



Biodiversity Net Gain Assessment

Proposals at
Combелands
Equestrian,
Pulborough

Biodiversity Net Gain Assessment

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Version 3 – 31st July 2024

Document Reference: GS316.Combelands.BNG.v3

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Summary

The applicant has commissioned a Biodiversity Net Gain Assessment of proposals on land at Combelands Equestrian in Pulborough.

The existing site consists of an area largely laid to modified grassland and artificial unsurfaced land in the form of horse arenas and access tracks.

The proposals are for an enlarged arena, grass parking area, new access and arena viewing building.

A quantitative assessment of the ecological impact of the proposals has been undertaken through use of the Natural England statutory Metric (2023). The calculation is completed to confirm whether the proposals accord with the National Planning Policy Framework (2023), Horsham Local Plan Policies, and the Environment Act (2021) within which a 10% net gain will be required.

The proposals would result in a 10.57% net gain in habitats and a 11.85% net gain in linear vegetative features on-site. As such the proposals are confirmed to result in biodiversity gains in accordance with local and national policy and relevant legislation. The proposed enhancements have been adjusted following comments from the Horsham District Council Ecological Consultee.

1.0 Introduction

- 1.1 The applicant has commissioned a Biodiversity Net Gain Assessment of proposals on land at Combelands Equestrian in Pulborough.
- 1.2 The following report details the rationale, methodology, calculation, and management required as part of this assessment. This assessment has been carried out by George Sayer (BSc(Hons) Environmental Sciences, PgDip Endangered Species Recovery, MCIEEM, MArborA). The proposed enhancements have been adjusted following comments from the Horsham District Council Ecological Consultee.

Site Description and Surrounding Area

- 1.3 The existing site consists of an equestrian facility, largely laid to modified grassland and artificial unsurfaced land in the form of horse arenas and access tracks. Several small surfaced areas, buildings and other habitats are present, as are long hedges and a line of trees.

Proposals

- 1.4 The proposals are for an enlarged arena, grass parking area, new access and arena viewing building.

2.0 Scope of Assessment

1. *Assess the current baseline habitat and linear value of the site*
 2. *Assess the likely habitat and linear features retained, removed and enhanced*
 3. *Calculate the change in habitat and linear biodiversity value*
 4. *Provide recommendations for management to ensure habitats proposed are achieved*
- 2.1 This appraisal and assessment is deemed to be relevant for a maximum of one year due to the possibility of changes in the habitats on-site and the methodology used to calculate Biodiversity Net Gain. Should the site conditions, methodologies or proposals alter, the ecologist should be consulted to confirm that the assessment is still valid.

3.0 Legislative Background

Legislation and Policy

3.1 In England, BNG is mandatory from 12 February 2024 under Schedule 7A of the Town and Country Planning Act 1990 (as inserted by Schedule 14 of the Environment Act 2021). Developers must deliver a BNG of 10%. There are a number of exemptions such as for small sites (exempt until 2nd April 2024).

3.2 The National Planning Policy Framework (NPPF, 2023) Paragraph 174 states:

“Planning policies and decisions should contribute to and enhance the natural and local environment by:

(a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

(b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

(c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

(f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

4.0 Methodology

Assessment Method

- 4.1 The Biodiversity Net Gain Assessment within this report was carried out by George Sayer (BSc(Hons) PgDlp MCIEEM MAborA) in March 2024 and updated in July 2024.

Site Assessments

- 4.2 The site was subject to a site survey on 5th March conforming to the UK Habitat Classification system v2.01 (UKHab Ltd 2023) and the habitats assessed in accordance with the Natural England Statutory Biodiversity Metric: User Guide (2024). Where required, existing and proposed habitat condition was assessed using the Statutory Biodiversity Metric Condition Assessments (2024).

Calculations

- 4.3 All calculations were carried out using the current Natural England Statutory Biodiversity Metric: User Guide (2024), available online: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>).
- 4.4 Calculations were undertaken to the nearest square metre. Linear habitats were measured to the nearest linear metre.
- 4.5 A summary of the results is included below; the full metric spreadsheet and condition assessments accompany this report as Excel documents.
- 4.6 The site is not part of any strategic wildlife corridor or enhancement network zone. For this reason, all habitats are considered to be of *low strategic significance*.

5.0 Summary of Baseline and Proposed Ecological Conditions

Area Habitats

- 5.1 The existing site is formed of the following habitats:
- 3.77 Ha of modified grassland, assessed as 'poor' condition
 - 0.16 Ha of developed land (buildings, tarmac drive and hardstanding)
 - 1.35 Ha of artificial unvegetated, unsealed surface (parking, access tracks and arenas)
- 5.2 It has been determined that, of the above habitats, 0.21Ha of modified grassland be lost to development.
- 5.3 The proposal will then create the following:
- 0.17 Ha of artificial unvegetated, unsealed surface in the form of the enlarged arena and surrounds;
 - 0.044Ha of sealed surface and developed land in the form of the arena viewing building;
 - 0.025 Ha of modified grassland surrounding the arena, considered of 'poor' condition.
- 5.4 Of the retained grassland, 0.28Ha (2200 sqm strip to south of site, and 600 sqm strip south of new hedge) will be enhanced from poor modified grassland, to moderate condition neutral grassland through harrowing and re-seeding, and improved management. This would line a new hedge which separates an existing public footpath from the jumping and cross-country warm up areas of the site.
- 5.5 The applicant has confirmed that the grassland is not subject to any fertiliser, herbicide or other such chemical application and as such, enhancement to this habitat and condition is considered possible.
- 5.6 The original baseline score of 7.54 biodiversity units will increase to 8.34 units, representing a gain of 10.57%.

Linear Habitats

- 5.7 The existing site contains the following linear features:
- 0.096 km of ornamental non-native hedgerow formed of coniferous hedge
 - 0.74 km of native hedgerows (all major hedges), assessed as 'moderate' condition
 - 0.078 km of native hedgerow with trees (to north of site), assessed as 'moderate' condition
- 5.8 Of these, 0.07 km of non-native and 0.012km of native hedge would be lost through the proposals. The following linear features would be planted:
- 0.164 km hedgerow – 0.097 km running north-west along the northern aspect of a footpath, 25m gapping up an existing gap, and 0.042 km continuing an existing hedge to the north. These are assessed as able to achieve 'moderate' condition as per the existing hedges on site.
- 5.9 The north-west hedge would separate an existing public footpath from the jumping and cross-country warm up areas of the site, and would also connect up a hedge running north with one running east-west. This hedge is proposed to be partially gapped-up – a 5m gap is required to allow horses and machinery through, but the reduction in gap size would benefit birds, bats and small mammals. The northern hedge would extend an existing hedge with trees.
- 5.10 The preferred option is for these to be species-rich native hedges, but as a precaution and considering all other hedges are largely hawthorn, standard native hedge has been assumed. The original baseline score of 3.68 linear biodiversity units will increase to 4.12 units, representing a gain of 11.85%.

6.0 Management

- 6.1 The proposals involve the following habitat creation and management, as described above:
- Planting of new native hedge;
 - Creation of neutral wildflower grassland from existing modified grassland.
- 6.2 The hedges should be planted in the appropriate planting season following the development, using whips, pot or cell grown plants. The hedges shall be managed in a similar manner to the existing hedges, where width is dictated by amenity but height of at least 1.5m should be achievable.
- 6.3 The proposed enhanced grassland is on the southern sides of hedges and would be created through heavy tilling or scarifying of the grass to significantly reduce the perennial ryegrass and white clover dominance to below 30%, followed by seeding with a mixture of both standard wildflower, and shade-tolerant mixes such as a hedgerow wildflower mix. This shall form banks of habitat suited to invertebrates, mammals and reptiles. The vegetation should be cut at a gradient from low height grading up to the hedge, with a single cut in spring and autumn.
- 6.4 This management would allow the grassland to achieve at least 8 species per square metre fairly easily, including over 20% cover of herbs and sedges and at least one abundant non-agricultural grass, and be classed as a neutral grassland. Any one of these criteria could be failed and the grassland still achieve neutral grassland status. Moderate criteria would be achieved through a varied sward, and avoidance of scrub, bracken, and disturbed ground. It is assumed that some suboptimal species such as nettles, buttercups and docks might still arise and as such moderate is a reasonable condition to target.

7.0 Conclusions

- 7.1 The proposals result in a 10.57% gain in area habitats and a 11.85% gain in linear habitats; these are both above the minimum 10% requirement. All trading rules are satisfied and no errors occur. As such the proposals are considered to have satisfied the requirements of Horsham District Local Plan Policies, NPPF (2023) Paragraph 174 and the requirements of the Environment Act (2021).

8.o References

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

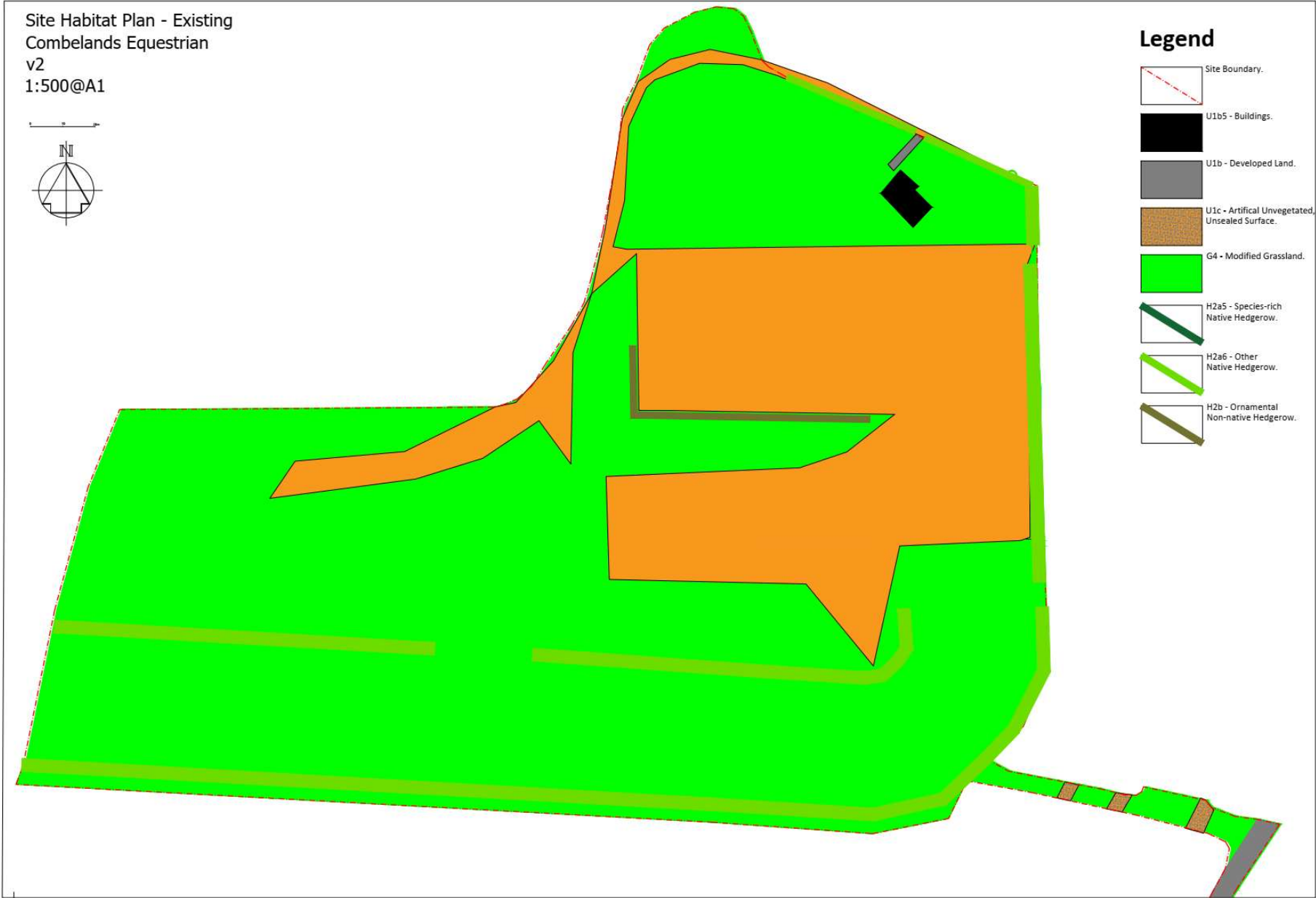
CIEEM (2018) Guidelines for Ecological Impact Assessment, 1st edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Natural England (2024) The Statutory Biodiversity Metric Calculation Tool, Condition Assessments and User Guide. Available Online:

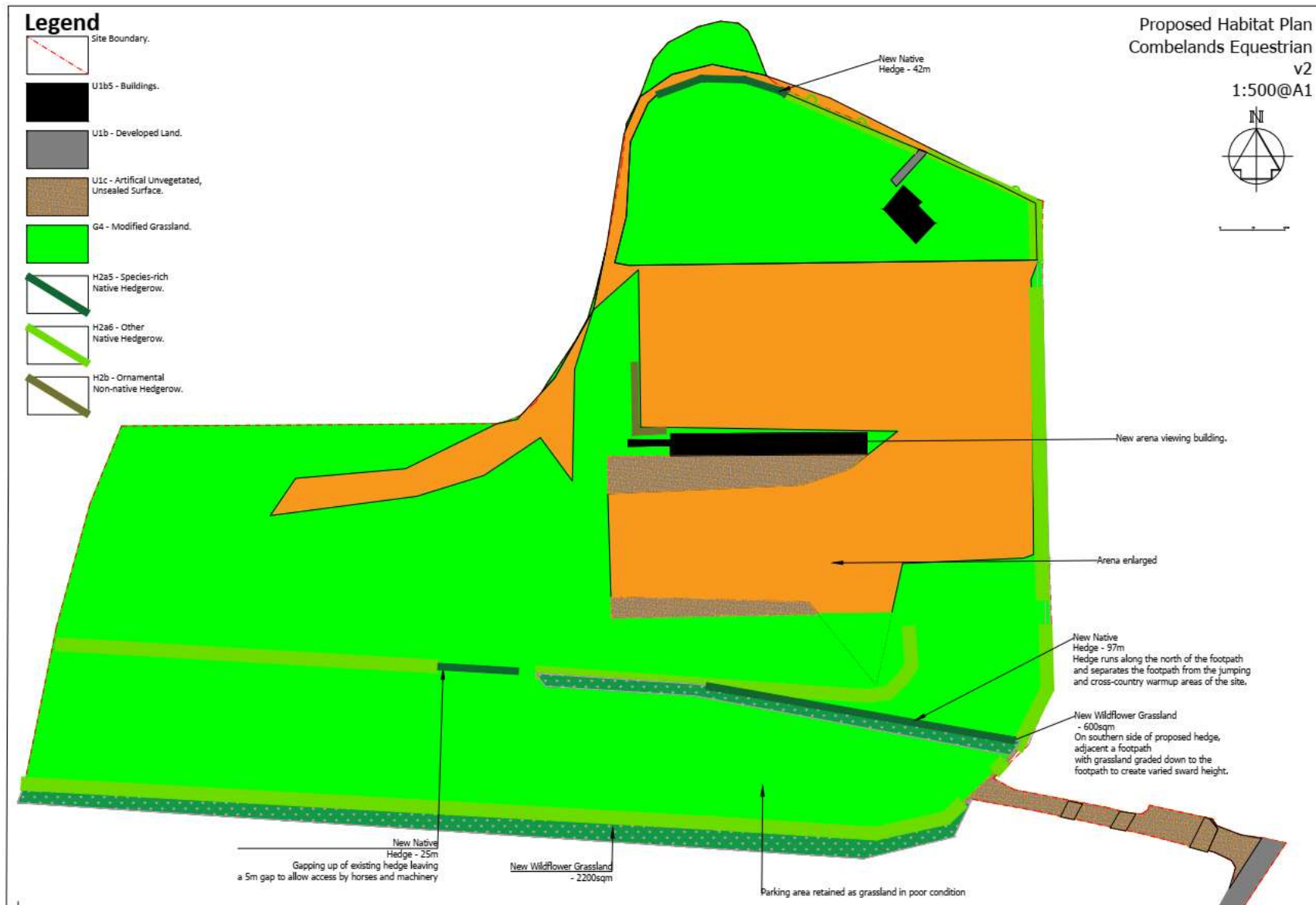
<https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides> (accessed 10th March 2024; updated guidance accessed 23rd July 2024)

UK Hab Ltd. (2023). The Habitat Classification Version 2.01. Available online: <https://www.ukhab.org>

9.0 Site Habitat Plan - Existing



10.0 Proposed Habitat Plan



11.o Summary of DEFRA Biodiversity Metric

Combelands Equestrian

Headline Results

Scroll down for final results ⚠

Return to results menu

On-site baseline	Habitat units	7.54			
	Hedgerow units	3.68			
	Watercourse units	0.00			
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	8.34			
	Hedgerow units	4.12			
	Watercourse units	0.00			
On-site net change (units & percentage)	Habitat units	0.80	10.57%		
	Hedgerow units	0.44	11.85%		
	Watercourse units	0.00	0.00%		
Off-site baseline	Habitat units	0.00			
	Hedgerow units	0.00			
	Watercourse units	0.00			
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00			
	Hedgerow units	0.00			
	Watercourse units	0.00			
Off-site net change (units & percentage)	Habitat units	0.00	0.00%		
	Hedgerow units	0.00	0.00%		
	Watercourse units	0.00	0.00%		
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.80			
	Hedgerow units	0.44			
	Watercourse units	0.00			
Spatial risk multiplier (SRM) deductions	Habitat units	0.00			
	Hedgerow units	0.00			
	Watercourse units	0.00			
FINAL RESULTS					
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.80			
	Hedgerow units	0.44			
	Watercourse units	0.00			
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	10.57%			
	Hedgerow units	11.85%			
	Watercourse units	0.00%			
Trading rules satisfied?	Yes ✓				
Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	7.54	8.29	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	3.68	4.05	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	0.00	0.00	0.00	No additional watercourse units required to meet target ✓

12.0 Condition Assessment – Modified Grassland

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type			
Grassland - Modified grassland			
On-site or off-site, site name and location	On-site - Combelands Equestrian Pulborough	Survey date and Surveyor name	George Sayer - 5th March 2024
Limitations (if applicable)	None	Survey reference (if relating to a wider survey)	Modified Grassland
Grid reference		Habitat parcel reference	G4
Habitat Description			
Well-maintained grassland forming gallops and other equestrian uses.			
ukhab – UK Habitat Classification			
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m ² (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.	No	10no. 1sqm quadrats were undertaken which revealed a mean of 4.3 species per sqm.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	No	Almost entirely c.10cm high. Very homogenous through mowing.
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes	None noted
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	No	Fairly extensive areas worn bare by equestrian uses.
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	Yes	Fairly extensive areas worn bare by equestrian uses is over 5%, but less than 10%.
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes	None noted
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes	None noted
Essential criterion achieved (Yes or No)			No
Number of criteria passed			4
Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved x/√	
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)		
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	Yes	
Suggested enhancement interventions to improve condition score			
The grassland is required in its current form for equestrian use, but some areas especially along the hedge margins could be allowed to grow longer, or harrowed and reseeded with a hedgerow mix and managed less regularly.			
Footnotes			
Footnote 1 – Creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, curled dock <i>Rumex crispus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common nettle <i>Urtica dioica</i>, creeping buttercup <i>Ranunculus repens</i>, greater plantain <i>Plantago major</i>, white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i>. Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover. Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement. Footnote 4 – Wildlife and Countryside Act 1981 (as amended).			

13.0 Condition Assessment – Hedges

<u>Condition sheet: HEDGEROW Habitat Types</u>					
Habitat Type:					
Native hedgerow Native hedgerow + associated with bank or ditch Native hedgerow with trees Native hedgerow with trees + associated with bank or ditch Species-rich native hedgerow Species-rich native hedgerow + associated with bank or ditch Species-rich native hedgerow with trees Species-rich native hedgerow with trees - associated with bank or ditch					
<u>slngh – UK Hedgeline Classification</u>					
On-site or off-site, site name and location	On-site, Combedale Equestrian, Pembrokeshire	Survey date and Surveyor's name	George Sayer, 5th March 2024		
Limitations (if applicable)	None	Survey reference (if relating to a wider survey)	H1 and H2		
<u>Continued Assessment Details</u>					
A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the ‘favourable condition’ criteria.					
This assessment is based on the Hedgerow Survey Handbook ⁽¹⁾ and Favourable Conservation Status document ⁽²⁾ . For further clarification please refer to the Hedgerow Survey Handbook.					
Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the ‘Hedgeline Description’ box, as well as other relevant features of the hedgerow.					
Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)	Criteria – the minimum requirements for ‘Favourable Condition’	Criteria description	Habitat past reference		
			H1	H2	
			Grid reference		
Care groups – applicable to all hedgerow types			Criterion passed (Yes or No)		Notes (such as justification)
A1.	Height	+/-1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shrubs, excluding any bare branches beneath the hedge canopy; 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 best practice. A newly planted hedgerow does not pass this criterion (passes it at +/-1.5 m height).	y	n
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 Prunus spinosa suckers) are only included in the width estimate when they are >1.5 m height. Last, 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	a
B1.	Gap - Hedge base	Gaps between ground and base of canopy <0.5 m for >60% of length	This is the vertical ‘gapness’ of the woody component of the hedgerow, and its distance from the ground to the lowest bough branch. Correct exceptions to this criterion are acceptable (see page 60 of the Hedgerow Survey Handbook).	y	y
B2.	Gap - Hedge continuity	Gaps make up <10% of total length and no canopy gaps >5 m	This is the horizontal ‘gapiness’ of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (in relation to windward side). Across gapes or gates contribute to the overall ‘gapiness’ but do not add to the % in isolation (as this is the typical size of a gate).	y	y
C1.	Undisturbed ground and potential vegetation	>+1 m width of undisturbed ground with perennial herbaceous vegetation for 50% of length. Requested from one end 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 50% of the hedgerow length, greater than 1m in width and must be present along at least one side of the hedgerow.	y	y
D1.	Naturalised / semi-natural vegetation	Past species indicative of mature environment such as Anemone pulsatilla etc. found in the area of undisturbed ground.	This criterion recognizes the value of the hedgerow base as botanical habitat with the capacity to support a wide range of plants. Cultivated heavily trodden footpaths, pressed ground etc., can limit available habitats niches.	y	y
E1.	Invasive and non-native species	>=50% of the hedgerow and established ground free of invasive non-native plant species (including those listed on Schedule 8 of the NCA) and recently introduced tree species.	The indicator species used are redpoll Linnet sp., Chiffchaff wallisii and Black-throated Blue Flycatcher. For information on identifying them see the “Identifying” section of the handbook. As well as the “Invasive Species” section of the handbook.	y	y
D2.	Current damage	=>50% of the hedgerow or undisturbed ground free of damage caused by human activity.	This criterion addresses damaging activities that may have led to loss of deterioration in other attributes. It could include evidence of pollution, sites of material or rubble, inappropriate management practices (for example, excessive hedging/cutting).	a	a
Additional group – applicable to hedgerows with trees only					
F1.	Trees class	If there is more than one species or morphology of tree present (the majority being mature, veteran and/or ancient), and there is no indication of recent removal, pruning or extensive fire present per 20-50m of hedgerow.	This criterion addresses if there are a range of species/classes or morphologies which allow for replacement of trees and provide opportunities for different species.	a	
F2.	Trees health	At least 50% of hedgerow trees are in a healthy condition (showing serious disease/vulnerability for wildfire). There is little or no evidence of self-inflicted impact on tree health or damage from livestock or adverse insects, pests or diseases or human activity.	This criterion identifies if the trees are compromised and health of the individual specimens.	y	
The hedgerow condition assessment produces 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:					
<u>General categories for hedgerows without trees</u>					
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 Does not fail both attributes in more than one functional group (For example, fails attributes A1, A2, B1 and B2 = Moderate condition).	2			
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (For example, fails attributes A1, A2, B1 and B2 = Poor conditions).	1			
Score achieved:					
<u>Condition categories for hedgerows with trees</u>					
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 Does not fail both attributes 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 Fails both attributes in more than one functional group (For example, fails attributes A1, A2, B1 and B2 = Poor condition).	1			
Score achieved:					
(Recommended enhancement interventions to improve condition) Hedges must be maintained as they are for amenity uses. Where this isn't necessary, hedges should be allowed to grow out and up and should be left to gap-up. Creation of margins of tall grass will avoid good condition to be achieved.					