TAW RIVER IMPROVEMENT PROJECT

YEAR 1 NEWSLETTER

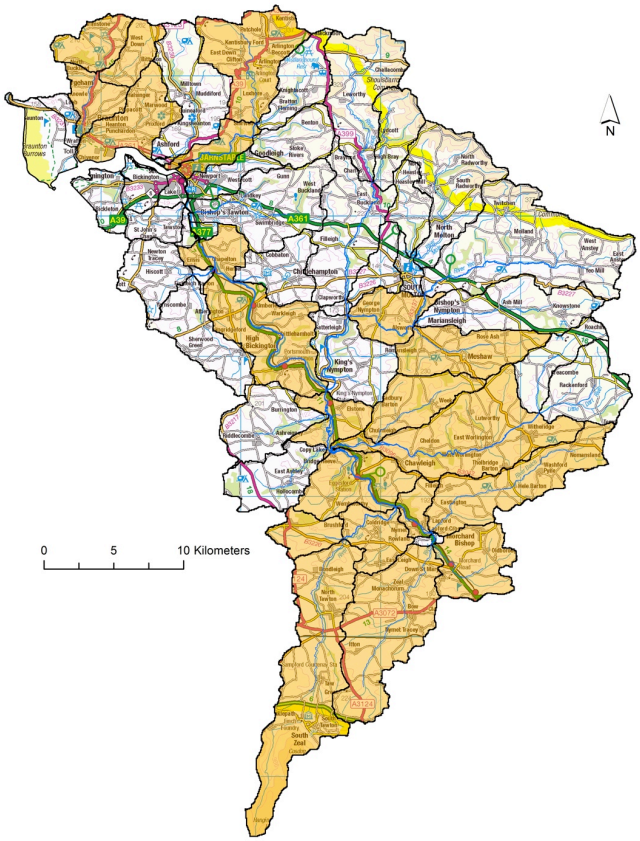
The Westcountry Rivers Trust (WRT) is managing the **Taw River Improvement Project** on behalf of the project partnership. The project is funded through the Catchment Restoration Fund to deliver improvements in 'Ecological Status' across the catchment under the Water Framework Directive (WFD).

PROJECT OUTLINE

The total project budget is **£1.86 million** and is co-run between the North Devon Biosphere Reserve and the WRT and covers the Taw catchment. It includes a large partnership including paid partners (South West Farming and Wildlife Advisory Group, Silvanus Trust and Devon Wildlife Trust) and supporting partners (River Taw Fisheries Association, Tarka Country Trust, Natural England, Mole Valley Farmers, Environment Agency, South West Water, North Devon District Council, Communities Living Sustainably and Exeter University). The **timeline** for the project is **2.5 years**, ending on the **31st of March 2015.**

THE RIVER TAW

The river Taw is one of the South West's most beautiful and culturally iconic rivers, but it does have it problems, both current and historic, which limit its ability to function naturally.



Core TRIP water body work areas

To address these problems the project is split into three parts and is managed through four sub-groups linked by the Project Advisory Group, which is made up of all partners:

1 – Data & Surveying

Responsible for reviewing past data and investigating the reasons why the rivers fail 'good ecological status' under the WFD.

2 – Fisheries Management

Responsible for managing the weir removal and fish easement projects as well as fisheries management.

3a – Land Management (Agriculture)

Responsible for agricultural advice and fencing grants as well as nutrient and soil tests. This group links with the Biodiversity group to ensure integration on the ground

3b – Land Management (Biodiversity)

Responsible for biodiversity advice, woodland mapping and wetland management as well as surveying for Fresh Water Pearl Mussels

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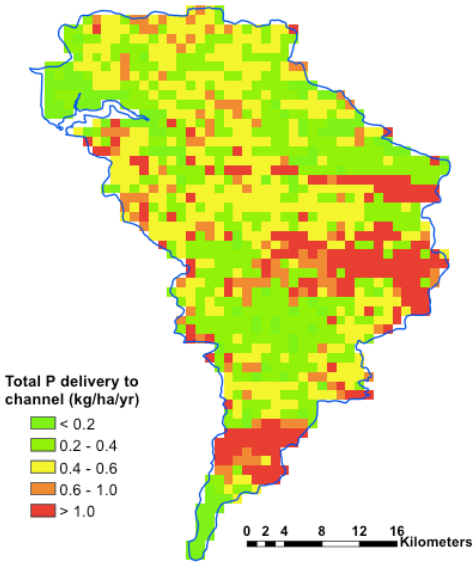
1 – Data & Surveying

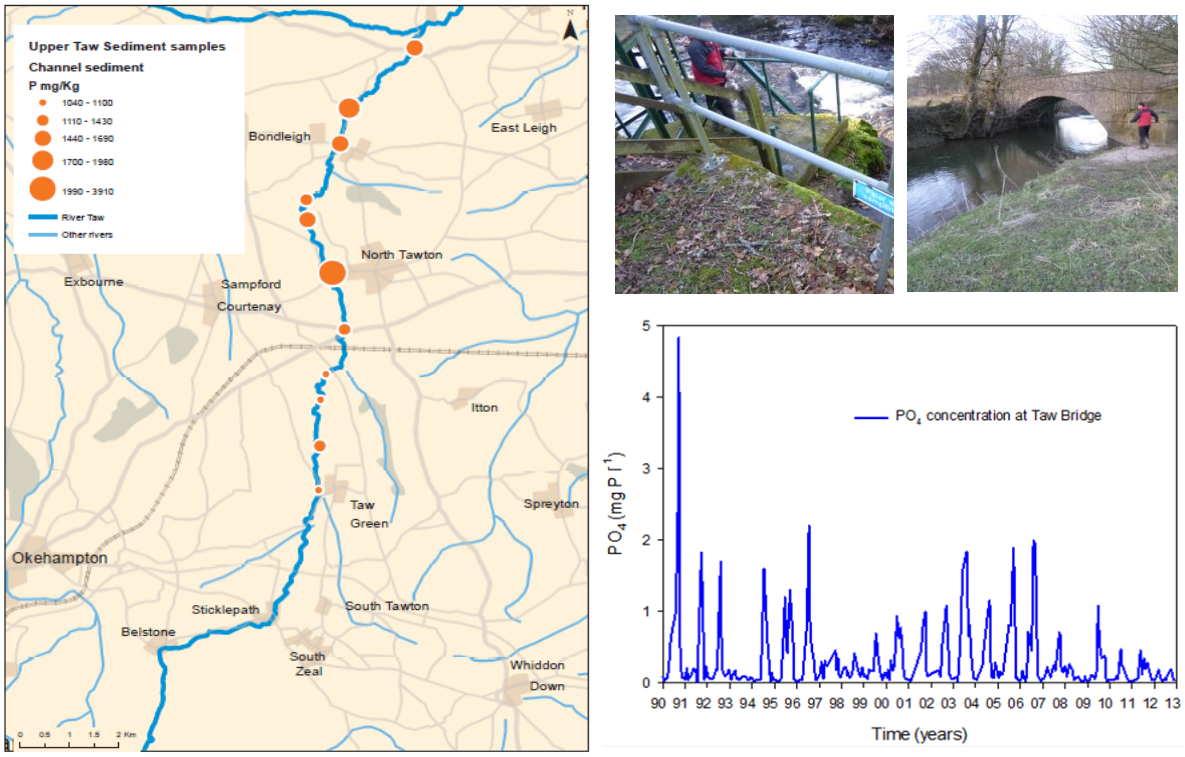
The Data and Surveying sub-committee are investigating two of the most prevalent WFD failures stopping water bodies on the Taw from reaching 'good ecological status' – Too much phosphate and too few fish. The Reasons For Failures (RFF) database created by the Environment Agency sets out the current state of thinking in regards to the causes of each failure. In the case of Phosphate it lists diffuse source agriculture, mixed agricultural run-off, agriculture and rural land management, industrial discharge, sewerage discharge, forestry and the water industry. In the case of reduced fish the RFF lists it as unknown, phosphate, sediment and morphology.

Through the Taw River Improvement Project, a research partnership between the Westcountry Rivers Trust, the Environment Agency, Natural England, Rothamsted Research North Wyke, University of Plymouth and ADAS aims to improve upon the RFF database with selected research studies and apportionment exercises.

These studies concentrate on three sub-catchments from the upper Taw, as initial source apportionment work and modeled findings have identified the majority of pressures are within these water bodies and that these pressures impact upon not only their WFD status but also the status of downstream water-bodies. The three sub-catchments have been identified as 1) the Upper Taw upstream of the junction with 2) the Dalch, Lapford Yeo and Ash Brook cluster, and 3) the Little Dart, Sturcombe River and Huntacott Water upstream of Chumleigh (see land management section for a map).



Modeled PSYCHIC Phosphate data



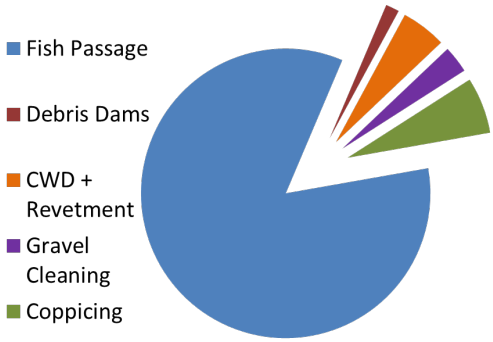
Upper Taw channel Particulate Phosphate concentration (left) and Phosphate concentrations from 1990-2013 at Taw Bridge on the River Taw (Based on data supplied by Environment Agency - bottom right) as well as two North Wyke sampling sites on the Upper Taw – Sticklepath Sewage Treatment works and Taw Bridge (top right)

2 – Fisheries Management

The Fisheries team is managed by Westcountry Rivers Trust and includes the River Taw Fisheries Association and the Environment Agency. This partnership has been in place for several years and the Taw River Improvement Project builds upon the Taw Access over Weirs project that saw several major weirs removed including Head Weir on the Mole that was replaced by a rubble ramp. Within this project the group is tackling barriers to migration as well as improving habitat through first surveying the tributaries and secondly, where appropriate, investing in selective habitat management.

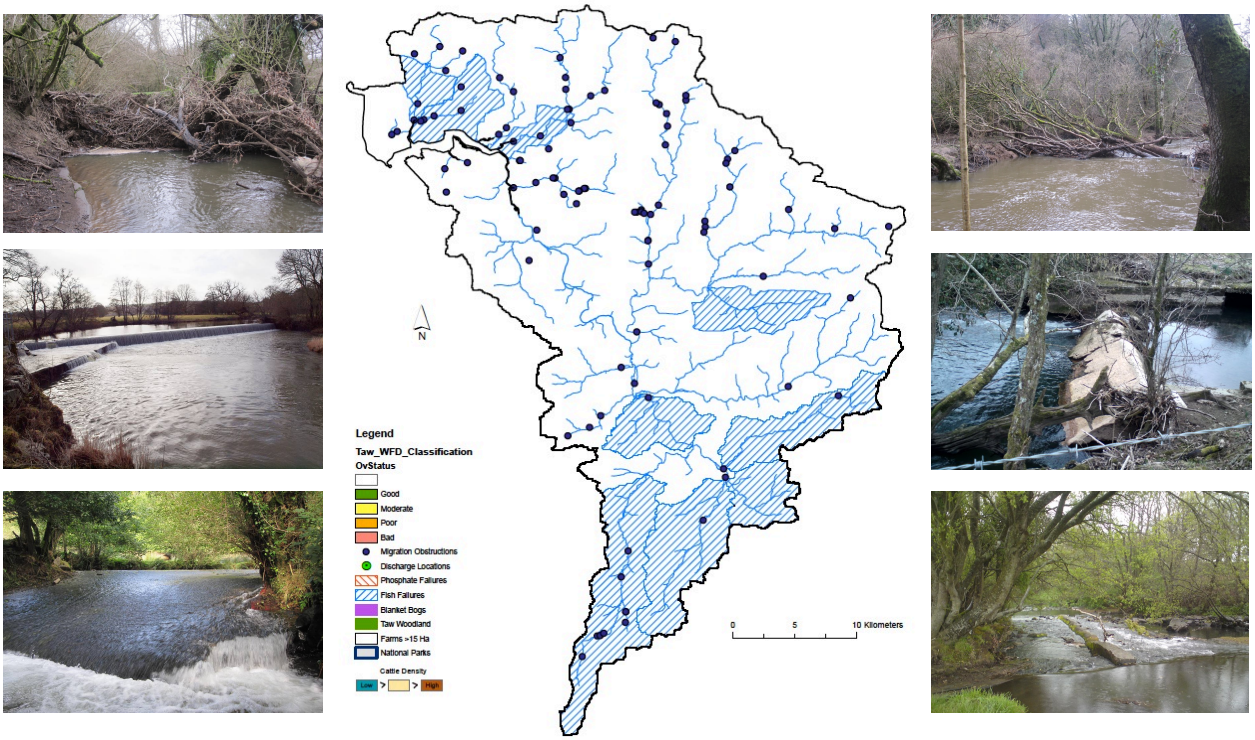
This work includes:

- Addressing access by installing multi species fish passes on weirs or, where possible, removing the structure completely;
- Coarse woody debris where it causes migration issues;
- Selective coppicing to increase light on riffle sections increasing food for young fish;
- Gravel cleaning to allow spawning to occur; and
- Coarse woody debris introduction where it is secured to the bank to provide juvenile cover.



Fisheries budget broken down by action

Over the past financial year the team have been working on proposals and schemes to address the migration barriers upstream of Colleton weir, which is being addressed directly through Environment Agency funding. There are several barriers scheduled for removal or installation of fish passes including, North Wyke (due for removal in May 2013), Rashleigh, Filleigh, Eggesford, North Molton and North Tawton as well as several other smaller features. Alongside this work two coppicing contracts have been set up for work on the main river to improve fisheries habitat. Electrofishing work and summer fisheries habitat walkover surveys are in the planning phase and access has been detailed over many of the upper catchments.



Water bodies failing for fish (hatched blue areas) and some of the barriers to migration (black dots) including woody debris that has collected upstream of fallen trees spanning the river as well as man made barriers such as weirs.

3a – Land Management (Agriculture)

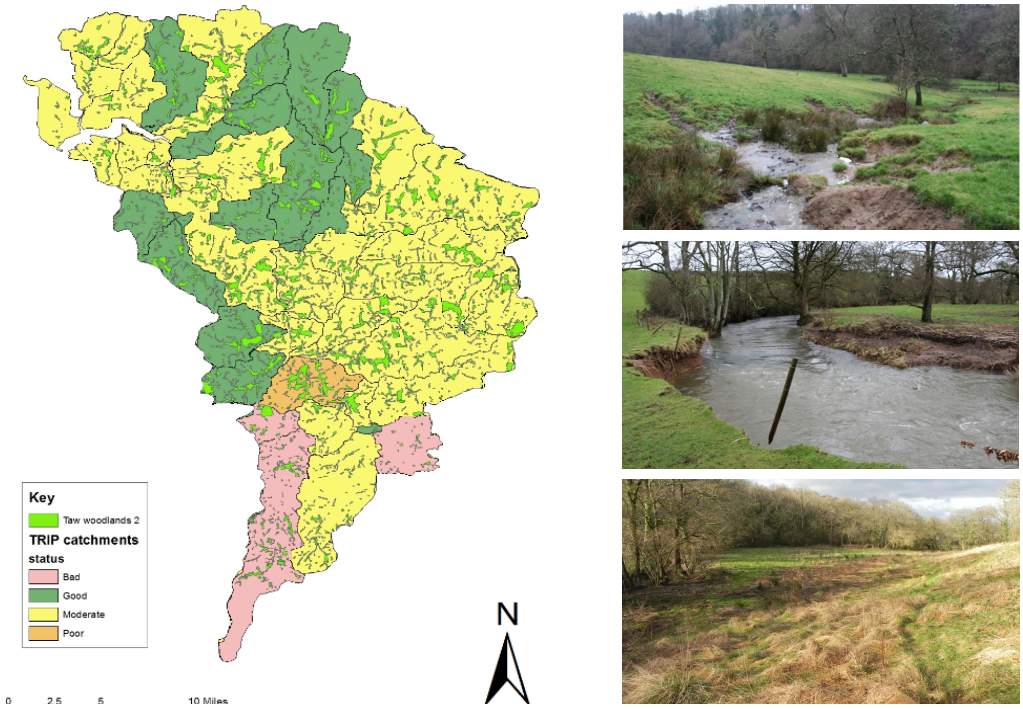
The Agriculture advice team is managed by Westcountry Rivers Trust and includes the South West Farming and Wildlife Advisory Group, Natural England and the Environment Agency. The group links and shares sub-committee meetings with the Biodiversity group to ensure integration of resources and ensure effective management on the ground. To achieve this the upper catchment, where a large proportion of the work is underway, has been split into three target areas.

Over the past financial year the team have visited over 100 farmers to assess the need for fencing stock out of the river to reduce nutrient ingress, which contributes to Phosphate failures, and sediment ingress, which contributes to fisheries failures. From these 100 farms, 36 were selected as needing fencing grant. More than 25km of riverbank in need of fencing was identified and grants for the work contracted including 50 hardened drinking or access points and are due for completion by December 2013. Soil and Nutrient tests are also underway.

WRT – Upper Taw (Red); FWAG – Dalch & Yeo (Green); and DWT – Little Dart (Blue)

3b – Land Management (Biodiversity)

The Biodiversity advice team is managed by North Devon Biosphere Reserve and includes the Silvanus Trust, Devon Wildlife Trust, Natural England, Environment Agency and the Tarka Country Trust. Over the last financial year they have: recruited working wetland staff, undertaken 5 wetland visits to 4 landowners covering 240ha; created a woodland inventory map; given advice and support to 15 landowners for woodland management including assisting them in writing England Woodland Grant Scheme grant applications; and extended the Fresh Water Pearl Mussel Survey. In the coming year they will expand upon this work.



Silvanus Trust Woodland inventory based on EA/RPA/WRT data (left), Westcountry Rivers Trust pictures from the Little Dart showing cattle access and increased sediment erosion that can cause fisheries habitat failures (top and middle right) and one of the Devon Wildlife Trusts sites on the Little Silver stream at Fern Tor (bottom right).