

Site Name: Thwaite House Moss **County:** Lancashire

District: Lancaster

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 substituted by Schedule 9 to the Countryside and Rights of Way Act 2000.

Local Planning Authority: Lancaster City Council

National Grid reference: SD 497 690 **Area:** 7.25 ha

Ordnance Survey Sheet: 97 **1:10,000:** SD 46 NE

Notification Date: 28 May 2004

Reasons for Notification:

Thwaite House Moss supports a nationally important mosaic of fen habitats, comprising semi-natural fen woodland displaying transitional succession from pioneer willow *Salix* spp. woodland through to mature alder *Alnus glutinosa* and birch *Betula* spp. woodland, species-rich fen meadow and tall-herb fen.

General description:

Thwaite House Moss is a remnant example of once widespread wetland habitats, now nationally rare due to land drainage and agricultural intensification. The site displays a wetland succession from grazed fen-meadow, through tall-herb fen and recently developed pioneer fen woodland, to mature fen woodland. This succession is considered to be unique in Lancashire. The site lies at an altitude of 30m above sea level, approximately 1.5km south of Carnforth. The topography of the site indicates its origin as a shallow post-glacial basin, possibly a kettle-hole, which through hydrosereal succession developed as a basin mire and infilled with peat. Historically, the peat surface has been modified through drainage and possibly peat extraction. Despite this, a high water table persists. The surrounding surface rock is Carboniferous Limestone resulting in a calcareous surface water input to the site giving base-rich conditions. This has resulted in the development of fen and carr vegetation.

Thwaite House Moss is noted for its representation of succession from open fen through to fen woodland and particularly the range of different fen woodland types. The north-east of the site supports established woodland on slightly higher ground with ash *Fraxinus excelsior* and Scots pine *Pinus sylvestris*. Central and southern parts of the site support more recently established woodland dominated by grey willow *Salix cinerea* with alder, downy birch *Betula pubescens*, crack-willow *S. fragilis*, purple willow *S. purpurea*, elder *Sambucus nigra*, and hawthorn *Crataegus monogyna*. The many ditches are characterised by alder.

The woodland ground flora is characterised by tufted-sedge *Carex elata*, common sedge *C. nigra*, brown sedge *C. disticha*, meadowsweet *Filipendula ulmaria*, common marsh-bedstraw *Galium palustre*, common nettle *Urtica dioica*, bittersweet *Solanum dulcamara*, purple-loosestrife *Lythrum salicaria*, amphibious bistort *Polygonum amphibium*, marsh cinquefoil *Potentilla palustris*, red campion *Silene dioica*, hedge

woundwort *Stachys sylvatica*, herb-robert *Geranium robertianum* and tufted vetch *Vicia cracca*. Greater tussock-sedge *C. paniculata*, bugle *Ajuga reptans* and male-fern *Dryopteris filix-mas* are also occasionally present.

The north-western area of fen-meadow supports a species-rich community characterised by rough meadow-grass *Poa trivialis*, red fescue *Festuca rubra*, meadow foxtail *Alopecurus pratensis*, Yorkshire-fog *Holcus lanatus*, brown sedge and hairy sedge *C. hirta* with meadowsweet, purple-loosestrife, common marsh-bedstraw, water mint *Mentha aquatica*, marsh horsetail *Equisetum palustre*, marsh-marigold *Caltha palustris*, creeping forget-me-not *Myosotis secunda*, skullcap *Scutellaria galericulata* and silverweed *Potentilla anserina*. Jointed rush *Juncus articulatus*, great burnet *Sanguisorba officinalis* and square-stalked St. John's-wort *Hypericum tetrapterum* are also occasionally present. The open ditches adjacent to the fen-meadow also support lesser pond-sedge *Carex acutiformis*.

The south-eastern part of the site supports an area of ungrazed fen, largely surrounded by woodland. This supports a tall-herb fen community characterised by common reed *Phragmites australis*, tufted hair-grass *Deschampsia cespitosa*, wild angelica *Angelica sylvestris*, great willowherb *Epilobium hirsutum*, meadowsweet, purple-loosestrife, common nettle and common valerian *Valeriana officinalis*.