

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

POWYS

RIVER ITHON

Date of Notification: 2001

National Grid Reference: SO 080 694

O.S. Maps: 1:50,000 Sheet number: 136, 147 & 148
1:10,000 Sheet number: SO 05 NW & NE
SO 06 SW, SE, NW & NE
SO 07 SE & NE
SO 08 SE
SO 16 SW, NW & NE
SO 17 SW, SE & NW

Site Area: 176.6 ha

Description:

River Wye

The Wye system, comprising the River Wye and several of its tributaries including the River Ithon, represents a large, linear ecosystem, which acts as an important wildlife corridor, an essential migration route and a key breeding area for many nationally and internationally important species. The Wye is of special interest for its associated plant and animal communities. Its character spans a range of types from an upland base-poor stream to an estuarine, silty lowland river. The river's overall diversity is a product of its underlying geology soil types, adjacent land use and hydrology.

The River Wye forms one of the longest rivers in England and Wales. From its source to its confluence the main channel is 250 kms long, drains a catchment of 4136 km sq. and has the fourth largest flow of any river in England and Wales. Rising at an altitude of 680 m on Pumlumon Fawr in Powys, the Wye meanders down through Wales, Herefordshire and Gloucestershire, finally entering the Severn Estuary at Chepstow.

River Ithon

The site is of special interest for its mesotrophic river types, which include communities containing water crowfoot *Ranunculus* spp. It supports important populations of otter *Lutra lutra*, Atlantic salmon *Salmo salar*, bullhead *Cottus gobio*, brook lamprey *Lampetra planeri* and river lamprey *Lampetra fluviatilis*.

The headwaters support more oligotrophic aquatic communities and extensive areas of semi-natural riparian habitats can still be found next to the Ithon and its tributaries. These include semi-natural woodland, dry and marshy grassland, stands of tall fen and marsh vegetation and

gravel banks. The site also includes back channels and oxbows that support otters and waterfowl and provide valuable refuges for small fish and invertebrates in times of flood.

The site includes the River Ithon from its headwaters to the confluence with the River Wye, and a number of important tributaries such as the Gwenlas Brook, Migram's Brook, Camddwr, River Aran, Mithil Brook, Clywedog Brook, River Dulas and Howey Brook. Together they form a representative series of mid-altitude, mesotrophic watercourses that have characteristics of both northern and south-western British types. The Ithon catchment is situated on a plateau, located between the Radnor Forest in the east and the Cambrian Mountains to the west, which drains towards the Wye valley in the south. It rises at an altitude of 400 m above sea level on Kerry Hill south of Newtown and descends gently to an altitude of 150 m where it enters the Wye below Newbridge-on-Wye. The catchment comprises largely agricultural land with significant areas of permanent pasture, broadleaved woodland and other semi-natural vegetation.

Most of the Ithon catchment has developed on sedimentary rocks of Silurian age but these show a number of distinctive local variations in texture, hardness and base status. Parts of the river and its lower tributaries cross Ordovician rocks and, between Cefnlllys and Alpine Bridge, the Ithon crosses several major fault zones where volcanic rocks, such as dolerite, have intruded into Ordovician shales. In large areas of the Ithon basin the rivers and streams meander through a flood plain composed of glacial till, outwash gravels and more recent river alluvium. Though rock sections are uncommon in the bed of the Ithon, the orientation of the river's course indicates that it is controlled by features in the solid geology, such as faults and folds in the valley floor. In places meanders have cut into the margins of the alluvial plain, exposing rock sections in river cliffs or at the foot of bluffs. The soils in the catchment vary from well-drained calcareous brown earths to acidic clays, although the majority are neutral to base-rich.

The middle and lower reaches of the River Ithon, River Aran, Mithil Brook, Clywedog Brook, River Dulas and Howey Brook support plant communities that are typical of mesotrophic rivers and streams. Typical aquatic plants include intermediate water starwort *Callitriche hamulata*, alternate water-milfoil *Myriophyllum alterniflorum*, amphibious bistort *Polygonum amphibium*, broad-leaved pondweed *Potamogeton natans*, stream water-crowfoot *Ranunculus penicillatus* subsp. *pseudofluitans* (both in its typical form and var. *vertumnus*), and the water mosses *Fontinalis antipyretica* and *F. squamosa*. Rocks in the flood zone support species such as the mosses *Amblystegium fluviatile*, *Brachythecium rivulare*, *Cinclidotus fontinaloides* and *Schistidium alpicola* var. *rivulare*, the liverwort *Chiloscyphus polyanthos* and the lichens *Dermatocarpon luridum* and *Verrucaria praetermissa*. Common emergent species include common spike-rush *Eleocharis palustris*, floating sweet-grass *Glyceria fluitans*, water mint *Mentha aquatica*, water forget-me-not *Myosotis scorpioides*, reed canary-grass *Phalaris arundinacea* and branched bur-reed *Sparganium erectum*. Downstream from Penybont, the Ithon becomes deeper and slow flowing in places. Species indicative of more eutrophic, lowland conditions predominate here such as small pondweed *Potamogeton berchtoldii*, curled pondweed *P. crispus*, perfoliate pondweed *P. perfoliatus*, river water-crowfoot *Ranunculus fluitans*, fool's water-cress *Apium nodiflorum*, great willowherb *Epilobium hirsutum*, yellow loosestrife *Lysimachia vulgaris*, bittersweet *Solanum dulcamara*, unbranched bur-reed *Sparganium emersum*, marsh woundwort *Stachys palustris* and filamentous algae *Hildenbrandia rivularis* and *Lemanea fluviatilis* are characteristic of these sections.

The tributaries feeding the upper Ithon, including the Gwenlas Brook, Migram's Brook and Camddwr, are more oligotrophic, and this is reflected in the flora. Alternate water-milfoil and

the moss *Fontinalis antipyretica* are prominent in places but other large aquatic and emergent species are scarce. The lower plant communities are well developed here and include characteristic upland species, such as the mosses *Calliergon cuspidatum*, *Hygrohypnum ochraceum* and *Rhyncostegium riparioides* and the liverwort *Pellia epiphylla*. Woodland is widespread along the river and stream banks, dominated variously by alder *Alnus glutinosa*, willows *Salix* spp., ash *Fraxinus excelsior* and oak *Quercus* spp. Wet areas that are protected from grazing stock support a tall vegetation dominated by meadowsweet *Filipendula ulmaria*, with frequent wild angelica *Angelica sylvestris*, common valerian *Valeriana officinalis*, common marsh bedstraw *Galium palustre*, ragged robin *Lychnis flos-cuculi*, marsh marigold *Caltha palustris*, water avens *Geum rivale*, lesser spearwort *Ranunculus flammula*, hemlock water-dropwort *Oenanthe crocata*, greater bird's-foot-trefoil *Lotus pedunculatus*, lady fern *Athyrium filix-femina* and great horsetail *Equisetum telmateia*. Grassland dominated by bents *Agrostis* spp. and fescues *Festuca* spp. is widespread along the banks of the upper Ithon and its tributaries, whilst wetter pasture is largely dominated by rushes *Juncus* spp. and purple moor-grass *Molinia caerulea*. Old back channels contain swamp vegetation that includes rushes, floating sweet-grass, tall sedges *Carex* spp., yellow iris *Iris pseudacorus*, and the uncommon wood club-rush *Scirpus sylvaticus*. Partly vegetated shingle bars occur throughout the river system and support a range of characteristic plants including marsh cudweed *Gnaphalium uliginosum*, water pepper *Polygonum hydropiper*, marsh yellow-cress *Rorippa palustris*, procumbent pearlwort *Sagina procumbens*, tansy *Tanacetum vulgare* and colt's-foot *Tussilago farfara*.

The upper Wye and its tributaries support one of the strongest populations of otters in England and Wales. This species is threatened by habitat destruction, disturbance and pollution throughout its European range. Otters rely on woodland, scrub and tall bankside vegetation for cover. Their holts can be located on the riverbank or in other suitable dense vegetation at some distance from the edge of the river channel.

A range of fish species occur in the Ithon and its tributaries. The system provides important spawning areas for Atlantic salmon, and juvenile salmon are present throughout. Brook and river lamprey are present in the main river and may also spawn in the tributaries. Bullhead are abundant everywhere.

Although not of special interest, the site supports a range of breeding birds that are associated with riparian habitats, including grey heron *Ardea cinerea*, common sandpiper *Actitis hypoleucos*, grey wagtail *Motacilla cinerea*, dipper *Cinclus cinclus*, kingfisher *Alcedo atthis* and sand martin *Riparia riparia*. The river and bankside trees support large populations of flying insects, which provide an important food source for bats, including Daubenton's bat *Myotis daubentonii*. The exposed riverine sediments support two nationally scarce beetles, the rove beetle *Deleaster dichrous* and the ground beetle *Tachys parvulus*. White-clawed crayfish *Austropotamobius pallipes* were recorded in 1987 near Llandewi Ystradenni.

Remarks:

The site supports the following habitats and species covered by the EC Habitats Directive (Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora):

Rivers with floating vegetation often dominated by water-crowfoot - Annex I

Common otter - Annex II and IV

Atlantic salmon - Annex II and V

Bullhead - Annex II
River lamprey - Annex II and V
Brook lamprey - Annex II

Otter is also listed in Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended).

*This document is **NOT** a definitive legal version and has been formatted, updated and partially edited for use on the CCW Web site. This document should not be used in any legal proceedings, public enquiry or any other hearing or appeal. If you require a full legal copy of the document please contact CCW in writing.*