



SOUTHAMPTON ROAD, ALDERBURY: GRASSLAND ASSESSMENT

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APPENDIX 1: HCA sheets

1 NON-TECHNICAL SUMMARY

- 1.1. An assessment of grassland was undertaken for a proposed residential development at Southampton Road, Alderbury. Most of the site is grassland occupying two adjacent fields divided by an outgrown hedgerow of Grey Willow.
- 1.2. Different types of grassland were identified using the standard UK Habitat Classification method (UKHab), which classifies habitats according to ecological and botanical criteria.
- 1.3. UKHab grassland types were mapped digitally and 1m x 1m quadrats used to identify and count the number of plant species within a standard sized area, which is one of the UKHab criteria defining the quality and type of grassland. The number of quadrats recorded depended on habitat area while quadrat placement aimed to best represent variation within a grassland community.
- 1.4. Each parcel of habitat was subject to Habitat Condition Assessment. The method judges habitats against a specific suite of criteria and generates a rating of Good, Moderate or Poor depending on the number and combination of criteria passed or failed. Determining habitat condition is part of the Statutory Biodiversity Metric Calculation process, which then generates Biodiversity Habitat Unit values. Most developments must demonstrate that a post-development design generates a minimum of 10% Biodiversity Net Gain above the baseline biodiversity value of the pre-development site.
- 1.5. Four types of grassland were identified. Mown 'Modified grassland' is of low ecological value and occurs on the pedestrian access route to the allotments. Two sub-types of 'Other neutral grassland' were distinguished: tall, bulky grassland on the edges of the site has a low plant species diversity, with Nettles, Brambles, Cleavers and Broad-leaved Dock usually present and often obvious. One parcel of bulky other neutral grassland is in Good Condition, two are in Moderate condition and two are in Poor condition.
- 1.6. Shorter meadow 'other neutral grassland' occurs in a block near the allotments on well drained soil; it has moderate plant diversity and is in Moderate condition.
- 1.7. An area of Yorkshire Fog-Soft Rush neutral grassland forms a zone at the bottom of the slope in the west field parcel where the soil is damp for much of the year. The habitat is distinctive because it has abundant rushes: it has good plant species diversity and is in Moderate condition.
- 1.8. The west field parcel also has an area classified as wetland rather than grassland because it is dominated by Jointed Rush rather than grasses. The soil is either damp, wet or waterlogged and the community contains a range of distinctive herbaceous species. This habitat parcel is a Priority Habitat in Good condition.
- 1.9. Grassland across most of the east field parcel has characteristics that conform to the UKHab definition of lowland meadow, which is a Priority Habitat. Plant species typical of agricultural improvement are scarce and achieve only very low cover while herbs and sedges usually cover at least 30% of the ground area. There is an appropriate suite of grass species as well as six plant species from the UKHab list of lowland meadow 'indicators': of these, Blue Sedge, Bird's foot Trefoil, Knapweed and Ragged Robin are found regularly. Additional lowland meadow indicator species are present although Meadowsweet is only on the field margin.
- 1.10. There are two sub-areas of lowland meadow habitat: a typical community type on the better draining soils in the south and southeast with Meadow Buttercup, Red Clover and some Knapweed, and an atypical community on less well drained soil characterized by areas of bare ground, Hard Rush, Ragged Robin and abundant sedges.

Southampton Road, Alderbury 2025: Grassland Assessment

2 CONTEXT

- 2.1. Leppitt Associates was commissioned by Cotswold Wildlife Surveys to undertake a survey and assessment of grassland in part fulfilment of a planning application for residential development at Southampton Road, Alderbury, near Salisbury.
- 2.2. The remit for the survey was specified by Wiltshire County Council ecologist in response to the submitted Preliminary Ecological Appraisal and Biodiversity Net Gain assessment, which identified significant areas of neutral grassland within the proposed planning boundary:

Botanical Surveys

A Preliminary Ecological Appraisal was carried out on site in August 2022. The habitat descriptions include a species list but no detail of the botanical survey methodology is included to support this assessment. It is noted that the grassland had been mown and topped at the time of the survey. From the information provided, we note that the grassland includes birds foot trefoil and meadow cranesbill, species indicative of lowland meadows.

The scheme will entail the loss of 3.76ha of neutral grassland, 1.32 ha of which was classified as 'good' in the BNG Assessment, however no condition assessment sheets were submitted in support of the application. Due to the site location and species present on site, we have concerns that the timing of the survey and survey effort has prevented full assessment of the ecological value of this habitat. We advise that additional surveys are undertaken to establish the grassland type communities. The grassland areas should be mapped highlighting the most diverse areas and comparison against UK BAP priority habitat and lowland meadows as defined by the UK Habitat Classification definition should be provided.

If surveys conclude that the grassland fits the description of lowland meadow, A UK Priority Habitat, a mitigation strategy in line with CP50 is required with evidence of consideration of the mitigation hierarchy to ensure no net loss of the local biodiversity resource.

- 2.3. In addition, the survey also provided Habitat Condition Assessments for determined grassland areas to inform the Statutory Biodiversity Metric Calculation (Defra 2024).
- 2.4. The basic character of the site is shown on Plate 2.1. It comprises a small area of woodland to the northwest and two grassland parcels partially divided by an outgrown hedgerow and cut annually. There is a small area of grassland in the southwest fenced from the main parcels. This provides access and parking for allotments located on the south boundary. A watercourse marks the north boundary.
- 2.5. The surveys were undertaken by Pam Leppitt MCIEEM who has over 35 years survey experience as a consultant ecologist and is competent in UK Habitat Classification, Statutory Biodiversity Metric Calculation, NVC classification and collation and submission of botanical data to the Priority Habitat Inventory for lowland meadow. Nomenclature follows Stace (2019).



Plate 2.1: Aerial image of the area identified for proposed residential development

3 METHOD

- 3.1. The survey was prepared digitally on the QGIS open access platform (3.40.4 Bratislava) with supporting Excel spreadsheet for quadrat data; it was conducted in the field on a tablet using Merginmaps software with GPS-powered tracking system and background Bing Maps satellite imagery (the most recent Google satellite image was distorted). The red line boundary was provided digitally in advance by RH Partnership Architects.
- 3.2. At the request of Leppitt Associates the grassland had not been cut prior to survey. The weather preceding the survey was unseasonably dry, so sward height and bulk are presumed to be atypical.
- 3.3. A walkover survey of the grassland area was undertaken on May 22nd 2025 to map the boundaries of the different grassland types present according to the definitions of the UK Habitat Classification Version 2.0 (UKHab Ltd. (2023)). The Biodiversity Net Gain (BNG) survey report (Cornwall Environmental Consultants Ltd. (CEC) 2024) did not specify explicitly the Minimum Mapping Unit (MMU) adopted in May 2024: given the size of the site the MMU used for the 2025 survey is 400m².
- 3.4. Once the extent of each area had been mapped, 1m x 1m quadrats were used to provide species data required to determine essential Criterion F for non-acid grassland types, whereby Good condition cannot be achieved unless there are 10 or more species per quadrat, and to identify potential Lowland Meadow Priority Habitat.
- 3.5. The number of 1m x 1m quadrats recorded per grassland type was proportionate to the area of habitat parcel mapped and the characteristics and heterogeneity of the sward. The location of each quadrat was recorded digitally and a photographic record taken.

- 3.6. Additional photographs were obtained to illustrate grassland types and an incidental species list compiled for each: species lists are not intended to be comprehensive but to illustrate the ecological character of the site as well as specific habitat characteristics.
- 3.7. Habitat Condition Assessments (HCAs) were undertaken for each mapped parcel. Limitations to the HCAs are identified in Section 5.

4 RESULTS

- 4.1. Figure 4.1 shows the UKHab types mapped for the survey area; the parcel identifier for areas subject to HCA; the assigned condition; and the location of each 1m x 1m quadrat. The survey does not include hedgerows, watercourses, woodland or other features not of direct relevance to the objectives. Boundaries to scrub were mapped where these define the extent of grassland habitat.
- 4.2. The outgrown hedgerow dividing the west and east parcels is shown as Willow *Salix cinerea* scrub rather than a linear feature. For the Statutory Biodiversity Metric a linear habitat is superimposed over adjacent area habitats so that the sum of area habitats always equates to the total site area. For the 2025 survey the exact canopy/habitat boundary was used to define the extent of the adjacent grassland: there is no explicit intent to redefine as scrub the hedgerow mapped for the BNG assessment (CEC 2024). Willow scrub is an important component of the neutral grassland/wetland habitat sere and reflects site ecology: Grey Willow saplings were locally abundant in some areas of the wetland.

Wetland f2b

- 4.3. Approximately 0.4ha of wetland f2b Purple Moor Grass and Rush Pasture (UKHab V2.0 2023) Priority Habitat is distinguished from the grassland matrix based on the dominance of rushes, absence of grasses, the types of forbs present and the height of the water table. Despite a period of prolonged dry weather, the ground was either very damp or wet, with runnels of standing water meandering through the eastern section and what are assumed to be Marsh snails were seen frequently. On the northeast boundary between other neutral grassland g3c and g3c8 *Holcus-Juncus* grassland (i.e. at the base of the gentle SW/NE trending slope) there are at least two locations where sub-surface water emerges to form small inflow routes to the wetland.
 - 4.3.1 The wetland margins comprise a mix of frequent Soft Rush *Juncus effusus* and Hard Rush *J. inflexus* with Jointed Rush *J. articulatus* but the wetter core area is dominated by Jointed Rush with scattered Soft Rush. The wetland bryophyte Pointed Spear Moss *Calliergonella cuspidata* is also characteristic but not represented constantly. Forbs include frequent to locally abundant Fleabane *Pulicaria dysenterica* and Cuckoo Flower *Cardamine pratensis*; other species were either occasional or rare and are listed in Table 4.1 according to the DAFOR scale (Dominant, Abundant, Frequent, Occasional or Rare, and sometimes only found locally, L).
 - 4.3.2 Although relatively species-poor, the overall wetland composition is most similar to the National Vegetation Classification Mire type M22 *Juncus subnodulosus-Cirsium palustre* fen-meadow (Rodwell 1991) as opposed to M23 *Juncus effusus/articulatus-Galium palustre* rush pasture, in which frequent Hard Rush and Comfrey *Symphytum officinale* are not typical. However, rush pasture and fen meadow exist on a continuum and although a general list was compiled as in Section 4.2.2 (Table 4.1) *Juncus* rushes were not examined closely since wetland was outside the remit of the survey. Both Soft and Hard Rush were starting to flower but there were no inflorescences on Jointed Rush; consequently Blunt-flowered Rush is not confirmed as a component species.



Figure 4.1: UK Habitat Classification of land off Southampton Road, Alderbury, showing habitat types, parcel identifier and condition, as well as the location of 1m x 1m quadrats, May 2025. Proposed planning boundary shown in red.
Scale 1:1500@A3

UKHab type

- g3a - lowland meadows
- g3c - other neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- g4 - modified grassland
- h3d - bramble scrub
- h3j - willow scrub
- f2b - purple moor-grass and rush pastures
- quadrats
- watercourse/ditch (undefined)

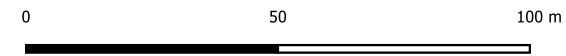
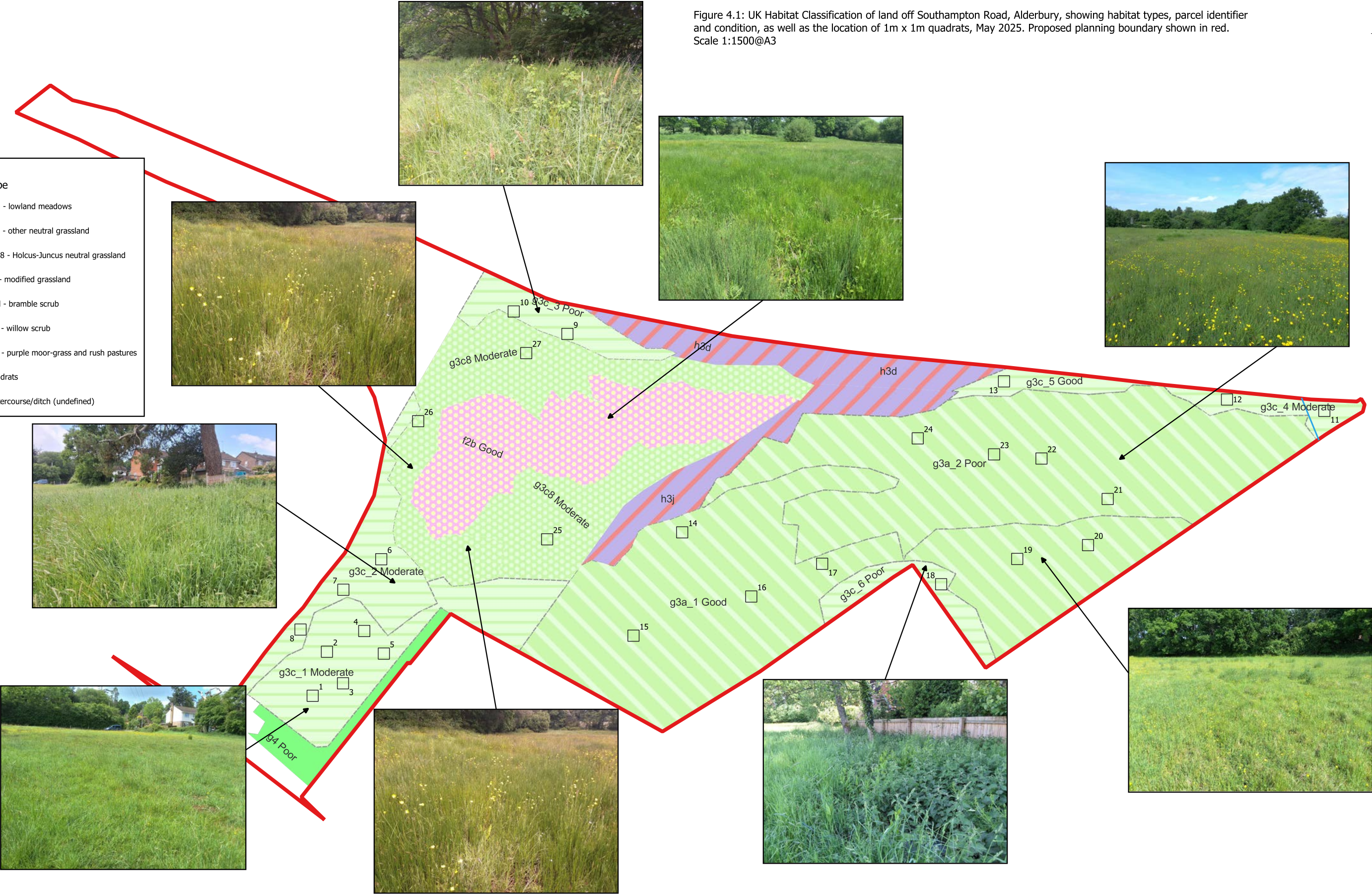


Table 4.1: Species noted in f2b Wetland Rush Pasture parcel, Alderbury May 2025 (not definitive)

Latin Name	Vernacular	Frequency of Occurrence DAFOR scale
<i>Achillea ptarmica</i>	Sneezewort	R
<i>Agrostis canina</i>	Velvet Bent	L
<i>Anagallis tenella</i>	Marsh Pimpernel	R & L
<i>Angelica sylvestris</i>	Angelica	R
<i>Cardamine pratensis</i>	Cuckoo Flower	F-LA
<i>Carex flacca</i>	Blue Sedge	O
<i>Carex hirta</i>	Hairy Sedge	L
<i>Carex nigra</i>	Common Sedge	R
<i>Carex viridula</i>	Small yellow Sedge	R & L
<i>Cirsium palustre</i>	Marsh Thistle	O
<i>Equisetum arvense</i>	Field Horsetail	L
<i>Eupatorium cannabinum</i>	Hemp Agrimony	R
<i>Galium palustre</i>	Marsh Bedstraw	L
<i>Glyceria fluitans</i>	Sweet Floating Grass	L
<i>Hypericum tetrapterum</i>	Square-stalked St. John's Wort	R
<i>Isolepis setacea</i>	Bristle Club-rush	R & L
<i>Lathyrus pratensis</i>	Meadow Vetchling	L
<i>Lotus pedunculatus</i>	Greater Bird's foot Trefoil	O
<i>Mentha aquatica</i>	Water Mint	R
<i>Myosotis discolor</i>	Changing Forget-me-not	O
<i>Pulicaria dysenterica</i>	Fleabane	F-LA
<i>Ranunculus acris</i>	Meadow Buttercup	O
<i>Salix cinerea</i>	Grey Willow seedlings	LF-LA
<i>Scrophularia auriculata</i>	Water Figwort	R
<i>Stellaria alsine</i>	Bog Stitchwort	O
<i>Succisa pratensis</i>	Devil's Bit Scabious	R & L
<i>Symphytum officinale</i>	Comfrey	O-LF

4.3.3 Appendix 1 provides a condition assessment for the wetland, which is rated 'Good' even if the eastern section is assessed separately to take account of Grey Willow seedlings (resulting in a fail for Criterion D). However, two of the wetland HCA criteria are notoriously problematic: Criterion A - water table regime - requires the surveyor to extrapolate from (usually) a single site visit; and Criterion C from the general observable health of the wetland and/or indicators of negative water quality, e.g. eutrophication resulting in aquatic microbial blooms or Nettles *Urtica dioica* alongside inflow routes.



Plate 4.1: Eastern section of f2b Rush Pasture showing Comfrey and Grey Willow among Soft Rush, Hard Rush and Jointed Rush, Alderbury May 2025

Grassland types

4.4. All grassland types were subject to HCA, provided in Appendix 1. Four grassland types are shown in Figure 4.1 amounting to the following approximate areas (based on an area of mapped Willow scrub rather than an overlying linear hedgerow feature):

- 0.77ha of g4 modified grassland in Poor condition
- 0.302ha short sward g3c other neutral grassland in Moderate condition
- 0.488ha bulky sward g3c other neutral grassland of which 0.053ha is in Good condition, 0.256ha is in Moderate condition and 0.179ha is in Poor condition
- 0.637ha g3c8 Holcus-Juncus neutral grassland in Moderate condition
- 2.066ha g3a lowland meadow Priority Habitat, of which 0.96ha is in Poor condition and 1.106ha is in Good condition.

Modified grassland g4

4.4.1 Pedestrian access to the allotments from the hard standing area is mown regularly and is of low diversity. This habitat is of low interest and not considered further.

Other neutral grassland, short sward g3c 1

4.4.2 Table 4.2 provides quadrat data for this area of g3c located in the southwest extreme of the site. Sward diversity varied (Plates 5.4.1 & 5.4.2) but the overall average was just short of the required 10 species per 1m x 1m. Bare ground exceeded the threshold for Criterion C partly because of abundant molehills (Appendix A).

Table 4.1: Species present in 1m x 1m quadrats recorded from g3c_1 other neutral grassland, Alderbury May 2025.
Species in red do not contribute to the final species richness score.

Species	Quadrat No. (Figure 4.1)				
	1	2	3	4	5
<i>Achillea millefolium</i>	✓	✓	✓		
<i>Agrostis capillaris</i>	✓	✓	✓	✓	✓
<i>Alopecurus pratensis</i>				✓	✓
<i>Anthoxanthum odoratum</i>	✓	✓	✓	✓	✓
<i>Carex flacca</i>				✓	
<i>Carex hirta</i>			✓		✓
<i>Dactylis glomerata</i>		✓			
<i>Festuca rubra</i>	✓	✓	✓	✓	✓
<i>Holcus lanatus</i>	✓	✓	✓	✓	✓
<i>Hypochaeris radicata</i>				✓	
<i>Lolium perenne</i>	✓	✓			
<i>Lotus corniculatus</i>			✓		
<i>Plantago lanceolata</i>	✓				
<i>Poa pratensis</i>	✓			✓	
<i>Ranunculus acris</i>					✓
<i>Ranunculus repens</i>	✓	✓	✓	✓	✓
<i>Rumex acetosa</i>		✓			✓
<i>Stellaria graminea</i>		✓	✓	✓	
<i>Taraxacum officinarum</i>	✓		✓		
<i>Trifolium pratense</i>		✓		✓	
<i>Trifolium repens</i>	✓	✓		✓	
<i>Vicia sativa</i>		✓			
Total No. spp	11	13	10	12	9
Allowable spp	9	11	9	10	8

Other neutral grasslands, bulky sward g3c

Alderbury/GrassAssess/05.2025

Other neutral grassland, bulky sward g3c_2 – g3c_6

- 4.4.3 Small areas of bulky g3c are located around the site periphery. All have varying proportions of Meadow Foxtail *Alopecurus pratensis*, False Oat Grass *Arrhenatherum elatius* and Cock's foot Grass *Dactylis glomerata* with Nettles, Bramble *Rubus fruticosus*, Cleavers *Galium aparine* and Broad-leaved Dock *Rumex obtusifolius*.



Plate 5.4.1: Quadrat 2, parcel g3c_1, Alderbury May 2025



Plate 5.4.2: Quadrat 4, parcel g3c_1, Alderbury May 2025

- 4.4.4 Table 4.3 confirms all but one location has low forb and overall species diversity, while Plates 4.5.3 - 4.5.5 show the typical sward for g3c_3 and g3c_6, which are in Poor condition. False Oat Grass was insufficiently abundant throughout any of the parcels for allocating g3c5 *Arrhenatherum* neutral grassland. The sward in g3c_5 was heterogeneous and the least bulky (Plate 4.5.3); it was the most diverse and least affected by adjacent residential properties (garden escapes, green waste deposits) and general eutrophication.

Table 4.2: Species present in 1m x 1m quadrats recorded from g3c_2 – g3c_6, other neutral grassland, Alderbury May 2025. Species in red do not contribute to the final species richness score.

Parcel	Quadrat No. (Figure 4.1)							
	6	7 3 x g3c 2	8	9 2 x g3c 3	10	11 2 x g3c 4	12	13 g3c 5
Species								18 g3c 6
<i>Agrostis capillaris</i>	✓						✓	
<i>Agrostis stolonifera</i>	✓			✓	✓	✓		✓
<i>Alopecurus pratensis</i>	✓			✓				
<i>Anisantha sterilis</i>		✓	✓					
<i>Anthoxanthum odoratum</i>						✓	✓	
<i>Arrhenatherum elatius</i>		✓				✓		✓
<i>Bromus hordaceus</i>			✓					
<i>Carex hirta</i>						✓	✓	✓
<i>Carex panicea</i>								✓
<i>Cirsium arvense</i>					✓		✓	✓
<i>Convolvulus arvensis</i>								✓
<i>Dactylis glomerata</i>	✓	✓		✓	✓		✓	✓
<i>Elytrigia repens</i>	✓	✓						
<i>Equisetum arvense</i>						✓		
<i>Festuca rubra</i>							✓	
<i>Galium aparine</i>	✓	✓	✓	✓	✓			✓
<i>Geranium robertianum</i>			✓					
<i>Heracleum sphondylium</i>	✓			✓	✓	✓		
<i>Holcus lanatus</i>	✓	✓	✓	✓	✓		✓	✓
<i>Juncus effusus</i>					✓			
<i>Lathyrus pratensis</i>						✓	✓	✓
<i>Lotus corniculatus</i>						✓	✓	✓
<i>Poa trivialis</i>								✓
<i>Potentilla reptans</i>							✓	
<i>Ranunculus acris</i>								✓
<i>Ranunculus repens</i>							✓	✓
<i>Rubus fruticosus</i>			✓	✓			✓	✓
<i>Rumex obtusifolius</i>				✓		✓	✓	✓
<i>Rumex sanguineus</i>			✓					✓
<i>Stellaria graminea</i>							✓	
<i>Taraxacum officinarum</i>					✓			
<i>Urtica dioica</i>	✓		✓	✓	✓			✓
<i>Veronica chamaedrys</i>						✓	✓	
Total No. spp	9	6	8	9	8	10	13	16
Allowable spp	8	6	7	7	6	9	10	13



Plate 5.4.3: Quadrat 9, parcel g3c_3, Alderbury May 2025



Plate 5.4.4: Quadrat 13, parcel g3c_5, Alderbury May 2025

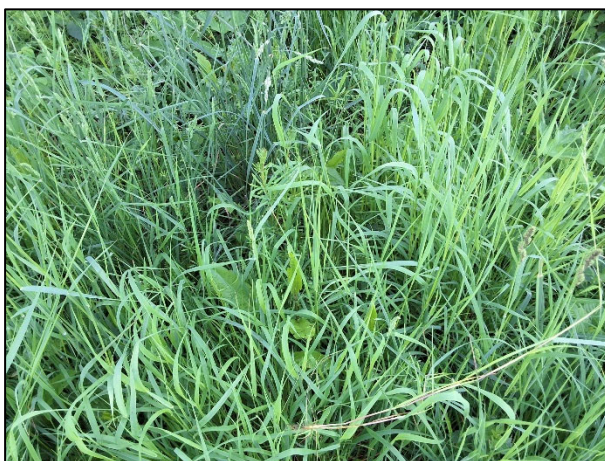


Plate 5.4.5: Quadrat 18, parcel g3c_6, Alderbury 2025

Holcus-Juncus neutral grassland g3c8

- 4.5. In the western section of the site there is a zone of g3c8 *Holcus-Juncus* (Yorkshire Fog-Soft Rush) neutral grassland at the transition from mesic g3c other neutral grassland to wetland f2b. The boundary between g3c8 and f2b was mapped based on the changing abundance of Jointed Rush versus Yorkshire Fog (as well as ground conditions and typical forbs), and that between g3c8 and g3c reflects a clear shift in abundance of Yorkshire Fog either alone or Yorkshire Fog in association with Hard Rush or Soft Rush.
- 4.5.1 The sward across the parcel is tall and generally open with bare ground exceeding the threshold for Criterion C. There is an intricate mosaic of types at a scale smaller than the MMU reflecting localised areas of drier and wetter soils (Plates 5.4.6 & 5.4.7 respectively). Quadrats were located to encompass this as effectively as possible and Table 4.3 shows that on average this habitat parcel passes Criterion F. The HCA is provided in Appendix 1.

Table 4.3: Species present in 1m x 1m quadrats recorded from g3c8 *Holcus-Juncus* neutral grassland, Alderbury May 2025. Species in red do not contribute to the final species richness score.

Species	Quadrat No. (Figure 4.1)		
	6	7	8
<i>Achillea ptarmica</i>			✓
<i>Agrostis capillaris</i>	✓	✓	✓
<i>Agrostis stolonifera</i>		✓	
<i>Ajuga reptans</i>		✓	
<i>Anthoxanthum odoratum</i>	✓	✓	✓
<i>Carex hirta</i>	✓	✓	✓
<i>Cirsium palustre</i>	✓		✓
<i>Dactylis glomerata</i>		✓	
<i>Festuca rubra</i>	✓		✓
<i>Fraxinus</i> seedlings		✓	
<i>Galium palustre</i>			✓
<i>Holcus lanatus</i>	✓	✓	✓
<i>Juncus articulatus</i>	✓	✓	✓
<i>Juncus effusus</i>	✓	✓	
<i>Lathyrus pratensis</i>	✓		
<i>Mentha aquatica</i>			✓
<i>Plantago lanceolata</i>	✓		
<i>Potentilla reptans</i>		✓	✓
<i>Quercus robur</i> seedling		✓	
<i>Ranunculus acris</i>	✓	✓	✓
<i>Ranunculus repens</i>	✓		
<i>Rumex acetosa</i>	✓		✓
<i>Urtica dioica</i>			✓
Total No. spp	13	13	14
Allowable spp	11	9	13

- 4.5.2 Table 4.3 does not reflect adequately the floristic diversity of the whole parcel, which has good correspondence to NVC type MG10b *Holco-Juncetum effusi Juncus inflexus* sub-community rush pasture (Rodwell 1992). Hard Rush is frequent to locally abundant with Creeping Bent Grass *Agrostis stolonifera* and Creeping and Meadow Buttercup *Ranunculus repens* and *R. acris*, respectively. Associated species are a complex drawn from the adjacent wetland and grassland communities, of which Fleabane, Hairy Sedge and Cuckoo Flower are particularly evident.



Plate 5.4.6: Quadrat 25, parcel g3c8, Alderbury 2025



Plate 5.4.7: Quadrat 26, parcel g3c8, Alderbury May 2025

Other lowland meadow g3a

- 4.6. Table 4.4 provides quadrat results for the largest habitat type in the east field parcel of the site, as well as additional UKHab conformance requirements for Lowland Meadow Priority Habitat.
- 4.6.1 The number of qualifying species per quadrat did not exceed 15. All quadrats had <10% cover of rye grass and White Clover *Trifolium repens*. The cover of broad-leaved herbs and sedges mostly exceeded 30% cover.

Table 4.4: Species present in 1m x 1m quadrats recorded from proposed g3a lowland meadow, Alderbury May 2025.

Species in green are UKHab lowland meadow indicators and grass species in blue are characteristic.

Frequency classification as specified by Natural England for lowland meadow Priority Habitat Inventory assessment, based on occurrence per 10 locations: Rare = 1 or 2; Occasional = 3 or 4; Frequent = 5-10

Parcel Species	Quadrat No. (Figure 4.1)										Frequency R/O/F
	14	15	16	17	19	20	21	22	23	24	
	g3a6_1				g3a6_2						
<i>Agrostis capillaris</i>									✓		1 R
<i>Agrostis stolonifera</i>	✓			✓		✓	✓	✓	✓		6 F
<i>Anthoxanthum odoratum</i>		✓	✓	✓	✓	✓	✓				6 F
<i>Bromus hordaceus</i>						✓	✓	✓	✓	✓	5 F
<i>Carex divulsa</i> ssp. <i>divulsa</i>								✓	✓		2 R
<i>Carex flacca</i>	✓	✓				✓	✓		✓		5 F
<i>Carex otrubae</i>							✓	✓	✓	✓	4 O
<i>Carex panicea</i>	✓	✓		✓							3 O
<i>Centaurea nigra</i>			✓								1 R
<i>Cerastium holosteoides</i>						✓					1 R
<i>Cirsium palustre</i>									✓	✓	2 R
<i>Convolvulus arvensis</i>	✓	✓									2 R
<i>Dactylis glomerata</i>	✓	✓	✓	✓	✓				✓	✓	7 F
<i>Epilobium parviflorum</i>								✓		✓	2 R
<i>Equisetum arvense</i>		✓	✓	✓	✓			✓			5 F
<i>Festuca rubra</i>	✓	✓			✓						3 O
<i>Geranium molle</i>				✓							1 R
<i>Geranium pusillum</i>						✓					1 R
<i>Holcus lanatus</i>	✓		✓	✓	✓	✓	✓	✓	✓	✓	9 F
<i>Hypericum perforatum</i>				✓				✓			2 R
<i>Juncus effusus</i>				✓			✓				2 R
<i>Juncus inflexus</i>							✓	✓	✓	✓	4 O
<i>Lathyrus pratensis</i>				✓							1 R
<i>Lolium multiflorum</i>	✓			✓							2 R
<i>Lolium perenne</i>	✓			✓		✓	✓				4 O
<i>Lotus corniculatus</i>	✓	✓	✓		✓	✓	✓	✓	✓		8 F
<i>Plantago lanceolata</i>			✓								1 R
<i>Poa trivialis</i>	✓		✓	✓	✓	✓	✓	✓	✓	✓	9 F
<i>Pulicaria dysenterica</i>	✓			✓	✓	✓	✓	✓	✓		6 F
<i>Ranunculus acris</i>	✓	✓	✓		✓	✓	✓				6 F
<i>Rumex obtusifolius</i>					✓			✓			2 R
<i>Salix cinerea</i> seedling										✓	1 R
<i>Scrophularia auriculata</i>								✓			1 R
<i>Senecio jacobaea</i>	✓	✓	✓		✓						4 O
<i>Silene flos-cuculi</i>					✓		✓				2 R
<i>Taraxacum officinarum</i>	✓		✓		✓	✓					4 O
<i>Trifolium dubium</i>	✓										1 R
<i>Trifolium pratense</i>		✓	✓	✓		✓	✓				5 F
<i>Veronica beccabunga</i>								✓			1 R
<i>Vicia cracca</i>								✓		✓	2 R
<i>Vicia sativa</i>						✓					1 R
Total No. spp	16	11	12	15	13	14	15	16	13	10	
Allowable spp	16	11	12	15	12	13	15	15	13	10	
<i>Lolium</i> / <i>T. repens</i> <10%	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
>30% other herbs/sedges	✓			✓	✓	✓	✓	✓	✓	✓	

- 4.6.3 Six indicator species were recorded across the ten quadrats: of these Blue Sedge and Bird's foot Trefoil are frequent and Carnation Sedge occasional. Beyond the confines of the quadrats, Knapweed *Centaurea nigra* is occasional across the entirety of the drier sub-area g3a_1 and Ragged Robin *Silene flos-cuculi* is localised and at least occasional in the low-lying sub-area g3a_2. In addition, Agrimony *Agrimonia eupatoria* was noted but rare within g3c6_1; Meadowsweet *Filipendula ulmaria* was present in g3a6_1 but only noted on the field margin; Meadow Vetchling is present over a wider area than suggested by the quadrats; and Marsh Bedstraw is present but rare in g3a_2.
- 4.6.4 Sweet Vernal Grass *Anthoxanthum odoratum*, Cock's foot and Yorkshire Fog are frequent (but generally at low cover) across the whole area and are appropriate to and characteristic of lowland meadow (UKHab V2.0 2023). Smooth Meadow Grass *Poa trivialis* and Creeping Bent are uncharacteristically frequent whereas Red Fescue *Festuca rubra* and Common Bent *Agrostis capillaris* are unusually sparse, being occasional at best. Crested Dog's Tail *Cynosurus cristatus* was not evident. Assignment of UKHab type g3a6 would require close correspondence to MG5 *Centaureo-Cynosuretum cristati* grassland (*sensu* Rodwell 1992; UKHab V2.0 2023), which does not seem to be the case for this grassland parcel.
- 4.6.5 Plates 5.4.8 - 5.4.10 illustrate sward variation and assumed underlying differences in soil moisture regime across the two sub-areas of g3a grassland.



Plate 5.4.8: Open sward with Red Clover and Blue Sedge, Quadrat 16, parcel g3a_1, Alderbury May 2025.



Plate 5.4.9: Dense Meadow Buttercup and Ragged Robin, Quadrat 21, parcel g3a_2, Alderbury May 2025



Plate 5.4.10: Hard Rush, Fleabane and Creeping Bent, Quadrat 22, parcel g3a_2, Alderbury 2025

- 4.6.6 The boundary between the two sub-areas of g3a is defined by Hard Rush, which marks lower lying ground of higher moisture status distinguished as sub-area g3a_2. This has an atypical gappy meadow sward with a low cover of grasses but an abundance of rushes and perennial sedges, especially False Fox Sedge *Carex otrubae* with Fleabane, Ragged Robin and Tufted Vetch *Vicia cracca*, as well as annuals including Soft Brome *Bromus hordaceus* (sometimes locally abundant) and scattered Hairy Tare *Vicia hirsuta*. Table 4.5 summarises the general composition.
- 4.6.7 Hemlock water Dropwort is locally abundant along the north periphery and particularly in the northeast where it forms a dense stand towards the tip of the site where there is a ditch or small watercourse, indicated on Figure 4.1 (status undefined).

Table 4.1: Species noted in g3a_2 grassland parcel, Alderbury May 2025 (not definitive)

Latin Name	Vernacular	Frequency of Occurrence DAFOR scale
<i>Agrostis stolonifera</i>	Creeping Bent	F
<i>Alopecurus pratensis</i>	Meadow Foxtail	O & L
<i>Anthoxanthum odoratum</i>	Sweet Vernal Grass	F
<i>Bromus hordaceus</i>	Soft Brome	O-LF
<i>Carex divulsa</i> spp. <i>divulsa</i>	Grey Sedge	O
<i>Carex flacca</i>	Blue Sedge	O-LF
<i>Carex otrubae</i>	False Fox Sedge	O-LD
<i>Carex nigra</i>	Common Sedge	R
<i>Centaurea nigra</i>	Knapweed	R
<i>Cirsium palustre</i>	Marsh Thistle	O
<i>Dactylis glomerata</i>	Cock's foot Grass	O-F
<i>Galium palustre</i>	Marsh Bedstraw	R
<i>Holcus lanatus</i>	Yorkshire Fog	F
<i>Hypericum tetrapterum</i>	Square-stalked St. John's Wort	R
<i>Juncus inflexus</i>	Hard Rush	F-LA
<i>Lathyrus pratensis</i>	Meadow Vetchling	O
<i>Lotus corniculatus</i>	Bird'sfoot Trefoil	O
<i>Myosotis discolor</i>	Changing Forget-me-not	R
<i>Oenanthe crocata</i>	Hemlock Water Dropwort	LA
<i>Poa trivialis</i>	Smooth Meadow Grass	F
<i>Potentilla anserina</i>	Silverweed	L
<i>Pulicaria dysenterica</i>	Fleabane	F-LA
<i>Ranunculus acris</i>	Meadow Buttercup	F
<i>Salix cinerea</i>	Grey Willow seedlings	O
<i>Scrophularia auriculata</i>	Water Figwort	R
<i>Silene flos-cuculi</i>	Ragged Robin	O-LF
<i>Taraxacum officinarum</i>	Dandelion	R
<i>Vicia cracca</i>	Tufted Vetch	O
<i>Vicia hirsuta</i>	Hairy Tare	O
<i>Vicia sativa</i>	Common Vetch	R

5 LIMITATIONS

- 5.1. Figure 4.1 presents the best effort boundaries assigned between habitat types with complex mosaics.
- 5.2. The resolution of the Condition assessments was based on a pragmatic approach and the adopted MMU. With a smaller MMU or greater survey effort it may have been possible to pinpoint small areas of sward of highest floristic diversity where local condition was above that assigned to the whole parcel.
- 5.3. Section 4.3 identifies the shortcomings of two wetland Statutory Biodiversity Metric HCA condition criteria. In the absence of information to the contrary, a precautionary approach was taken.
- 5.4. The weather preceding the survey was unusually dry and the proportion of bare ground in the shorter sward grassland may be greater than is usual.

6 SUMMARY

- 6.1. The survey identified three UKHab grassland types including an area of Priority Habitat Lowland Meadow, as well as wetland Priority Habitat Rush Pasture. The habitats reflect a transition from mesic neutral grassland to seasonally waterlogged neutral grassland to rush pasture wetland with standing/slow moving water and associated wet Willow scrub.
- 6.2. Some grassland communities/parcels are heterogeneous presumably because of underlying edaphic conditions and historic management.
- 6.3. The site is floristically diverse with a complex mosaic of sward types; on the day of the survey invertebrates were abundant and diverse.

7 REFERENCES

Cornwall Environmental Consultants Ltd. (2024) *Land Southampton Road, Biodiversity Net Gain CEC4770*. Report to Formula Land (Alderbury) Ltd.

Defra (2023) *Biodiversity Net Gain Metric 4.0*. [Statutory biodiversity metric tools and guides - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/statutory-biodiversity-metric-tools-and-guides)

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APPENDIX 1: HCA sheets

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)														
UK Habitat Classification (UKHab) Habitat Type														
Grassland - Modified grassland														
Habitat Description														
ukhab – UK Habitat Classification														
On-site or off-site, site name and location	Salisbury Road, Alderbury			Survey date and Surveyor name	23.05.2024 P.Lepitt									
				Survey reference (if relating to a wider survey)	Grassland Assessment									
Limitations (if applicable)				Habitat parcel reference										
				g4										
				Grid reference										
Condition Assessment Criteria														Notes (such as justification)
				Criterion passed (Yes or No)										
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.			n										
	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.													
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										
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).			y										
	Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.													
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.			y										
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .			n										
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.			y										
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).			y										
Essential criterion achieved (Yes or No)				n										
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)	X											
Suggested enhancement interventions to improve condition score													
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).													

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)												
UK Habitat Classification (UKHab) Habitat Types												
Grassland - Lowland calcareous grassland Grassland - Lowland dry acid grassland Grassland - Lowland meadows Grassland - Other lowland acid grassland Grassland - Other neutral grassland Grassland - Tall herb communities (H6430) [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.] Grassland - Upland acid grassland Grassland - Upland calcareous grassland Grassland - Upland hay meadows Sparsely vegetated land - Calaminarian grassland												
Habitat Description												
ukhab – UK Habitat Classification												
On-site or off-site, site name and location	on-site. Salisbury Road, Alderbury	Survey date and Surveyor name	22/05/2025 P. Leppitt									
		Survey reference (if relating to a wider survey)	Grassland Assessment									
Limitations (if applicable)		Habitat parcel reference										Notes (such as justification)
		g3c_1	g3c_2	g3c_3	g3c_4	g3c_5	g3c_6	g3c8	g3a6_1	g3a6_2		
Condition Assessment Criteria		Grid reference										
		Criterion passed (Yes or No)										
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.	y	y	y	y	y	y	y	y	n		
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	y	n	n	n	n	n	n	y	y		
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ² .	n	y	n	y	y	n	n	n	n		molehills in 1. more bare than 5% in g3c8
D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.	y	n	y	n	y	y	y	y	y		
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.	y	y	n	y	y	n	y	y	n		

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.	n	n	n	y	y	n	y	y	y			
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		n	n	n	y	y	n	y	y	n			
Number of criteria passed		4	3	2	4	5	2	4	5	3			
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)					X			X				
Passes 3 - 5 criteria, including essential criterion A.	Moderate (2)	X	X		X			X					
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.	Poor (1)			X			X			X			
Suggested enhancement interventions to improve condition score													
Notes													
Footnote 1 - Professional judgement should be used alongside the UKHab description.													
Footnote 2 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.													
Footnote 3 - Species indicative of suboptimal condition for this habitat type include: 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> . There may be additional relevant species local to the region and or site.													
Footnote 4 – 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, by applying professional judgement.													
Footnote 5 – Wildlife and Countryside Act 1981 (as amended).													

Condition Sheet: WETLAND Habitat Type			
Habitat Types			
Grassland - Floodplain wetland mosaic and CFGM - See the Statutory Biodiversity Metric User Guide. Wetland - Blanket bog Wetland - Depression on peat substrates (H7150) Wetland - Fens (upland and lowland) Wetland - Lowland raised bog Wetland - Oceanic valley mire [1] (D2.1) Wetland - Purple moor grass and rush pastures Wetland - Reedbeds Wetland - Transition mires and quaking bogs (H7140)			
Habitat Description			
For Oceanic valley mires - see EUNIS See the Statutory Biodiversity Metric User Guide for Floodplain wetland mosaic (FWM) and coastal and floodplain grazing marsh (CFGM). For CFGM also see the below: Coastal and floodplain grazing marsh UK BAP Priority Habitat description Priority Habitat Inventory (England) - data.gov.uk All other wetland habitats - see UK Habitat Classification (UKHab): UKHab			
On-site or off-site, site name and location	Salisbury Road, Alderbury	Survey date and Surveyor name	22.05.2025 P.Leppitt
Limitations (if applicable)		Survey reference (if relating to a wider survey)	Grassland Assessment
Grid reference		Habitat parcel reference	
Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
Core Criteria - must be assessed for all wetland habitat types :			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. Note - this criterion is essential for achieving Good condition.	y	
B	The parcel represents a good example of its specific habitat type - the appearance and composition of the vegetation closely matches its UKHab description, with vascular and non-vascular characteristic indicator species consistently present. ¹	y	
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	y	
D	Cover of scrub and scattered trees are less than 10%.	y	
E	Cover of bare ground is less than 5%.	n	

F	There is an absence of invasive non-native plant species ² (as listed on Schedule 9 of WCA ³) and species indicative of suboptimal condition ⁴ make up less than 5% of ground cover.	y	
Additional Criterion - must be assessed for Fen and Purple moor grass and rush pasture habitats only:			
G	No more than 25% of the habitat area has a continuous cover of litter (such as dead vegetation) preventing regeneration.	y	
Additional Criterion - must be assessed for Bog habitats only:			
H	Sphagnum moss <i>Sphagnum</i> spp. and cottongrasses <i>Eriophorum</i> spp. are at least Frequent ⁵ . Cover of ericaceous dwarf shrubs ⁶ is less than 75%.		
Additional Criterion - must be assessed for Reedbed habitats only:			
I	The reedbed has a diverse structure with between 60% and 80% reeds <i>Phragmites australis</i> . Other areas may include open water (at least 10%), species-rich fen and or wet woodland.		
Additional Criterion - must be assessed for Floodplain wetland mosaic and CFGM only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet.		
Essential criterion achieved (required for Good condition) Yes or No:			y
Number of criteria passed			6
Condition Assessment Result		Condition Assessment Score	Score Achieved x/√
Results for habitats requiring assessment of 6 criteria (Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1)):			
•Passes 5 or 6 core criteria, including criterion A.		Good (3)	
•Passes 3 or 4 core criteria; OR •Passes 5 core criteria but fails criterion A.		Moderate (2)	
•Passes 2 or fewer core criteria.		Poor (1)	
Results for habitats requiring assessment of 7 criteria - core criteria and additional criterion specified for habitat type - all habitat types except Depression on peat substrates (H7150) and Oceanic valley mire [1] (D2.1):			
•Passes 5 or 6 core criteria including criterion A; AND •Passes additional criterion G, H, I or J (choose the one specified for the habitat type).		Good (3)	X
•Passes 4 or 5 of 7 criteria; OR •Passes 6 of 7 criteria but fails criterion A or additional criterion G, H, I or J (choose the one specified for the habitat type).		Moderate (2)	
•Passes 3 or fewer criteria.		Poor (1)	
Suggested enhancement interventions to improve condition score			