

COUNTY: CHESHIRE

SITE NAME: PETTYPOOL BROOK VALLEY

DISTRICT: Vale Royal

SITE REF: 15WCA

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

Local Planning Authority: CHESHIRE COUNTY COUNCIL, Vale Royal District Council

National Grid Reference: SJ 620700

Area: 47.02 (ha.) 116.19 (ac.)

Ordnance Survey Sheet 1:50,000: 118

1:10,000: SJ 66 NW, SJ 67 SW

Date Notified (Under 1949 Act): 1951

Date of Last Revision: 1979

Date Notified (Under 1981 Act): 1991

Date of Last Revision: –

Other Information:

Boundary amendment (addition and reduction). Site formerly known as Petty Pool.

Description and Reasons for Notification:

The wetland communities at the head of Pettypool, and those downstream along the course of Pettypool Brook, comprise Cheshire's most extensive and diverse valley mire system. The mature woodland with its abundant dead wood, and the extensive peatland habitats, offer a diversity of refugia which are particularly attractive to a wide range of insects. The site supports populations of a number of national and county rarities, making it one of the county's foremost invertebrate sites.

Situated on the north edge of Delamere Forest, 4 miles south west of Northwich, the valley lies in an undulating landscape of sandy soils deposited during the last glacial retreat.

Where the flow of acidic water draining from these sands has been impeded accumulations of peat have formed locally along the valley floor. Variations in local conditions and land management have subsequently allowed the development of a wide range of habitats including open water, emergent reedbeds, marginal fen, mossland, extensive carr woodland and small areas of dry acidic grassland and woodland.

The open water of Petty Pool, an artificially enlarged mere, supports small patches of floating vegetation and a narrow broken band of emergent swamp vegetation which is best developed where Pettypool Brook enters the pool. Stands are dominated by amphibious bistort *Polygonum amphibium*, yellow water-lily *Nuphar lutea*, lesser bulrush *Typha angustifolia*, bottle sedge *Carex rostrata* and common reed *Phragmites australis*.

The fen vegetation throughout the valley is typified by the presence of greater tussock-sedge *Carex paniculata* either in association with *Sphagnum* mosses, bottle sedge and marsh cinquefoil *Potentilla palustris* or, in more nutrient rich areas, by tall herbs and rushes such as reed canary-grass *Phalaris arundinacea* and sharp-flowered rush *Juncus acutiflorus*.

The extensive mosaic of poor and rich fen at the southern end of the site is the best example of these communities in Cheshire and supports a number of plant species of local rarity such as cyperus sedge *Carex pseudocyperus*, marsh pennywort *Hydrocotyle vulgaris*, marsh violet *Viola palustris* and common spotted-orchid *Dactylorhiza fuchsii*. Alder *Alnus glutinosa* and sallow *Salix cinerea* scrub is colonising the fen from the surrounding woodland margins demonstrating succession from fen to carr woodland.

Another area of poor fen north west of Churchill Wood grades into dry acidic grassland dominated by mat-grass *Nardus stricta*, a rare species in lowland Cheshire. In areas where there is limited lateral water movement, the more acidic conditions have favoured the

development of *Sphagnum* mossland with purple moor-grass *Molinia caerulea* under a canopy of downy birch *Betula pendula* as in the basin in the north west of the site.

The presence of greater tussock-sedge marks the transition into the alder dominated woodland more typical of the site. The frequency of the shade tolerant fen species such as common nettle *Urtica dioica*, yellow iris *Iris pseudacorus* and marsh-marigold *Caltha palustris* indicate the woodland's origin and its development in nutrient richer situations.

A different type of alder woodland rarely found in lowland Cheshire has developed on flushed slopes north west of Petty Pool. It contains very old coppiced alders with a ground layer of mosses and opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium*.

Areas of dry woodland also occur throughout the site. They are particularly important for their ancient specimens of pedunculate oak *Quercus robur* and beech *Fagus sylvatica*, the dead wood of which supports a characteristic invertebrate fauna. Clumps of over mature beech are scattered around Petty Pool, and many old oaks are found on open bracken *Pteridium aquilinum*-dominated slopes north west of the pool.

The attractiveness of the site to a wide variety of insects is one of its most important qualities and arises from both the diversity of habitats and the stability of the microhabitats and refugia they offer. The surroundings of Petty Pool have a long history of rare insect discoveries. In recent years, from dead wood on the site, the nationally rare beetle *Xyloterus signatus* has been re-found, with new records for the scarce species *Gnathoncus buyssoni* and *Oxypoda procerula*. Equally important are the invertebrate habitats offered by the tussocky vegetation and ancient tree bases of fen and carr areas. Another nationally rare beetle, *Dryocoetinus alni*, and the scarce *Psammoecus bipunctatus*, have been discovered recently in Churchill Wood.