



Rushmoor Bottom Rivers Week Report, Sept 2017

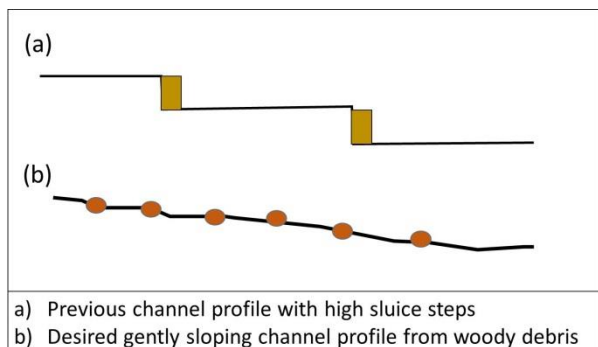
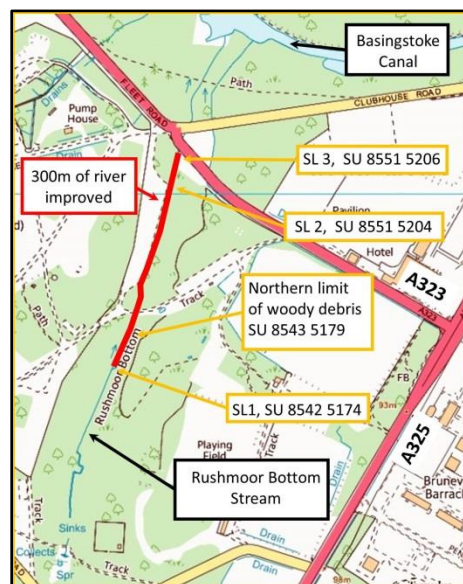
Rushmoor Bottom

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 Rushmoor Bottom.

Rushmoor Bottom forms part of the Wellesley Woodlands west of Aldershot, with the stream flowing north towards the junction of Fleet Road and Clubhouse Road. The former army stream was straightened by the Victorians, with substantial sluices creating boggy areas.

Rationale for River Enhancements

Three years ago Rushmoor Bottom Stream started out as a straight deeply incised channel, around 4ft across, with long sections brick lined. The steep banks and dense woodland cover meant there was only occasional riparian vegetation, with a largely bare and dead stream bed. The stream's profile contained only occasional large drops at the sluices, so the natural processes of sedimentation and erosion were confined to the sluices. This artificial channel morphology had minimal benefit for wildlife and high rainfall could easily flood downstream. Since 2015 we've been working to restore the stream to a more natural morphology, to improve biodiversity and retention of high waters (see diagram below).



Our 2017 river improvements

For Rivers Week this year, rangers and 8 volunteers undertook three key jobs downstream of Sluice 1 (SL1) to enhance 300m of stream.

- Open up the woodland canopy
- Install brush bundles (faggots) over 50m
- Lower the height of the three sluices (SL1-3)

Opening up the canopy and fixing woody debris in the channel

The volunteers cleared some scrub from a marshy section of the stream, creating brash bundles or faggots, from the cut scrub. The faggots were tied with wire then fixed into the channel using stakes, also pointed from the cut brash. All together we installed 5 faggots from SL1 at SU 8542 5174 downstream to SU 8543 5179.



Matt and Duncan hammer in stakes



Newly installed faggots

Since 2015 we have installed lots of other woody debris of either logs or faggots in the channel upstream of SL1. The improvements here have been dramatic, creating a more gently sloping stream profile. The woody debris encourages the river to meander, producing areas of erosion and sedimentation along its entire route. This creates ideal niches for invertebrates and for riparian vegetation to become established. Such features can also help slow flood events by retaining more peak flows in the upper catchment.

The photo from last years improvements shows how water flowing over the channel logs is already starting to create a more natural meandering channel. We have also removed lots rubble from the former brick and concrete lining.



View upstream of SL1 from
wood debris installed last year

Lowering the height of the sluices

A key constraint on the Rushmoor Bottom Stream was the stepped profile created by the three high sluices. During Rivers Week the volunteers removed the top log from all three of the sluices, which also helps to reduce the barriers to wildlife movement along the stream. Both the two downstream sluices closest to Fleet Road (SL2 at SU85515204 & SL3 at SU85515206) proved relatively easy once we'd dug out the thick slit behind each top log, then used a small hand winch to drag it clear.



Digging out the sleeper sluice (SL1)

The sluice at the southern end of the work area by the pedestrian bridge proved more of a challenge (SL at SU85425174). Sam set to work chainsawing a large birch log balanced in the sluice, which we later used to sure up the bank.

The single sleeper meant the entire structure could be removed, but faced with less-than-subtle army engineering of frequent metal posts, this proved easier said than done.

We dug around the sleeper to free it with the iron bar, and used the winch to drag out the sleeper. I then donned waders to attach the winch line onto the numerous metal posts. It was fantastic getting the metal work and sleeper obstruction cleared. It's easy to find on the main path if you'd like to take a look at how the channel is now evolving.



Stuart attaching strop to winch out the metal



The removed sluice

Future Ambitions

Our plan over the coming years is to monitor how the river profile changes with our improvement works, then further lower the sluices as appropriate, to create a gentle stream profile.

We also aim to open up more of the canopy to encourage further riparian vegetation, and join up the marsh with Rushmoor Bottom Meadow.

Thank you to all the rangers, volunteers, Moragh Stirling at the South East Rivers Trust for her much valued help behind the scenes, 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.

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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