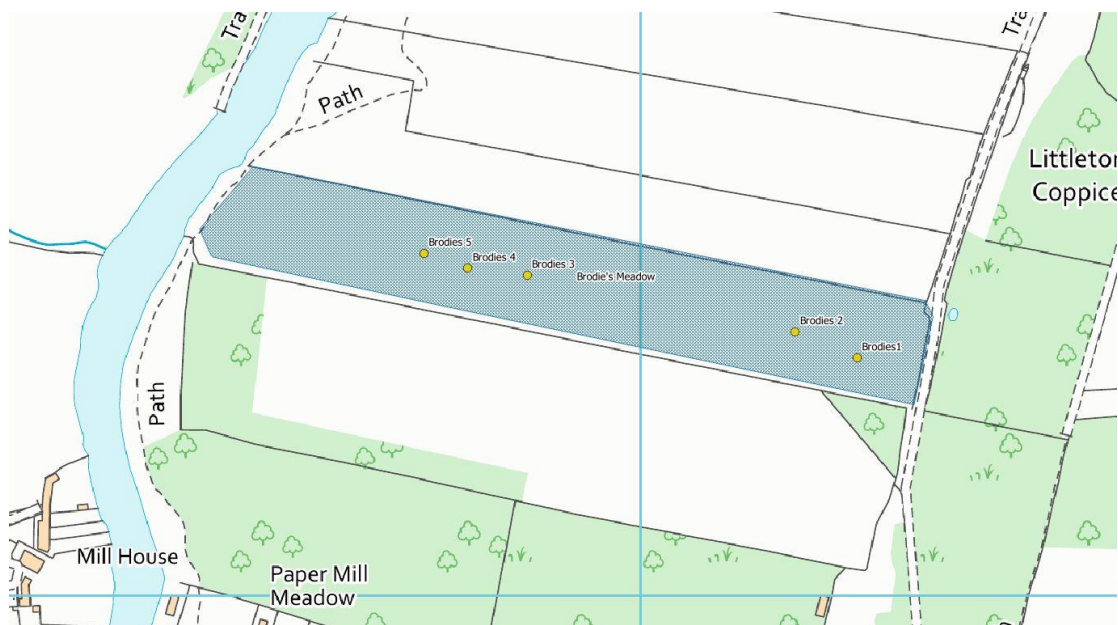


**Brodies Meadow**  
**Vale Landscape Heritage Trust**  
**Worcestershire**



Yellow dots indicate the location of quadrats recorded in 2022

<b>Site Name</b> Brodies Meadow	<b>Grid Ref</b> SO069482	<b>County</b> Worcestershire	
<b>River</b> Severn catchment	<b>Ownership</b> Vale Landscape Heritage Trust	<b>Designation</b> None	<b>Size (ha)</b> 3.8 ha
<b>Date</b> 28/06/2022	<b>Meeting with</b> Vale Landscape Heritage Trust	<b>Managed by</b> VLHT	
<b>Management and History</b>			
<p>VLHT bought this site in December 2017. The previous owner was a farmer who had been taking hay for a couple of years before then. Prior to that, it was grazed only. Hay cut but not currently aftermath grazed. Tend to cut early July. The farmer who previously owned it, is now responsible for managing it on behalf of the VLHT and is also the same farmer who cuts Littleton Meadows.</p> <p>Not thought to have been heavily fertilised historically.</p>			
<b>Agri environment agreement</b>			
<p>The field is in an agreement. It has just gone into mid-tier, initially as existing species rich meadow. The agreement will last for 5 years.</p>			

<b>Restoration</b>	
Technique used/Dates	
<p>Hay cutting was implemented by the previous owner (approx. 2015). The VLHT have spread some yellow rattle in here, but doesn't seem to have worked.</p> <p>The VLHT bought the site to protect the old hay meadow and plan to manage it to maximise its floodplain meadow diversity. The driver is for nature conservation. The VLHT manage a substantial number of sites across the Vale, bought for protection and conservation.</p>	
<b>Hydrology</b>	The site floods annually and water can sit for many weeks. There are ditches but these are mostly silted up. They are interested in new ditches.
Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)	
<b>Current site interest</b>	Attached excel spreadsheet for botanical data
<p>A botanical survey was carried out in June 2022 on five 1 x 1 m quadrats across the field.</p> <p>The vegetation is dominated by grasses, such as creeping bent, Yorkshire fog and Meadow barley. These are all species which are very responsive to nutrients deposited by floods; they develop their biomass quickly. Shallow-rooted, creeping on the surface of the ground, creeping bent <i>Agrostis stolonifera</i>, creeping buttercup <i>Ranunculus repens</i> and creeping cinquefoil <i>Potentilla reptans</i> have a noticeable presence across the field. This can be explained by prolonged flood periods and waterlogging in the lower part of the field. These species may also indicate some level of soil compaction.</p> <p>The current vegetation hasn't got high similarity scores to any particular NVC grassland types. The presence of great burnet <i>Sanguisorba officinalis</i> in the field suggests the vegetation maybe classified as MG4c Burnet floodplain meadow Yorkshire fog sub-community <i>Alopecurus pratensis</i>-<i>Sanguisorba officinalis</i> <i>Holcus lanatus</i> sub-community. However, the high abundance of grasses on the field more likely suggests MG9 Tufted hair-grass pasture <i>Holcus lanatus</i>-<i>Deschampsia cespitosa</i> grassland, MG10 Soft rush-pasture <i>Holcus lanatus</i>-<i>Juncus effusus</i> rush pasture and MG15 Cuckooflower grassland, <i>Alopecurus pratensis</i>-<i>Poa trivialis</i>-<i>Cardamine pratensis</i>, with close similarity scores.</p> <p>Species richness ranges from 10 - 14 sp/m<sup>2</sup>.</p> <p>Ellenberg's indicator scores, based on vegetation preferences to soil wetness and nutrients, showed nutrient levels slightly higher than it would be helpful for restoration of the species-rich vegetation (Table 1).</p>	

Functional types (Grime, 1974), are dominated by competitors as well as ruderal species so the ratio of the functional types, is not well balanced, as it currently stands.	
<b>Phosphorus levels</b>	Not known. VLHT are planning to collect soil samples for all their mid-tier sites including this one.
<b>Soil profiles</b>	
This is completed by members of the FMP team recording a soil profile. <b>Not done in 2022</b>	
<b>Management recommendations</b>	
Improvement of the drainage system on the site can reduce the length of waterlogging periods which will positively affect species richness in the lower parts of the field. The soil nutrient level can be decreased by timely (mid-June) hay cuts, which are specifically recommended for the years after prolonged floods.  Yellow rattle <i>Rhinanthus minor</i> does not grow well in wet soils, so relying only on this species for grass control might not bring desirable results. Green hay application can enhance species diversity, but drainage and nutrient levels should be tackled before additional propagules are applied.	

Table 1. Summary of the botanical data collected.

Brodies Meadow	
<b>Ellenberg F (moisture tolerance)</b>	5.78
<b>Ellenberg N (fertility)</b>	5.44
<b>Ellenberg R (Reaction)</b>	6.36
<b>Species/quadrat (mean and range /1 m x 1 m)</b>	10-14 (12)
<b>NVC (top 2 MAVIS subcommunities)</b>	MG4c MG9

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.

Measure	Score of success/progress				
	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 <sup>2</sup> )	<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