

## **Test and Itchen Restoration Strategy 2014 collaborative projects between the Environment Agency, Natural England and landowners.**

The Test and Itchen restoration Strategy is collaboratively involved in seven projects this year, five on the Test and two on the Itchen. We are also carrying out feasibility reports on three structures, two on the Test and one on the Itchen. The works are a mixture of narrowing, bank protection removal, the creation of islands, and altering and removing structures for the benefit of fish passage, upstream habitat and re connecting the river with the flood plain. All works have had input from Environment Agency geomorphologists, fish passage and flood risk experts and Natural England. The designs at Tufon, Chilland and Twyford are by Nigel Holmes, who is sadly no longer with us and will be missed by all. As of writing, three projects are under way and the rest are due to start soon. Please see below a brief description of each project and the reach number.

### **River Test (starting upstream)**

#### **Polhampton.T003 – Rehabilitate.**

Presently there is a 3m wide structure which has a 35cm drop. This is impounding upstream and preventing fish passage. Unfortunately the structure cannot be completely removed. The works will reduce the height of the structure, create a rock ramp on the downstream side and a rock crescent on the upstream side. This will reduce the upstream impoundment and increase velocity. The rock ramp and crescent have been designed to focus the flow and thereby improve up and down stream fish migration to this previously unreachable section.



Structure at Polhampton to be improved

**Tufton (phase 2). T025, T026, T028 – Rehabilitate.**

Work on the main channel was completed last year and this year's work is focusing on the by stream. Previously this was a straight, heavily shaded channel with little in channel or bank side habitat. Restoration involves pinch points, creating shallow scrapes to hold fish, meanders, re-profiling the banks at various locations, removing a structure and tree work to allow more light into the channel and provide woody debris for re-profiling . The section is approximately 600m long and works is taking place on both banks. Works have started here and are going well. Last year's finished works give a good idea of how this will improve and mature with age. Future management will be more subtle than in the past as is already being seen on lasts years restored section. Once this work has been completed units T023, T025, T026, T027 and T028 will all have been finished.



Tufton phase 2 – work in progress

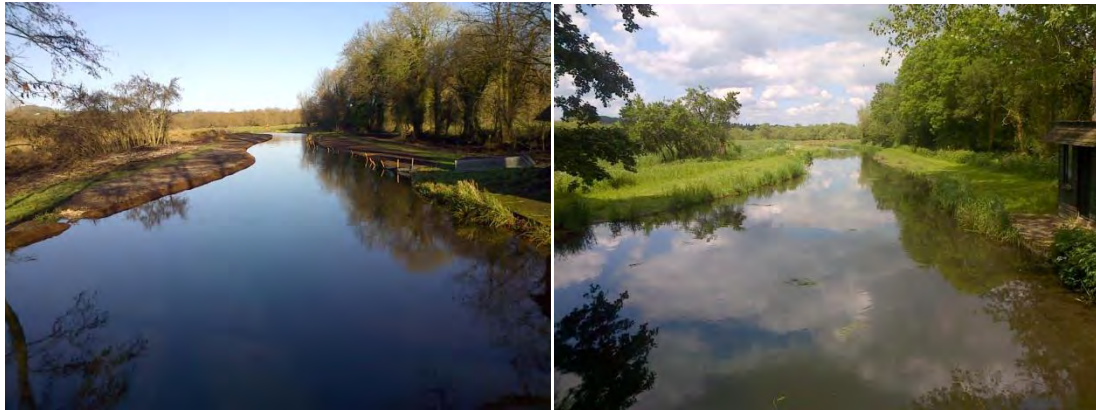


Before and after shots of Tufton phase 1.



**Houghton Club (phase 2). T089 – Rehabilitate.**

This is a continuation of last year's work and will improve both banks in a 100m section upstream of the previous works. The restoration will create meanders in a presently straight and historically dredged section using previously dredged material to create the meanders. Small trees along the true left bank will be thinned out to allow more light in so as to encourage bank side marginal vegetation. If gravel can be won locally bed raising will take place to help further improve in stream velocities and therefore habitat. As on the previous site, bank side management will also be more subtle.



Before and after shots of last years work.

**Upstream of Saddlers Mill. T148 – Rehabilitate.**

Work will involve various types of restoration techniques to the true right bank to improve bank side habitat and re connect the river with the flood plain. The total length to be improved is approximately 100m. On one section 40m of steel piling is being completely removed and the bank re graded to improve bank side habitat for water voles and marginal vegetation. The front will be protected initially using heavy duty, large diameter faggots planted up with the vegetation already on site. Due to the sensitivity of flooding here colleagues from flood risk advised on the feasibility and construction. Other sections are being narrowed due to historic cattle poaching. The removal of the steel pilings has started, see below.



Steel piling exposed prior to removal. Piling removed and bank being profiled

**Broadlands. T150 – Conserve and Enhance.**

Although this section is down as conserve and enhance within the Strategy, this particular area is highlighted as 'remove bank protection'. The work will involve removing 110m of wooden piling from the true right bank and re grading the banks to form a shallower gradient. This will increase channel capacity, re connect the river to the flood plain and help natural river processes take over for the benefit of the opposite bank which has suffered due to the presence of the piling.



110m of wooden piling true right bank

**River Itchen (starting upstream)**

**Chilland. I34, I37, I36 – Rehabilitate & Conserve and Enhance.**

Section I36 is down as Conserve and Enhance but the report does highlight the need to 'modify hatch control operations to enhance channel'.

This is a collaborative project between the Environment Agency, Natural England, the Hampshire Wildlife Trust and the land owner. This large parcel of land with riverine and terrestrial habitats has recently gone into a High Level Stewardship scheme (HLS). The T&I restoration strategy involvement is in removing bank side protection, altering the above mentioned hatch to improve fish passage and provide a constant flow to I36 which presently varies from little to no flow.



**Twyford, Bishopstoke Angling Club. I65 – Rehabilitate.**

This is an ambitious project to build 3 islands in an overly wide and historically dredged section of river. Work has just started here. The islands will be constructed in limestone rock and planted up with locally won woody debris and vegetation. Due to the sensitivity of flooding in this area colleagues in flood defence were consulted and were happy for the works to go ahead as the historic flooding in Twyford occurs from runoff from the north not the actual river. The club have asked for a small single span bridge to one of the islands to access fishing. While not absolutely necessary it was agreed for the good of the project and will not detract from the overall improvement to this stretch.



Looking upstream – view of over wide, slow, dredged section with islands staked out.



First island being built – notice near bank mobilisation of silt already due to increased velocities.

**Feasibility reports.**

Once contractors have been chosen three structures are to be surveyed to assess their suitability for either removal or alteration to improve fish passage, flood risk, salmonid spawning and upstream habitat in general for the benefit of the SSSI. The three structures are at Bossington, the Houghton club on the Test and at Winchester College on the Itchen. The owner at Bossington is very keen to have the structure removed/alterd which will improve in-channel conditions up stream. We will have to see what the report says before the Houghton club or Winchester College are 100% on board but the floods at the beginning of the year have highlighted to them the need that something needs to be done.



Bossington structure



Houghton structure



Winchester College structure



## Restoration works completed in 2013

All the works from last year are maturing nicely with evidence of water voles, *Ranunculus* growth and an abundance of adult and juvenile brown trout. All those collaboratively involved with last year's work are also very happy with the outcome of the various projects. As agreed with owners and keepers, a more subtle style of management has allowed margins to grow which is providing excellent habitat for plants and invertebrates. Unfortunately not all anglers appreciate this style of management and there have been a few complaints at some locations over the difficulty of access to the water's edge. The restored sites also, as would be expected, have faster velocities. While this is ideal for wild fish it is not the preferred habitat of large stocked fish and again anglers have complained about the difficulty in fishing some of these restored sections. To date keepers have created gaps in marginal vegetation to provide better access or built fishing platforms. Keepers are also being encouraged to inform/educate anglers as to the importance of the wider environment they are fishing in and the SSSI designation and what that means.



Before and after, 1 year old – Houghton, river Test, Blackbridge



Before and after, 7 months – Compton, river Test, upstream of 'swimming pool'.

Some of the 2013 restored sites have been used as examples of how the Environment Agency and Natural England can work collaboratively with land

owners. Along with other senior Environment Agency managers, Sir Philip Dilley the new chairman visited one site, commenting that the works seemed like good value for money. David Baxter, the Environment Agency Water Frame work Directory (WFD) lead, also visited one site to see how we work collaboratively with land owners and how this could be transferred to help WFD works move forward on the ground.

### **The future**

Although there may have been some sceptism at first when trying to sell the idea of the Strategy to owners and fisheries, now that works have been finished it has shown others that the outcome can be beneficial to all involved. Funding permitting, we are already working on some exciting projects for next year and the year after.

Thanks to the owners, fishery managers and keepers for being involved in this valuable work. Thanks to all those from the Environment Agency and Natural England for all the work that goes on behind the scenes to enable these projects to take place and thanks also to the contractors who's skills bring it all to life.