

## Biodiversity Net Gain Assessment

**Site Address:**

Lower Rivermead Farm, Willow Lane, Wargrave, RG10 8LH

**Client:**

Nicola Butler

**Assessment Date:**

10<sup>th</sup> September 2025

**Project:**

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

The construction of an outdoor equestrian arena (20m x 40m).

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	Dan Crispin BSc (Hons); Graduate Ecologist		10/09/2025
Reviewed	0.2	Abby Pidgen BSc (Hons) MSc; Consultant Ecologist		15/09/2025
Final	1	Dan Crispin BSc (Hons); Graduate Ecologist		16/09/2025
Updated	1.1	Dan Crispin BSc (Hons); Graduate Ecologist		16/10/2025
Reviewed	1.2	Mel Reid BSc (Hons) MRes AMRSB; Principal Ecologist		16/10/2025
Final	2	Dan Crispin BSc (Hons); Graduate Ecologist		16/10/2025

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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 survey site is centred on National Grid Reference SU 78235 80037 and has an area of approximately 1.70ha. The site comprises one field (modified grassland) currently used for grazing horses with access provided to the field via a worn asphalt and gravel track. The wider site comprises agricultural buildings, fields used for grazing livestock, with pockets of scattered trees/woodland and hedgerows. There is a man-made drainage system ~0.25km to the north of the site. The site comprises 'Loamy and clayey soils of coastal flats with naturally high groundwater' as classified by LandIs Soilscapes.

The site is situated within Wargrave Marsh, with aerial imagery showing the local landscape to have an agricultural character. Positioned between the River Thames (~0.2km west) and Hennerton Backwater (~0.2 km east), the site and adjacent properties are located on an island with access provided by a bridge ~0.7km to the south. The presence of nearby waterbodies likely enhances the area for a variety of species, including bats amphibians and reptiles. The town of Wargrave, Berkshire is located ~1.0km to the south of site, with the town of Lower Shiplake, Berkshire ~0.4km west of site, across the River Thames. The surrounding area is predominantly agricultural, with pockets of woodland, hedgerows and residential properties in all directions. Hennerton Golf Club is located ~0.4km east of the site, on the far side of Hennerton Backwater.

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

- ❖ Statutory BNG Metric – Lower Rivermead Farm RG10 8LH - v2 - 41916517 (Arbtech Consulting Ltd, 2025)
- ❖ Preliminary Ecological Appraisal (PEA) – Lower Rivermead Farm RG10 8LH - v1 - 41916517 (Arbtech Consulting Ltd, 2025)
- ❖ Proposed Location Plan October 2025 – RG108LH/EM/NB (Equestrian Planning Consultancy, 2025)
- ❖ Proposed Manege (Michael G Baynton & Associates, 2025)

### Executive Summary

- ❖ The current landscaping proposal generates a net gain of **+0.04** area-habitat units (**+11.34%**). As such, the proposed development is compliant with current legislation (Environment Act 2021) and planning policies (National Planning Policy Framework, 2024) as a minimum biodiversity net gain of +10% was achieved for area-habitat units.
- ❖ All trading conditions have been satisfied.
- ❖ 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.

## Introduction

BNG Informative		
	Date reflected by BNG calculations	30 <sup>th</sup> April 2025
<p>The baseline biodiversity value of the site is derived from the site as observed during the PEA field survey (Arbtech Consulting Ltd, 2025). As evident in the screenshots of satellite imagery obtained from Google Earth dated 15<sup>th</sup> April 2020 and 18<sup>th</sup> 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>		
<b>Habitat Degradation Statement</b>	  <p>15-04-2020 Lower Rivermead Farm, RG10 8LH</p> <p>18-03-2025 Lower Rivermead Farm, RG10 8LH</p> <p>Google Earth</p> <p>Google Earth</p>	
<b>Irreplaceable Habitat Statement</b>	<p>No irreplaceable habitats as listed under the Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations (2024) are currently present nor were present before 30<sup>th</sup> January 2020.</p>	
<b>Metric Version &amp; Publication Date</b>	<p>Statutory Biodiversity Metric Calculation Tool first published 29<sup>th</sup> November 2023 with last updates to metric tools and user guides on 3<sup>rd</sup> July 2025.</p>	
<b>BNG Target Uplift</b>	<p>+10%</p>	
<b>National Character Area (NCA)</b>	<p>110 - Chilterns</p>	

<b>Strategic Significance</b>	<p>The Royal Borough of Windsor and Maidenhead Council (RBWMC), the responsible authority for drafting the Local Nature Recovery Strategy (LNRS) for Wokingham District Council (WDC), has yet to adopt a comprehensive LNRS. As advised by the WDC, the following documents from its adopted Local Plan (including Supplementary Planning Documents, SPDs), were used to determine strategic significance:</p> <ul style="list-style-type: none"> <li>❖ <a href="#">Planning Policies Map (WBC, 2025)</a></li> <li>❖ <a href="#">Biodiversity Opportunity Areas (Berkshire LNP)</a></li> <li>❖ <a href="#">The Natural Environment in Berkshire Biodiversity Strategy 2014 – 2020 (Berkshire LNP, 2014)</a></li> </ul>																
	Baseline / Post-Development	Habitat	Justification														
	Both	All	<b>Low:</b> The site is located within the Chilterns Escarpment Biodiversity Opportunity Area (BOA). However, none of the habitats present on-site are within scope of the BOAs targets and opportunities or have sufficient ecological value to justify a higher strategic significance.														
<b>Condition Assessment</b>	<p>The following tabs from the Statutory Biodiversity Metric – Condition Assessment Sheets were used when assessing the condition of each habitat:</p> <table border="1"> <thead> <tr> <th>Habitat</th><th>Tab No.</th><th>Tab Name</th></tr> </thead> <tbody> <tr> <td>Developed Land; Sealed Surface</td><td rowspan="2"><b>N/A</b></td><td>Condition pre-determined</td></tr> <tr> <td>Artificial Unvegetated; Unsealed Surface</td><td></td></tr> <tr> <td>Modified Grassland</td><td><b>Tab 5</b></td><td>Grassland Low</td></tr> <tr> <td>Rural Trees</td><td><b>Tab 9</b></td><td>Individual Trees</td></tr> </tbody> </table>			Habitat	Tab No.	Tab Name	Developed Land; Sealed Surface	<b>N/A</b>	Condition pre-determined	Artificial Unvegetated; Unsealed Surface		Modified Grassland	<b>Tab 5</b>	Grassland Low	Rural Trees	<b>Tab 9</b>	Individual Trees
Habitat	Tab No.	Tab Name															
Developed Land; Sealed Surface	<b>N/A</b>	Condition pre-determined															
Artificial Unvegetated; Unsealed Surface																	
Modified Grassland	<b>Tab 5</b>	Grassland Low															
Rural Trees	<b>Tab 9</b>	Individual Trees															
<b>Limitations</b>	<p>No limitations were identified during the preparation of this assessment.</p>																

**Baseline**

Baseline Biodiversity Value: On-Site				
Area-Habitats (A-1)				
Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Developed Land; Sealed Surface	0.06445	Access to site is provided by a worn asphalt track from Willow Lane.	<b>N/A:</b> Habitat condition pre-determined.	<b>Low</b>
Artificial Unvegetated, Unsealed Surface	0.01853	A small section of gravel separates the access road from the track leading to main site.		
Modified Grassland	0.17263	<p>The majority of site is comprised of modified grassland used for horse grazing with a track providing access from the farmyard. The parcel is bound with a metal wire fence and is partitioned with an electric fence, keeping the two horses present in the south-west of the parcel.</p> <p>There was a regular sward height of ~5cm, which increases slightly to the east of parcel, reflecting the current use for horse grazing. The track has a regular, short sward height of ~3cm.</p> <p>A small section of bramble scrub is present along the south-west perimeter of the site which shows evidence of clearance and small patches of the parcel are covered with common nettle; however, these account for &lt;20% of the parcel area.</p> <p>There is evidence of physical damage present from high levels of access surrounding the gates, however, these account for &lt;5% of the parcel area. There are no other areas of bare ground or bracken present in the parcel.</p> <p>An individual specimen of Spanish bluebell (<i>Hyacinthoides hispanica</i>) was located in the centre of the parcel. No other invasive non-native species were identified.</p>	<b>Poor:</b> Passes 5 of 7 criteria. (C-G)	

## Post-Development

Post-Development Biodiversity Value: On-Site					
Area-Habitats					
	Habitat	Area (ha)	Description	Condition Assessment	Strategic Significance
Retained (A-1)	Developed Land; Sealed Surface	0.06445	Existing asphalt access track.	<b>N/A:</b> Habitat condition pre-determined.	Low
	Artificial Unvegetated, Unsealed Surface	0.01853	Existing gravel areas.		
	Modified Grassland	0.09263	Existing grassland access track and field.	<b>Poor:</b> As existing	
Created (A-2)	Artificial Unvegetated, Unsealed Surface	0.08000	Proposed manège.	<b>N/A:</b> Habitat condition pre-determined.	Low
	Rural Trees	Moderate: 0.0651	Proposed 16no small trees planted within field. Specification TBC.	<b>Moderate:</b> Passes 3/4 of 6 criteria. 16no - Small	

## Change of Biodiversity Value

		Biodiversity Units	
		Area-Habitat	
On-Site	Baseline	0.00	❖ Developed Land; Sealed Surface (N/A)
		0.00	❖ Artificial Unvegetated, Unsealed Surface (N/A)
		0.35	❖ Modified Grassland (Poor)
		<b>0.35</b>	<b>Units - Total</b>
On-Site	Post-Development	<b>Retained (A-1)</b>	
		0.00	❖ Developed Land; Sealed Surface (N/A)
		0.00	❖ Artificial Unvegetated, Unsealed Surface (N/A)
		0.19	❖ Modified Grassland (Poor)
		<b>Created (A-2)</b>	
		0.00	❖ Artificial Unvegetated, Unsealed Surface (N/A)
		0.20	❖ Rural Trees (Moderate)
	On-Site Net Change	<b>0.38</b>	<b>Units - Total</b>
		<b>+0.04</b>	<b>Unit Change</b>
		<b>+11.34%</b>	<b>% Change</b>

## Results, Discussion, and Next Steps

BNG Informative	
Results and Next Steps	<p>The current landscaping proposal generates a net gain of <b>+0.04</b> area-habitat units (<b>+11.34%</b>). As such, the proposed development is compliant with current legislation (Environment Act 2021) and planning policies (National Planning Policy Framework, 2024) as a minimum biodiversity net gain of +10% was achieved for area-habitat units.</p> <p>All trading conditions have been satisfied.</p> <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>
Recommendations	<p>In order to achieve the required net gain in biodiversity as a result of the proposed development and satisfy trading rules, the creation of new trees within the site will be implemented. The below recommendations will achieve Moderate condition:</p> <ul style="list-style-type: none"> <li>Any trees planted on site will be located <b>outside</b> of vegetated gardens, as instructed by the BNG user guide (Natural England, 2025). It should be noted that any trees planted within mixed scrub habitat should not exceed 5m in height.</li> <li>Tree species planted will be of <b>native</b> origin, or at the very least, appropriate with the local landscape. Any non-native species planted must comprise &lt;30% off all trees planted on site.</li> <li>Trees planted on-site will require protection from damage caused by human activity, including poor management and vandalism.</li> <li>Trees should be planted in areas with enough space for the canopy growth to reach a <b>minimum</b> of 75% of its expected area, relative to the age, height and species of the tree, allowing the canopy to oversail <b>at least</b> 20% of the ground vegetation beneath. Additionally, these trees will <b>not</b> be subject to regular pruning.</li> <li>Species considered suitable for planting include English oak, hazel, rowan, hawthorn, blackthorn, birch, willow, spindle, elm, wild cherry, ash.</li> </ul>
BNG Mitigation Hierarchy	
Avoidance	
Minimisation	Avoidance of impacts to existing habitats has been demonstrated and only occurs where required to facilitate the development.
Mitigation	The unavoidable loss of modified grassland will be mitigated through the creation of new trees.
Offset	N/A: Net gain is achieved within the development boundary.

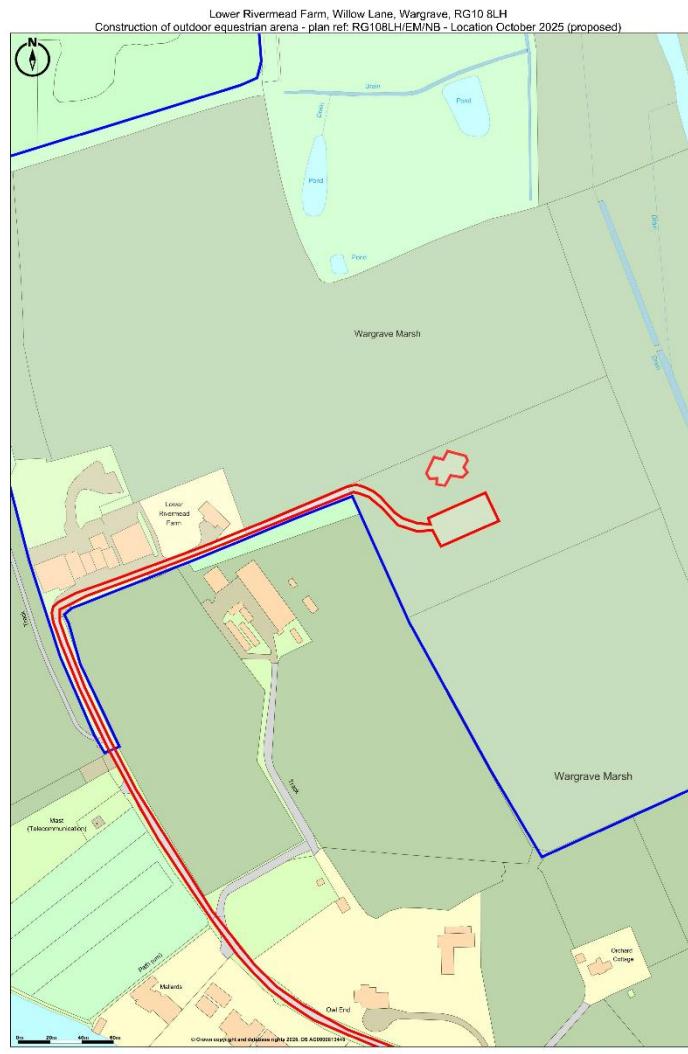
## Appendix 1: Baseline Habitat Plan

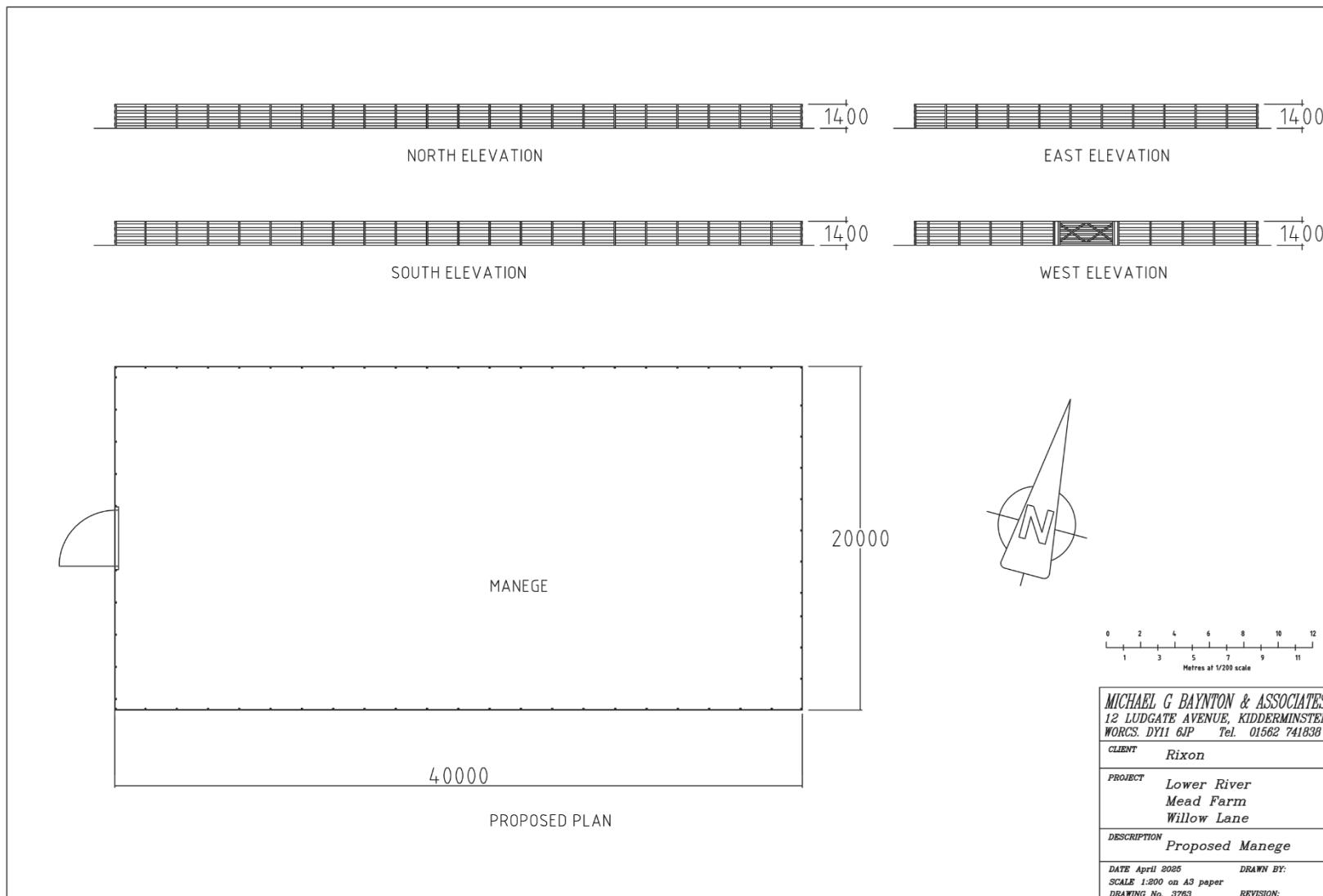


## Appendix 2: Post-Development Habitat Plan



### Appendix 3: Proposed Development Plan





## Appendix 4: Headline BNG Results

On-site baseline	<i>Area habitat units</i>	0.35																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00																				
On-site post-intervention (Including habitat retention, creation & enhancement)	<i>Area habitat units</i>	0.38																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00																				
On-site net change (units & percentage)	<i>Area habitat units</i>	0.04																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00%																				
Off-site baseline	<i>Area habitat units</i>	0.00																				
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	<i>Watercourse units</i>	0.00																				
Off-site post-intervention (Including habitat retention, creation & enhancement)	<i>Area habitat units</i>	0.00																				
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	<i>Watercourse units</i>	0.00																				
Off-site net change (units & percentage)	<i>Area habitat units</i>	0.00																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00%																				
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	0.04																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00																				
Spatial risk multiplier (SRM) deductions	<i>Area habitat units</i>	0.00																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00																				
<b>FINAL RESULTS</b>																						
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	0.04																				
	<i>Hedgerow units</i>	0.00																				
	<i>Watercourse units</i>	0.00																				
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	<i>Area habitat units</i>	11.34%																				
	<i>Hedgerow units</i>	0.00%																				
	<i>Watercourse units</i>	0.00%																				
Trading rules satisfied?	Yes ✓																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Unit Type</th> <th>Target</th> <th>Baseline Units</th> <th>Units Required</th> <th>Unit Deficit</th> </tr> </thead> <tbody> <tr> <td><i>Area habitat units</i></td> <td>10.00%</td> <td>0.35</td> <td>0.38</td> <td>0.00</td> </tr> <tr> <td><i>Hedgerow units</i></td> <td>10.00%</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td><i>Watercourse units</i></td> <td>10.00%</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> </tbody> </table>			Unit Type	Target	Baseline Units	Units Required	Unit Deficit	<i>Area habitat units</i>	10.00%	0.35	0.38	0.00	<i>Hedgerow units</i>	10.00%	0.00	0.00	0.00	<i>Watercourse units</i>	10.00%	0.00	0.00	0.00
Unit Type	Target	Baseline Units	Units Required	Unit Deficit																		
<i>Area habitat units</i>	10.00%	0.35	0.38	0.00																		
<i>Hedgerow units</i>	10.00%	0.00	0.00	0.00																		
<i>Watercourse units</i>	10.00%	0.00	0.00	0.00																		
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 ✓																						

## Appendix 5a: Baseline Habitat Condition Assessment Sheets

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

Condition Assessment Criteria:		Condition Passed (Y / N)	Notes/Justification
<b>A</b>	There must be 6-8 vascular plant species per m <sup>2</sup> , including at least 2 forbs. <b>Note - this criterion is essential for achieving moderate condition.</b>	N	Species poor. <6 vascular plant species per m <sup>2</sup> .
<b>B</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.	N	Uniform short sward height (~5cm)
<b>C</b>	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	Small area of scattered scrub present along the south-western perimeter (<20% of parcel area).
<b>D</b>	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 present in around access gates due to high levels of access (<5% of parcel area).
<b>E</b>	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y	Bare ground cover between 1-10%.
<b>F</b>	Cover of bracken less than 20%.	Y	No bracken observed (<20% coverage). Assumed pass.
<b>G</b>	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y	Single specimen of Spanish bluebell located within the centre of the parcel.
<b>Essential criterion achieved (Y/N)</b>		Y	
<b>Number of criteria passed</b>		5	
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; <b>OR</b> 4, 5 or 6 of criteria but failing criterion A		Poor (1)	

## Appendix 5b: Post-Development Habitat Condition Assessment Sheets

**Created – Rural Trees;** assessed using ‘Individual Trees’ habitat type condition sheet:

Condition Assessment Criteria		Condition Passed (Y/N)	Notes/Justification
A	The tree is a native species (or more than 70% within the block are native species).	Y/N	TBC
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	Individual tree and thus automatically pass this criterion.
C	The tree is mature (or more than 50% within the block are mature).	N	Newly planted.
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	Trees allowed to retained >75% of their expected canopy and protected from damage.
E	Natural Ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	None present on new trees.
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	>20% of the tree canopy area to have vegetation underneath.
Number of criteria passed			3/4
Condition Assessment Result	Condition Assessment Score	Score Achieved ✓	
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)		