

# Carmarthenshire Nature Recovery Plan

Freshwater habitats include 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 ecosystem.

The county has a rich and intricate network of **rivers** and streams 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.

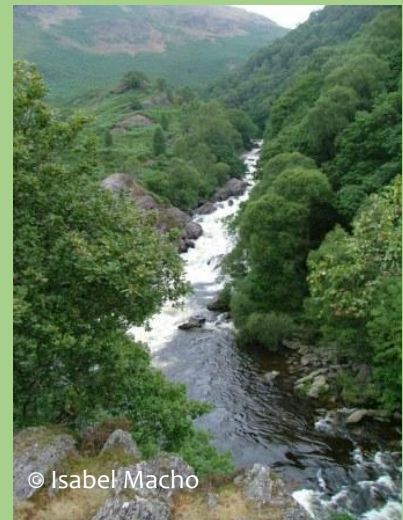
Headwaters are also an important habitat. These are small-scale environments that are much neglected and important for many plants and invertebrates. The scope to restore headwaters and wetlands simultaneously in projects should be considered.

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

## Freshwater habitats

*Partneriaeth Natur*  
SIR GÂR - CARMARTHENSHIRE  
*Nature Partnership*



© Isabel Macho

### 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.

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**. 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** – 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** 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 oxbow 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, have local biodiversity value but can be the source of some invasive non-native aquatic plant species such as Parrot's Feather and New Zealand Pygmy Weed. These can cause significant issues, causing flooding by blocking watercourses and drainage channels. They can rapidly dominate a water body, displacing native species.

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 such as the nutrient runoff from agricultural land into our watercourses.

### Associated priority 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

#### River Tywi



Pant-y-Llyn Turlough



### 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.

### Vision statement and objectives

The overall vision is to maintain, restore and enhance these freshwater habitats in the county and the priority 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 unhindered 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:

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

### 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)

[West Wales Rivers Trust](http://www.westwalesriverstrust.org)

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