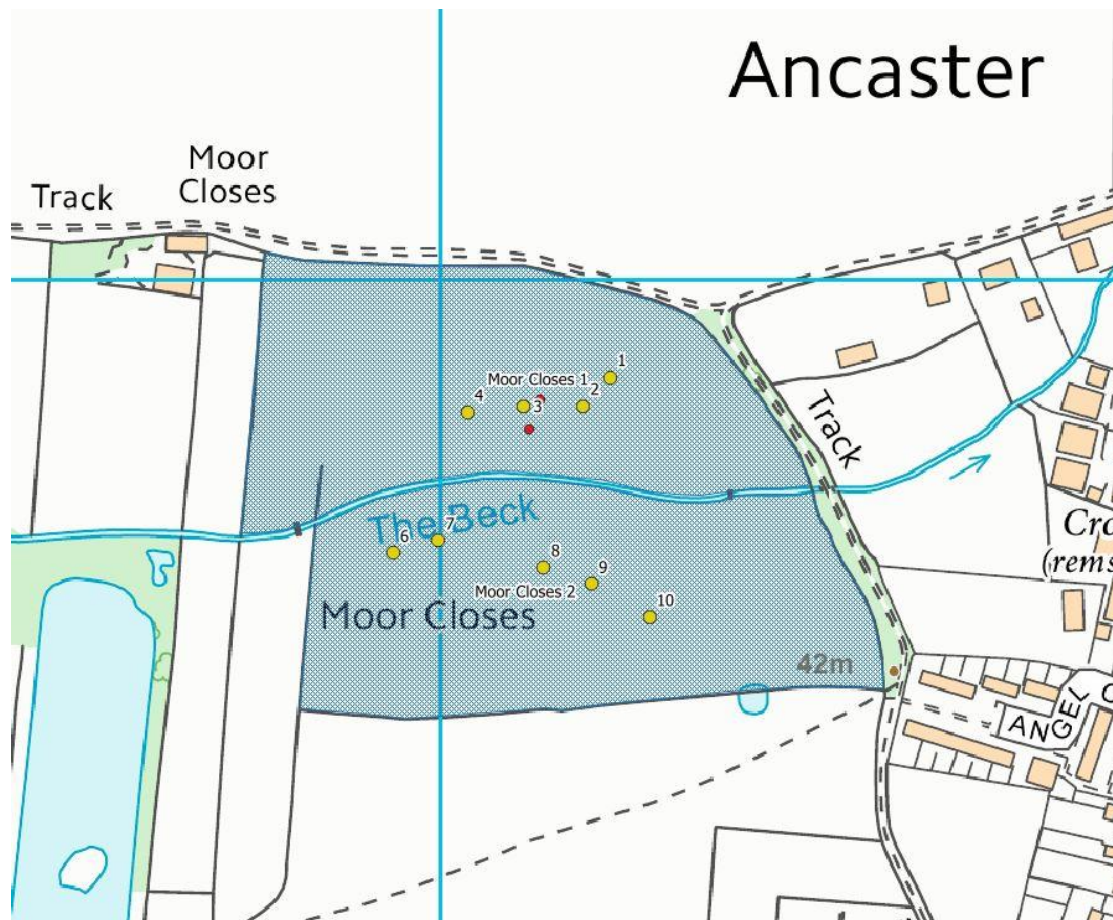


Site Visit Assessment Form – Moor Closes, Lincolnshire

Update following re-visit in 2022



Yellow dots are quadrat locations visited in 2022.

Red dots are those visited in 2017.

2022 amendments to the form are in red text

Site Name Moor Closes SSSI	Grid Ref 1 = SK 980 439 2 = SK 980 438	County Lincolnshire	
River The Beck	Ownership LWT	Designation SSSI	Size (ha) 1=2.5 2=2.67
Date 14/07/2017 22/06/2022	Meeting with Lilianna Witkowska-Wawer Sarah Craythorne Sophie Hawkrige	Managed by Lincolnshire Wildlife Trust	
Management and History			

This site is a small valley between two sand banks where rare species grow on the sandy terrace along the road, and on the bank-slope where cemetery is located. Both fields form part of Moor Closes SSSI, designated for being an outstanding example of a traditionally managed calcareous loam pasture.

On field 2 there is a sandy strip, which, according to the local archaeologist, appeared after the brook was dug out for the stream diversion. The original stream was diverted after sand extraction and lake formation in the quarry.

Management includes topping the field and leaving the arisings as it was too wet to remove it. Grazing implemented recently.

Restoration

Technique used/Dates

The drain at the back of the field 1 was cleared in 2016. Meadowsweet is cut in places and grazed by cattle and occasionally by sheep - crunching the stems so the animals eat it well when they are put on the site as they like the fresh aroma of crushed stems. The remaining cuttings are raked off where they are the densest.

Hydrology

Flooding regime
Water management
Soil-water levels (indicated by auger hole/any other data)

The small diverted river runs in the middle. The ditch in the field 1 is about 40 cm deep, and was recently cleared, but does not drain the field well as there is >120 cm of fine peat. Cows poach the ditch and water from it does not discharge into the stream.

Historical information

The site, comprised originally of four meadows (two bigger meadows on both sides of the stream and two adjacent small meadows) was purchased by the Trust in 1971. These traditionally managed grasslands have never been cultivated, no fertilizer or herbicide has been used in the past and they were designated as SSSI in 1972 for the unique plant communities and flora.

Current site interest

Attached excel spreadsheet for botanical data

Being located between two sandy banks on two sides of the small stream, fields 1 and 2 have very unusual soil. The site was most likely formed as a result of seepage of ground water from under the sand banks. The thickness of the layer of very fine peat varies from 30 cm to more than 120 cm. Peat overlies the yellow sand at the bottom of the soil profile and peat is also mixed with some sand along the profile.

Both fields have a mosaic of sand 'islands' among larger areas of peat. Sand bars along the both sides of the stream probably appeared after the brook was dug out for the stream diversion. The sandy 'islands' and bars have sandy peat soils. They

accommodate a specific plant community different from that on the thick layers of peat. Areas on the thick layer of peat were dominated by common sedge *Carex nigra*, while the sandy 'islands' had a high percentage cover of carnation sedge *Carex panicea*. Meadowsweet *Filipendula ulmaria*, and sharp-flowered rush *Juncus acutiflorus* dominated across the fields. Species found on sand 'islands' only, were twayblade *Listera ovata*, bird's-foot trefoil *Lotus corniculatus*, marsh valerian *Valeriana dioica*, tormentil *Potentilla erecta*, selfheal *Prunella vulgaris*, meadow buttercup *Ranunculus acris*, yellow rattle *Rhinanthus minor*, quaking grass *Briza media*, and devil's-bit scabious *Succisa pratensis*, forming a species-rich community. Very tall and dense growth of meadowsweet *Filipendula ulmaria* on both fields can be explained by high phosphorus content in the soil.

The botanical survey of the site was repeated in 2022, on five 1 x 1 m quadrats in each field. Meadowsweet has reduced its vigour and spread, especially in field 1. In patches however, it remains one of the more dominant species, together with sharp-flowered rush *Juncus acutiflorus*. However, its overall dominance decreased substantially during the last five years. Both fields are good examples of MG8 Kingcup-carnation sedge (*Cynosurus cristatus-Carex panicea-Caltha palustris* meadow)

The site also supports plant communities with over 60% similarity score with to Burnet floodplain meadow (MG4) *Alopecurus pratensis-Sanguisorba officinalis* grassland. The species richness is relatively high, up to 22 and 24 species per 1 m², and could be improved further. Even though the soil sample taken in 2017 showed a high level of phosphorus (see below), the Ellenberg indicator values for soil nutrients, calculated on the basis of the plant species preferences, are below 5. This suggests the peat and sandy soils are relatively poor.

The Ellenberg indicator values for soil moisture are, however relatively high (F=6.7 and F=7 in field 1 and 2 respectively). Moist but poor soils are the ideal situation for the MG8 plant community.

Functional diversity in these MG8 meadows reflects some dominance of competitive species over stress-tolerant ones, however ruderal species are relatively less abundant, then they would be on more fertile soils.

Both these fields qualify as Priority Habitat Lowland Meadows Condition A.

Phosphorus levels

pH=6.61, Olsen P= 32.89 mg/kg PO4-P

Soil profiles



Soil at quadrat 249

A horizon
0 - 10 cm – very fine peat

B horizon
10 – 30 cm – sandy peat (50% of sand)
30 – 120 cm – fine peat, slightly waterlogged

**Soil near the stream (location 250?
Check on the map) No photo**

A horizon
0 – 30 cm – sandy loam (50% sand) with peat (30%)
B horizon
30 – 50 cm – sandy peat (10% of sand)
C horizon
50 – 70 cm – wet yellow sand



Field 2, on the sand strip along the brook

A horizon
0 – 10 cm sandy peat (50% of sand)

B horizon
10 – 30 cm – sandy peat (about 30% of sand) with iron

C horizon
30 – 50 cm – yellow sand with iron
50 – 60 cm – grey sand, saturated



Under tall meadowsweet *Filipendula ulmaria* on field 2

A horizon
Negligibly thin

B horizon
0 – 70 cm – very even sandy peat (5% of sand)
70 – 80 cm – sandy peat (40% of sand)

	<p><i>C horizon</i> 80 – 90 cm – grey sand, very sharp and clear boarder with the upper layer</p>
<p>Site manager aspirations/objectives</p>	
<p>More species rich meadows and reduction in meadowsweet and rush cover.</p>	
<p>Management recommendations</p>	
<p>Moor Closes was discussed with David Gowing (FMP Director). He said there is most likely to be a ground water seepage from under the sand bank. This allows peat to form evenly. The site looks very interesting as it is, and therefore we do not advise drainage as this would not improve it even if a much deeper ditch is dug across the field. To control meadowsweet <i>Filipendula ulmaria</i>, hay cut is the best solution. If it is too wet for the machinery to be put on the site, then a hand cut might be the only option. Removal of the hay will bring the site into the condition where it can be managed by careful grazing only. With very tall meadowsweet as it is now, cows won't be able to control it efficiently, only flatten it, which will not help with maintenance of site diversity.</p> <p>In 2022, management of the site seems to be efficient and effective in controlling meadowsweet. Consistent management, as it is currently organised, will help to increase species richness in these two most interesting meadows.</p> <p>It is advised to submit the fields (if not already) to the PHI inventory team at Natural England HabitatInventories@naturalengland.org.uk if you want to include them in future Stewardship applications. Send this report with the botanical datasheet attached to the above email address.</p>	