

Biodiversity Net Gain Assessment

Survey site:

Lullings Cottage, West Hill, Balcombe, Haywards Heath, West Sussex, RH17 6QY

Client:

Tim Musker

Survey date:

16th May 2025

Project:

This report is prepared to inform a planning application with Mid Sussex District Council. The proposal is described as:

The replacement of existing cottage for a single storey replacement dwelling with associated landscaping.

BNG assessment methodology and legislation can be found in the Arbtech Supplement: **[BNG Methodology and Legislation – 2025.](#)**

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

Version Control			
Status	Issue	Name	Date
Draft	0.1	Anya White BSc, Consultant Ecologist	09/06/25
Final	1.0	Anya White BSc, Consultant Ecologist	10/06/25

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Site Location and Context

A baseline habitat map is provided in **Appendix 1**, a post development habitat map in **Appendix 2**, a proposed development plan in **Appendix 3**, headline BNG results in **Appendix 4**, and condition assessments in **Appendix 5**.

The site is centred at National Grid Reference TQ 32828 30403 and has an area of approximately 0.127ha. The site consists of a residential dwelling, an outbuilding, trees and modified grassland. There is no barrier between the grassland site and the field in the wider parcel, and therefore it has become one grassland parcel. There is a long driveway to the north, which has an offsite hedgerow to the east.

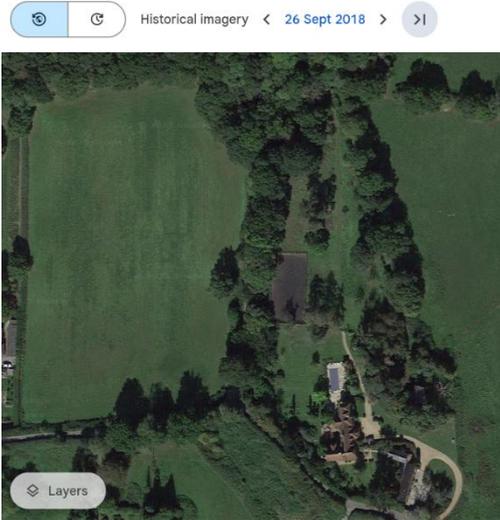
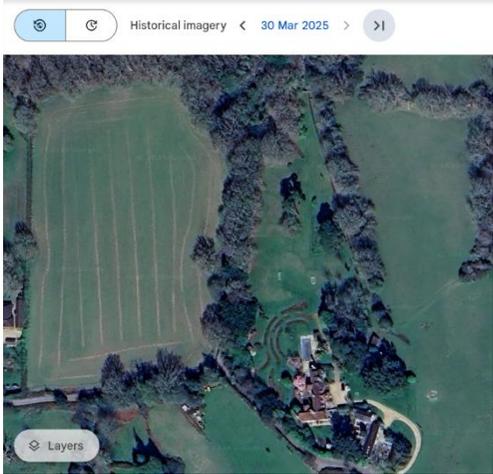
This report should be read in conjunction with the following documents:

- ❖ Statutory BNG Metric – Lullings Cottage, RH17 6QY, v1 (Arbtech Consulting Limited, 2025)
- ❖ 241_Lullings_Planning_Proposed
- ❖ Baseline Habitats Condition Assessment (BHCA) - Lullings Cottage, RH17 6QY, v1 (Arbtech Consulting Limited, 2025)

Executive Summary

The current landscaping proposal generates a net loss of area-based habitat units (-8.78%) and a net change of linear-based habitat units (00.00%). As such, the proposed development is not compliant with current legislation (Environment Act 2021) and planning policies (National Planning Policy Framework, 2024), and offsite compensation will need to be sought.

Introduction

BNG Informative			
	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Date reflected by BNG calculations</td> <td>9th June 2025</td> </tr> </table>	Date reflected by BNG calculations	9 th June 2025
Date reflected by BNG calculations	9 th June 2025		
Habitat Degradation Statement	<p>The baseline biodiversity value of the site is derived from the site as observed during the BHCA field survey (Arbtech Consulting Ltd., 2025). As evident in the screenshots of satellite imagery obtained from GoogleEarth dated 26th September 2018 and 30th March 2025, the site does not appear to have undergone any degradation. The habitats on site, and therefore biodiversity value of the site, is not considered to have undergone degradation since 30th January 2020.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Historical imagery < 26 Sept 2018 > > </p> </div> <div style="text-align: center;">  <p>Historical imagery < 30 Mar 2025 > > </p> </div> </div>		
Irreplaceable Habitat Statement	No irreplaceable habitats as listed under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024) are currently present nor were present before 30 th January 2020.		
Metric Version & Publication Date	Statutory Biodiversity Metric Calculation Tool first published 29 th November 2023 with last updates to metric tools and user guides on 23 rd July 2024.		
BNG Target Uplift	+10%		

National Character Area (NCA)	122 – High Weald		
Strategic Significance	Sussex Nature Partnership is the responsible authority for drafting the Local Nature Recovery Strategy (LNRS) for Mid Sussex Council, but they are yet to adopt a comprehensive LNRS. As advised, the following documents from its adopted Local Plan (including Supplementary Planning Documents, SPDs), were used to determine strategic significance: <ul style="list-style-type: none"> ❖ Policies Map ❖ Mid Sussex District Plan 2021 – 2039 (Mid Sussex District Council, 2022) 		
	Habitat	Baseline / Post-Development	Justification
	Urban habitats – Developed land; sealed surface, buildings and vegetated garden	Baseline and Post-development	Low strategic significance. Not outlined in local strategy.
	Rural trees	Baseline and Post-development	Medium strategic significance. Trees are outlined as protected within the local strategy, but there is no guidance towards assigning strategic significance.
	Modified grassland	Baseline	Low strategic significance. Not outlined in local strategy.
	Native hedgerow	Post-development	Medium strategic significance. Hedgerows are outlined as protected within the local strategy, but there is no guidance towards assigning strategic significance.
Limitations			
There were no specific limitations to the assessment.			

Baseline

Baseline Biodiversity Value: On-Site				
Area-Based Habitats (A-1)				
Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Modified Grassland	0.149964	The majority of the site is modified grassland, which is subject to frequent management and was previously used as a residential garden. However, the dwelling is now unoccupied and there is no barrier between the grassland within the survey boundary and the wider field that the dwelling is situated within.	<i>Poor: passes 4 of 7 criteria excluding essential criterion A.</i> Assessed using the 'Grasslands Low Distinctiveness' habitat type condition sheet.	Low Strategic Significance
Buildings	0.00858	There are two buildings present on site. One of which is a house, which is currently unoccupied and no longer maintained. The other is a shed structure, which has been used as a log store and is also not currently maintained.	This habitat is not subject to a condition assessment.	Low Strategic Significance
Developed land: sealed surface	0.000349	A short patio of paving stones is present to the front of the property and in between T1.	This habitat is not subject to a condition assessment.	Low Strategic Significance
Rural Tree	Moderate: 0.0204	There are six trees on the baseline. 3x small trees in good condition, 1x small tree in moderate condition, 1x medium tree in moderate condition and 1x extra-large tree in good condition. See BHCA for more information.	Moderate: passes 4 of 6 criteria.	Medium strategic significance
	Good: 0.0887		Good: passes 5 of 6 criteria.	Medium strategic significance

Post-Development

Post-Development Biodiversity Value: On-Site					
Area-Based Habitats					
	Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Retained (A-1)	Rural Tree	Moderate: 0.0204	Five of the six baseline trees are to be retained. The removed tree is a small tree in good condition.	Moderate: passes 4 of 6 criteria.	Medium strategic significance
		Good: 0.0887		Good: passes 5 of 6 criteria.	Medium strategic significance
Created (A-2)	Buildings	0.009971	Two buildings are to be developed on site. One is the single-storey replacement dwelling and the other is an outbuilding.	This habitat is not subject to a condition assessment.	Low Strategic Significance
	Developed land; sealed surface	0.039675	Hardstanding is to be built, for a driveway, parking and landscaping.	This habitat is not subject to a condition assessment.	Low Strategic Significance
	Vegetated garden	0.109234	The remaining area, including the lawn, is to become vegetated garden as per BNG guidelines surrounding residential gardens.	This habitat is not subject to a condition assessment.	Low Strategic Significance

Post-Development Biodiversity Value: On-Site					
Linear-Based Habitats					
	Habitat	Length (km)	Description	Condition Assessment	Strategic Significance
Created (B-2)	Native hedgerow	0.01823	A hedgerow is to be planted as a privacy screen on the southeast boundaries. Species planted will be native, and it to achieve poor condition.	Poor: Fails both attributes in more than one functional group	Medium strategic significance

Change of Biodiversity Value

		Biodiversity Units		
		Area-Based	Linear-Based	Watercourse-Based
On-Site	Baseline	❖ 1.63	❖ 0.00	❖ N/A
	Post-Development	❖ 1.49	❖ 0.04	❖ N/A
Overall Net Change		-0.14	N/A	N/A

Results, Discussion, and Next Steps

BNG Informative	
Results	<p>The current landscaping proposal generates a net loss of area-based habitat units (-8.78%) with unmet trading rules. In line with the Statutory Biodiversity Metric User Guide (2024), any loss of a habitat must be replaced on a like-for-like or like-for-better principle. At present, trading conditions are not satisfied for the loss of 1no rural tree (medium distinctiveness) and modified grassland (low distinctiveness). With unmet trading conditions and a net loss, the proposal fails principal Rules 1 and 2 of BNG and is not compliant with current legislation (Environment Act 2021) and planning policies (National Planning Policy Framework, 2024). The change for linear-based habitat units is N/A as there are no hedgerows on the baseline, therefore a percentage gain cannot be calculated.</p> <p>In order to achieve a +10% biodiversity net gain for area-based habitats, a minimum area-based unit score of 1.79 will need to be achieved. At present, there is a unit deficit of 0.31 units.</p>
Recommendations and Next Steps	<p>In order to achieve the required 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 achieve a net gain on site. The provisioning of additional landscaping should first be considered within the site boundary.</p> <p>There is limited scope on site and this provision may not be possible to achieve on site or adjacent with the current arrangement (within the redline boundary) considering the size of the proposed development area and the limited amount of soft landscaping within the parcel. Additionally, there are strict rules surrounding net gain within private gardens as any gains cannot legally be secured, therefore the areas of vegetated gardens limit the possibility for creation of higher distinctiveness habitats.</p> <p>Based on the proposed plans, it is unlikely that net gain will be achieved by ways of habitat creation/enhancement without significant changes to the proposals on site or require unfeasible commitments off-site. As such, a financial contribution to off-site ecological enhancements (i.e. purchasing biodiversity units) within an approved scheme is required to make up the +10% net gain for area-based habitat units. The mechanism for securing this off-setting will need to be proposed to and confirmed by the LPA and would be linked to the application through a planning obligation Section 106 (s106) agreement. The proposed habitat compensation must be of an appropriate distinctiveness to meet the trading rules of BNG.</p> <p>A summary as to what off-site units will be required is detailed in the table below.</p>

	<table border="1"> <thead> <tr> <th></th> <th>Distinctiveness</th> <th>Broad Habitat Group</th> <th>Habitat</th> <th>Units Required</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Area-Based</td> <td>Medium</td> <td>Individual Trees</td> <td>Rural Tree</td> <td>0.05</td> </tr> <tr> <td>Low</td> <td>Grassland</td> <td>Modified grassland</td> <td>0.09</td> </tr> <tr> <td>Any</td> <td>Any</td> <td>Any</td> <td>0.17</td> </tr> <tr> <td colspan="3" style="text-align: right;">Total</td> <td>0.31</td> </tr> </tbody> </table>		Distinctiveness	Broad Habitat Group	Habitat	Units Required	Area-Based	Medium	Individual Trees	Rural Tree	0.05	Low	Grassland	Modified grassland	0.09	Any	Any	Any	0.17	Total			0.31
	Distinctiveness	Broad Habitat Group	Habitat	Units Required																			
Area-Based	Medium	Individual Trees	Rural Tree	0.05																			
	Low	Grassland	Modified grassland	0.09																			
	Any	Any	Any	0.17																			
	Total			0.31																			
Pre-Commencement	<p>A Biodiversity Gain Plan (BGP) and Habitat Management and Monitoring Plan (HMMP) must be produced for the site. This should include recommendations for the implementation, management and monitoring of the site for at least 30 years to ensure that biodiversity net gain is delivered.</p> <p>These additional requirements can only be actioned following the finalisation of the BNG assessment – be it on-site or off-site net gains sought.</p>																						
BNG Mitigation Hierarchy																							
Avoidance	Impacts to the priority habitats on site will be avoided where possible (individual trees).																						
Minimisation	Impacts to notable habitats on site have been minimised, as 5 trees are to be retained.																						
Mitigation	Land that is not buildings, hardstanding or driveway is to become vegetated garden, as stated in the rules surrounding private gardens.																						
Offset	Net gain for linear-based habitats have been achieved on site. Compensation for area habitats will be sought offsite.																						

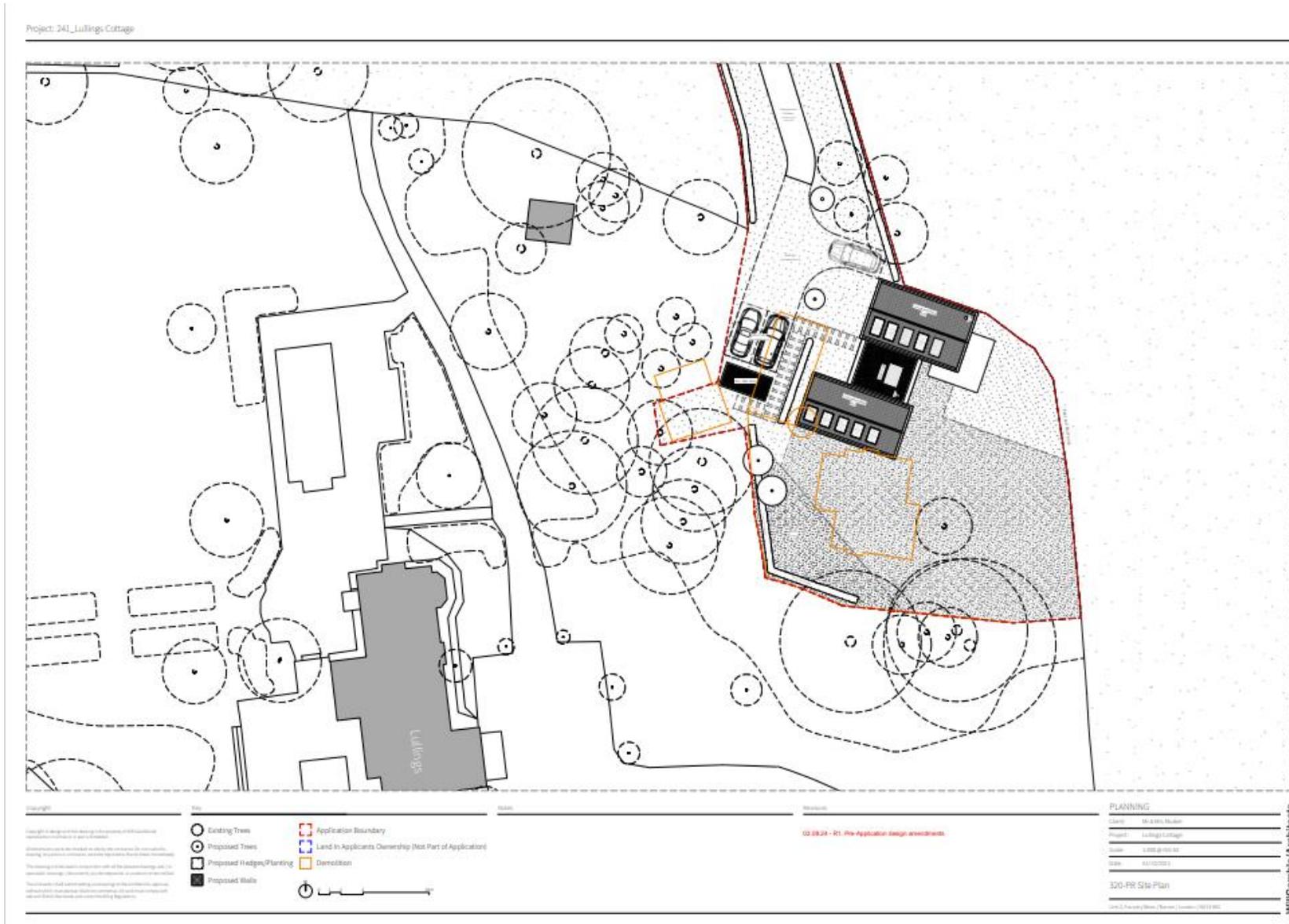
Appendix 1: Baseline Habitat Plan



Appendix 2: Post-Development Habitat Plan



Appendix 3: Proposed Development Plan



Appendix 4: Headline BNG Results

FINAL RESULTS			
Total net unit change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-0.14	
	<i>Hedgerow units</i>	0.04	
	<i>Watercourse units</i>	0.00	
Total net % change <small>(Including all on-site & off-site habitat retention, creation & enhancement)</small>	<i>Habitat units</i>	-8.68%	Total net gain achieved is less than target set ▲
	<i>Hedgerow units</i>	N/A	0 baseline units - % cannot be calculated
	<i>Watercourse units</i>	0.00%	
Trading rules satisfied?	No - Check Trading Summaries ▲		

Appendix 5a: Baseline Habitat Condition Assessment Sheets

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

Condition Assessment Criteria		Condition Achieved (Y/N)					
		T01 S	T02 S	T03 S	T04 M	T05 2	T06 XL
A	The tree is a native species (or more than 70% within the block are native species).	N	Y	Y	Y	Y	Y
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	Y	Y	Y	Y	Y
C	The tree is mature (or more than 50% within the block are mature).	Y	Y	Y	Y	N	Y
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.	N	N	Y	N	Y	Y
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y	Y	N	N	N	Y
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	Y	Y	Y	Y	Y
Number of criteria passed		Moderate	Good	Good	Moderate	Moderate	Good

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

Condition Assessment Criteria:		Condition passed (Yes or No)	Notes/Justification
A	There must be 6-8 vascular plant species per m ² , including at least 2 forbs. Note – this criterion is essential for achieving moderate condition.	N	Fewer 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	Varied sward height.
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 present (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.	N	Physical damage present in more 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).	N	Significant bare ground observed.
F	Cover of bracken less than 20%.	Y	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.
Essential criterion achieved (Y/N)			N
Number of criteria passed			4
Condition Assessment Result		Condition Assessment Score	Score Achieved ✓
Passes 6 or 7 of 7 criteria including passing essential criterion A		Good (3)	
Passes 4 or 5 of 7 criteria including passing essential criterion A		Moderate (2)	✓
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion A		Poor (1)	✓

Appendix 5b: Post-Development Habitat Condition Assessment Sheets

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	Criterion passed (Yes or No)	Notes/Justification
A1. Height	>1.5 m average along length	<p>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.</p> <p>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).</p> <p>A newly planted hedgerow does not pass this criterion (unless it is > 1.5 m height).</p>	Y	Hedgerow averages >1.5m in height.
A2. Width	>1.5 m average along length	<p>The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.</p> <p>Outgrowths (e.g. blackthorn suckers) are only included in the width estimate when they >0.5 m in height.</p> <p>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).</p>	N	Hedgerow averages <1.5m in width.
B1. Gap – hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	<p>This is the vertical ‘gappiness’ of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth.</p> <p>Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).</p>	N	Gaps in base.
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).	N	Canopy gaps.

		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).		
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.	N	No undisturbed ground either side.
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.	N	Undesirable species unknown.
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 anticipated.
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).	N	Hedgerow likely to be damaged.
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:	Poor		