Working Together for Healthy Water and a Healthy Environment

We all have a part to play in looking after our becks, rivers, lakes and their surrounding habitats and as a land manager you can do much to make a difference to the quality of water.

Conserving Coniston & Crake and South Cumbria Rivers Trust are working with farmers and managers across five catchment areas looking at ways in which positive changes can be made to how land is managed for healthier watercourses. These changes benefit farmers and their livestock as well as local communities and the surrounding environment. They will also help in compliance of the new *Farming Rules for Water 2018*. Carrying out improvements could enhance the capital value of your holding and increase opportunities for further grants in the future.

Conserving Coniston & Crake and South Cumbria Rivers Trust can advise, plan, project manage and fund a variety of practical options for you, saving you time and money and making improvements for your livestock and the environment.

De-culverting & Beck Re-naturalisation

Culverted water courses

Historically many miles of culvert were installed throughout the lake district. This was mostly done to improve agricultural efficiency by increasing areas of land available for cultivation and livestock and for small scale mill schemes.

Unfortunately many of these culverts are now failing due to difficulty/lack of maintenance, resulting in blockages, often seen as water emerging on the surface of the field. This causes surface water runoff leading to:

- Water logging the soils for extended periods of time causing soil compaction
- Widespread surface erosion within the field parcel and ripping out vegetation/crop
- Surface flows carry away important soil reserves upon which all agriculture is based
- Expensive fertilisers applied to the land may be removed as water washes the nutrients away wasting money and time

Problems of culvert blockage and lack of maintenance resulting in surface flow also have implications on rivers and lakes downstream:

- Compacted areas of the field reducing water infiltration leading to higher river flows and flooding downstream
- Surface sediment and soil runoff ends up in the rivers and lakes downstream. This can block river gravels by filling in the spaces between the stones, causing fish eggs to die through lack of oxygen as they are buried beneath the surface of the gravel
- Fertilisers, slurry or muck that have been washed off as a result of surface flow can result excess nutrients within the rivers and lakes changing the important chemical balance of the water.

The red line show the location of the culvert and you can clearly see the problems caused by the blockages, putting large parts of the field out of use.

De-culverting & Beck Re-naturalisation

What is de-culverting?

De-culverting is the process of creating an open river channel where previously the water course flowed underground. This process involves digging up the old culvert and allowing the water to flow more naturally.

In some cases it is more appropriate to re-route the water course to follow the lowest point within the field parcel to minimise future erosion of the banks removing the need for maintenance of embankments or channel dredging.

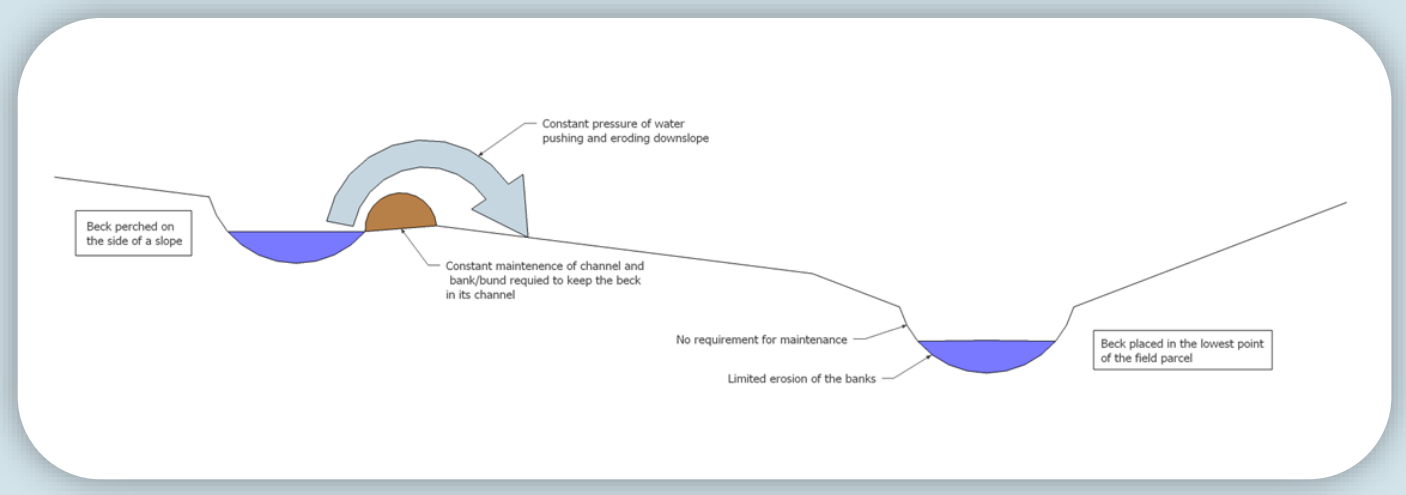

Diagram showing the benefits of re-routing the water course. However, this may not be necessary depending on the water course itself and the field it flows through.

Agricultural benefits of de-culverting water courses

- Reductions in overland flow reducing soil compaction, soil losses, vegetation stripping and fertiliser losses, saving you time and money.
- Less restriction of flows created by having a wider, open channel.
- Any blockages may well clear themselves without the need for maintenance.
- If re-routing the water course to a lower point is an option, the existing culvert can be left in place and **may act as additional drainage** within the field parcel.

Environmental benefits of de-culverting water courses

- Reduction in flood flows and sediment runoff reaching water courses downstream, improving conditions for fish eggs and invertebrates.
- An open water course now accessible to wildlife, fish and birds.
- Creation of natural habitat along areas which were previously unavailable.
- Linking up new stretches of salmon and trout breeding and spawning grounds upstream which were previously unreachable due to the presence of a culvert.

The red line marks the course of the old culvert. The new beck was allowed to follow its natural course. The surrounding area was planted with a number of trees to provide additional habitats.

De-culverting & Beck Re-naturalisation

Conserving Coniston & Crake will

- Advise, plan and project manage completion of de-culverting including water course consent, planning permission and contractor liaison **for free**.
- As a condition fencing will be installed for free to keep livestock from entering the water course.
- Free installation of specific water drinking solutions and crossing points for livestock.

Benefits to You

- Livestock health by reducing contact with waterborne livestock diseases and infections such as fluke.
- Reduced potential for lameness caused by wading through deep mud.
- Increased ease of livestock stock management or flock gathering.
- Creation of shelter if the fenced area is also planted with hedging or trees.
- De-culverting may prevent overland flow or soil erosion affecting the water courses downstream, helping you to comply with the New Farming Rules for Water which will come into force in April 2018.

Creation of a new beck for part of a small hydro power scheme. The area within the fence was planted with trees to create improved habitats. Gates and a livestock crossing point were also installed as part of the beck creation project.

Removal of revetments to re-naturalise a beck. This work supports natural flood management with the beck's newly graded sides. The farmer was also happy to support the work to improve habitat conditions for native white clawed crayfish.

Points to Note

- A small amount of the field parcel land surface will become water course as opposed to pasture or crop.
- The fencing included as part of the project will be required to be set back from the water course, reducing areas available for permanent grazing. This will be done as far as possible in a way so as not to affect payments from RPA. However, by creating an area of biodiversity interest environmental payments may become available.

Here to Help You

Conserving Coniston & Crake can discuss options and offer solutions that meet you and your needs as long as there are benefits to the watercourses on your land. Installations have, on other farms, saved the land manager/farmer time and money and improved conditions for livestock and the wider environment.

We can advise, plan, project manage and fund a variety of practical options for you, on a one-to-one basis so will look at any other bespoke options for farming improvements that impact positively on water quality.

Together, we will review your current situation, identify potential opportunities and then develop an action plan.

More information sheets are available for

- *Fences and gates*
- *Stream crossings and tracks*
- *Bank erosion and EWS (engineered wooden structures)*
- *Feeding and drinking areas*
- *Reducing water loss and clean water separation*

Farming Rules for Water 2018

From April 2018 all farmers in England will need to follow some new rules to protect water quality.

The rules will ensure that farmers use fertilisers efficiently and avoid water pollution through surface runoff and soil erosion, standardising good farm practices that many will already be performing.

There are eight new rules; five for managing fertilisers and manure and three for managing soil.

The Environment Agency will be responsible for managing compliance with these new rules and will be carrying out checks.

Catchment Sensitive Farming

Your local Catchment Sensitive Farming (CSF) Officer can also give training and advice on practical solutions tailored to you and your farm.

The CSF Officer can talk to you about the availability of grants, business solutions that save money & time as well as the environmental benefits to making positive changes.

Contacts

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The Farmer Network - www.thefarmernetwork.co.uk
National Farmers Union - www.nfuonline.com

Conserving Coniston & Crake is a 3 year HLF project with the aim of improving water quality, habitat and biodiversity in the catchment area, through conservation activities and community engagement. The project is supported by South Cumbria Rivers Trust, the Coniston & Crake Catchment Partnership and other partners - the National Trust and the Lake District National Park Authority.
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