Little Gore Meadow (and Great Gore old meadow) Vale Landscape Heritage Trust Worcestershire



Great Gore Meadow is an old meadow not a restoration field. Quadrats were collected from here but the focus for this report is the restoration field Little Gore.

Site Name	Grid Ref	County		
Little Gore Meadow	SO990453	Worcestershi	re	
River	Ownership	Designation	Size (ha)	
Severn catchment	Vale Landscape	None	1.3 ha	
	Heritage Trust			
Date	Meeting with	Managed by	Managed by	
28/06/2022	VLHT	VLHT		
Newsgewent and listen:				

Management and History

This field was bought by the VLHT in May 2004. Historically it was horse grazed. Since it was bought by the Trust it has been hay cut and aftermath grazed by sheep. Tends to be cut no later than mid-July and the hay is sold by the VLHT, with the farmer getting free grazing. The hay is sold locally for horses and sheep at cost (£0.5/small bale).

There is some early spring grazing by sheep here as well in the more tussocky areas.

Agri environment agreement

The field was in a HLS agreement but this has run out. VLHT are trying to get this field into ELM, and it is currently in an intermediate scheme.

Restoration

Technique used/Dates

The change in management at the time of purchase was followed by spreading of green hay from Great Gore (old meadow adjacent) in 2007. However this preceded extensive flooding.

Brush harvested seed was also taken from Great Gore.

BH seed wasn't spread in the weedier areas in Little Gore. The field was marked into sections and BH seed was spread equally across the sections. It was carried out by a local contact who has his own BH machine.

Hydrology	The site does flood most winters up to the
Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)	break in slope, drains quite quickly.
Current site interest	Attached excel spreadsheet for botanical data

Little Gore (restoration field)

A botanical survey was carried out on five 1 x 1 m quadrats across the field in June 2022. False oat-grass *Arrhenatherum elatius* dominates in all areas of the field, and grasses dominate the field in general.

Amongst well-established herbs, lady's bedstraw *Galium verum* and hogweed *Heracleum spondylium* are notable. Several clones of great burnet *Sanguisorba officinalis* and meadowsweet *Fillipendula ulmaria* are also well established in the sward, which is a good sign of restoration progress. The field is most similar to an MG9 - *Holcus lanatus-Deschampsia cespitosa* grassland, and MG4c - *Alopecurus pratensis-Sanguisorba officinalis* grassland, *Agrostis stolonifera* subtype. Both communities scored over 60% similarity with current vegetation on the meadow. This means the plant community is quite well established.

The ratio of Grime's functional types (1976) revealed a strong prevalence of competitor species over stress-tolerant species (Table 2), which is a sign of slow restoration success in this field.

Ellenberg's indicator values (Table 1) showed that the soil nutrient level is high (N=6) and this explains the vigour of the more competitive species. Overall, the species diversity in the meadow is relatively high, and could be increased further if the soil nutrient level is brought under control.

Little Gore qualifies as Priority Habitat Lowland Meadows Condition B.

Great Gore (old meadow)

Great Gore showed a lower species richness than the restored Little Gore Meadow, with a range of 12 to 17 species per 1 square metre. The current vegetation can be classified as MG1c NVC community, where meadowsweet is constant and sometimes co-dominant with false oat-grass, or MG4c grassland. Both types scored less than 60% similarity with the vegetation in the meadow, which means the plant community is quite dynamic and not settled.

The dominance of competitive species in the estimate of functional diversity (Table 2.2) reflects the high soil nutrient level (Table 1), and possibly high soil moisture content too.

Whilst Great Gore has a lower diversity it qualifies as Priority Habitat Lowland Meadows Condition A as there are more (and more frequent) indicator species.

Phosphorus levels	
Soil profiles	

Not recorded here.

Management recommendations

The most efficient way of reduction of soil nutrients is an earlier hay cut. In May-June, above-ground parts of the plants contain maximum level of nutrients obtained from the soil. If an early - mid-June hay cut is possible, it will remove more nutrients from the field. If it is possible to implement a second cut in the late summer, this will increase the nutrient removal and help to reduce bulk and thatch.

It is recommended to submit the fields (if not already) to the PHI inventory team at Natural England <u>HabitatInventories@naturalengland.org.uk</u> if you want to include them for future Stewardship applications. Send this report with the botanical datasheet attached to the above email address.

Table 1. Summary of the botanical data collected.

	Little Gore (restoration)	Great Gore (old meadow)
Ellenberg F (moisture tolerance)	5.32	5.88
Ellenberg N (fertility)	6.00	5.68
Ellenberg R (Reaction)	6.58	6.40
Species/quadrat (mean and range /1 m x 1 m)	17 (15-22)	14 (12-17)
NVC (top 2 MAVIS subcommunities)	MG9b	MG4c
	MG4c	MG1c

Table 2. Five categories of meadow restoration progress, measured by indicator scales based on species richness, NVC similarity score and ratios of Grime's plant functional types. Adapted from Rothero, Tatarenko & Gowing, 2020.

Little Gore	Score of success/progress				
Measure	1 Failure	2	3	4	5 Success
Average scores from five botanical quadrats per field. Calculated in MAVIS					
Species richness (number of species per 1 m ²)	<8	8 to 12	13-15	16-20	>20
NVC similarity score	<50%	50-55%	55-60%	>60%	>60%
C:S ratio	1.65	1.39	1.23	1.1	1.09
S:R ratio	0.67	0.79	0.81	0.89	0.93

Great Gore	Score of success/progress				
Measure	1 Failure	2	3	4	5 Success
Average scores from five botanical quadrats per field. Calculated in MAVIS					
Species richness (number of species per 1 m ²)	<8	8 to 12	13-15	16-20	>20
NVC similarity score	<50%	50-55%	55-60%	>60%	>60%
C:S ratio	1.65	1.39	1.23	1.1	1.09
S:R ratio	0.67	0.79	0.81	0.89	0.93