

Biodiversity Net Gain Assessment

Survey site:

Brookfield Farm, Old Wokingham Road, RG40 3BU

Client:

Stuart Brooks

Survey date:

15th January 2025

Project:

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

Change of use of land to a natural burial ground to include parking area, single storey pavilion and landscaping to include new tree planting, ponds and wildflower meadow.

[Unsubmitted]

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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 Stuart Brooks to undertake a Biodiversity Net Gain (BNG) Assessment at Brookfield Farm, Old Wokingham Road, RG40 3BU (hereafter referred to as “the site”). The assessment was required to inform a planning application for the change of use of land to a natural burial ground to include parking area, single storey pavilion and landscaping to include new tree planting, ponds and wildflower meadow (hereafter referred to as “the proposed development”).

BNG change summary:

	Habitat area units	Hedgerow units	Watercourse units
Change in units	-9.43%	108.12%	N/A
Units required for a 10% net gain	13.17	0	N/A

Areas of Habitat

The baseline habitat value of the site is 67.75 units, comprising other neutral grassland, other broadleaved woodland, and scattered trees.

The post development habitat value of the site is 51.27 units, comprising retained other neutral grassland (44.62 units), retained trees (0.22 units), and retained other broadleaved woodland (3.98 units), as well as created mixed scrub (6.07 units), non-priority pond (2.85 units), artificial pond (0.07 units) and scattered trees (3.55 units).

Hedgerows

The baseline hedgerow value of the site is 0.48 units, comprising native hedgerow.

The post development habitat value of the site is 1.00 units, comprising native hedgerows.

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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Stuart Brooks to undertake a Biodiversity Net Gain (BNG) Assessment at Brookfield Farm, Old Wokingham Road, RG40 3BU (hereafter referred to as “the site”). The assessment was required to inform a planning application for the change of use of land to a natural burial ground to include parking area, single storey pavilion and landscaping to include a new tree planting, ponds and wildflower meadow (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 for Brookfield Farm, Old Wokingham Road, RG40 3BU – V2
- Preliminary Ecological Appraisal (PEA) for Brookfield Farm, Old Wokingham Road, RG40 3BU – V2 (Arbtech, June 2025).

1.2 Site Location, Geology and Landscape Context

The survey site is centred on National Grid Reference SU 83705 66550 and has an area of approximately 5.29ha. The site comprises a large other neutral grassland field seasonally used for grazing horses. It is situated just outside the towns of Wokingham and Bracknell, Berkshire. There are scattered trees outside the northern border of the site that connect into the local landscape. Aerial imagery shows the local landscape to have a woodland character, with several small copses and woodland swathes in close proximity to the site as well as the Swinley forest located to the south-east of the site. Small water bodies such as ponds and lakes can be found nearby, 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.

1.3 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 requirement for biodiversity net gain is also enshrined within the National Planning Policy Framework (NPPF, 2024). The DEFRA Statutory Biodiversity Metric is the widely accepted tool used to calculate BNG. It enables the calculation of habitat value pre- and post-development in order to determine the overall change in biodiversity value as a result of the proposed development. The Biodiversity Metric has separate BNG assessments for areas of habitat, hedgerows and watercourses. The biodiversity value of a

site should be maximised. However, it may not always be possible to achieve a 10% biodiversity net gain within a site and therefore the Statutory Biodiversity Metric can also account for offsite habitat creation, where land is available. Alternatively, developers can seek to provide an agreed financial contribution to an appropriate third party (such as the Local Authority, the UK Government or another landowner) to deliver the required biodiversity net gain elsewhere on their behalf.

2.0 Methodology

2.1 Baseline Biodiversity Value

The baseline BNG Calculation was informed by a PEA (Arbtech, June 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, 2024).

Habitat Condition

Habitat condition was assessed using the relevant condition assessment sheets found in the Statutory Biodiversity Metric User Guide (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 Local Development Scheme (LDS) 2024-26 Rochford District Council (adopted 13 February 2024)

2.2 Post Development Biodiversity Value

The post development BNG Calculation was informed by a Landscape Masterplan (Harper Landscape Architecture LLP, October 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 Landscape Masterplan.

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, 2023). This is based on the assumption that a 30-year management plan will be adopted for the site.

Strategic Significance

Strategic significance was assigned for each proposed habitat based upon a review of the following:

- Likely ecological value
- Function within the landscape
- Any site or habitat allocations under the Local Development Scheme (LDS) 2024-26 Rochford District Council (adopted 13 February 2024)

2.3 Limitations

No limitations encountered during this assessment.

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

Unit type	Habitat	Area / Length	Description	Condition Assessment	Strategic Significance
Habitat area units	Other neutral grassland	5.29606ha	The majority of the site is comprised of other neutral grassland that is seasonally grazed by horses, species present within the habitat comprise; Yorkshire fog (D), perennial ryegrass (A), common bent (A), white clover (F), yarrow (F), creeping buttercup (F), meadow buttercup (F), ragwort (F), ribwort plantain (F), Hawkbit (F), curled dock (O), wild mustard (O), common storks-bill (O), garden sorrel (O), selfheal (O), dandelion (O), bracken (O), bramble (O), poppy (O), red clover (O), Hare's foot clover (O), common nettle (R), gorse (R), and small bugloss (R). There are 10 or more vascular species present per m ² of the site. Across the habitat, at least 20% is above 7cm sward length and at least 20% is under 7cm, with less than 5% of the total area covered by scrub, less than 20% cover of bracken, no invasive species present, however, cover of species indicative of suboptimal condition accounts for over 5% of the habitat area. Cover of bare ground is between 1 and 5% and the habitat parcel represents a good example of its habitat type. There is also a dead wood pile present at the north-west corner of the site.	Good	Medium Location ecologically desirable but not in local strategy
	Rural trees	0.05018ha	Along the north-east site boundary there is a row of 51 individual cypress trees.	Moderate	Medium Location ecologically desirable but not in local strategy

	Other broadleaved woodland	0.4519ha	At the south-east corner of the site is a small patch of other broadleaved woodland, this woodland is comprised solely of silver birch and is ~0.05ha in size. Ground level species comprise; bramble (F), common bent (O), Yorkshire fog (O), yarrow (O), and ivy (O). One age class is present within the woodland parcel, with no significant browsing evident, no invasive species present, and only one native tree or shrub species present. >80% of both canopy trees and understorey shrubs are native, no temporary open space present, no classes or coppice regrowth are present within the woodland, tree mortality is at 10% or less, no recognisable NVC woodland plant community present, and only one storey is present within the survey plot. No veteran trees are present, less than 25% of the survey plot has dead wood, and no nutrient enrichment or damaged ground present.	Poor	Medium Location ecologically desirable but not in local strategy
Linear units	Native hedgerow	0.21892km	Along the western border of the site is a line of very young hawthorn hedgerow. The hedgerow was planted very recently and shows evidence of grazing by the horses so the average height is ~50cm and the average width is ~30cm. there are gaps present between each of the hawthorn shrubs equating to ~60% of the length, with gaps between the ground and the base of the canopy also, however, these gaps are less than 50cm. there is no undisturbed ground either side of the hedgerow. There are no invasive species present, and the hedgerow is unaffected by human activities.	Poor	Medium Location ecologically desirable but not in local strategy

3.2 Post Development Habitats

Table 2 details the post development habitats present within the site along with their area/length, condition and strategic significance. An assessment of the anticipated condition for each habitat (where relevant) is provided in Appendix 5b, which is based on the assumption that a 30 year management plan will be implemented for the site. The proposed development will result in the loss of native hedgerows and a portion of modified grassland.

Table 2: Post Development Biodiversity Value

Unit type	Habitat	Area / Length	Description	Target Condition	Strategic Significance
Habitat area units	Mixed scrub	0.82411ha	Planted A mix of planted flora largely consisting of scrub. Suggested scrub include woody species that spread well such as alder, hawthorn, hazel or bramble	Moderate	Medium Location ecologically desirable but not in local strategy

	Other neutral grassland	3.71864ha	Good condition other neutral grassland to be retained.	Good	Medium Location ecologically desirable but not in local strategy
	Ponds (non-priority habitat)	0.25838ha	Proposed lake with natural edges.	Good	Medium Location ecologically desirable but not in local strategy
	Ornamental lake or pond	0.01931ha	Proposed formal water feature within ceremony gardens (Areas of hardstanding).	Moderate	Low Area/compensation not in local strategy
	Developed land; sealed surface (Hardstanding)	0.45566ha	Proposed hardstanding including a new car park made from asphalt with a buff dressing and a hoggin path.	N/A - Other	Low Area/compensation not in local strategy
	Developed land; sealed surface (Building)	0.0195ha	Proposed pavilion.	N/A - Other	Low Area/compensation not in local strategy
	Rural tree	1.0545ha	259 small planted trees around the site. Species mix is unknown but it is recommended than native species are planted including oak, Silver Birch, Hornbeam, Common Beech, Rowan, Ash, Hawthorn, Wild Cherry, Yew, Sweet Chestnut, Elder, Lime, and Willow.	Moderate	Medium Location ecologically desirable but not in local strategy
	Retained rural trees	0.05018ha	Retained cypress trees.	Moderate	Medium Location ecologically desirable but not in local strategy
	Other broadleaved woodland	0.4519ha	On-site woodland retained	Poor	Medium Location ecologically desirable but not in local strategy

Linear units	Native hedgerow	0.27223km	Proposed hedgerow within ceremony gardens (Areas of hardstanding) and surrounding the car park.	Moderate	Medium Location ecologically desirable but not in local strategy
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3.3 Change in Biodiversity Value of the Site

Full details are provided in the Defra Statutory Biodiversity Metric. The headline results are presented in Appendix 6.

Areas of Habitat

The baseline habitat value of the site is 67.75 units, comprising other neutral grassland, scattered trees, and broadleaved woodland.

The post development habitat value of the site is 51.27 units, comprising retained other neutral grassland (44.62 units), retained trees (0.22 units), and retained other broadleaved woodland (3.98 units), as well as created mixed scrub (6.07 units), non-priority pond (2.85 units), artificial pond (0.07 units) and scattered trees (3.55 units).

This results in a net change in biodiversity of -9.43% (i.e. a net loss).

Hedgerows

The baseline hedgerow value of the site is 0.48 units, comprising native hedgerow.

The post development habitat value of the site is 1.00 units, comprising native hedgerows.

This results in a net change in biodiversity of 108.12% (i.e. a net gain).

4.0 Recommendations to Deliver BNG

4.1 Discussion

The current proposed plan results in a -9.43% net loss in habitat units and a 108.12% net gain in hedgerow units. This is less than the 10% target of biodiversity net gain for habitat units, and more than the 10% target net gain for hedgerow units.

In order to achieve the required minimum 10% net gain in biodiversity as a result of the proposed development, the provision of additional or alternative landscaping should be explored and the proposed plans amended accordingly to either achieve a 10% net gain on site or to reduce off-site compensation requirements that may be required to achieve a 10% net gain.

4.2 Landscaping

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

- Minimise the loss of existing other neutral grassland on-site.
- Retention of areas of existing other neutral grassland through loss of created mixed scrub habitat.

Should these alterations be incorporated this BNG Assessment will need to be updated to accurately reflect the change in biodiversity value of the site pre- and post-development.

4.3 Biodiversity Offsetting

If the landscaping plans are not altered or if any alterations still do not deliver a 10% net gain, the deficit will need to be delivered in a suitable offsite location i.e. biodiversity offsetting.

According to the Defra Statutory Biodiversity Metric there is a unit deficit of 13.17 habitat units, however, to satisfy the trading rules 18.93 other neutral grassland units are required, these will need to be provided to offset the loss in biodiversity and achieve a 10% biodiversity net gain.

The mechanism for securing this off-setting will need to be proposed to, and confirmed by the LPA e.g., purchasing conservation credits through a registered provider, habitat creation directly through the client owned or LPA offered land or a financial contribution towards another provider such as a local nature reserve or park. As well as the creation of new habitats, this should also secure the management of the proposed habitats to help achieve the desired condition for at least 30 years. This would be

linked to the application through a planning obligation Section 106 (S106) agreement. The proposed habitat compensation should be of an appropriate distinctiveness to meet the trading rules of BNG. An ecology survey of the baseline habitat of any off-site land will be required to inform the baseline conditions of any land subject to off-site compensation measures.

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 (2024) Preliminary Ecological Appraisal. January 2025.
- 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.
- Harper Landscape Architecture LLP (2024) Landscape masterplan. October 2024.
- Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey a technique for environmental audit.
http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- Natural England (2024). The Statutory Biodiversity Metric (JP039).
- Natural England (2024). The Statutory Biodiversity Metric User Guide (JP039).
- Natural England (2024). The Statutory Biodiversity Metric Technical Annex 1 – Condition Assessment Sheets and Methodology (JP039).
- Natural England (2024). The Statutory Biodiversity Metric Technical Annex 2 – Technical Information (JP039).
- The UK Habitat Classification Habitat Definitions Version 2.0 (The UK Habitat Classification Working Group, July 2023)

Appendix 1: Proposed Development Plan



Brookfield Farm, Natural Burial Site
Harper Landscape Architecture LLP

Landscape Masterplan

Dwg No. hla 601 02 March 2025 1:750 @ A1 1:1500 @ A3



Appendix 2: Site Location Plan



Appendix 3: Baseline Habitat Plan



Appendix 4: Post Development Habitat Plan



Appendix 5a: Habitat Condition Assessment Sheets - Baseline

Other Neutral Grassland Condition Assessment (or other medium-high distinctiveness grass)

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 relevant to the specific habitat type (and relative to Footnote 3 suboptimal species which may be listed in the UKHab description). ¹ Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.	Yes	
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.	Yes	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	Yes	
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%.	Yes	
E	Combined cover of species indicative of suboptimal condition ³ 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 ⁴ (as listed on Schedule 9 of WCA ⁵) are present, this criterion is automatically failed.	no	
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 3 and 5 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.	Yes	
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		Yes	
Number of criteria passed		5	
Condition Assessment Result	Condition Assessment Score	Score Achieved x/√	
Acid grassland types (Result out of 5 criteria)			
Passes 5 criteria	Good (3)		
Passes 3 or 4 criteria	Moderate (2)		
Passes 2 or fewer criteria	Poor (1)		
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)	X	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)	x	

Woodland Habitat Condition Assessment

Condition Assessment Criteria						
Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	Notes (such as justification)
A	Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.	1	
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in less than 40% of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .	3	
C	Invasive plant species	No invasive species ³ present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, and other invasive species ³ <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ ≥10% cover.	3	
D	Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.	1	
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native ⁵ .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native ⁵ .	<50% of canopy trees and <50% of understory shrubs are native ⁵ .	3	
F	Open space within woodland	10 - 20% of woodland has areas of temporary open space ⁶ . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted ⁷ .	21 - 40% of woodland has areas of temporary open space ⁶ .	<10% or >40% of woodland has areas of temporary open space ⁶ . But if woodland <10ha has <10% temporary open space, please see Good category ⁷ .	3	
G	Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .	1	
H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback ⁹ .	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .	3	
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.	1	
J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .	1	
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.	1	

L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	1	
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground ¹⁴ .	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground ¹⁴ .	3	
Total Score (out of a possible 39)					25	
Condition Assessment Result				Condition Assessment Score		Result Achieved
Total score >32 (33 to 39)				Good (3)		Poor
Total score 26 to 32				Moderate (2)		
Total score <26 (13 to 25)				Poor (1)		

Individual Trees Condition Assessment

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	No	
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).	Yes	
C	The tree is mature (or more than 50% within the block are mature) ¹ .	No	
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.	Yes	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Yes	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	
Number of criteria passed		4	

Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved ×/✓	
Passes 5 or 6 criteria	Good (3)	X	
Passes 3 or 4 criteria	Moderate (2)	✓	
Passes 2 or fewer criteria	Poor (1)	X	

Hedgerow Condition Assessment

Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)		Criteria - the minimum requirements for 'favourable condition'	Criteria description	Criterion passed (Yes or No)	Notes (such as 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 the 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).	No	
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 (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >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).	No	
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.	No	

			Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).		
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).	Yes	
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 hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow 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.	No	
C2.	Nutrient-enriched 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, does not exceed the 20% cover threshold.	No	
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	Yes	
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 (for example, excessive hedgerow cutting).	Yes	
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N/A	

		tree present per 20 - 50m of hedgerow.			
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	N/A	

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees

Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND <u>Does not fail both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR <u>Fails both attributes</u> in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		Poor

Condition categories for hedgerows with trees

Category	Category Requirements	Metric 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 (for example, 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 (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		N/A

Appendix 5b: Habitat Condition Assessment Sheets - Proposed

Scrub Habitat Type Condition Assessment

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). ¹ - At least 80% of scrub is native, - There are at least three native woody species ² , - No single species comprises 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).	Yes	
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran ³) shrubs are all present.	No	
C	There is an absence of invasive non-native plant species ⁴ (as listed on Schedule 9 of WCA ⁵) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Yes	
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Yes	
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	No	
Number of criteria passed			
Condition Assessment Result (out of 5 criteria)	Condition Assessment Score	Score Achieved ×/✓	
Passes 5 criteria	Good (3)	X	
Passes 3 or 4 criteria	Moderate (2)	✓	
Passes 2 or fewer criteria	Poor (1)	X	

Ornamental pond

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - applicable to all ponds (woodland¹ and non-woodland):			
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Yes	
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	No	

C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.	Yes		
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	Yes		
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	Yes		
F	There is an absence of listed non-native plant and animal species ³ .	Yes		
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Yes		
Additional Criteria - must be assessed for all non-woodland ponds:				
H	Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3 m deep.	Yes		
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	Yes		
Number of criteria passed		8		
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓		
Results for woodland ponds which require assessment of 7 core criteria				
Passes 7 criteria	Good (3)	N/A		
Passes 5 or 6 criteria	Moderate (2)	N/A		
Passes 4 or fewer criteria	Poor (1)	N/A		
Results for non-woodland ponds which require assessment of 9 criteria				
Passes 9 criteria	Good (3)	X		
Passes 6 to 8 criteria	Moderate (2)	✓		
Passes 5 or fewer criteria	Poor (1)	X		
Suggested enhancement interventions to improve condition score				

Non-priority pond

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - applicable to all ponds (woodland ¹ and non-woodland):			
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	Yes	
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	Yes	
C	Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp. or filamentous algae.	Yes	
D	The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework.	Yes	
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams ² , pumps or pipework.	Yes	
F	There is an absence of listed non-native plant and animal species ³ .	Yes	
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Yes	
Additional Criteria - must be assessed for all non-woodland ponds:			
H	Emergent, submerged or floating plants (excluding duckweed) ⁴ cover at least 50% of the pond area which is less than 3 m deep.	Yes	
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	Yes	
Number of criteria passed		8	
Condition Assessment Result	Condition Assessment Score	Score Achieved ×/✓	
Results for woodland ponds which require assessment of 7 core criteria			
Passes 7 criteria	Good (3)	N/A	
Passes 5 or 6 criteria	Moderate (2)	N/A	
Passes 4 or fewer criteria	Poor (1)	N/A	
Results for non-woodland ponds which require assessment of 9 criteria			
Passes 9 criteria	Good (3)	✓	

Passes 6 to 8 criteria	Moderate (2)	X	
Passes 5 or fewer criteria	Poor (1)	X	
Suggested enhancement interventions to improve condition score			

Individual Trees Condition Assessment

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The tree is a native species (or at least 70% within the block are native species).	Yes	
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).	Yes	
C	The tree is mature (or more than 50% within the block are mature) ¹ .	No	
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.	Yes	
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	No	
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes	
Number of criteria passed		4	
Condition Assessment Result (out of 6 criteria)	Condition Assessment Score	Score Achieved x/✓	
Passes 5 or 6 criteria	Good (3)	X	
Passes 3 or 4 criteria	Moderate (2)	✓	
Passes 2 or fewer criteria	Poor (1)	X	

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)	Area habitat units	-6.39
	Hedgerow units	0.52
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Area habitat units	-9.43%
	Hedgerow units	108.12%
	Watercourse units	0.00%
Trading rules satisfied?		No - Check Trading Summaries ▲

Total net gain achieved is less than target set ▲

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Area habitat units	10.00%	67.75	74.53	13.17
Hedgerow units	10.00%	0.48	0.53	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 ✓

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