Vegetation Survey
on land adjoining
Ceredigion County Council Offices
Aberaeron

June 2021

Client: Ceredigion County Council

Survey Dates: 4th June 2021

Report Reference: WW/NVC/4621

Author: Matt Sutton

Contents

1. Introduction

Matt Sutton of Wyndrush Wild was contracted to survey and assess grassland in a field in Aberaeron, prior to its temporary adoption as a works site. The field is centred on grid reference SN 453 627.

The single field within the proposed site is generally level, or gently sloping in a seaward direction. It is mown once a year in late summer, with arisings removed, and also receives rabbit grazing. It is well-drained, although a damp channel forms the south-western boundary.

2. Survey Methodology

A single visit was made to the site on 4th June 2021. The field was walked, and a visual assessment of boundaries between vegetation types made. A series of 2x2m quadrats were then recorded across the area. All higher and lower plant taxa were recorded in each quadrat using the DOMIN scale of abundance (Appendix 1). All species noted in the main grassland community but not present in quadrats were also recorded. An assessment of species abundance in each community using the DAFOR scale (Dominant, Abundant, Frequent, Occasional, Rare) was also made.

Following survey, the quadrats recorded from the single plant community were grouped together into a floristic table. Following NVC methodology, the occurrence of each species within the group of quadrats was assigned a constancy score as indicated in Appendix 2. The species within the table were then listed in order of their constancy score.

3. Results

A single grassland community dominates the field. *Anthoxanthum odoratum* and *Festuca rubra* are the dominant grasses, with *Holcus lanatus* and *Agrostis capillaris* frequent to abundant. *Dactylis glomerata* is frequent at low cover, whilst *Alopecurus pratensis* is occasional, particularly in the ranker grassland to the north-east. In contrast, *Poa humilis* was only noted in a shorter sward area to the south-west. *Plantago lanceolata* dominates the forb-component, whilst *Rumex acetosa*, *Ranunculus acris* and *Heracleum sphondylium* are also constant. The latter was mostly present as young plants, whose cover would be expected to increase during the growing season. Patches of *Lotus corniculatus* are present in a few places, and *Lotus uliginosus* in one. *Centaurea nigra* is only occasional, and *Trifolium pratense* rare. Several indicators of past agricultural or other disturbance are present – *Jacobaea vulgaris* is abundant, whilst *Cerastium fontanum* and *Cirsium arvense* are frequent and there are a few plants of *Rumex crispus* and *Cirsium vulgare*. There are only minor variations in this grassland across the stand, chiefly related to sward height which increases towards the northern end of the field. An increased tussocky nature and build-up of a thatch of dead litter here is associated with an increase in taller species such as *Cirsium arvense* and *Centaurea nigra*.

Quadrat data is presented in Appendix 1. This vegetation does not fit comfortably with any published NVC communities. The community constants are typical species of MG6 *Lolium perenne – Cynosurus cristatus* grassland, MG6, but the eponymous species of that community are notable by their absence. *Lotus corniculatus* and *Centaurea nigra* are constants of the more species-rich and highly valued MG5 *Cynosurus cristatus – Centaurea nigra* grassland, but both are infrequent here and only abundant in small patches. Such grassland encountered during the Phase II Lowland Grassland Survey of Wales by CCW was classified as 'Other Neutral Grassland'. Incidental observations within the field included common blue butterflies. The field appears likely to support grassland fungi, such as waxcaps, but these would not be visible until later in the year.

NVC Survey Map

Other Neutral Grassland in Q5 (top) and Q6 (bottom)

A narrow fringe around the margins of the field, outside of the area maintained by mowing, supports coarser grassland broadly referable to MG1 *Arrhenatherum elatius* grassland (unsampled). *Arrhenatherum* itself is generally rare, but *Dactylis glomerata* is abundant and the presence of *Lathyrus pratensis*, *Torilis japonica*, *Silene dioica*, *Potentilla reptans*, *Urtica dioica* and *Stellaria graminea* point to this community. A single patch of *Tanacetum vulgare*, an occasional plant in the county, was present in the northern corner.

The south-western boundary of the field is marked by a damp channel, dominated by patches of *Rorippa nasturtium-aquaticum* and *Veronica beccabunga*. *Agrostis stolonifera*, *Ranunculus repens*, *Isolepis cernua*, *Rumex crispus* and *Juncus effusus* are occasional or frequent along the edges. Such vegetation may be accommodated within the ill-defined S23 'Other Water Margin Vegetation'. The rabbit grazed and trampled damp grassland alongside this is dominated by *Agrostis stolonifera*, *Holcus lanatus*, *Potentilla anserina* and *Equisetum arvense*. A single spike of *Dactylorhiza praetermissa* was noted here.

4. Conservation Assessment

The field holds semi-improved neutral grassland with no clear NVC equivalent. It is broadly similar to MG6, a widespread grassland community which shows more signs of agricultural modification than the more species-rich and highly-valued MG5. As such, the field is only of minor conservation interest. Continued late-mowing in the absence of fertiliser or other inputs will potentially allow MG5 to develop here in future.

5. Recommendations

It is intended that restoration will be required following removal of topsoil prior to temporary usage as a works compound. It is presumed that topsoil would be stored in temporary banks around the periphery of the site. If these are to be stabilised to prevent soil degradation and erosion, hydroseeding with a low-productivity grass mix may be required. This should be based on non-competitive species such as red fescue, common bent and sweet vernal grass, all of which are already present on site. Alternatively, seed harvested from the site could be used (although removal of ragwort and creeping thistle prior to any harvesting operations is advisable and may prove onerous).

Reinstatement would then be achieved by pulling stored soil back over the site using excavators. Subsoiling and/or power harrowing are likely to be required prior to seeding. Seed harvested from the site in 2021 may show significant loss of viability by the anticipated reinstatement date late in 2022, and, as the site is not notably species-rich, it would be preferable to re-seed with meadow seed harvested from elsewhere in west Wales in 2022. A few people could broadcast this by hand, or it could be drilled using a tractor. Light rolling may be required. Following germination, it could be expected that a seed-bank of weed seeds such as ragwort would be activated, so an ongoing control programme may be required.

(top) and (bottom) there is a fringe of *Dactylis*-dominated vegetation referable to MG1

Damp channel with S23 ‘other water-margin vegetation’

6. Summary and Conclusions

The field is not notably species-rich, and does not classify as a high-value ‘lowland meadows’ grassland community. Provided care is taken in restoration and ongoing management, opportunities exist to restore a sward with enhanced diversity.

7. References

Countryside Council for Wales. Supplementary Guidance for NVC Grassland Survey. Unpublished.

Rodwell, JS (1992) British Plant Communities Grasslands and Montane Communities. CUP.

Appendix 1.
Table of quadrat (2x2m) Domin values from Other Neutral Grassland

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Constancy	Stand
Aspect	NW	NW	NW	flat	flat	flat	flat		
Slope (degrees)	5	5	5			5			
Vegetation height (cm)	25	10	20-30	20-30	10-20	5	25		
Anthoxanthum odoratum	5	6	5	7	6	7	7	V	D
Festuca rubra	4	4	7	6	4	5	7	V	D
Plantago lanceolata	6	7	5	5	6	5	6	V	D
Holcus lanatus	3	5	4	4	3	3	3	V	A
Rumex acetosa	2	1	3	2	1	2	3	V	F
Ranunculus acris	3	4	2	3	2	4	2	V	A
Agrostis capillaris	5	5	3	5	4	3		V	F
Jacobaea vulgaris	4	4		3	4	3	4	V	A
Heracleum sphondylium	3	3	2	4	3		1	V	F
Cerastium fontanum	2	2	2	1	3	2		V	F
Dactylis glomerata	2	2	2	2			2	IV	F-A
Cirsium arvense			5	3	1	2	2	IV	F
Centaurea nigra	4		1	2	1				O
Lotus corniculatus					6	2	1	III	r - vlA
Hypochaeris radicata	1			1			1	III	O
Taraxacum officinale agg.		1		2		2		III	O
Cardamine pratensis	2	1	1					III	
Trifolium repens	3				1	4		III	O
Ranunculus ficaria			2	1				II	R
Ranunculus repens			2	2				II	R - vlA
Alopecurus pratensis			3	3				II	O
Kindbergia praelonga				2		1		II	O
Poa humilis						4		I	R
Trifolium pratense						1		I	R
Geranium dissectum				1				I	R
Rubus fruticosus				2				I	R
Convolvulus arvensis			2					I	R
Equisetum arvense									R - vlA
Lathyrus pratensis									R
Lotus uliginosus									R - vlA
Prunella vulgaris									R
Rumex crispus									R
Cirsium vulgare									R

Appendix 2. Domin scale for recording vegetation cover.

Percentage Cover	Domin Value
91-100%	10
76-90%	9
51-75%	8
34-50%	7
26-33%	6
11-25%	5
4-10%	4
<4% with many individuals	3
<4% with several individuals	2
<4% with few individuals	1

Appendix 3. Constancy Score

Percentage of Quadrats	Constancy Value
81-100%	V
61-80%	IV
41-60%	III
21-40%	II
1-20%	I