

Throop Fisheries Enhancement at Glen's Weir August 2011 Dorset Stour at Holdenhurst

For the ninth year in a row the Fisheries Recreation & Biodiversity Team at Blandford combined with the Avon & Stour Ops Delivery Field Team, has now successfully completed the latest enhancement works on the Dorset Stour. The works were at Throop Fishery and the project aims were the following which will contribute to the lower Stour achieving good ecological status under the Water Framework Directive:

- Increase flow and natural scouring effect over gravels allowing self cleaning and mobilisation
- Enhance existing spawning areas and increase potential spawning habitat upstream and downstream of Glens Weir
- Increase parr and juvenile barbel habitat
- Re-instate collapsed banks and re-profile weir pool to increase weir pool habitat and dynamics
- Provide fry refuge areas
- Swim creation, modification and reduced cattle poaching

Completed Project



Project Background

Extensive dredging work in the 1970's removed thousands of tonnes of gravel from the lower Stour for flood risk purposes leaving a featureless linear channel. The removal of these gravels eliminated miles of spawning habitat for coarse species such as barbel, chub and salmonid species such as brown trout, sea trout and salmon. These works contributed to the collapse of the Dorset Stour as a salmon fishery and also impacted on species such as barbel, which need varying flows and associated habitats to complete their lifecycle successfully. Although in places the river has re-naturalised to some degree, routine dredging works still take place further downstream for flood risk purposes, as maintenance of the Christchurch flood alleviation scheme. These past and ongoing works restrict the opportunity for these heavily modified areas of river to naturalise.

The project was aimed at restoring and enhancing instream habitat in a previously dredged area providing new spawning habitat, fry refuge areas and juvenile habitat for multiple fish species. Species benefiting from these works such as Barbel once reaching adulthood, can migrate up for 20km into different areas upstream and downstream utilising different habitats before returning in May to spawning areas. Projects such as this one contribute not only to local habitat but to the whole biodiversity of the river itself.

Dredging at barbel corner at Throop Fishery in the 1970's



(Photo courtesy of Pete Reading from the Barbel Society)

The Environment Agency worked in partnership with The Barbel Society and Ringwood & District Angling Association (RDAA) to gather data and highlight areas where river restoration could take place on the lower Stour. Glen's weir at Throop Fishery was identified as a great opportunity not only to improve a known spawning area for the local barbel population, but also to improve and create further spawning area's downstream, improve weir pool habitat and provide fry refuge areas for multiple species. Pre-enhancement monitoring work was completed (a separate report is available from the EA) and further post project monitoring is taking place in partnership with RDAA and the Barbel Society through angler catch data, electric fishing and redd count data.

The project was completed with the use of a 50' 360 reach machine digger in the expert hands of craftsman 'Midge' together with a 360 tracked dumper driven by Mike Clements from Ops delivery. Nearly 600 tonnes of Portland stone were placed into the collapsed bank, old weir and in channel as flow deflectors together with gravel re-instatement and re-profiling. Fry refuge areas were also created behind flow deflectors diversifying habitat for juvenile and adult fish species. The area was then fenced off to prevent cattle poaching and angler access into this area has been retained by installation of a gate into the enhancement area.

Midge and Mike re-profiling the weir and gravels



The end result has led to increased flows over a known spawning area by placing of a block stone deflector above Glen's weir, created a 30m riffle and shallow glide downstream of the weir by re-using gravels previously dredged from the bank side, and installation of another block stone deflector at the tailrace of the weir pool. These combined works together with re-profiling of the weir itself have increased flows over these spawning and juvenile habitat areas and created holding features for larger adult species within the weir pool itself. As flows are now concentrated in the middle of the channel, less scouring of the bank will occur retaining clean gravels throughout the year.

"I am extremely happy with the finished result as over 100m of river habitat has been restored for a multitude of fish species benefiting the whole reach at Throop. I fully expect to see salmon spawning in these areas this winter and in late spring, barbel and chub spawning over the newly re-profiled gravels. Adult Salmon have already been seen lying in the re-profiled weir pool and good catches of Barbel have already been taken from the tail race."

"The Dorset Stour is often looked at as second best compared to neighbouring rivers, but in terms of its biodiversity this is not the case. Slowly but surely it is returning back into a fantastic river. My special thanks go to Ops Delivery again as they have completed a grade 'A' job, also Chris Allport and Brian Wilson from RDAA and Pete Reading from the Barbel Society for their continued support and significant funding contribution. It has been a fantastic collaborative project."

Jim Allan (Fisheries Technical Officer, Environment Agency)

Glens Weir before and after re-profiling and bank stabilisation



Upstream gravels before and re-profiling



Upstream deflector and fry refuge area before and after



Downstream deflector and re-profiled gravels



Project Photos

Photo 1. Glens Weir before and after re-profiling and bank stabilisation



Photo 2. Glens Weir after re-profiling and bank stabilisation



Photo 3. Upstream gravels before re-profiling



Photo 4. Upstream gravels after re-profiling



Photo 5. Upstream deflector location and fry refuge area before works



Photo 6. Upstream deflector and fry refuge area completed



Photo 7. Downstream deflector location and gravel re-profiling area before works



Photo 8. Downstream deflector and re-profiled gravels post works



Photo 9. Downstream deflector, re-profiled gravels and gravel berm looking downstream



Photo 10. Downstream deflector and re-profiled gravels looking upstream



Photo 11. Enhanced weir pool dynamics and bank stabilisation looking upstream



Photo 12. Condensed flows into weir pool looking downstream



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