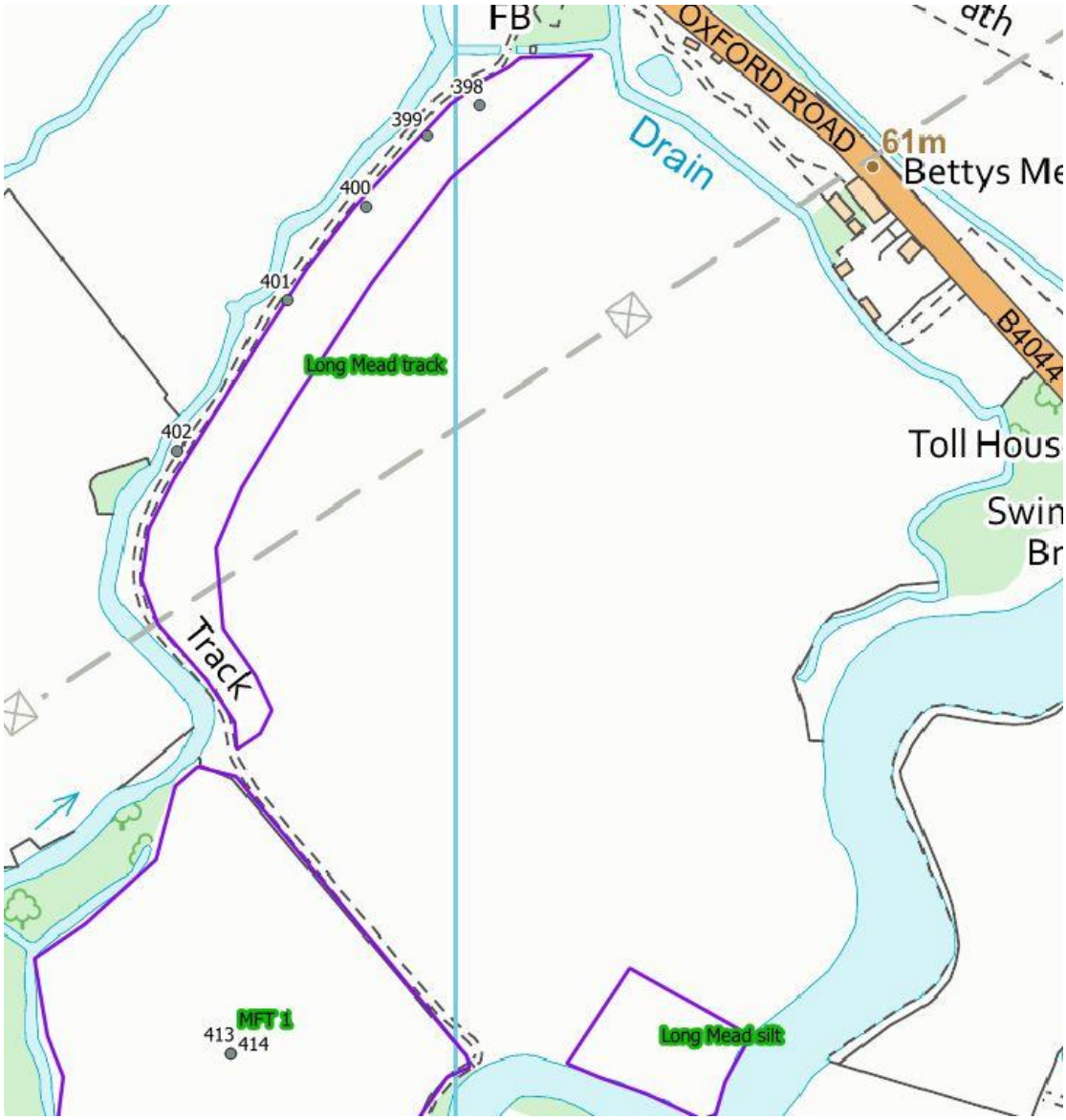
Site Visit Assessment Form Long Mead (Track). Oxfordshire



The map shows quadrats recorded in 2021 (dots).The restoration areas have a purple outline.

Site Name Long Mead adjacent to track	**Grid Ref** SP439086	**County** Oxfordshire	
River Thames	**Ownership** Long Mead Wildlife Site	**Designation** Local Wildlife Site	**Size (ha)** 0.87 track 0.27 silt
Date 22/06/2021	**Meeting with** Long Mead Wildlife Site and Irina Tatarenko	**Managed by** Long Mead Wildlife Site	
Management and History			
Long Mead is an ancient, species rich meadow, but there are two areas that have been undergoing restoration because of previous damage:			

1. The track area. The neighbouring farmer drove through the meadow one whole winter destroying the sward completely in this area and so their predecessor required it to be sown with rye-grass. Not sure of date. Generally, since the meadow was two properties two sets of owners drove randomly over it.
2. The silt area. The silt area is where typically silt was deposited following river dredging. This practise stopped 20 years ago (when current owners took on ownership).

Long Mead used to have devil's bit scabious *Succisa pratensis*, but this has disappeared from the site, for no obvious reason.

Agri environment agreement

The site has an agri-environment agreement with a cutting date of 16th July, but NE are happy for an earlier cut. They are generally aiming for an earlier cut. Hay cutting is carried out by a contractor so some years it works well, but other years it can be tricky to get the hay cut when needed. May be looking at getting a different grazier. For the past 5 years it has been grazed with sheep, but ideally it would be grazed by cattle and they are concerned that this is encouraging sedges.

Restoration

Technique used/Dates

Restoration technique for the track area. The hay was cut a bit earlier in 2020 than normal, this area was then harrowed on 30th July in the first week of August. Typically they would aim for 50% bare ground through harrowing, but adjacent to the track it was nearer 100%. The green hay was cut straight into a forage harvester from the adjacent meadow on 2nd August 2020 and spread immediately.

The silt area. Hay has been cut here for 20 years as for the rest of the meadow, but it is still very fertile. The owners have also been cutting this area for classroom space in May for the past 10 years , and believe this cut has had more of an impact in reducing fertility than 20 years of summer cuts.

Hydrology	Long Mead floods on average 1 year in 3. Extreme floods occur about every 8 years.
Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)	
Current site interest	Attach excel spreadsheet for botanical data

Botanical survey of 5 1 x 1 m quadrats randomly distributed along the Track restoration area, was carried out just a year after restoration had been done.

The Ellenberg indicator values suggest that the area is still rich in soil nutrients (N=5.94). The species richness varies from 12 to 20 species per 1 m^2. In 2021, the area was dominated by annual bromes: meadow brome *Bromus racemosus* and soft

brome *Bromus hordaceous*, covering up to 80% of the ground surface. Perennial rye-grass *Lolium perenne* and rough meadow-grass *Poa trivialis* were also abundant. Herbs were very sparse, but some, like ribwort plantain *Plantago lanceolata,* common chickweed *Cerastium fontanum,* self heal *Prunella vulgaris* and Autumn hawkbit *Leonthodon autumnalis* were quite evenly distributed along the strip.

Functional diversity, as described by a ratio of Grime's functional types, in this newly restored vegetation was not well balanced. Ruderal species dominated, competitors were not well established, and stress-tolerant species were hugely under represented. The MG4b Typical burnet floodplain meadow (Alopecurus pratensis-Sanguisorba officinalis grassland) plant community scored 55% similarity in MAVIS calculation based on 5 botanical quadrats. This score is not conclusive yet (Rothero et al, 2020), however demonstrates a positive trend in vegetation development towards a target community similar to that of the wider meadow.

The vegetation in the 'silt' area was not surveyed in 2021.

Phosphorus levels	Not known.

Soil profiles

Not recorded during the survey in 2021.

Landowner objectives

Species rich strip along the track and in the silt deposited area that is similar to the rest of the meadow.

Management recommendations

Consistency in the annual hay cut is important. Occasional early cuts and double cuts, in particular if the site has been flooded over winter, will help to balance excess soil nutrients along the track.

This form below is a summary of the botanical data collected.

	Long Mead Track 2021	**Similarity score to the NVC community (%)**
Ellenberg F (moisture tolerance)	5.32	
Ellenberg N (fertility)	5.94	
Ellenberg R (Reaction)	6.6	
Species/quadrat (mean and range /1 m x 1 m)	17 (12-20)	
NVC (top 2 MAVIS subcommunities)	MG4b MG8d	55% 52%