A clear solution for farmers

CATCHMENT SENSITIVE FARMING

Sediment trap and catchment management improves water quality and river habitat

Rivers Test and Itchen Catchment (29)
CSFO: Serena Leadlay

The Bourne Rivulet sub-catchment is located in the headwaters of the River Test, a classic chalk river system in Hampshire, and supports brown trout, grayling, bullhead and brook lamprey. It became a target area in 2008 as part of the renewed focus on headwater sub-catchments.

A whole range of activities have been used to improve water quality and river habitat, one of which has been the construction of sediment traps as described below.

Highways often provide a pathway for pollutants which travel from agricultural land to a watercourse.

Methodology

Step 1 - Scoping

The highway in question follows a long steep slope, is in the main lower than the adjacent land, and narrows in sections; and the absence of kerbing results in passing vehicles eroding the verges which provides a sediment source.

Highway cutting clearly showing the course for agricultural pollution

After a site meeting with the farmer, the local Highways Officer and an EA Operations Delivery the best option was evidently a sediment pit located adjacent to a farm gateway.

Step 2 - Planning

On the basis that the work provided a pilot study, the EA Ops Delivery team agreed to complete the work at no cost to CSF. A series of other EA Teams and Hampshire County Council Highways Department ensured that the construction would be efficiently completed with minimum impact on the environment or farmer.

Step 3 - Construction

Vegetation was removed using a strimmer. Soil was then excavated using a mini-digger and used to infill the cutting and divert runoff into the sediment trap and to provide a bank

Sediment trap creation

between the sediment trap and the river bank vegetation. Due to the connectivity provided by the highway, the sediment trap was not designed to hold all runoff, but to capture the first flush. Once vegetation establishes in the base and newly formed bund, this will provide additional filtration.

Step 4 – Follow up

This work was publicised internally in EA and CSF as strongly as possible to demonstrate the effectiveness of small scale projects such as this. An article in the local Parish Newsletter explained the work but more high profile publicity was thought counter productive. The main benefit is that the site is now used as a demonstration tool by several organisations to show how to mitigate issues surrounding runoff from highways. Hampshire Highways Department maintain the site.

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