

COUNTY: SOMERSET

SITE NAME: PRIDDY POOLS

DISTRICT: MENDIP

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

Local Planning Authority: MENDIP DISTRICT COUNCIL, SOMERSET COUNTY COUNCIL

National Grid Reference: ST 545510

Area: 52.7 (ha) 130.2 (ac)

Ordnance Survey Sheet 1:50,000: 182

1:10,000: ST 55 SW

Date Notified (Under 1949 Act): 1967

Date of Last Revision: 1972

Date Notified (Under 1981 Act): 1986

Date of Last Revision: –

Other Information:

Site boundary amended. Site includes 2 SSSIs formerly known as St Cuthbert's Cave and Priddy. The Priddy Pools are managed by the Somerset Trust for Nature Conservation. Site lies within the Mendip Hills Area of Outstanding Natural Beauty.

Description and Reasons for Notification:

Biological

This site supports a very rich invertebrate and amphibian fauna. A wide range of semi-natural habitats are present, including valley mire, open water, swamp and tall fen. These habitats have a restricted distribution in the Mendip Hills. Priddy Pools is situated in the central Mendip lead orefield and the ecology of the area bears the mark of the lead industry. Spoil heaps are frequent, especially in the southern part of the site. The northern pool was dammed in the 1850s to provide a supply of running water for the sifting and washing of slag. Lead was processed at St Cuthbert's Works until 1908.

Priddy Pools (260m) occupies the head of a valley that has formed on the southern edge of the Mendip plateau. Peaty gleyed podzols of the Thrupe series and podzols of the Ashen series have developed on the underlying Porthishead Beds of the Old Red Sandstone. The poorly drained soils of the Thrupe series are restricted to the valley bottom.

The hydrology of the site is complex. Nutrient-poor water flows from springs in the north of the site to St Cuthbert's Swallet where it disappears before re-emerging at Wookey Hole. A valley mire has developed in the area immediately to the south of the springs. *Sphagnum recurvum* and *S. auriculatum* are the most frequent mosses. Common Cottongrass *Eriophorum angustifolium*, Brown Bent *Agrostis canina*, Soft Rush *Juncus effusus* and Jointed Rush *J. articulatus* are common. Other species include Deergrass *Tricophorum cespitosum*, Purple Moor-grass *Molinia caerulea*, Cross-leaved Heath *Erica tetralix* and Bog Asphodel *Narthecium ossifragum*. The valley mire grades into the shallow nutrient poor northern pool which is fringed by swamp communities dominated by (i) Water Horsetail *Equisetum fluviatile*, (ii) Common Spike-rush *Eleocharis palustris*, (iii) Bottle Sedge *Carex rostrata* and (iv) Soft Rush *Juncus effusus*. Bulbous Rush *J. bulbosus* is the dominant submergent.

Soils in the valley bottom to the south of this pool appear to be more nutrient rich. This change is probably a consequence of disturbance caused by the lead industry. Many of the spoil heaps have been colonised by species typical of mesotrophic grassland such as False Oat-grass *Arrhenatherum elatius*, Soft-brome *Bromus mollis*, Yellow Oat-grass *Trisetum flavescens*, Yellow Rattle *Rhinanthus minor*, Cowslip *Primula veris* and Lady's Bedstraw *Galium verum*. The southern pool is relatively nutrient-rich and is fringed by a broad

band of Common Reed *Phragmites australis* with Greater Tussock Sedge *Carex paniculata*, Bulrush *Typha latifolia* and Water Horsetail. Canadian Pondweed *Elodea canadensis* and Broad-leaved Pondweed *Potamogeton natans* are the dominant submergents.

A mosaic of acid dry dwarf-shrub heath and acidic grassland occurs on the drier valley slopes. Heath species include Heather *Calluna vulgaris*, Bell Heather *Erica cinerea*, Gorse *Ulex europaeus* and Western Gorse *U. gallii*. Bilberry *Vaccinium myrtillus* is rare. The acidic grassland is dominated by Heath Moor-grass although Wavy Hair-grass *Deschampsia flexuosa* is also common. Other species include Prickly Sedge *Carex muricata* ssp *lamprocarpa*, Sheep's Fescue *Festuca ovina*, Heath Bedstraw *Galium saxatile* and Tormentil *Potentilla erecta*.

Additional interest lies in the flora that can tolerate high concentrations of lead in the soil such as Spring Sandwort *Minuartia verna* and the moss *Ditrichum plumbicola*.

Priddy Pools supports a very rich fauna. 15 species of dragonfly have been recorded including the notable Four-spotted Chaser *Libellula quadrimaculata* and Ruddy Darter *Sympetrum sanguineum*. Five British species of amphibian occur and there are good populations of Great-crested Newt *Triturus cristatus*, Smooth Newt *T. vulgaris* and Palmate Newt *T. helveticus*. 3 species of reptile, Viviparous Lizard *Lacerta vivipara*, Adder *Vipera berus*, Grass Snake *Natrix natrix*, and at least 2 species of fish; Perch, *Perca fluviatilis* and Three-spined Stickleback *Gasterosteus aculeatus* are present. Breeding birds include Moorhen *Gallinula chloropus*, Coot *Fulica atra*, Mallard *Anas platyrhynchos*, Reed Bunting *Emberiza schoeniclus* and Sedge Warbler *Acrocephalus schoenobaenus*.

Priddy Pools is an important research site. Detailed study of the algae in the northern pool was carried out in the late 1960s and early 1970s, as part of the International Biological Programme.

#### Geological

The site contains the entrance to St Cuthbert's Swallet Cave, and overlies a large part of the cave complex reached through St Cuthbert's Swallet. This cave is an integral part of the Priddy Caves system which contains over 10 miles of surveyed cave passages divided between two major systems and four minor systems, all interconnected. All the caves are sink hole systems, fed by sink holes at the ground surface, and 3 of them exceed 100 metres in depth; in all the caves the detailed disposition and form of the passages can be seen clearly to have followed marked lines of natural weakness in the rocks. St Cuthbert's Swallet was formed by the erosive action of water flowing beneath the water-table at considerable depth (so called "phreatic development"). St Cuthbert's Swallet is a classic example of a deep phreatic cave system, containing inclined bedding plane mazes at many levels, fault-guided rifts and some significant chambers. Nine successive phases of sediment deposition, stalagmite deposition and stream erosion have been recognised in St Cuthbert's Swallet, providing an exceptional record of environmental change through the warm and cold phases of the Ice Age.