



## Hawley Meadows Rivers Week Report, Sept 2017

### Hawley Meadows

This year we built on our experience of improving the river along the Blackwater Valley, by again jointly hosting the Loddon Catchment Rivers Week. This series of tasks coordinated by the Loddon Catchment Partnership, aims to enhance river habitat and raise the profile of river improvements. One of our three tasks was at Hawley Meadows.

Hawley Meadows is a thin unimproved grassland site straddling the River Blackwater and its confluence with the Cove Brook. The site lies north west of junction 4 of the M3. Around 70% of the River Blackwater channel is man made, since the braided meandering channel was diverted to make way for the A331.

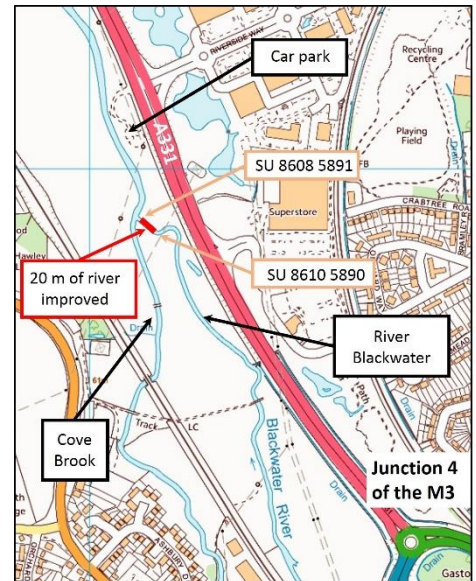
### Rationale for River Enhancements

We've been working closely with the Environment Agency (EA) on river enhancement projects for many years at Hawley Meadows. In 2012 Dominic Martyn, the then Loddon Technical Officer for Fisheries at the EA, helped us create the site Fisheries & Conservation Management Plan. Many of the 22 tasks have already been achieved, including installation of 11 items of woody debris. These logs or brash were fixed to the river bed to diversify the flow of the river. Especially where the channel has been straightened, the river is often wide and slow flowing, which produces excess sedimentation and silt.

By using woody debris we have narrowed the channel which speeds up the water, scouring off the silt to expose the underlying gravels. This stony substrate is then perfect for fish spawning and the areas of slack water create niches for fish fry to shelter and invertebrates.

### Our 2017 river improvements

A few years ago the EA and BVCP deposited gravel at the old ford by the confluence to act as a fish spawning ground (see map). Upstream floating mats of vegetation by either bank help to narrow the channel and expose the central ford gravel (see photo). However the floating mats are permeable and die back in the winter.



View upstream of ford

## Installing woody debris to stabilise the gravel bed

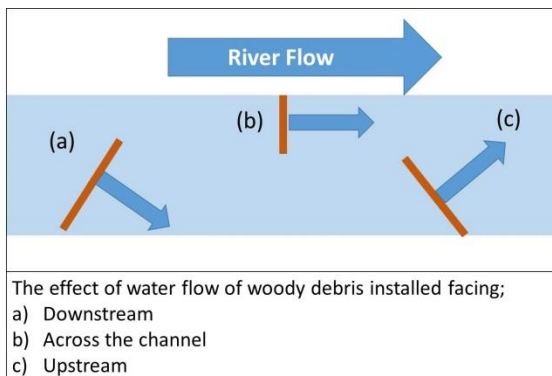
So for Rivers Week this year rangers helped to stabilise the gravel bed, improving 20m of river channel by the confluence between SU 8610 5890 and SU 8608 5891.

This was achieved by installing woody debris (WD13 & WD14 \*) upstream of the ford to slow down the water flowing through the floating vegetation mats. This slower water should deposit silts behind the woody debris and build up year-round vegetated banks.

Firstly we used an iron bar to make a hole in the river bed and then hammered in chestnut stakes. These posts were sustainably sourced from the volunteers at Rowhill Nature Reserve, as chestnut is one of the most resilient types of timber to use in water projects. Next logs from Hawley Meadows were wired to the stakes to fix them in place, then the stakes topped.



Sam wiring down the logs



Since we had long enough logs we positioned one of the woody debris logs facing upstream, to direct the water into the faster central channel. This effect is counter intuitive, and I was suspicious till I saw it in action on the woody debris we installed previously on Hawley Meadows (see diagram). During high flows the water moves over the woody debris then is directed off at right angles. Fixing the log facing downstream actually pushes the water into the bank, which needs to be avoided where bank erosion would cause a problem, such as an adjacent footpath.

## Future Ambitions

Our plan over the coming years is to monitor the extent of scouring of the ford gravels and complete the remaining river improvements identified in the 2012 plan.



View downstream of the completed woody debris WD 13 and WD14

Thank you to all the rangers, volunteers, Moragh Stirling at the South East Rivers Trust for her much valued help securing the necessary EA permits, and to the Loddon Catchment Partnership for coordinating the tasks. Also thank you to Steve Bailey, BVCP Manager who has been instrumental in creating our vision for river improvement along the Blackwater Valley and planning the works.

\* Woody Debris feature described in the “Hawley Meadows Fisheries and Conservation Management Plan”, 2012, *Dominic Martyn, EA*.

If you'd like to find out more about the benefits of woody debris, take a look at “Woody debris and trees near rivers: A guide for landowners”, August 2017, *issued by the EA*.

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