow units	0.00			
	Watercourse units	0.00			
On-site post-intervention (Including habitat retention, creation & enhancement)	Area habitat units	4.16			
	Hedgerow units	1.28			
	Watercourse units	0.00			
On-site net change (units & percentage)	Area habitat units	3.12	301.01%	Zero baseline units - % cannot be calculated	
	Hedgerow units	1.28	N/A		
	Watercourse units	0.00	0.00%		
Off-site baseline	Area habitat units	0.00			
	Hedgerow units	0.00			
	Watercourse units	0.00			
Off-site post-intervention (Including habitat retention, creation & enhancement)	Area habitat units	0.00			
	Hedgerow units	0.00			
	Watercourse units	0.00			
Off-site net change (units & percentage)	Area habitat units	0.00	0.00%		
	Hedgerow units	0.00	0.00%		
	Watercourse units	0.00	0.00%		
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	3.12			
	Hedgerow units	1.28			
	Watercourse units	0.00			
Spatial risk multiplier (SRM) deductions	Area habitat units	0.00			
	Hedgerow units	0.00			
	Watercourse units	0.00			
FINAL RESULTS					
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	3.12			
	Hedgerow units	1.28			
	Watercourse units	0.00			
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	301.01%	0 baseline units - % cannot be calculated		
	Hedgerow units	N/A			
	Watercourse units	0.00%			
Trading rules satisfied?	Yes ✓				
Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Area habitat units	10.00%	1.04	1.14	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 ✓