



Biodiversity Net Gain Assessment

Cloud Park Farm Dial Lane, Congleton, CW12 3QJ

Stephen Davies

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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

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 Stephen Davies to undertake a Biodiversity Net Gain (BNG) Assessment at Cloud Park Farm, Dial Lane, Congleton CW12 3QJ (hereafter referred to as “the site”). The assessment was required to inform the Staffordshire Moorlands District Council. The proposal is described as a change of use of single storey agricultural building to dwelling and associated external domestic amenity; new vehicular access; temporary siting of static caravan (hereafter referred to as “the proposed development”).

The baseline habitat value of the site is comprised of other neutral grassland in poor condition, rural trees in good condition and modified grassland. The modified grassland was cleared before the site visit due to active management to control Himalayan balsam on-site. Due to the loss of the pre-existing habitat before it could be condition assessed; the modified grassland was assumed to be in good condition. The total baseline habitat value of the site is **1.85** area-based units. The proposed plan involved the creation of neutral grassland in in good condition, this replaces the cleared modified grassland, individual tree planting, a new scrub re-wilding area in good condition, with a further tree planting scheme in the off-site area within the wider siter ownership and the planting of a native hedgerow along the new access road. The combination of which results in a net change in biodiversity of **41.71%** (i.e. a net gain).

Contents

1.0 Introduction and Context	6
1.1 Site Location, Geology and Landscape Context	6
1.2 BNG Informative	6
2.0 Methodology	8
2.1 Baseline Biodiversity Value	8
2.2 Post Development Biodiversity Value	8
2.3 Limitations	9
3.0 Results	10
3.1 Baseline Habitats	10
3.2 Post Development Habitats	11
3.3 Change in Biodiversity Value of the Site	13
4.0 Recommendations to Deliver BNG.....	15
4.1 Discussion	15
4.2 Landscaping	Error! Bookmark not defined.
4.3 Biodiversity Offsetting	Error! Bookmark not defined.
4.4 Post Development	15
4.5 Design statement.....	Error! Bookmark not defined.
5.0 Bibliography	16
Appendix 1: Proposed Development Plan.....	17
Appendix 2: Site Location Plan	18
Appendix 3: Baseline Habitat Plan	19
Appendix 4: Post Development Habitat Plan	20
Appendix 5a: Habitat Condition Assessment Sheets - Baseline	21
Appendix 5b: Habitat Condition Assessment Sheets - Proposed	25
Appendix 6: Headline BNG Results.....	32

1.0 Introduction and Context

Arbtech Consulting Limited was instructed by Stephen Davies to undertake a Biodiversity Net Gain (BNG) Assessment at Cloud Park Farm, Dial Lane, Congleton CW12 3QJ (hereafter referred to as “the site”). The assessment was required to inform the Staffordshire Moorlands District Council. The proposal is described as a change of use of single storey agricultural building to dwelling and associated external domestic amenity; new vehicular access; temporary siting of static caravan (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 DEFRA Biodiversity Metric.
- ❖ Preliminary Ecological Appraisal (PEA): Cloud Park Farm, Dial Lane, Congleton CW12 3QJ (Arbtech Consulting Ltd., 2024).

1.1 Site Location, Geology and Landscape Context

The survey site is centred on National Grid Reference SJ 90246 62334 and has an area of approximately 0.39ha. The site is comprised of one barn (B1), two dilapidated outbuildings (B2, B3), developed land; sealed surface, other neutral grassland and large areas of recently cleared bare ground that was previously modified grassland. Clearance has occurred due to a large covering of Himalayan balsam identified in a previous ecological appraisal (Elite Ecology, 2022), it should be noted that there are stumps on site from the removal of small trees, there is also still Himalayan balsam present on site, and an area of Japanese knotweed has been identified outside the site boundary but within the site ownership. The site is situated within a rural area ~5km east of Congleton town centre. Aerial imagery shows the local landscape to have a rural character, with several small copses and woodland swathes in close proximity to the site a band of broadleaved woodland running adjacent to the western site boundary. Water bodies can be found nearby, including a brook running outside of the southwest boundary to the site, and four ponds located ~290m, ~310m, ~480m and ~530m to the east. Such features likely enhance the area for a variety of species, including bats, amphibians and reptiles. A site location plan is provided in Appendix 2.

1.2 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 requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2023). As of 12th February 2024, BNG has become mandatory.

The DEFRA Statutory Biodiversity Metric is the latest and final 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.

1.3 Scope of this Report

This report assesses the biodiversity value of the site pre-development and outlines the minimum biodiversity units required to achieve a +10% net gain.

2.0 Methodology

2.1 Baseline Biodiversity Value

The baseline BNG Calculation was informed by a PEA (Arbtech Consulting Ltd., 2024). A baseline habitat plan is provided in Appendix 3.

Habitat Classification

The 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).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric Condition Assessment Supplement (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 Staffordshire Moorlands Local Plan

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by the proposed 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, 2023) and the information provided within the proposed 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 14 of the Statutory Biodiversity Metric User Guide (Natural England, 2024).

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, 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
- ❖ Function within the landscape
- ❖ Any site or habitat allocations under the Staffordshire Moorlands Local Plan

2.3 Limitations

The clearance of a widespread area of Himalayan balsam was already carried out at the time of the PEA (Arbtech, October 2022). Therefore, the previous habitats on site had already been damaged or removed prior to assessment. This report is a retrospective attempt to classify how the work, which has already been undertaken, has impacted the biodiversity units on site. Attempts have been made to estimate the previous habitat on site by using Google maps, local records and client knowledge.

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

Type	Habitat	Area (ha) / Length (km)	Description	Condition Assessment	Strategic Significance
Area-Based	Developed land: sealed surface [u1, b6]	0.017ha	As described within the PEA report for the same site (Arbtech, 2024).	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).
	Buildings [u1b5]	0.038ha	As described within the PEA report for the same site (Arbtech, 2024).	Habitat condition pre-determined as ' N/A ' as detailed within the Statutory Biodiversity Condition Assessment Supplement.	
	Modified grassland [g4]	0.203ha	As described within the PEA report for the same site (Arbtech, 2024). The area of modified grassland was cleared prior to the PEA, condition is assumed positively as a precautionary measure given the retrospective nature of the report.	Good: passes 7 of 7 criteria including essential criterion A. Assessed using the 'Grasslands Low Distinctiveness' habitat type condition sheet	
	Scattered trees [g, 32]	0.0041ha	As described within the PEA report for the same site (Arbtech, 2024). There are 7 scattered trees on-site. Due to diameter at breast height, the goat willow on site was the only tree measured large enough to be included in the calculations. The other trees all measured <7.5cm DBH.	Good: passes 5 of 6 criteria. Assessed using the 'Individual Trees' habitat type condition sheet.	Medium Strategic Significance Habitats are not formally identified in the local strategy, but the area is located within the boundaries of local plan policies concerning greenbelt and countryside development.

Type	Habitat	Area (ha) / Length (km)	Description	Condition Assessment	Strategic Significance
	Other neutral grassland [g3c]	0.131ha	As described within the PEA report for the same site (Arbtech, 2024). To the north of B1 is an area of neutral grassland historically used for grazing stock. The sward height was uniform in the centre but was left longer along the boundaries and to the north of B2 and B3. Height in the centre was <7cm, areas in the margins were >30cm. There was <5% damage and bare ground within the grassland area. Areas were waterlogged directly behind the derelict outbuildings.	Poor: Passes 3 of 6 criteria excluding criterion A and F. Assessed using the 'Grasslands medium, high and very high Distinctiveness' habitat type condition sheet	Medium Strategic Significance Habitats are not formally identified in the local strategy, but the area is located within the boundaries of local plan policies concerning greenbelt and countryside development.

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 gain of 0.77 units.

Table 2: Post Development Biodiversity Value – on-site

Habitat			Area (ha) / Length (km)	Description	Target Condition	Strategic Significance
Created	Area-Based	Modified grassland [g4]	0.002ha	A central strip of modified grass will be seeded within the access track. This will be heavily managed to not impact vehicle access.	Good: passes 7 of 7 criteria including essential criterion A. Assessed using the 'Grasslands Low Distinctiveness' habitat type condition sheet	Low Strategic Significance Compensation not in local strategy
		Other neutral grassland [g3c]	0.159ha	Other neutral grassland to the north of the site to be extended with a neutral grassland planting scheme across the majority of the site.	Good: Passes 6 of 6 criteria including criterion A and F. Assessed using the 'Grasslands medium, high and very high Distinctiveness' habitat type condition sheet	Medium Strategic Significance Habitats are not formally identified in the local strategy, but the area is located within the boundaries of local plan policies concerning

Habitat			Area (ha) / Length (km)	Description	Target Condition	Strategic Significance
Retained		Artificial unvegetated, unsealed surface [u1e]	0.028ha	New permeable gravel trackway and parking area.	Habitat condition pre-determined as ‘N/A’ as detailed within the Statutory Biodiversity Condition Assessment Supplement.	greenbelt and countryside development.
		Mixed scrub [h3h]	0.027ha	Rewilding area including holme oak, horse chestnut, field elm, buddleia and hazel.	Good: passes 5 of 5 criteria. Assessed using the ‘Mixed Scrub habitat type condition sheet.	Medium Strategic Significance Habitats are not formally identified in the local strategy, but the area is located within the boundaries of local plan policies concerning greenbelt and countryside development.
		Scattered trees [g. 32]	0.0489ha	Native tree planting, 11 individual trees. Species include holme oak, horse chestnut, alder and holly	Moderate: passes 4 of 6 criteria. Assessed using the ‘Individual Trees’ habitat type condition sheet.	
	Linear-Based	Native hedgerow [h2b]	0.033km	Hedgerow to run along new access track, species include blackthorn and hawthorn	Good: no more than 2 failures anticipated and no more than 1 failure in a functional group. Assessed using the ‘Hedgerow’ habitat type condition sheet.	
		Area-based habitats	Other neutral grassland [g3c]	0.131ha	Other neutral grassland to the north of the site to be retained	
	Buildings [u1b6]		0.024ha	See Table 1.		
	Developed land; sealed surface [u1b5]		0.016ha	See Table 1.		
	Scattered trees [g, 32]		0.0041ha	See Table 1.		

Table 3: Post Development Biodiversity Value – off-site

Habitat			Area (ha) / Length (km)	Description	Target Condition	Strategic Significance
Created	Area-Based	Scattered trees [g, 32]	0.0285ha	Additional tree planting of 7 trees within the wider area of site ownership. Species include native apple, plum and pear trees.	Moderate: passes 4 of 6 criteria. Assessed using the 'Individual Trees' habitat type condition sheet.	Medium Strategic Significance Habitats are not formally identified in the local strategy, but the area is located within the boundaries of local plan policies concerning greenbelt and countryside development.

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.

Area-Based Habitat Units

The baseline area-based habitat value of the site is **1.85** units, comprising **1.22** units of modified grassland, **0.58** units of other neutral grassland, **0.05** units of individual urban trees.

Developed land sealed surface has 0.00 habitat unit value.

The post development area-based habitat value of the site is **2.17** units, comprising the:

- creation of modified grassland (0.01 units), other neutral grassland (1.47 units), mixed scrub (0.25 units), and rural individual trees (0.16 units);
- retention of other neutral grassland (0.58 units), developed land; sealed surface (no value), Rural trees (0.16 units)

The post development area-based habitat value of the off-site area within the wider site boundary is 0.10 units, comprised of:

- creation of 7 rural individual trees (0.10 units)

This results in a net change in biodiversity of **41.71%** (i.e. a net gain).

Linear-Based Habitat Units

The baseline linear-based habitat value of the site is 0 units, as there were no hedgerows within the site boundary.

The post development linear-based habitat value of the site is 0.14 units, comprising the:

- creation of a native hedgerow (0.14 units);

This results in no net change in biodiversity in linear-based habitats

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current landscaping proposal generates a net gain of area-based habitat units (41.71%), and no net change in linear-based units (due to there being no baseline linear-based habitat value on-site. As such, the proposed development is compliant with current legislation (Environment Act 2021) and planning policies (National: National Planning Policy Framework, 2023) as a minimum biodiversity net gain of +10% was achieved for area- based habitat units.

All trading conditions have been satisfied.

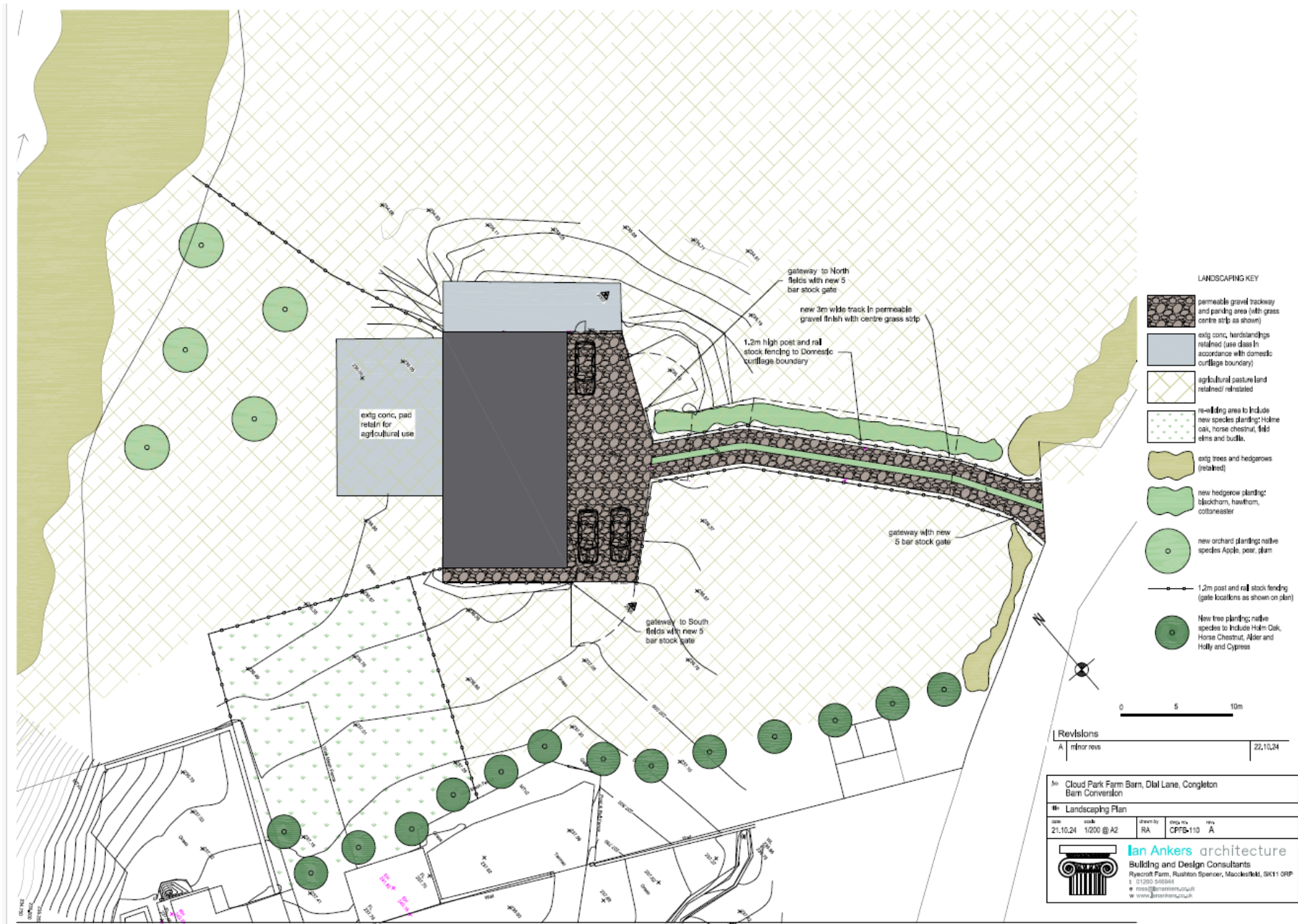
4.4 Post Development

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.

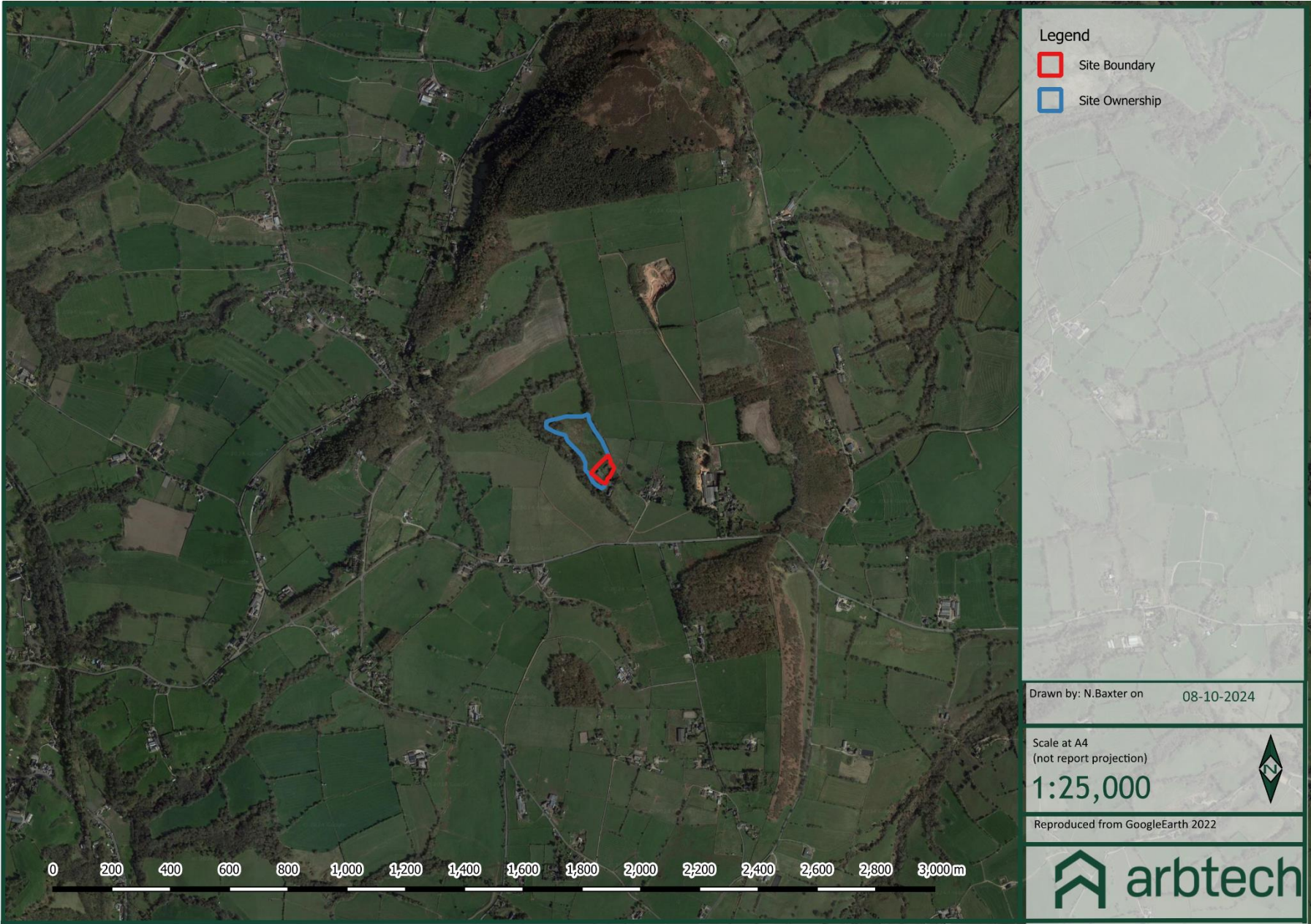
5.0 Bibliography

- Arbtech Consulting Ltd. (2024). Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA): Cloud Park Farm, Dial Lane, Congleton CW12 3QJ.
- 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
- National Planning Policy Framework (2023). <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- Natural England (2024). The Statutory Biodiversity Metric User Guide. <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>
- Natural England (2024). The Statutory Biodiversity Metric. <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.
- Staffordshire Moorlands District Council (2020). Staffordshire Moorlands Local Plan. <https://www.staffsmoorlands.gov.uk/localplan>

Appendix 1: Proposed Development Plan



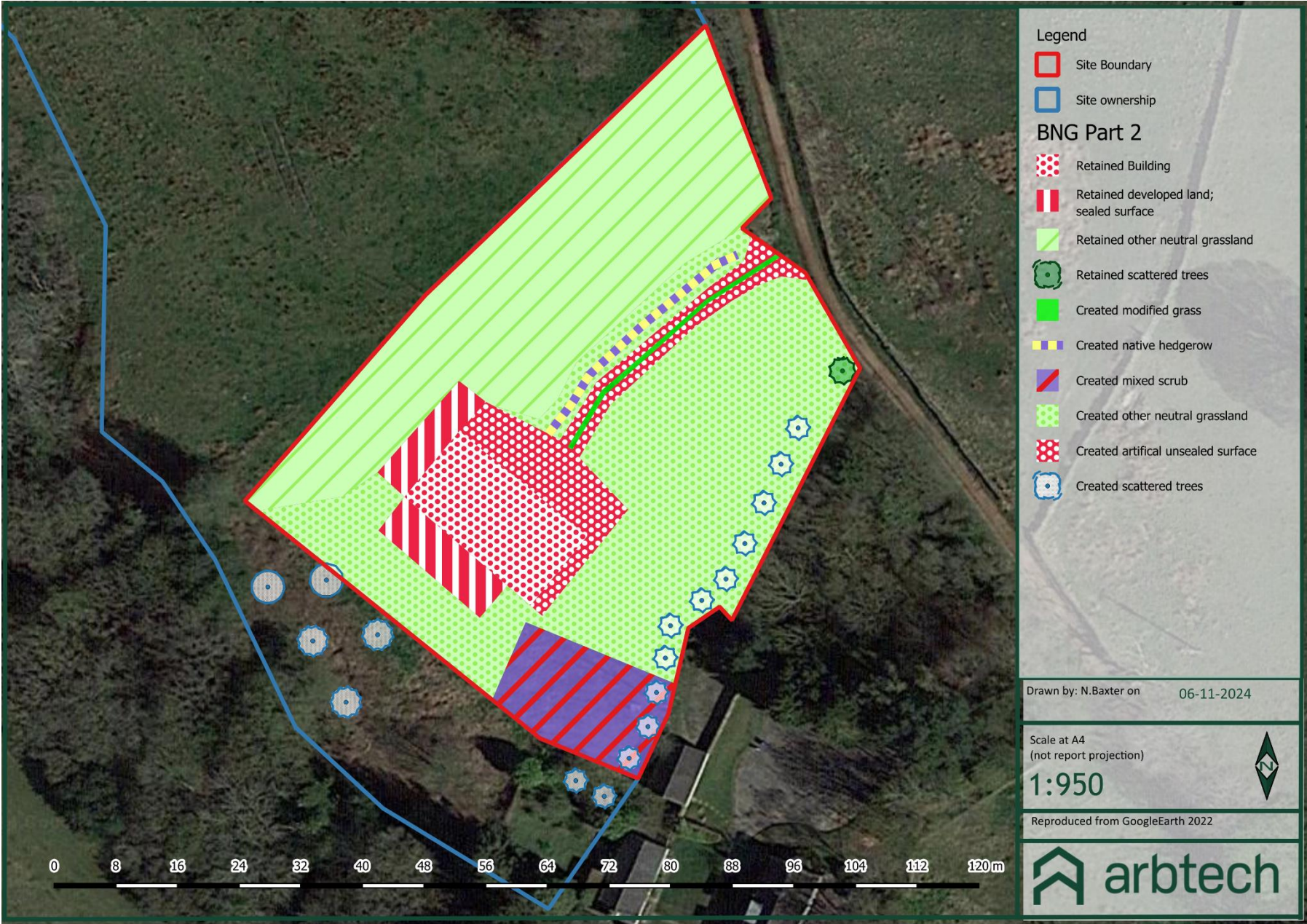
Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5a: Habitat Condition Assessment Sheets - Baseline

Modified Grassland; assessed using 'Grasslands Low Distinctiveness' habitat type condition sheet:

Condition Assessment Criteria:		Condition Achieved (Y/N)	Notes/Justification
A	There must be 6-8 vascular plant species per m ² , including at least 2 forbs. NB - this criterion is essential for achieving moderate condition.	Y	Condition is assumed positively as a precautionary measure given the retrospective nature of the report.
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	
C	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	
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	
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y	
F	Cover of bracken less than 20%.	Y	
G	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	N	Evidence of widespread presence of Himalayan Balsam
Essential criterion 1 achieved (Y/N)			Y
Number of criteria passed			6
Condition Assessment Result	Condition Assessment Score	Score Achieved x/✓	
Passes 6 or 7 of 7 criteria including passing essential criterion 1	Good (3)	✓	
Passes 4 or 5 of 7 criteria including passing essential criterion 1	Moderate (2)		
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1	Poor (1)		

Other Neutral Grassland; assessed using 'Grasslands Medium/High/Very High Distinctiveness' habitat type condition sheet:

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relative to the specific habitat type. Note – this criterion is essential for achieving moderate or good condition for non-acid grassland types only.	N	Low proportion of indicator species, with species indicative of suboptimal conditions i.e. common nettle, creeping buttercup and white clover
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 insects, birds and small mammals to live and breed.	Y	Varied sward height
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ¹ .	Y	Cover of bare ground <5%.
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Y	No bracken present
E	Combined cover of species indicative of sub-optimal condition ² and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴) are present, this criterion is automatically failed.	N	Himalayan balsam present.
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	N	Distribution of vascular plants was sporadic, with white clover being abundant
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		N	
Number of criteria passed		3	
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Non-acid grassland Types (Result out of 6 criteria)			
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.		Good (3)	
Passes 3 - 5 criteria, including essential criterion A.		Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.		Poor (1)	✓

Rural Trees - cleared trees; assessed using 'Individual Trees' habitat type condition sheet:

Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
A	The tree is a native species (or more than 70% within the block are native species).	Y	Condition is assumed positively as a precautionary measure given the retrospective nature of the report.
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	
C	The tree is mature (or more than 50% within the block are mature).	N	Stump measurements were possible showing diameters of the cleared trees to not exceed 5cm.
D	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Condition is assumed positively as a precautionary measure given the retrospective nature of the report.
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	
Number of criteria passed			5
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Passes 5 or 6 of 6 criteria		Good (3)	✓
Passes 3 or 4 of 6 criteria		Moderate (2)	
Passes 0, 1 or 2 of 6 criteria		Poor (1)	

Rural Trees ; assessed using 'Individual Trees' habitat type condition sheet:

Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
A	The tree is a native species (or more than 70% within the block are native species).	Y	All the trees on site are native
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	All trees are individual trees and thus automatically pass this criterion.
C	The tree is mature (or more than 50% within the block are mature).	N	>50% of the trees are mature (1 mature, 6 not mature)
D	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Little to no evidence of adverse anthropogenic impacts; all trees have retained >75% of their expected canopy.
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y	Loose bark was observed, as was ivy coverage.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	More than 20% of the tree canopy areas have vegetation underneath.
Number of criteria passed			5
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Passes 5 or 6 of 6 criteria		Good (3)	✓
Passes 3 or 4 of 6 criteria		Moderate (2)	
Passes 0, 1 or 2 of 6 criteria		Poor (1)	

Appendix 5b: Habitat Condition Assessment Sheets - Proposed

Rural Trees; assessed using 'Individual Trees' habitat type condition sheet:

Condition Assessment Criteria		Condition Achieved (Y/N)	Notes/Justification
A	The tree is a native species (or more than 70% within the block are native species).	Y	Native trees proposed.
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	All trees considered individual trees and thus automatically pass this criterion.
C	The tree is mature (or more than 50% within the block are mature).	N	No mature trees anticipated.
D	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Y	Little to no evidence of adverse anthropogenic impacts anticipated; all trees anticipated to retained >75% of their expected canopy.
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	None anticipated.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	More than 20% of the tree canopy area anticipated to have vegetation underneath.
Number of criteria passed			4
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Passes 5 or 6 of 6 criteria		Good (3)	
Passes 3 or 4 of 6 criteria		Moderate (2)	✓
Passes 0, 1 or 2 of 6 criteria		Poor (1)	

Mixed Scrub; assessed using 'Scrub' habitat type condition sheet:

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species ¹ , with no single species comprising more than 75% of the cover (except hazel <i>Corylus avellana</i> , common juniper <i>Juniperus communis</i> , sea buckthorn <i>Hippophae rhamnoides</i> or box <i>Buxus sempervirens</i> , which can be up to 100% cover).	Y	Proposed species closely matches the characteristics of the specific scrub type (mixed scrub), with at least 80% native scrubs, three native woody species, and no dominant species.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ²) shrubs are all present.	Y	Management anticipated to maintain a balance of all age classes.
C	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴) and species indicative of sub-optimal condition ⁵ make up less than 5% of ground cover.	Y	Management anticipated to remove non-native invasive species.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	Management anticipated to maintain a well-developed edge. Adjacent habitat proposed to be modified grasslands of good condition.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Y	Scrub to be planted with open areas to create natural openings. Such openings anticipated to be under management.
Number of criteria passed			5
Condition Assessment Result (out of 5 criteria)		Condition Assessment Score	Score Achieved x/✓
Passes 5 criteria		Good (3)	✓
Passes 3 or 4 criteria		Moderate (2)	
Passes 2 or fewer criteria		Poor (1)	

Modified Grassland; assessed using 'Grasslands Low Distinctiveness' habitat type condition sheet:

Condition Assessment Criteria:		Condition Achieved (Y/N)	Notes/Justification
A	There must be 6-8 vascular plant species per m ² , including at least 2 forbs. NB - this criterion is essential for achieving moderate condition.	Y	Seed mixes used will ensure than 6 vascular plant species per m ² .
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	Management will ensure a varied sward height through rotational mowing regimes
C	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	No scattered scrub will be present within the grassland (less than 20% coverage).
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	Physical damage will be present in less than 5% of total grassland area.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y	Management will ensure that bare ground cover will be +between 1% and 10%.
F	Cover of bracken less than 20%.	Y	No bracken will be present on site (less than 20% coverage).
G	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y	Absence of invasive species will be ensured by management
Essential criterion 1 achieved (Y/N)			N
Number of criteria passed			7
Condition Assessment Result	Condition Assessment Score	Score Achieved x/✓	
Passes 6 or 7 of 7 criteria including passing essential criterion 1	Good (3)	✓	
Passes 4 or 5 of 7 criteria including passing essential criterion 1	Moderate (2)		
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1	Poor (1)		

Native Hedgerow; assessed using 'Hedgerow' habitat type condition sheet:

Hedgerow favourable condition attributes				
Attributes and functional groupings (A, B, C, D & E)	Criteria (the minimum requirements for 'favourable condition')	Description	Condition Achieved (Y/N)	Notes/Justification
Core groups - applicable to all hedgerow types				
A1. Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).	Y	Hedgerow will average 1.5m in height.
A2. Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	Y	Hedgerow will average 1.5m in width.
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y	Gap between ground and base of canopy will be maintained at <0.5m for more than 10% of length.
B2. Gap – hedge canopy continuity	Gaps make up <10% of total length and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness', but are not subject to the >5 m criterion (as this is the typical size of a gate).	Y	No canopy gaps >5m will be present

C1. Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least)	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedge. Undisturbed ground should be present for at least 90% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedge. This criterion recognises the value of the hedge base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	Y	At least one side of the hedge has >1m of undisturbed ground with perennial herbaceous vegetation for >90% of length.
C2. Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground	The indicator species used are nettles (<i>Urtica</i> spp.), cleavers (<i>Galium aparine</i>) and docks (<i>Rumex</i> spp.). Their presence, either singly or together, should not exceed the 20% cover threshold.	Y	Management will ensure no cleavers will be present
D1. Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native and recently introduced species	Recently introduced species refer to plant that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives.	Y	No invasives will be present within the hedge.
D2. Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g. excessive hedge cutting).	Y	>90% of hedgerow and understorey will be free of damage caused by human activities.
Condition categories for hedgerows with trees				
Category	Maximum number of attributes that can fail to meet 'favourable condition' criteria in Table TS1-2	Weighting (score)		
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3		
Moderate	No more than 5 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (e.g., fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2		

Poor	Fails a total of more than 5 attributes; OR <u>Fails both attributes</u> in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	1	
Score achieved:	Good		

Other Neutral Grassland; assessed using 'Grasslands Medium/High/Very High Distinctiveness' habitat type condition sheet:

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type, with a consistently high proportion of characteristic indicator species present relative to the specific habitat type. Note – this criterion is essential for achieving moderate or good condition for non-acid grassland types only.	Y	Species composition of seed mixes closely resembles definition of g3c 'other neutral grassland'.
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 insects, birds and small mammals to live and breed.	Y	Varied sward height of such specifications anticipated.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ¹ .	Y	Cover of bare ground anticipated to not exceed 5%.
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	Y	Management anticipated to control bracken cover, if present.
E	Combined cover of species indicative of sub-optimal condition ² and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴) are present, this criterion is automatically failed.	Y	Physical damage anticipated to not exceed 5% of total area. No invasives anticipated.
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	Y	Species composition of seed mixes suggests there will likely be 10 or more vascular plant species per m ² .
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		Y	
Number of criteria passed		6	
Condition Assessment Result		Condition Assessment Score	Score Achieved x/✓
Non-acid grassland Types (Result out of 6 criteria)			
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.		Good (3)	✓
Passes 3 - 5 criteria, including essential criterion A.		Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.		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	0.77		
	Hedgerow units	0.14		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	41.71%		
	Hedgerow units	N/A		
	Watercourse units	0.00%		
Trading rules satisfied?		Yes ✓		
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	1.85	2.03	0.00
Hedgerow units	10.00%	0.00	0.00	0.00
Watercourse units	10.00%	0.00	0.00	0.00

0 baseline units - % cannot be calculated

No additional area habitat units required to meet target ✓
No additional hedgerow units required to meet target ✓
No additional watercourse units required to meet target ✓