

Site name: Chasewater and the Southern Staffordshire Coalfield Heaths **Unitary authority/county:** Staffordshire, Walsall

District: Cannock Chase, Lichfield

Status: Site of Special Scientific Interest (SSSI) notified under section 28C of the Wildlife and Countryside Act 1981, as inserted by Schedule 9 to the Countryside and Rights of Way Act 2000

Local Planning Authority: Staffordshire County Council, Walsall Metropolitan Borough Council, Lichfield District Council, Cannock Chase District Council

National Grid reference: SK035079 **Area:** 530.23 ha

Ordnance Survey Sheet: **1:50,000:** 128, 139 **1:10,000:** SK 00 NW, SK00NE, SK 01 SW

Notification date: 16 December 2010

Reasons for notification:

Chasewater and the Southern Staffordshire Coalfield Heaths SSSI is nationally important for its wet and dry lowland heath, fens (including habitats often referred to as mires and swamps) and oligotrophic (nutrient-poor) standing open water habitats, and for its populations of two nationally scarce vascular plant species: floating water-plantain *Luronium natans* (listed in Schedule 8 to the Wildlife and Countryside Act 1981, as amended) and round-leaved wintergreen *Pyrola rotundifolia* (a regional rarity).

General description:

Chasewater and the Southern Staffordshire Coalfield Heaths SSSI is located in southern Staffordshire between Norton Canes and Burntwood, and extends into Walsall. The SSSI stretches for seven kilometres, from Hednesford Hills in the north to Brownhills Common in the south and lies on unstratified, pebbly or gravelly boulder clay overlying Carboniferous Middle Coal Measures. Whilst the underlying geology has had some influence on the habitats found within the SSSI, the impact of human activity in the form of coal mining, the construction of Chasewater as a canal feeder reservoir and, more recently, the building of the M6 Toll motorway have had a far greater impact in shaping what is present today.

The construction of Chasewater and the operation of the Cannock Chase Collieries would have undoubtedly been highly destructive to the natural environment, but they also safeguarded areas of semi-natural habitat from other damaging influences such as intensive agriculture, forestry and development. Once the reservoir was completed and the collieries ceased to operate, plants and animals were able to recolonise the site. Recent developments have subsequently recognised the high wildlife value of the area and, through various habitat translocation and creation techniques, have minimised their impact by contributing to the restoration and enhancement of the local environment.

At various points the continuity of semi-natural habitats is interrupted by housing, roads and improved farmland. Nevertheless, the site's importance is enhanced by its strategic location in providing an ecological link between the nationally important heaths of Sutton Park, located nine kilometres to the south, and those of Cannock Chase, lying one kilometre to the north.

Wet and dry lowland heath

The lowland heathland has largely developed on land heavily influenced by past and more recent coal mining activities and, as a consequence, varies considerably in both age and origin. Whilst some of the heathland has been associated with the site for a considerable time, some is relatively recent in origin with the youngest having been established in the last twenty years as part of a derelict land reclamation scheme, a restoration scheme on an exhausted open-cast mine and a translocation associated with the construction of the M6 Toll motorway.

The dry heathland is dominated by heather *Calluna vulgaris* and wavy hair-grass *Deschampsia flexuosa*, with occasional or frequent bilberry *Vaccinium myrtillus*, cowberry *V. vitis-idaea*, crowberry *Empetrum nigrum*, Western gorse *Ulex gallii*, purple moor-grass *Molina caerulea* and bell heather *Erica cinerea*. Wetter areas, particularly to the north-west of Biddulph's Pool and on the north shore of Chasewater, support wet heathland communities. These are dominated by purple moor-grass, cross-leaved heath *Erica tetralix* and heather, with cranberry *Vaccinium oxycoccos*, cottongrasses *Eriophorum* spp. and various bog-mosses including *Sphagnum fallax*, *S. palustre*, *S. papillosum* and *S. capillifolium* occurring at lower frequencies.

Fens (including habitats often referred to as mires and swamps)

A number of fens have developed on the margins of the various water bodies, below Chasewater's main dam and within the lowland heathland. They include habitats often referred to as mires and swamps and vary in both size, from a few square metres to one hectare, and their water chemistry, from base-poor to base-rich. The water supply for some of these fens appears to be influenced by the chemistry of the spoil derived from abandoned coal workings. These fens contain a number of nationally and regionally scarce vascular plants and bryophytes.

The fens are numerous and scattered across the site. In the valley below the main (eastern) dam of Chasewater a complex of different fen types has developed. A small mire on the upper slopes dominated by lawns of *Sphagnum fallax* with cross-leaved heath, cranberry, common cottongrass and occasional round-leaved sundew *Drosera rotundifolia* merges into a community with water horsetail *Equisetum fluviatile*, marsh pennywort *Hydrocotyle vulgaris* and hemp agrimony *Eupatorium cannabinum* indicative of a more nutrient-rich water supply. As the valley broadens out into a basin and the soils are wetter, great willowherb *Epilobium hirsutum* and common reedmace *Typha latifolia* become dominant, water horsetail, marsh pennywort and hemp agrimony are still abundant, and species such as wild angelica *Angelica sylvestris*, marsh marigold *Caltha palustris*, marsh cinquefoil *Comarum palustre*, bottle sedge *Carex rostrata* and early marsh orchid *Dactylorhiza incarnata* are occasional.

A large, highly alkaline, spring-fed fen, fed largely from spring mounds built from concretions of deposited minerals, has developed on the north shore of Chasewater. This supports a remarkable flora containing sea club-rush *Bolboschoenus maritimus*, marsh arrow-grass *Triglochin palustris*, early marsh orchid and the nationally scarce round-leaved wintergreen *Pyrola rotundifolia*, within a matrix of common cottongrass, common sedge *Carex nigra* and common reedmace. Charophytes (stoneworts) and calcicolous bryophytes such as *Campylium stellatum*, *Drepanocladus polygamum*, *Riccardia* sp. and *Didymodon tophaceus* are associated with the spring mounds.

Open-water transition fens are located on the south side of the Wyrley and Essington Canal and on the north side of Biddulph's Pool. The former supports tubular water-dropwort *Oenanthe fistulosa*, star sedge *Carex echinata* and white sedge *Carex curta*. The latter site contains abundant bottle sedge, bog pondweed *Potamogeton polygonifolius* and *Sphagnum inundatum*.

A swamp on No Man's Bank is dominated by common sedge, marsh cinquefoil and common cottongrass, with bog pondweed, water horsetail and jointed rush *Juncus articulatus*. A small acidic basin mire dominated by common cottongrass *Eriophorum angustifolium* occurs

on Norton Bog. This is perhaps the only remnant of a more extensive area of bog that was destroyed by the tipping of mining waste.

Oligotrophic (nutrient-poor) standing open water

The oligotrophic open water habitat represented by the four main water bodies, Biddulph's Pool, Chasewater (including Jeffrey's Swag), the Slurry Pool and the Anglesey Branch of the Wyrley and Essington Canal, is rare elsewhere in Staffordshire and the wider West Midlands Region. Those that do exist are generally degraded. The characteristic flora is dependent on water that is low in nutrients and this has been maintained because the soils of the catchment are of low fertility, derived from the underlying pebbly or gravelly boulder clay, albeit heavily influenced by coal mining. Also, much of the catchment lies within the SSSI and is occupied by semi-natural vegetation managed under a low intensity agricultural regime. The four main water bodies still retain a flora, albeit slightly species-poor, typical of water bodies with a low nutrient status. Taken together, these water bodies have a good selection of characteristic species, including several that are nationally or regionally scarce.

The characteristic flora of Biddulph's Pool is dependent on acidic water, low in nutrients. Beds of broad-leaved pondweed *Potamogeton natans* occupy the deeper water and there is a natural transition from the open water through a marginal fen community into mature carr woodland.

Chasewater is a large lake with gently shelving margins on a semi-natural substrate of sand, gravels and pebbles. The transition from the surrounding heathland into the emergent and draw-down vegetation communities passes through thin and sporadic stands of water horsetail *Equisetum fluviatile*, common spike-rush *Eleocharis palustris*, common cottongrass, bog pimpernel *Anagallis tenella* and floating club-rush *Eleogiton fluitans*, before giving way to an almost continuous stand of shoreweed *Littorella uniflora* and small-fruited yellow-sedge *Carex oederi*. These are joined in places by occasional needle spike-rush *Eleocharis acicularis* and the nationally scarce floating water-plantain *Luronium natans*. Generally, tall marginal emergents are scarce, but siltier parts of the drawdown zone are dominated, seasonally, by marsh yellow-cress *Rorippa palustris* and marsh cudweed *Filaginella uliginosa*, along with scarce species such as orange foxtail *Alopecurus aequalis* and golden dock *Rumex maritimus*.

Unlike Biddulph's Pool, the Slurry Pool is quite unusual in that it is oligotrophic, but with moderate alkalinity and levels of calcium carbonate. This has allowed lawns of the charophyte (stonewort) *Chara virgata* to develop across the bottom of the pool. Aquatic plants include shining pondweed *Potamogeton lucens*, lesser pondweed *Potamogeton pusillus*, broad-leaved pondweed, spiked water-milfoil *Myriophyllum spicatum* and mare's-tail *Hippuris vulgaris*. Significant stands of lesser reedmace *Typha angustifolia* and common reed *Phragmites australis* can be found around the margins of the pool.

The Anglesey Branch canal is perhaps the most botanically diverse water body within the site. Aquatic plants are abundant with large beds of fan-leaved water-crowfoot *Ranunculus circinatus* and shining pondweed throughout. Other species include the nationally scarce flat-stalked pondweed *Potamogeton friesii*, curled pondweed *Potamogeton crispus*, spiked water-milfoil and amphibious bistort *Persicaria amphibian*. Shoreweed and the nationally scarce floating water-plantain both occur along the margins.

Vascular plants

Populations of floating water-plantain occur in both Jeffrey's Swag and the Anglesey Branch of the Wyrley and Essington Canal. Round-leaved wintergreen *Pyrola rotundifolia* can be found in the heathlands and on the edge of the fen vegetation on the north shore of Chasewater.

The mosaic of habitats present on the site supports a diverse range of birds. Over 140 species are regularly recorded in any year. A large roost of gulls *Larus* spp. assembles during the winter and the number of lesser black-backed gulls *Larus fuscus* can exceed 4,000 individuals. A range of other wintering waterfowl are also present with tufted duck *Aythya fuligula* often approaching nationally important numbers on Chasewater.