Severn Rivers Trust
Preserving and Caring for the Severn Catchment

Environment Agency

River Worfe Restoration Project

The River Worfe catchment comprises nine waterbodies, eight of which are designated as being in a poor ecological status under the Water Framework Directive (WFD). The watercourses are failing on factors including sedimentation, Phosphates, Nitrates, Invertebrates, Fish populations, Diatoms, BOD, Low Flows, Macrophytes and Dissolved Oxygen. Walkover surveys conducted by APEM Aquatic Scientists covered the entire catchment, and confirmed the significant impacts and issues within the catchment, including those caused by high sedimentation due to agricultural run-off. The Worfe Catchment Restoration Project aims to begin to rectify and remediate these problems, and improve land use and riparian management.

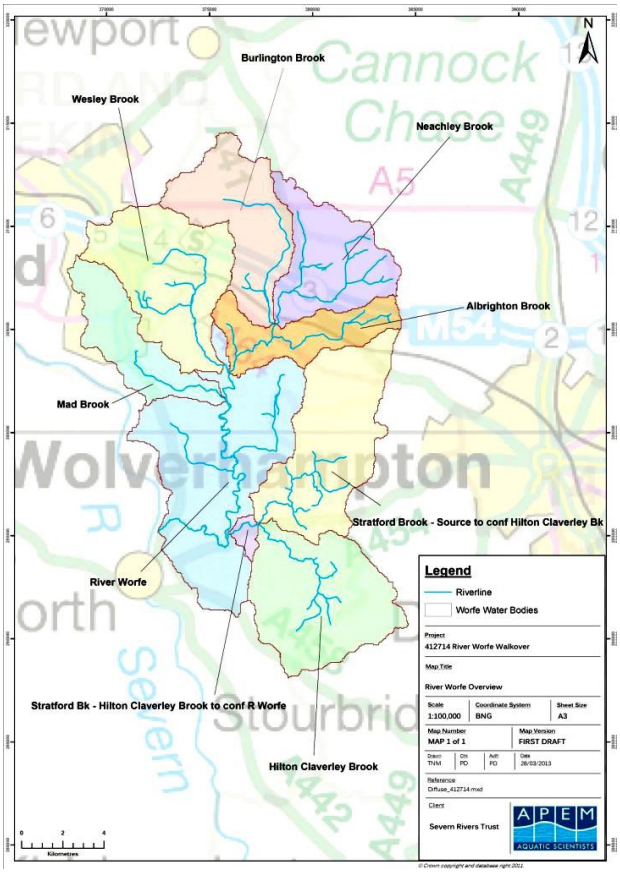
The majority of issues arise from diffuse pollution sources located primarily on farm land. Arable farms provide a large proportion of pipe-outlets and flows of overland run-off releasing contaminants and high sediment yields into the watercourses. Livestock farming also creates some issues such as poaching and high levels of nutrient input. Some small-scale domestic and industrial sources are also present within the catchment, though rural issues are most prominent.

Funding from the CRF will be used within the Worfe catchment to work with farmers and encourage better farming practices, and the installation of economic, environmentally friendly alternatives and remedies. These will include designated buffer strips, fencing, coppicing of riparian habitats, and in-stream revetments to stabilise eroded banks. The Severn Rivers Trust (SRT) aims to improve the habitat and riverine environment in order to encourage a sustainable return to natural river processes and reduce diffuse pollution from farmland to ensure that the failing waterbodies achieve Good Ecological Status under the WFD.

Key facts	
River Basin District	Severn
Catchments	River Worfe (8 waterbodies)
Outcomes	**Reduced agricultural run-off** - reduced the in-stream sedimentation and fertiliser contamination, improved farming practices **Improved biodiversity** - increased in-stream habitats, re-established fish migratory habitats, improved invertebrate biodiversity, **Improved river water quality** - reduced diffuse and point source pollution **Improved fish migration** - removed un-necessary weirs, re-established spawning grounds **Reduced lateral river erosion and poaching** - installed revetments, reduced access to watercourses from farm animals **Improved flow regime** – Reduced abstraction and or augmentation **Social** - improved environment for recreation **Economic** - improved fisheries, introduced farmers to the 'Passport Scheme', reduced farmers expenditure on wasted fertilisers, fuel and soil replacement.
Start Date	September 2012
End Date	March 2015
Budget	£1,253,000
Project Partners	Natural England Catchment Sensitive Farming, Environment Agency, APEM, Shropshire County Council, Shropshire Wildlife Trust, Severn Trent Water, Shropshire Rural Hub, National Farmers Union, Wild Trout Trust, RSPB, Country Landowners Association, Woodland Trust and Salopian Flyfishers Association.

Through restoration work, the project will address issues including:

- Sediment which has a direct adverse effect on water quality
- Fertiliser run-off into watercourses which can cause nutrient enrichment and impact negatively on river ecology
- Barriers to fish migration, preventing fish from reaching habitat that they should be present in
- Interrupted natural downstream movement of substrate which reduces spawning habitat for salmonids
- Poor in-stream and riparian habitat for riverine species
- Low flow regimes



Description of Works

In order to solve the issues within the Worfe catchment, the Worfe Restoration Project will advise and assist farmers and land owners in applying the correct and relevant practices and tackle the issues by delivering the following measures:

Fencing - where agricultural practices have been identified to be causing the watercourse to fail to meet WFD standards, riparian fencing and associated drinking points will result in multiple benefits. The poaching of riverbanks by livestock will be reduced, as will the associated excess sediment inputs. Vegetation will become re-established along the riverbanks, therefore increasing riparian habitat and biodiversity. This will result in the establishment of a buffer zone that will reduce the amount of nutrient run-off that enters the watercourse from farmland and roads.

Reconnecting habitat - where an obstruction to fish passage exists within the river channel, the project will look to remove it, or at the very least, make it passable. This will not only open up more habitat to migratory fish, but where removal occurs it will also return the sediment movement to a more natural regime.

Riparian Management - Bankside trees that have not been cut or coppiced or several years and have been allowed to grow up can shade riverbanks, restricting sunlight to under-storey vegetation and result in bare ground under the trees which is then susceptible to erosion. The aim is to increase the amount of light getting through the canopy, promote natural re-growth of bankside plants and increase levels of bank stability and stabilise the spread of Phytophthora amongst the Alders, reducing bank side collapse (another main source of sediment).

Community engagement - this is essential to the long term success of the project as it encourages local ownership and support. It is seen as an integral part of an integrated catchment management approach. We will increase and improve community engagement and establish a sense of ownership and responsibility of their rivers through active groups for future improvements and monitoring.

About the team
Project Manager: Alex Clark
Finance/admin/PR: Tony Bostock
Director: Tony Bostock
Other contacts
Environment Agency: Guy Pluckwell **Natural England:** Rob Howells

What will success look like?

As a charitable organisation, the Severn Rivers Trust want to work with farmers, landowners and other associated partner organisations to ensure that our priorities are aligned in order to achieve land management solutions that benefit both people and the environment. Through education, we hope that farmers and landowners will take ownership of the issues affecting their watercourses, ensuring that they understand their direct and indirect dependence on these natural resources and the services they provide. Our principal aim is to see watercourses in the Worfe catchment achieve Good Ecological Status under the Water Framework Directive. This will mean a return to natural flow regimes, improved water quality, increased riverine habitat and reconnected habitat, ultimately resulting in a better river environment that can sustain greater biodiversity.

Department for Environment Food & Rural Affairs · Natural England · The River Restoration Centre · Severn Rivers Trust · Severn Trent Water · APEM · Salmon & Trout Association · The Wildlife Trusts Shropshire

Contact the on 07817 622919 or email severnriverstrust@btconnect.com