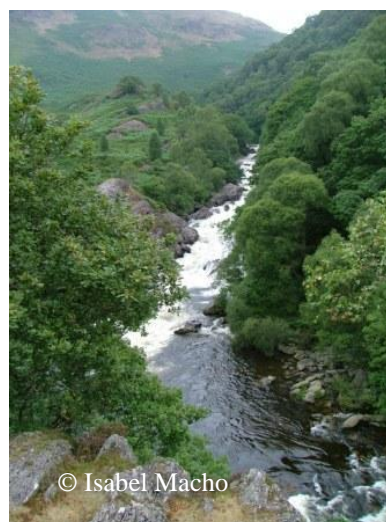


## CARMARTHENSHIRE LBAP FRESHWATER HABITATS ACTION PLAN

### Introduction

This grouped habitat action plan (HAP) includes rivers, ponds, aquifer-fed fluctuating water bodies, mesotrophic lakes and oligotrophic and dystrophic lakes. It also includes canals. It is closely linked to the wetlands HAP.

The county has a rich and intricate network of **rivers** and streams (*Afonydd*), ranging from narrow, deeply incised upland streams to the more gentle lowland meandering sections of the river Tywi. This range of freshwater habitats supports plants and animals (flora and fauna) characteristic of these habitats, and the network of watercourses acts as a corridor for wildlife movement throughout the county, linking wetland sites and bringing wildlife into the heart of our urban centres. The wildlife value of the county's rivers is recognised at a European and national level through the designation of the Tywi and Teifi, together with the Taf, Gwendraeth and Loughor estuaries, as Sites of Special Scientific Interest (SSSIs) and Special Areas of Conservation (SACs).



The mosaic (variety) of habitat features found in rivers and streams can support a diverse range of plants and animals; riffles, runs and pools support aquatic species, exposed river sediments such as shingle beds and sand bars are important for a range of invertebrates, notably ground beetles, spiders and crane flies. Sand martins nest in exposed banks and little ringed plovers nest on the shingle bars, whilst marginal and bankside vegetation sustain an array of fauna and flora. Rivers and streams can often provide an important wildlife corridor link between fragmented habitats in intensively farmed areas and support a range of priority BAP species including otter, water vole, shad, and freshwater pearl mussel.

Headwaters are also a BAP habitat. These are small-scale environments that are much neglected and important for many plants and invertebrates. The scope to restore headwaters and wetlands simultaneously in projects should be considered.

The streams of the upland valleys are important spawning and nursery areas for salmon and sea trout (sewin), which use the boulder-strewn 'riffle-pool' stretches for food and cover. The Tywi, together with its tributary the Cothi, and the Teifi, are famous as salmon and trout rivers, with the Tywi recognised as one of the premier sea trout rivers in the British Isles, providing vital commercial income to the local area.

In contrast to the fast-flowing upland streams are the lowland drainage ditches on the coastal flats of Carmarthenshire. They are important for a range of wildlife including the increasingly threatened water vole and plant, invertebrate and bird species and are an integral part of the coastal grazing marsh landscape.

Our rivers and streams are also widely appreciated by the general public. The beauty and biodiversity value of our major rivers is a major tourist asset to the county.

Another important freshwater habitat is the country's only example of an **aquifer-fed naturally fluctuating water body** (*Dyfroedd a gyflenwir gan ddyfrhaen, ac sy'n arddangos amrywiadau naturiol yn lefel y dŵr*). These are temporary lakes, called turloughs and found in areas of carboniferous limestone. Turloughs have no visible inlet or outlet streams but are fed from groundwater. They are unique environments both in terms of the geology and the rare wildlife which they support. As they are fed from groundwater they regularly fill with water in winter and empty in the summer. In Carmarthenshire Pant-y-llyn turlough can be found at the eastern end of Carmel Woods SAC. It is usually empty by June–July and fills again from October to December.

Other freshwater habitats in Carmarthenshire include our **lakes** (*Llynoedd*) – a number of which are designated as SSSIs. Talley Lake (SN631337), Llyn Pencarreg (SN537456) and Llyn Llech Owain (SN568151) are all SSSIs, the latter two examples of nutrient-poor (oligotrophic) water bodies. Other examples of larger waterbodies in the county include Taliaris Lake and Lliedi Reservoirs.

The county is not renowned for its **ponds** (*Pyllau dŵr*) and many of the larger examples have been created as a result of industry, e.g. Machynys Ponds in Llanelli created as a result of digging out clay for bricks in the nineteenth century. Bishops Pond (SSSI) at Abergwili is one of the best examples of open water in the county – it is a cut off ox-bow lake from the river Tywi. Some of our ponds have recreational value and are stocked with fish, e.g. Cwm-yr-Oernant ponds at Carmarthen and Old Castle Pond in Llanelli. The Wildlife and Wetlands Trust at Penclacwydd have created a number of waterbodies that have since become high-value habitats for biodiversity.

The range of waterbodies in Carmarthenshire provides valuable habitat for wildfowl and other birds, invertebrates (especially if there is good marginal vegetation) and flora.

Garden ponds, which obviously have biodiversity value, will be dealt with under the Brownfield, Gardens and Urban Open Space Grouped Action Plan.

The role of the interaction between freshwater and terrestrial (and to a lesser extent marine) habitats should not be overlooked. Poor quality terrestrial habitat can have a significant negative effect on rivers.

### **Natural benefits of freshwater habitats**

As well as the inherent value of these habitats and the species they support they provide us with a number of natural benefits:

- Provision of fresh water for us.
- Cultural - rivers are key to the history of settlement in the county.
- Water storage and regulation of flow.
- Tourism – angling, canoeing, swimming.
- Gravel extraction for building.
- Natural fertilisation of flood plains.

**Why are freshwater habitats changing** (from the *State of Nature* report: [www.rspb.org.uk/stateofnature/](http://www.rspb.org.uk/stateofnature/))?

- Physical modification and drainage.
- Water pollution.
- Lack of active management.
- Climate change.

- Water abstraction.
- Non-native species and introduced diseases.

#### **Vision statement and objectives**

The overall vision of for this plan is to maintain, restore and enhance these freshwater habitats in the county and the BAP species associated with them. The ability of all our watercourses to function as effective wildlife corridors is a principal objective. River catchments are dynamic systems and where possible the geomorphological processes that influence them should be underhindered by human intervention and ‘management’.

We would like to increase the number of wildlife ponds as an opportunity for landowners, households, schools and communities to actively engage with a biodiversity enhancement project. This is especially important within the context of habitat connectivity within the Carmarthenshire landscape. Any action would seek to meet one or more of the following objectives:

- FW1** To positively manage freshwater habitats in Carmarthenshire, their water quality and riparian/marginal habitats.
- FW2** To increase the number of ponds in the county.
- FW3** To maintain and expand the range and/or population of associated freshwater species.
- FW4** To identify and record significant ponds/freshwater bodies and associated species in the county.
- FW5** To raise awareness of freshwater habitats and the benefits they bring us.

#### **Associated BAP/S42 species (NB this may not be an exhaustive list):**

**Birds** - Little Ringed plover, Ringed plover, Tree sparrow.

**Mammals** - Otter, Water vole, Bat spp.

**Plants/lower plants** - Tubular Water dropwort, Multi-fruited River moss, Floating water plantain.

**Fish** - Allis shad, Twaite shad, European eel, River lamprey, Sea lamprey, Atlantic salmon, Brown/sea trout.

**Invertebrates** - Scarce Four-dot Pin-palp, Minutest Diving Beetle, Oxbow Diving Beetle, Southern Yellow Splinter, Freshwater pearl mussel, Iron Blue Mayfly, *Spiriverpa lunulata* (fly), Newbery's Rove Beetle.

**Summary of action achieved by LBAP Partners (for more information contact the biodiversity officer – Biodiversity@carmarthenshire.gov.uk) or visit the national Biodiversity Action Reporting System - <http://ukbars.defra.gov.uk>:**

#### **2010–12**

- Improve passage for fish through installation of fish passes in rivers - EAW FW1
- Clearance of blockages in Carmarthenshire rivers - CRT FW1
- River Gwynon - stabilise bankside erosion with compost socks - NBGW FW1
- Management of ponds at Pembrey Country Park - CCC FW1
- Establishment of river care groups in the county – Pontyberem/Pontnewydd FW1
- Management of waterbodies in Millennium Coastal Park - reeds and non-native fish – CCC FW1
- Llanybydder river corridor project - restoration - CCC/EAW FW1

- Tywi Afon yr Oesoedd project - protection of riparian habitat at 14 sites FW1
- TAYO project - 16 ponds restored and three created in Tywi valley FW1/2
- Delta lakes - creation of bankside vegetation - CCC/EAW
- Morfa Berwig - pond creation - EAW FW2
- Whitland - four ponds created as part of flood defence works - EAW FW2
- Amphibian & Reptile Conservation - pond created near Cwm Ifor - ARC FW2
- Carms Anglers - request for requests to be sent to Local Record Centre – CCC FW4
- Training events - watercourse management – TAYO FW5

### 2013

- Witchett pool, Pendine - removal of reeds - MOD/Quinetic FW1
- ? ponds created in the county through REF funded project – ARC FW2
- Riparian management – Nant Crychiau – fencing and creation of buffer habitat – Carms Amateur Angling Association (CAAA) FW1
- River care management by vol. groups – Gwendraeth/Amman – Vols/KWT FW1
- Watercourses fenced off as part of Landscape and Biodiversity RDP-funded scheme to protect banks from poaching - CCC FW1
- Pond and scrape created and 2 ponds restored as part of Landscape and Biodiversity RDP-funded scheme - CCC FW1

### 2014

- Riverine habitat improvement for the passage and spawning of migratory fish in the Tywi catchment - 287 river blockages removed with 203 km of river habitat opened up for migratory fish- CRT/EFF/NRW FW1
- Riverine habitat improvement - 403 km of buffer strip fencing has been erected, allowing for riparian vegetation to grow – CRT/EFF/NRW FW1
- Riverine habitat improvement - 650 m of soft bank revetment (i.e. staking and willowing for river bank support) - CRT/EFF/NRW FW1
- Volunteer training for monitoring - CRT/EFF/NRW FW1
- Water quality improvements within the upper Tywi catchment, continuous monitoring of biological responses - NRW/DCWW
- Restoration of ponds in Pembrey Country Park - CCC/ARC FW1

### 2015

- Scrapes/ponds created at Morfa Berwig – ARC/CCC FW2
- Ponds created at Pembrey Country Park – ARC/CCC FW2
- Ponds created through ARC-Nature Fund project on farms near Llanddeusant- ARC FW2
- Tree planting along Doethie and other tributaries of the Tywi – to stabilize banks and increase shade – CRT/CC FW1
- Tywi catchment - migratory fish barrier removal - CRT FW1
- Tywi catchment - limestone sand application to mitigate against acidification – CRT FW1
- Tywi catchment - monitoring river health with volunteers – CRT FW4
- Riverine improvements to Afon Cynin, Cywyn and Dewi Fawr catchments – NRW/landowners FW1
- Fencing of ditches in Pembrey area to improve riparian habitat - NRW FW1
- 800m of ditch restoration work- WWT FW1
- Long-term tree and scrub control project underway to restore the value of islands and deep water lake for breeding lapwing and other wetland birds – WWT FW1
- Cors Goch –5 ponds opened up to create open water habitat for odonata – WTSWW FW1

### Future proposed action

- Hydrological survey of Ffrwd Farm better understand and manage water movements FW1
- Ditch management at Morfa Berwig – NRW FW1
- Pond creation – ARC FW1
- Fencing of R. Crychiau to protect spawning ground - CAAA FW1
- Fencing of R. Annell to protect spawning ground - CAAA FW1

### Useful links:

<http://jncc.defra.gov.uk/page-1430>

[www.wildlifetrusts.org/wildlife/habitats/wetlands-and-rivers](http://www.wildlifetrusts.org/wildlife/habitats/wetlands-and-rivers)

[Carmarthenshire Rivers Trust](http://www.carmarthenshire-rivers-trust.org)

[www.biodiversitywales.org.uk/en-GB/Freshwater](http://www.biodiversitywales.org.uk/en-GB/Freshwater)

### Where to see these habitats in the county

*Rivers and streams:* Throughout the county! However look at the county walks in the Cothi Valley.

*Lakes:* Talley Lakes SSSI (SN631337), Llyn Pencarreg SSSI (SN537456) and Llyn Llech Owain SSSI (SN568151).

*Ponds:* Sandy Water Park and in Llanelli, Bishops Pond (SSSI) at Abergwili is one of the best examples of open water in the county – it is a cut off oxbow lake from the river Tywi, Cwm-yr-Oernant, Carmarthen. Pwll Lagoon SSSI and Ashpits Pond Burry Port.



Partneriaeth Bioamrywiaeth Sir Gaerfyrddin  
Carmarthenshire Biodiversity Partnership

[www.carmarthenshirebiodiversity.co.uk](http://www.carmarthenshirebiodiversity.co.uk)

The [Carmarthenshire Biodiversity Partnership](http://www.carmarthenshirebiodiversity.co.uk) (CBP) is made up of the following organisations: [Carmarthenshire County Council](http://www.carmarthenshire.gov.uk) (CCC), [Wildlife Trust of South and West Wales](http://www.wildlifetrusts.org) (WTSWW), [Natural Resources Wales](http://www.naturalresourceswales.gov.uk) (NRW), [RSPB](http://www.rspb.org.uk), [Wildfowl and Wetlands Trust](http://www.wildfowl-wetlands-trust.org) (WWT), [Carmarthenshire Bird Club](http://www.carmarthenshire-bird-club.org) (CBC), [National Botanic Gardens Wales](http://www.nationalbotanicgardenswales.org) (NBGW), [Butterfly Conservation](http://www.butterflyconservation.org) (BC), [Carmarthenshire Rivers Trust](http://www.carmarthenshire-rivers-trust.org) (CRT), [National Trust](http://www.nationaltrust.org.uk) (NT), [Botanical Society of the British Isles](http://www.botanicalsocietyofthebritishisles.org) (BSBI), [Llanelli Naturalists](http://www.llanelli-naturalists.org) (LN), [Bat Conservation Trust](http://www.batconservationtrust.org) (BCT), [West Wales Biodiversity Information Centre](http://www.westwalesbiodiversityinformationcentre.org) (WWBIC), [Amphibian and Reptile Conservation](http://www.amphibianandreptileconservation.org) (ARC), [Woodland Trust](http://www.woodlandtrust.org) (WT)