

COUNTY: Norfolk

SITE NAME: ANT BROADS & MARSHES

DISTRICT: North Norfolk

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

Local Planning Authority: Broads Authority

National Grid Reference: TG 362 213

Area: 742.64 (ha) 1834.32 (ac)

Ordnance Survey Sheet 1:50,000: 134

1:10,000: TG 32 SW SE, TG 31 NE

Date Notified (Under 1949 Act):

1954 Barton Broad

Sutton Broad

1971 Ant Marshes

Date of Last Revision:

1968 – Barton Broad

1974 – Sutton Broad

– Ant Marshes

Date Notified (Under 1981 Act): 1989

Date of Last Revision: –

Other Information:

This is a composite site made up of the 3 former separate SSSIs known as Sutton Broad, Barton Broad and Ant Marshes. The site is listed in “A Nature Conservation Review” (Ratcliffe 1977) and is included within the Broads Environmentally Sensitive Area.

Reasons for Notification:

The flood-plain of the middle Ant valley, one of the 5 principal river valley systems constituting Broadland, supports one of the most extensive remaining areas of undeveloped primary fen habitats in Britain, and is considered to form the finest example of unpolluted valley fen in Western Europe. Nationally important stands of carr woodland are also present, principally in the vicinity of Barton Broad, and the wide range of wetland habitats has given rise to an associated fauna of exceptional interest.

In contrast with other Broadland river valleys, there are extensive areas of species-rich mixed fen communities that are still regularly cut for reed and sedge. Past management coupled with local hydrological and substrate variations has resulted in the development of the most diverse pattern of fen vegetation of all the Broadland valleys, and provides the only known sites for several plant communities and uncommon species that were once more widespread in Broadland. Further particularly distinctive features of the Ant Valley wetlands include the presence of numerous pools and turf ponds within the fen, plus a diversity of woodland types which exhibit similarities to those of the Bure Valley. The site also supports a wide range of breeding birds and insects including the majority of the broadland specialities.

Open Water and Marginal Swamp

The River Ant runs the length of the site and is extensively utilised by boat traffic. Closely associated with the river are three areas of open water created by the flooding of medieval peat-diggings, namely Sutton Broad, Cromes Broad and Barton Broad. Formerly, these areas supported a very rich flora and fauna, but nutrient enrichment over the last three decades has resulted in a marked deterioration in water quality and consequent disappearance of most aquatic plants. Algal blooms occur in summer, and the broads support only small amounts of aquatic macrophytes such as Yellow Water-Lily *Nuphar lutea* and White Water Lily *Nymphaea alba*.

Active measures are now being taken to reduce phosphate levels and restore a more diverse flora in Barton Broad. At the turn of the century, Sutton Broad was a large area of open water, but has now been reduced to a central navigable channel surrounded by a floating raft of fen vegetation. Crome's Broad, which lies in a small side-valley, is more isolated

from the river than the other three areas, and supports a less impoverished aquatic flora. Rigid Hornwort *Caratophyllum demersum* dominates, with small amounts of Water Starwort *Callitriche* spp present. Together with Barton Broad it attracts moderate numbers of wintering wildfowl, including Mallard, Teal, Wigeon, Shoveler, Pochard and Tufted Duck.

Area of Reedswamp dominated by Common Reed *Phragmites australis*, Lesser Reedmace *Typha angustifolia*, and more locally, Common Club-rush *Schoenoplectus lacustris*, occur around the margins of the Broads, providing a nesting habitat for wildfowl such as Gadwall, Pochard, Teal, Shoveler and Tufted Duck. Near Barton Broad, tussocks of Tussock-sedge *Carex paniculata* have gained a hold within areas of reedbed, depressing the vegetation and recreation swampy hollows between them. Here, a tall-fen vegetation has developed on the tops of tussocks, and this is prone to invasion by tree saplings with consequent development to swamp carr. Swamp vegetation also occurs in association with pools in the fen vegetation, locally dominated by Saw Sedge *Cladium mariscus* or Tufted Sedge *Carex elata*.

A network of species-rich dykes support an abundance of aquatic plants, including Frogbit *Hydrocharis morsus-ranae*, Water Violet *Hottonia palustris*, Spiked Water-milfoil *Myriophyllum spicatum* and the local Broadland species, Water Soldier *stratiotes aloides*.

Fen

Extensive areas of fen vegetation have developed on flat waterlogged floodplains on peat alongside the river, and show an outstanding range of variation, including plant communities almost wholly restricted to Broadland. These species-rich fens are principally dominated by Common Reed, and associates include Great Fen-sedge *Cladium mariscus*, Purple Small-reed *Calamagrostis canadensis*, Yellow Loosestrife *Lysimachia vulgaris*, Purple Loosestrife *Lythrum salicaria*, Common Valerian *Valeriana officianalis*, Yellow Iris *Iris pseudacorus*, Water Dock *Rumex hydrolapathum*, and a large population of Milk Parsley *Peucedanum palustre*. Associated with these, is a diverse understorey of Blunt-flowered Rush *Juncus subnodulosus*, Marsh Cinquefoil *Potentilla palustris*, and Purple Moor-grass *Molinia caerulea*, together with a variety of herbs such as Marsh Bedstraw *Galium palustre*, Water Mint *Mentha aquatica* and occasional Marsh Helleborine *Epipactis palustris*.

Within this tall-fen community there is considerable variation, and several distinct vegetation types can be recognised. Fairly extensive areas are managed as commercial sedge-beds cut on a three to four year rotation so that Great Fen-sedge has attained prominence. Black Bog-rush *Schoenus nigricans* is an important component of the understorey throughout much of the cut areas, and in derelict mowing-marshes, woody species such as Bog-myrtle *Myrica gale*, have invaded the open fen. Ferns are especially abundant and include Royal Fern *Osmunda regalis*, the uncommon Marsh Fern *Thelypteris palustris* and populations of the nationally rare Crested Buckler-fern *Dryopteris cristata*. In contrast, wetter areas remain as unmown primary fen, often developed as a floating mat of vegetation which has colonised open water, as at Sutton Broad. Cyperus sedge *Carex pseudocyperus*, Greater Spearwort *Ranunculus lingua* and Slender Sedge *Carex lasiocarpa*, are all markedly more frequent here than in other fen areas, and particularly notable species include Greater Water Parsnip *Sium latifolium*, Cowbane *Cicuta virosa*, and Fibrous Tussock-sedge *Carex appropinquata*.

An interesting community occurs along the edge of the fens where they back onto the valley slopes of the adjoining upland. Here, Purple Moor-grass is generally dominant with frequent Meadow Thistle *Cirsium dissectum* and Heather *Calluna vulgaris*, Cross-leaved Heath *Erica tetralix*, Mat Grass *Nardus stricta* and Tormentil *Potentilla erecta*.

Small pools and stands of mire vegetation occur in shallow depressions as an intimate mosaic within the tall fen, and are largely associated with nineteenth century peat-diggings and turf ponds. Such areas are relatively isolated from the influence of nutrient-rich river

water and support a number of plant communities not found elsewhere in Broadland. The numerous permanent pools attest to the high water levels throughout the year, and support a diversity of aquatic plants including the local species: Lesser Water-plantain *Baldellia ranunculoides*, Fen Pondweed *Potamogeton coloratus*, Marsh St John's wort *Hypericum elodes* and three species of Bladderwort *Utricularia* spp. These pools, together with associated wetter areas of fen, are of exceptional interest for their aquatic coleoptera (water-beetles), and indeed the site is considered to be the most important in Britain for this group. The many rare relict fen species present are indicative of an undisturbed post-glacial history, and include *Agabus striolatus*, *Hydranea palustris* and *Hypdroporus scalesciarius*.

Hydroseral succession has resulted in the development of particularly species rich communities in old turf-ponds, characterised by Slender Sedge, Bottle Sedge *Carex rostrata* and the notable Lesser Tussock Sedge *Carex diandra* over a carpet of bryophytes such as the uncommon mosses *Cinclidium stygium* and *Scorpidium scorpiodes*. Other species present include Common Cotton-grass *Eriophorum angustifolium*, Bogbean *Meyanthes trifoliata*, Grass-of-Parnassus *Parnassia palustris*, Great Sundew *Drosera anglica*, Bogsedge *Carex limosa*, Early Marsh-orchid *Dactylorhiza incarnata*, Marsh Lousewort *Pedicularis palustris* and the notable Narrow-leaved Marsh-orchid *Dactylorhiza traunsteineri*. The nationally rare Fen Orchid *Liparis loeselii* also grows here at one of its few British stations.

The site is of national importance for its fenland invertebrate fauna, and a considerable number of rare or notable species have been recorded from several groups. There is a large population of the Swallow-tail Butterfly *Papilio machaon brittanica*, whose larvae feed on Milk-Parsley, and it is the only known site in Britain for *Trogus lapidator*, a wasp parasite on the Swallowtail. 45 species of moth considered rare or notable are present, including the only British localities for the Small Dotted Footman *Pelosia obtusa*, whose larvae depend on algae attached to Reed litter. The weevil, *Ceutorhynchus querceti* is one of several rare coleoptera in addition to the water-beetles, and a particularly large number of rare or notable Diptera (Trueflies) has been recorded.