

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

CEREDIGION / PEMBROKESHIRE / CARMARTHENSHIRE

AFON TEIFI

Date of Notification: 1997

National Grid Reference: SN785675 to SN158502

O.S. Maps:

1:50,000 Sheet number:	145,146,147
1:10,000 Sheet number:	SN14 SE,NE SN23 NE,NW,SE SN24 SE,SW SN33 SE,SW SN34 SE,SW,NW SN43 NW, NE SN44 SE,SW,NW SN54 NE,NW,SW SN55 SW,SE SN64 NW SN65 NE,NW,SW,SE SN66 NE,SE SN76 NE,NW,SW

Site Area: 772.6 ha

Description:

Afon Teifi rises at an altitude of 455m at Llyn Teifi on the western slopes of the Cambrian mountains. It flows south-west, through the raised mire complex of Cors Caron and on through the Teifi Gorge, entering Cardigan Bay at Cardigan. The geology consists of Ordovician and Silurian mudstones, siltstones and sandstones, that are extensively mantled by Quaternary deposits of variable, but sometimes considerable thicknesses. These consist of sands and gravels, glacial lake clays, alluvium and peat. Afon Teifi is of special interest for a range of river types and associated riverside habitats; flowering plants; bryophytes; otter; Cetti's warbler; bottlenose dolphin; brown hairstreak; fish; dragonflies and a variety of other invertebrates as well as both breeding and wintering bird communities and for geomorphological features at Cenarth and Cors Caron. Ten tributaries; the Cych, Clettwr, Grannell, Ceri, Dulas, Piliau, Groes, Tyweli, Cerdin and Brefi, are also included in the site.

Geomorphology:

The Teifi valley is notable for a range of geomorphological features exemplified by SSSI sites at Cors Caron and Cenarth. At Cors Caron, Afon Teifi flows through an area of fine-grained lake sediments and provides an exceptional opportunity for studying fluvial transport processes dominated by suspended sediment movement. It provides a marked contrast with the upstream and downstream reaches where coarse bedload transport is dominant, which is more typical of

upland rivers in mid-Wales. There are also important contrasts in bank erosion and stability within the site that are associated with variations in the vegetation.

The Teifi at Cenarth exemplifies several such river gorges along its course, as at Cilgerran, Henllan, Alltcavan, Llandysul and Llanllwni. These were fashioned by glacial meltwater across spurs during ice-sheet melting. This event was followed by the development of Lake Teifi, a large proglacial lake. After lake drainage, the Teifi took a preferred route along the meltwater gorges, thus abandoning its Apreglacial course that is still evident in nearby abandoned dry valleys that are infilled by thick accumulations of glacial lake clays.

Biology:

Upstream of Cors Caron the Afon Teifi is an upland oligotrophic (nutrient-poor) river. Where it runs through peat, species such as the liverwort *Scapania undulata* and bog pondweed *Potamogeton polygonifolius* with filamentous green algae occur within the channel, with species including purple-moor grass *Molinia caerulea*, mat grass *Nardus stricta* and bog-mosses *Sphagnum* spp. characteristic of the channel margins. Where the channel crosses rocky areas or mineral soil, the channel is often shaded by willows *Salix* spp. and the channel flora consists mainly of shade-tolerant lower plants including *Scapania undulata* and the mosses *Racomitrium aciculare* and *Rhynchostegium ripariodes*, with filamentous algae and lichens *Verrucaria* spp. occurring on cobbles.

Afon Teifi, as it flows through Cors Caron, supports a distinctive plant community which reflects the slow flow, the oligotrophic water and the more mesotrophic (less nutrient-poor) banks, with clay and alluvium as well as peat. Typical species here are water horsetail *Equisetum fluviatile*, water sedge *Carex aquatilis* and broad-leaved pondweed *Potamogeton natans*. Cors Caron has an important regulatory influence on flows in the Afon Teifi between Tregaron and Llandysul. The river, along most of this length, supports species including stream water-crowfoot *Ranunculus penicillatus* ssp. *penicillatus*, unbranched bur-reed *Sparganium emersum* and common water-starwort *Callitriche stagnalis*. Similar vegetation occurs in the Grannell and Dulas tributaries which join the Afon Teifi along this stretch, but in the smaller streams few aquatic higher plant species occur, although intermediate water-starwort *C. hamulata* is characteristic. The liverwort *Pellia epiphylla* is common on clay banks in the small streams.

A short stretch of the main Afon Teifi around Llanybydder supports mesotrophic to eutrophic (nutrient-rich) vegetation including intermediate water-starwort, Canadian waterweed *Elodea canadensis* and branched bur-reed *Sparganium erectum*.

Below Llandysul, Afon Teifi is generally mesotrophic with species including common duckweed *Lemna minor*, stream water-crowfoot and alternate water-milfoil *Myriophyllum alterniflorum* occurring, together with a range of bryophytes including *Cinclidotus fontinaloides*, *Rhynchostegium riparioides* and *Fontinalis squamosa*. Reed canary-grass *Phalaris arundinacea* is a characteristic bankside plant.

The Cych and Clettwr tributaries support oligotrophic to mesotrophic communities, with species including hemp-agrimony *Eupatorium cannabinum* and bittersweet *Solanum dulcamara* characteristic of the banks and stream water-crowfoot *Ranunculus penicillatus* ssp. *pseudofluitans* within the channel on the Cych. The mosses *Hygrohypnum ochraceum* and *Fontinalis squamosa* are present.

The Teifi Marshes support extensive *Phragmites australis* reedbeds and a mosaic of flood-plain fen, swamp, grassland and saltmarsh communities displaying transitions between freshwater and brackish communities. Woodland, scrub and hedgerows add to the diversity of the marshes. Estuarine alder *Alnus glutinosa* carr at Rosehill is of particular interest.

In the upper reaches of the Teifi Estuary intertidal flats are predominantly muddy. In the lower reaches sand flats, shingle with associated vegetation and saltmarsh occur.

Afon Teifi is the major British stronghold of the nationally rare northern yellow-cress *Rorippa islandica*. The nationally scarce floating water-plantain *Luronium natans* occurs in the Teifi pools and in a number of other locations on the Afon Teifi, including Cors Caron. Five other nationally scarce higher plant species and seven species rare in west Wales also occur within the site. Afon Teifi is the only known site in Wales for the hybrid pondweed *Potamogeton x olivaceus*. It supports an important assemblage of bryophyte species including the only known Welsh populations of the nationally rare multi-fruited river moss *Cryphaea lamyana* and four other bryophytes listed in the European Red Data Book.

Afon Teifi is of high invertebrate interest and eight Red Data Book species are known to occur, including the caddis flies *Oecetis notata* and *Ylodes simulans* and the five-spot ladybird *Coccinella quinquepunctata*. The Red Data Book whorl snail *Vertigo lilljeborgi* occurs in riverside backwaters and wetlands. Thirty four nationally scarce invertebrates have been recorded, including brown hairstreak *Thecla betulae*, with the freshwater pearl mussel *Margaritifera margaritifera* being of particular interest. Fifteen breeding dragonfly species, including the club-tailed dragonfly *Gomphus vulgatissimus*, have been recorded on the Teifi Marshes and nearby stretches of the river.

The otter *Lutra lutra* is widespread along Afon Teifi and its tributaries where appropriate bankside cover exists. Water vole *Arvicola terrestris* has been recorded. The river corridor, including bankside tree cover, bridges and other structures, provides valuable feeding habitat, and some roosting habitat, for up to eleven bat species, including Daubenton's bat *Myotis daubentonii*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*.

Afon Teifi and its tributaries support non-migratory fish species including native brown trout *Salmo trutta fario*, pike *Esox lucius* and important populations of brook lamprey *Lampetra planeri* and bullhead *Cottus gobio*. Migratory fish which spawn within the river system include river lamprey *L. fluviatilis*, sea lamprey *Petromyzon marinus*, Atlantic salmon *S. salar*, sea trout *S. trutta trutta* and the eel *Anguilla anguilla*. Grayling *Thymallus thymallus* and the rare allis shad *Alosa alosa* have also been reported.

Afon Teifi supports a range of breeding birds including dipper *Cinclus cinclus*, kingfisher *Alcedo atthis*, sand martin *Riparia riparia* and sedge warbler *Acrocephalus schoenobaenus*. Associated wetlands provide feeding habitats for waders such as lapwing *Vanellus vanellus*, snipe *Gallinago gallinago*, curlew *Numenius arquata* and redshank *Tringa totanus*. The Teifi Marshes are of particular ornithological significance and support important populations of breeding birds including snipe, water rail *Rallus aquaticus*, reed bunting *Emberiza schoeniclus*, reed warbler *Acrocephalus scirpaceus* and the rare Cetti's warbler *Cettia cetti*, the latter at the north-west limit of its range. The lower reaches of the river, together with the associated marshes hold a

notable range of wintering waterfowl.

Bottlenose dolphin *Tursiops truncatus* and harbour porpoise *Phocoena phocoena* have been recorded in the estuary.

Remarks:

The Teifi Marshes form part of the Welsh Wildlife Centre owned by the Wildlife Trust, West Wales.

The Afon Teifi site includes parts of the Cors Caron and Coedmor National Nature Reserves.

Cors Caron is also a site designated as a wetland of international importance under the terms of the Ramsar Convention.

The source of Afon Teifi falls within the Elenydd-Mallaen Special Protection Area.

Afon Teifi supports the following species and habitats covered by European Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora:

Floating vegetation of *Ranunculus* of plain, submountainous rivers - Annex I

Floating water plantain *Luronium natans* - Annex II

Otter *Lutra lutra* - Annex II and IV

Atlantic Salmon *salmo salar* - Annex II and IV

Bullhead *Cottus gobio* - Annex II

Allis shad *Alosa alosa* - Annex II and V

Brook lamprey *Lampetra planeri* - Annex II

Sea lamprey *Petromyzon marinus* - Annex II

Grayling *Thymallus thymallus* - Annex V

Freshwater pearl mussel *Margaritifera margaritifera* - Annex II and IV

River lamprey *Lampetra fluviatilis* - Annex II and V

Bottlenose dolphin *Tursiops truncatus* - Annex II and IV

Harbour porpoise *Phocoena phocoena* - Annex II and IV

Daubenton's bat - Annex IV

Pipistrelle bat - Annex IV

Lesser horseshoe bat - Annex II

Brown long-eared bat - Annex IV

Natterer's bat - Annex IV

Brandt's bat - Annex IV

Whiskered bat - Annex IV

Noctule bat - Annex IV

Greater horseshoe - Annex II

Serotine bat - Annex IV

Leisler's bat, - Annex IV

Otter, daubenton's bat, pipistrelle bat, lesser horseshoe, brown long-eared bat, Natterer's bat, Brandt's bat, whiskered bat, noctule bat, greater horseshoe, serotine bat, Leisler's bat, freshwater pearl mussel, bottlenose dolphin, brown hairstreak and harbour porpoise are listed under Schedule 5 of the Wildlife and Countryside Act 1981, (as amended).

Floating water plantain *Luronium natans* and multi-fruited river moss *Cryphaea lamyana* are listed under Schedule 8 of the Wildlife and Countryside Act 1981, (as amended).

Cetti's warbler is listed under Schedule 1 of the Wildlife and Countryside Act 1981, (as amended).

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