

COUNTY: OXFORDSHIRE

SITE NAME: FRILFORD HEATH, PONDS AND FENS

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981

Local Planning Authorities: Vale of the White Horse District Council

National Grid Reference: SU442985

Ordnance Survey Sheet 1:50,000: 164 1:10,000: SU49 NW

Date Notified (Under 1949 Act): 1950 Date of Last Revision: 1977

Date Notified (Under 1981 Act): 1986 Date of Last Revision:

Area: 110.2 ha 272.4 ac

Description and Reasons for Notification

The acid grassland, heathland and associated valley fens at Frilford Heath are unique in southern England. The site has an exceptionally diverse flora and fauna, with over 400 species of vascular plants recorded, including many national rarities, together with rare beetles, flies, bees and other insects. The plant and animal communities of Frilford Heath bear a strong resemblance to those found in the Brecklands of East Anglia. Outside this area such communities are rare and usually associated with coastal dunes.

Frilford Heath occupies gently undulating ground underlain by calcareous grit and Corallian limestone. Leaching has produced mostly dry, acidic soils which grade into base-rich areas wherever limestone reaches near the surface. This unusual combination of soils produces conditions in which calcicole (lime loving) and calcifuge (lime avoiding) plants grow in close proximity.

The heath was formerly dominated by ling *Calluna vulgaris*, but this has mainly been replaced by grassland dominated by red fescue *Festuca rubra* and sheep's fescue *F. ovina*, in which species such as common rockrose *Helianthemum nummularium* and stemless thistle *Cirsium acaule* occur in the lime-rich areas. The open sward contains many uncommon plants, some of which are represented here in their sole Oxfordshire locality, whereas sand pits and field boundaries support a rich ephemeral flora dominated by annuals. Notable species include striated catchfly *Silene conica*, maiden pink *Dianthus deltoides*, smooth cat's-ear *Hypochoeris glabra*, shepherd's cress *Teesdalia nudicaulis*, spring vetch *Vicia lathyroides*, hoary cinquefoil *Potentilla argentea*, field mouse-ear *Cerastium arvense*, bird's-foot *Ornithopus perpusillus* and the annual clovers *Trifolium striatum*, *T. scabrum*, *T. arvense* and *T. subterraneum*. The rare grasses dense silky bent *Apera interrupta* and mat-grass fescue *Nardurus maritimus* are locally frequent on open sandy soils. The heathland also contains scrub, dominated by gorse, hawthorn and blackthorn. Bracken and open oak woodland occur on the more acid soils.

Frilford Heath is a famous entomological site. Ten species of beetle recorded are otherwise known in Britain only from the Breckland district or the coast. The heath has an exceptional ant, bee and wasp fauna. The 51 species recorded include the solitary eumenid wasp *Microdynerus exilis*, a species only recently recognised as native to Britain. The uncommon solitary bee *Panurgus bankianus* is also recorded. The fly (Diptera) fauna includes one further Red Data Book species *Cheilosia mutabilis* and the nationally uncommon *Epistrophe diaphana*. There is a strong population of the scarlet tiger moth *Panaxia dominula* associated with its larval foodplant common comfrey *Symphytum officinale*.

A shallow valley running across the site supports a series of small wetland communities. A herbaceous fen situated on permanently waterlogged peat at the junction of a small reedbed and carr woodland has a wide range of plants which are very uncommon in Oxfordshire. These include blunt-flowered rush *Juncus subnodulosus*, black bog-rush *Schoenus nigricans*, spike rush *Eleocharis quinqueflora*, bog pimpernel *Anagallis tenella*, common butterwort *Pinguicula vulgaris*, adder's tongue *Ophioglossum vulgatum*, the cotton grasses *Eriophorum latifolium* and *E. angustifolium*. The exceptional orchid flora includes marsh helleborine *Epipactis palustris*, southern marsh-orchid *Dactylorhiza praetermissa*, early marsh-orchid *D. incarnata*, fragrant orchid *Gymnadenia conopsea* ssp. *densiflora* and the rare narrow-leaved marsh orchid *D. traunsteineri*.

The moss and liverwort flora recorded from the fen contains many species associated with moist and base-rich conditions, including *Bryum pseudotriquetrum*, *Campylium stellatum*, *Cratoneuron commutatum*, *Drepanocladus revolvens* and the uncommon marshland species *Mnium seligeri*.

Other types of wetland vegetation present include sedge-dominated communities, wet birch-oak woodland and a series of unpolluted ponds which support the uncommon stonewort *Chara hispida*.