

Coulton Bank Soil Erosion

Yorkshire Derwent Catchment

CSFO: David Rees

Sediment has been identified as a key pressure for Water Framework Directive failures in this Howardian Hills part of the catchment. In a very wet October, a Higher Level Stewardship heritage mill restoration project at Coulton was being inundated with soil from neighbouring farmland on higher ground.



Soil erosion from sloping arable land (light green centre of map) washed sediment down the road to Coulton Mill (bottom right) and into a tributary of Marrs Beck.

A site visit showed run off travelling down inside the field hedge before washing out through the hedge and through a gap onto the road. Road drain grids had filled with sediment, turning the road down to the mill into a temporary watercourse whenever it rained.







Coulton Mill HLS Heritage Restoration project inundated with sediment from Coulton Bank

Nigel Judson, Coulton House Farm, was aware of the problem and was keen to work with local CSFO David Rees to resolve the run-off and loss of soil. A free Soil Husbandry Report was commissioned with training delivered in July 2013. The profile pits dug in the Rivington course loam soil revealed a distinctive dark anaerobic compacted layer at 5" to 8" and a slaked surface crust. With impeded drainage to the sandstone below, and with no worm activity to improve soil structure, considerable run-off had resulted. Acting on a report recommendation to break up the compacted layer, post-harvest sub-soiling cultivation resulted in a significant improvement to soil structure and drainage.

The farm was within the Capital Grant Scheme target area and a successful application was made for a sediment trap / pond in the bottom corner of the arable field (see photo below). This work was completed in November 2013 to further improve resilience to extreme weather events affecting this high risk sloping field.



Nigel Judson also used the yard works options in the Capital Grant Scheme to fit new rainwater goods, lay new drains and concrete the farmyard. "I'm very pleased with the range of help CSF provided", Nigel said "I have learned a lot this year and couldn't have completed this work without the 50% grant aid from the Capital Grant Scheme".

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