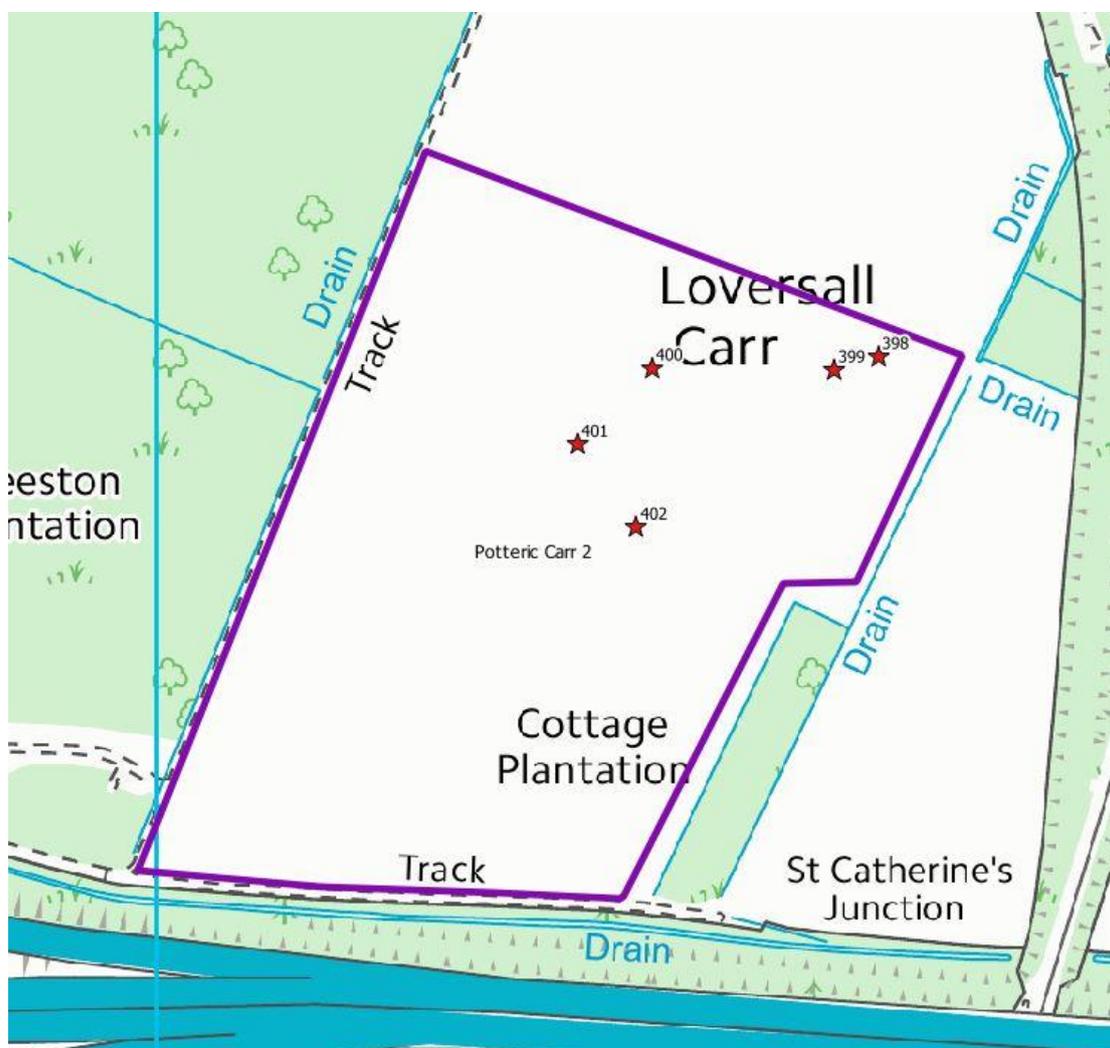


Site Visit Assessment Form Loversall Carr Field 2, Potteric Carr, South Yorkshire



Site Name Loversall Carr 2	Grid Ref SK591996	County South Yorkshire	
River River Torne	Ownership Yorkshire Wildlife Trust	Designation Not part of SSSI	Size (ha) 7.85
Date 19 th June 2018	Meeting with Jim Horsfall	Managed by Yorkshire Wildlife Trust	
Management and History			
Agri environment agreement			
This field is part of the wider site Agri-Environment Scheme, under HLS option HK13, creation of wet grassland for breeding waders. It was arable for some years (decades?). On Victorian maps, strip fields are indicated, suggesting either arable or pasture land use.			

<p>The site is to be designated as a SAM due to Romano-British settlement (thought to be place where people from forts on Limestone came down to Humber for spiritual/religious reasons).</p>	
<p>Current management</p>	
<p>Only just undertaken restoration action, so no current management.</p>	
<p>Restoration</p>	
<p>Technique used/Dates</p>	
<p>YWT took this area on in 2015 after it had been left fallow for a year, and was just weeds. Was then glyphosate treated in September 2015, cultivated, seeded and rolled. Seed came from brush harvesting other sites and commercial mix. In 2016 it was spring grazed by sheep and cattle grazed in the Autumn. There were lots of issues with trespassing in 2017 due to wayleave works on the site, and although it had been shut up for hay, a hay cut was not taken because of the high proportion of thistles. Instead a boom sprayer was used to reduce the weed burden (24D selective herbicide). It was then grazed with cattle and sheep. In 2018 it was grazed until March, then shut up for hay. Hay made in early July on 2/3 of field (not all due to lack of barn space for storage).</p>	
<p>Hydrology</p>	<p>The area does not flood overland as the whole area is pump drained and defended through land drainage and flood protection banks. Interior drainage is through ditches that link to ex-IDB drains. The water table sits close to the surface throughout much of the year. The site gets some standing water but from rainfall. There is soil water movement through the sandy soil and a dipwell has been installed in an adjacent field which shows soil water regime is appropriate for an MG4 type community.</p>
<p>Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)</p>	
<p>Historical information</p>	
<p>Part of this site was originally a coal mine that collapsed and is now a lake, which forms part of the nature reserve. The YWT acquired this land, and then extended the ownership around it to include wetlands and grasslands. The whole Potteric Carr site is now about 250 ha. Historically the area was the Humber Lake, hence the sandy soil profile.</p>	
<p>Current site interest</p>	<p>Attach excel spreadsheet for botanical data</p>
<p>A comparison of the current plant community with known NVC types, shows that MG4c (<i>Holcus lanatus</i> subcommunity of <i>Alopecurus pratensis-Sanguisorba officinalis</i> grassland) scored the highest similarity (53 %). However, this is too low to be conclusive and the restoration site is still in a very early stage. Species richness on the site is very low, especially in herb cover. This may be from the prolonged effect of the herbicide used for treating the field prior restoration or due to the hard plough pan evident in the soil profile.</p>	

Grasses are growing well, with species like red fescue *Festuca rubra*, creeping bent grass *Agrostis stolonifera*, crested dog's-tail grass *Cynosurus cristatus* and Yorkshire fog *Holcus lanatus* dominating the community. The hardpan (plough pan) layer observed in the soil profile can affect the growth of deep-rooted MG4 species even if the ground water regime was found to be suitable for restoration of this type of vegetation and ideally would be broken up.

Phosphorus levels

At start of project, soil P was index 2 or below, neutral pH (7.1), with high Mg due to Magnesium limestone nearby (index 6.5).

Soil profiles



Soil Profile 2 Quadrat 399

A horizon
0 – 30 cm loamy sand. Poor structure, stones (ex-arable top soil layer)

30 -35 cm hard layer, clay, compacted plough pan?

B horizon
35 - 60 cm sand
60 – 80 cm wet sand
80 – 100 cm sandy clay, and black organic layer

C horizon
100 – 120 wet sand

Site manager aspirations/objectives

Species rich meadow with wet influence.

Management recommendations

This site has a very good potential for a species-rich meadow, but breaking the hardpan (plough pan) found at the depth of 30-35 cm in the soil is strongly recommended before doing any other restoration processes. Before this is attempted, further soil profiles should be examined to ensure the pan is found across the field.

Breaking up such a hard layer can be done by deep ploughing the site. Removal (break) of the hardpan should also help to reduce the amount of residual herbicide in the soil which may be preventing germination of the sown herbs. After this has been done, the site should be re-seeded with herbs typical of a drier floodplain meadow.

	Rossington 2	Potteric Carr 2
Ellenberg F (moisture tolerance)	5.36	5.46
Ellenberg N (fertility)	5.62	5.28
Ellenberg R (Reaction)	6.34	6.26
Species/quadrat (mean and range /1 m x 1 m)	13.2 (8-20)	11.4 (7-16)
NVC (top 2 MAVIS subcommunities)	MG9b MG9	MG4c MG6