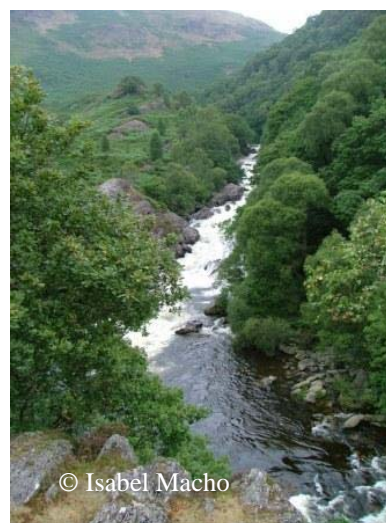


FRESHWATER HABITATS ACTION PLAN

Introduction and Vision Statement

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, 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 supports 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.

The streams of the upland valleys are important spawning and nursery areas for salmon and sea trout, 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 the premier sea trout river in England and Wales, 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 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 Lledi 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 soon 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 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.

Associated species

Little Ringed plover	Multi-fruited River	Brown/sea trout
Ringed plover	moss	
Otter	Floating water plantain	Scarce Four-dot Pin-
Water vole	Allis shad	palp
Bat spp.	Twaite shad	Minutest Diving Beetle
	European eel	Oxbow Diving Beetle
	River lamprey	Southern Yellow
Tubular Water	Sea lamprey	Splinter
dropwort	Atlantic salmon	

Freshwater pearl
mussel
Iron Blue Mayfly

Spiriverpa lunulata
(fly)
Newbery's Rove Beetle

Action Plan Objectives

FWH1ME To maintain the extent of the freshwater habitats in Carmarthenshire

FWH2AC Improve the water quality of the county's freshwater habitats

FWH3AC Protect and improve the habitat quality of Carmarthenshire's riparian corridors

FWH4RE Restore and enhance through appropriate management degraded stretched of riparian corridor in the county and degraded ponds

FWH5EX To increase the number of ponds in the county

FWH6SP To maintain and expand the range and/or population of associated freshwater species

DCM2FWH To identify and records significant ponds in the county

Actions

CODE	TEXT	START/END DATE	CONTACTS (lead in bold)
FWH1ME1	Maintain extent of mesotrophic lakes at NBGW	2010–ongoing	NBGW – 2Ha
FWH2AC1	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant Gorlech, whilst considering other relevant biodiversity issues	2010–2015	CRT
FWH2AC2	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant Clydach, whilst considering other relevant biodiversity issues	2010–2015	CRT
FWH2AC3	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant Marlais, whilst considering other relevant biodiversity issues	2010–2015	CRT
FWH2AC4	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant y Ffin, whilst considering other	2010–2015	CRT

	relevant biodiversity issues		
FWH3AC5	Through TAYO project undertake Himalayan balsam training day with local landowners	2010–2011	TAYO
FWH3AC6	Protect riparian habitat and water quality of R.Gwynon through NBGW	2010–ongoing	NBGW – 1km
FWH4RE1	Through TAYO project improve, through sensitive management and habitat creation schemes, the habitat diversity of riparian habitat in Carmarthenshire	2009–2015	TAYO
FWH4RE2	Through CRT project work improve, through sensitive management and habitat creation schemes, the habitat diversity of riparian habitat in Carmarthenshire	2009–2015	CRT
FWH4RE3	Through EAW project work improve, through sensitive management and habitat creation schemes, the habitat diversity of riparian habitat in Carmarthenshire	2009–2015	EAW
FWH4RE4	Through TAYO project restore ponds (including ox-bow lakes) through silt removal, fencing or vegetation management - under advice from EAW	2010–2011	TAYO
FWH4RE5	Through CRT project work restore ponds through silt removal, fencing or vegetation management - under advice from EAW	2009–ongoing	CRT
FWH5EX1	Produce plan to improve profiles of attenuation ponds along Morfa Berwick link road for water vole, including section to address any H&S concerns	2010–2011	CCC
FWH5EX2	Through EAW project work create wildlife ponds in appropriate locations within the county	2009–2015	EAW
FWH5EX3	Through SWWARG project work create wildlife ponds in appropriate locations within	2010–2015	SWWARG

	the county		
FWH6SP1	Produce leaflet to raise awareness of and encourage collation of sightings for shad and lamprey by anglers	2010–2011	EAW/CCC (Do we have one already?)
DCM2FWH1	Produce list of our major waterbodies and establish their nutrient status	2010–2012	EAW
DCM2FWH2	Produce list of watercourses to prioritise survey/management action	2009–2015	CRT
DCM2FWH3	Undertake targeted surveys of riverine/riparian habitat	2009–2015	CRT
DCM2FWH4	Trial a survey sheet for anglers for key BAP species, plus version for recording on-line	2010–2011	CCC/EAW/CRT
DCM2FWH5	In partnership with the Riverfly Partnership www.riverflies.org undertake surveys at 50 pre-identified locations on Carmarthenshire rivers	2010–2015	CRT
RA2FWH1	Provide training for volunteers so that they can undertake survey of selected river locations	2009–2010	CRT, EAW
RA2FWH2	Produce list of suppliers of native species suitable for ponds	2010–2011	FLORA LOCALE
RA2FWH3	Organise a raising awareness session for landowners on management of watercourses/riparian habitat: 1/yr for next 5 years	2010–ongoing	EAW/Tir Gofal/TAYO/CRT
RA4FWH4	Add a descriptions of freshwater habitats to the Carmarthenshire Biodiversity website with maps and photos	2010	CCC
RA4FWH5	Hold at least 1 guided walk/event looking at these habitats every 2 years	2010–2015	CCC, LBAP Partners
POL2FWH1	Identify a list of candidate SINC's in the county for our freshwater habitat resource – prioritising habitat within settlement limits	2010–2013	CCC