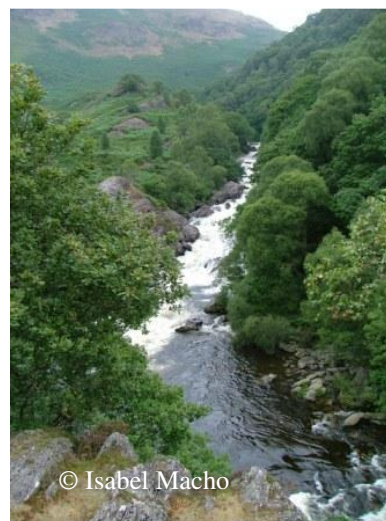


FRESHWATER HABITATS ACTION PLAN

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

CODE	TEXT	START/ END DATE	Lead contact	Action goals	Key partners	Funding	Priority L,M,H	Report Jan–Dec 2010	Report Jan–Dec 2011
FWH1ME1 Lakes	Maintain extent of mesotrophic lakes at NBGW (SN521183)	2010–ongoing	NBGW	2Ha lakes maintained				New inflow control of silt installed in 2010.	
FWH2AC1 Rivers	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant Gorlech, whilst considering other relevant biodiversity issues (~SN581344)	2010–2014	CRT	At least 17 km	Landowners CCW	✓	M	7 km opened up, work still in progress, awaiting permitted window, e.g. April 15th.	
FWH2AC2 Rivers	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant Clydach, whilst considering other relevant biodiversity issues (~SN534330)	2010–2014	CRT	At least 12 km	Landowners CCW	✓	M	5 km opened up, work still in progress, awaiting permitted window, e.g. April 15th.	
FWH2AC3 Rivers	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant Marlais, whilst considering other relevant biodiversity issues (~SN612371)	2010–2014	CRT	At least 15 km	Landowners CCW	✓	M	3 km opened up, work still in progress, awaiting permitted window, e.g. April 15th.	
FWH2AC4 Rivers	Improve habitat for BAP fish species by undertaking clearance of identified blockages along Nant y Ffin, whilst considering other relevant biodiversity issues (~SN554337)	2010–2014	CRT	At least 10 km	Landowners CCW	✓	M	Work scheduled to begin in April.	
FWH3AC5 Rivers	Protect riparian habitat and water quality of R.Gwynon through NBGW by use of compost socks to stabilise riverbank erosion (~SN521183)	2010–ongoing	NBGW	1km		✓ WRAP		Project completed except for final plant and water invert surveys due to be completed by March 2011	
FWH3AC6 Rivers	Monitor R.Gwynon riparian protection project at NBGW – water quality (inverts), plant colonisation (~SN521183)	2010–ongoing	NBGW	Annual Monitoring reports		✓ WRAP		Two reports completed in 2010 one more due in 2011 – as above	
FWH3AC7 Ponds	Manage ski centre pond at Pembrey CP – sea buckthorn management (SN408002)	2010–2014	CCC	Sea buckthorn removed				Ski Centre pond: all sea buckthorn cleared including re-growth.	
FWH3AC8 Ponds	Manage woodland pond at Pembrey CP – pond lily and silting up (SN396007)	2010–2014	CCC	Pond lily managed	EAW	✓			Pond silt dug out – Feb 2011.
FWH4RE1 Rivers	As part of TAYO project improve, through sensitive management and habitat-creation schemes, the	2009–2014	TAYO	At least 7000 m fencing	Landowners CCW	✓	H	8221 m of fencing of riparian habitat undertaken at 14 sites within the	

	habitat diversity of riparian habitat in Carmarthenshire							TAYO project in the Tywi valley. Details available.		
FWH4RE2 Rivers	Through CRT project work improve, through sensitive management and habitat creation schemes, the habitat diversity of riparian habitat in Carmarthenshire	2009–2014	CRT	At least 50 sites	Landowners CCW	✓	H	32 sites now completed. Details available.		
FWH4RE3 Rivers	Through EAW project work improve, through sensitive management and habitat creation schemes, the habitat diversity of riparian habitat in Carmarthenshire	2009–2014	EAW	At least ?? sites	Landowners CCW	✓		<ul style="list-style-type: none"> Silt/weed clearance carried out at Ffrwd Farm SSSI/ WT site to maintain open water habitats. Approx. 400m of ditch. (SN419025) 	<ul style="list-style-type: none"> Contributing £2K to CCC's Llanybydder riparian corridor restoration project. Removal of debris from river channel and management of riparian woodland. (SN527473) 	
FWH4RE4 Ponds	Through TAYO project restore ponds (including ox-bow lakes) through silt removal, fencing or vegetation management - under advice from EAW	2010–2011	TAYO	20 ponds	Landowners	✓	H	Sixteen ponds have been restored with 1565 m of fencing through the TAYO project in the Tywi Valley. Three have also been created. Details available.		
FWH4RE5 Ponds	Through CRT project work restore ponds through silt removal, fencing or vegetation management - under advice from EAW	2009–ongoing	CRT	At least 5 ponds	Landowners	✓	H	<p>One completed Taliaris, SN63823 27498.</p> <p>One work in progress, all funding secured, Cwmifor, SN65680 26846.</p>		
FWH4RE6 Lakes	Undertake habitat management/reedbed creation at Delta lakes (SN506987)	2010-2011	EAW	Up to 500 m reedbed created	CCC – Grounds Maintenance	✓		Project underway – 200m coir reed mats ordered – work to be undertaken early 2011. Will improve habitat for water voles, reed buntings, Cetti's warblers, etc, and inverts.	Coir rolls installed in Feb 2011.	
FWH4RE7 Ponds	Restore two ponds at Gelli Aur CP (SN596199)	2010-2014	CCC	2 ponds restored	Gelli Aur			Seeking funding/work contribution in kind to undertake management – possible training opportunity with EAW		
FWH5EX1 Ponds	Produce plan to improve profiles of attenuation ponds along Morfa Berwick link road for water vole, including section to address any H&S concerns (SS540986)	2010–2011	EAW	One annotated plan produced	CCC CCW WTSWW		H	Not started – 2011 priority.		
FWH5EX2 Ponds	Through EAW project work create wildlife ponds in appropriate	2009–2014	EAW	At least 10 ponds created		✓		<ul style="list-style-type: none"> Three ponds created at Morfa Berwig. 	<ul style="list-style-type: none"> Pond created at Pwll, Feb 2011 – SN485007. 	

	locations within the county							(SS544987) • Four new ponds created in Whitland as part of Flood Defence Maintenance Works (SN202167)		
FWH5EX3 Ponds	Through SWWARG and Million Ponds Project work create wildlife ponds in appropriate locations within the county	2010–2014	SWWARG	At least 10 ponds created	CCC Landowners	✓		One pond created in NW Carms – Cwmdud – SN354343.		
FWH5EX4 Ponds	Through TAYO project create wildlife ponds in appropriate locations within the Tywi Valley	2010–2011	TAYO	5	Landowners	✓		Three ponds created		
FWH6SP1 Species	Promote CCW leaflet to raise awareness of and encourage collation of sightings for shad, eel and lamprey by anglers	2010–2011	EAW	One PR produced 1 newsletter article	CCC	✓		Not started.		
DCM2FWH1 Lakes	Produce list of our major waterbodies and establish their nutrient status. Use Wales BAP priority lakes inventory and habitat profile sheets to prioritise lake action in Carmarthenshire	2010–2012	EAW	One list/report	CCW WTSWW CRT			Not started.		
DCM2FWH2 Rivers	Use Wales BAP priority rivers inventory and habitat profile sheets to prioritise river action in Carmarthenshire	2010–2012	EAW	One list/report	CCW WTSWW CRT			Not started.		
DCM2FWH3 Lakes	Survey vegetation and water quality of previously unsurveyed lakes	2010–2014	EAW	Survey at least 2 previously unsurveyed lakes per year	CCC CCW WTSWW		L	Not started.		
DCM2FWH4 Rivers	Undertake targeted surveys of riverine/riparian habitat	2009–2014	CRT	At least 10 surveys undertaken Map of surveyed rivers produced				22 surveys now completed, more planned. Results will be transferred on Mapinfo in due course.		
DCM2FWH5 Species	Trial a survey sheet for anglers for key BAP species, plus version for recording on-line	2010–2011	CCC	One survey sheet produced	EAW CRT WWBIC			Not started.		
DCM2FWH6 Species	In partnership with the Riverfly Partnership www.riverflies.org undertake surveys on Carmarthenshire rivers	2010–2014	CRT	50 surveys undertaken at pre-identified locations	Volunteers Landowners			This is ongoing with over 100 now documented and filled by CRT/ EAW.		
DCM2FWH7 Ponds	Disseminate and promote guidance on how to assess ponds to see if they meet the priority criteria and where info should be reported	2010–2011	CCC	Info available on website	PCT CCW EAW WTSWW			Not started.		
RA1FWH1	Through TAYO project undertake	2010–2011	TAYO	One training event	Landowners	✓		A Himalayan Balsam		

	Himalayan balsam training day with local landowners							clearing volunteer event was held in May 2010.		
RA1FWH2	Add a descriptions of freshwater habitats to the Carmarthenshire Biodiversity website with maps and photos	2010	CCC	One website entry				Completed		
RA1FWH3	Organise guided walk/event looking at these habitats	2010–2014	CCC	At least one walk every 2 years	LBAP Partners			• 3 June – Pembrey Canal. Llanelli Naturalists		
RA2FWH1	Provide training for volunteers so that they can undertake survey of selected river locations	2009–2010	CRT	Training event held	EAW	✓		No report		
RA2FWH2 Ponds	Produce list of suppliers of native species suitable for ponds	2010–2011	CCC	One list on website	PCT Plantlife EAW WTSWW CCW			Not started – 2011 priority		
RA2FWH4	Write to garden centres in county re sale of invasive freshwater plant species with suggestions for alternatives	2010–2011	CCC	Letter to garden centres	PCT Plantlife EAW WTSWW CCW			Not started – 2011 priority		
RA2FWH5 Rivers	Organise a raising awareness session for landowners on management of watercourses/riparian habitat	2010	TAYO	At least one training event	EAW CRT FCW Woodland managers	✓		Ideal Homes for Otters- 02 October 2010 Watercourse Management 20/08/2010 Watercourse management 28/09/2009		
RA2FWH6	Promote PCT website information on pond creation, maintenance and monitoring	2010–2014	CCC	Website entry/downloadable info	EAW PCT CCW WTSWW			Not started		
POL2FWH1	Identify a list of candidate SINC's in the county for our freshwater habitat resource – prioritising habitat within settlement limits	2010–2013	CCC	One GIS layer created	WWBIC	✓	H	Not started		
POL2FWH2	Ensure riparian corridors are protected as part of development control process	2010 – ongoing	CCC	100% of relevant applications	EAW CCW		H	Commented on 23 applications in 2010 requesting protection of riparian corridors. No mechanism at moment to assess whether this was carried out.		