Site Visit Assessment Form – Tewkesbury Nature Reserve 1, Gloucestershire

Green outlines are labelled with the source of the green hay (local floodplain meadows)

Site Name Tewkesbury Nature Reserve Field 1	**Grid Ref** SO899314	**County** Gloucestershire	
River Swilgate (Severn)	**Ownership** Tewkesbury Town Council	**Designation** None	**Size (ha)** 5.81
Date 28th June 2017	**Meeting with** Cathy Beeching (EA), Caroline Corsie, Joanna Rutherford (Volunteer), Larry Blacker (TNR Limited Reserve Manager), Anna Ellen (EA and volunteer), Les Buchanan (Chair of Trustees), Ken Pomfret (FMP Ambassador)	**Managed by** Tewkesbury Nature Reserve Ltd Trust?	
Management and History			

Agri environment agreement	
Yes.	
Current management	
Are thinking about cutting half in June and half in July. Worried about seed spreading in early stages.	
Restoration	
Technique used/Dates	
2015, herbicided vegetation, disked, power harrowed, rolled and then spread seed end Aug/beginning sept 2015. 6 ha was spread on at rate of 22 kg/ha. Hay was used in 2017 for bedding as local farmers are not keen on it. Farmers want it to be cut earlier (better quality hay). In first year after application (2016) the site was sheep grazed from late May and topped. No grazing in second year. Different seed sources were used: BD - Burley Dene seed PH - Poolhay seed LM – Lazy Meadow (drier/MG5 type) Green outlines on maps show roughly where each was spread.	
Hydrology Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)	Not sure of extent of flooding here.
Historical information	
Was previously arable for approx. 30 years. Maize was one crop that was grown here.	
Current site interest	Attach excel spreadsheet for botanical data
In its second year after restoration, the target plants are doing very well. For example, great burnet *Sanguisorba officinalis* had already reached a flowering stage of its life cycle, which indicates conditions are good here for this species. According to the NVC assessment, this field is most similar to an MG4 Typical (MG4b) plant community. There are a number of weed species including greater burdock *Arctium lappa* and common plantain *Plantago major* still present in the sward, however this is very common in the early stages of a restoration from arable. Red clover *Trifolium pratense* and ribwort plantain *Plantago lanceolata* dominated the community in 2017. Grasses with high abundance like common bent *Agrostis capillaris*, smooth brome *Bromus racemosus,* tall fescue *Festuca arundinaceae* and meadow barley *Hordeum secalinum* were found in patches. These species can be vigorous, but did not appear to be affecting the growth of smaller grasses and herbs across the field.	

Phosphorus levels	P index 2-3 – Cathy Beeching can provide accurate P data.

Soil profiles

Soil Profile 1 taken at quadrat 156

A horizon
0 - 20 cm Clay loam/dark brown

B horizon
20 - 40 cm Light clay loam. Some evidence of iron deposit.
40 - 80 cm manganese nodules evident, slightly more orange colouration
80 - 120 cm Some light gley. Some coarse material (sand/gravel). Some organic matter near bottom

The soil profile does not indicate great fluctuation of water levels, and that water sits fairly low in the profile – towards 80 cm

Soil series 813b (western half of both fields)
411b (eastern half of both fields and with greater area than above)

Site manager aspirations/objectives

Continue to develop species rich meadows for HLS objectives

Management recommendations

Continue with current management. A timely hay (June) cut is important to keep on top of the nutrients. Two hay cuts a year could be considered here if grazing is hard to find. This would help manage the high P index. However, the good germination rate is encouraging, and species appear not to be currently hindered by the higher than ideal P index. The timely hay cuts and prevention of water logging will be the keys to continued success here.

Earlier hay cuts may encourage the farmers to use the hay more widely, as it should improve the hay quality significantly.

	Tewksbury	
	Field 1	Field 2
Ellenberg F (moisture tolerance)	5.38	5.44
Ellenberg N (fertility)	5.4	5.36
Ellenberg R (Reaction)	6.4	6.56
Species/quadrat (mean and range /1 m x 1 m)	17.6 (13-22)	12.8 (11-15)
NVC (top 2 MAVIS subcommunities)	MG4v2 MG4b	MG6a MG6