

From Beck To Beach

The newsletter of **West Cumbria Rivers Trust**

Nine tonnes of plastic removed from River Keekle

The first phase of our £1.5m partnership project with the Environment Agency to remove a plastic liner from the bed of the River Keekle is now complete, with a bench and picnic table made from the recycled plastic marking the spot.

A 2.5km stretch of the river was lined with plastic in the 1990s to protect it from potential mine water contamination, but the liner is now causing erosion and plastic pollution. Our project to remove the liner started this year and will continue in 2020. This summer saw an initial nine tonnes of plastic removed from a 170-metre trial site and the riverbed restored with stone.

The trial site enabled us to experiment with different methods of removing and recycling

the plastic to find the best way to complete the remaining 2.3km river restoration in summer 2020. During that phase we estimate that 100 to 150 tonnes of plastic will be removed.



The plastic removed from the trial site

Plaswood from Berry BPI, who have generously supported the project by covering some of the costs involved.

The project is part of the Environment Agency's River Restoration Programme in Cumbria – one of the biggest portfolios of river restoration projects in the UK.

This year's trial phase was funded by the Environment Agency at a cost of £175,000. Phase two has been awarded £1.3m by the European Agricultural Fund for Rural Development's Water Environment Grant.

westcumbriarivertrust.org/projects/keekle



Before the restoration...



... and after!

The first phase was a huge success and we're already seeing massive positive changes in the restored section of river. The river is re-naturalising itself and evidence of natural gravel, cobbles and sediment deposition can be seen now the unsightly plastic isn't in the way. Once restored, the full 2.5km stretch has the potential to become great habitat for fish spawning and a haven for people and wildlife.

The plastic is being recycled, with the sheets shredded, cleaned and used in the manufacture of recycled plastic lumber. Some of the plastic from the trial site has been made into a bench and picnic table at Walkmill Community Woodland car park to mark the project's success so far. The recycling and manufacture has been done by Dumfries-based

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West Cumbria Rivers Trust

Caring for our Lakes and Rivers

Update: Natural flood management projects

Natural flood management (NFM) is an important part of the government's strategy to protect communities from flood risk. In partnership with the Environment Agency, we're delivering four of 15 projects across Cumbria that are part of DEFRA's £15 million National NFM Programme. Our projects aim to help reduce flood risk to Keswick, Cockermouth, Flimby and Bootle and all run from 2019 to 2021. Monitoring the effectiveness of NFM is a key part of the projects and we aim to contribute to the national evidence base on its benefits.

Each project takes a catchment-wide approach. We're working with farmers and landowners across the catchments to implement measures to slow water run-off and store it in the landscape. Measures include improving soil condition, creating and restoring hedgerows, building leaky woody dams across rivers to slow the flow of water in storm conditions, temporary water storage areas and tree planting. Lots of small interventions across a catchment can add up to make a real difference to downstream flows. NFM measures can also help improve water quality and increase biodiversity.



Glenderamackin catchment

Area: Mungrisdale to Keswick

Funding: £693,000 (DEFRA's NFM programme / European Agricultural Fund for Rural Development's Water Environment Grant)

We've put in cross-slope hedgerows, in-field tree cages and leaky dams. In total, we're aiming to plant 10,000 trees across the catchment this winter. We're working with lots of landowners on plans for other measures which will take shape in 2020, including two ponds to store more water during storm events (and provide habitat), cross floodplain kested hedgerows, further leaky dams and improving connections between small watercourses and their floodplains.

Cocker catchment

Area: Buttermere and Loweswater to Cockermouth

Funding: £818,000 (DEFRA's NFM programme / European Agricultural Fund for Rural Development's Water Environment Grant)

Around 9,000 trees will be planted over the winter. Some are on slopes that lead down to becks, and others adjacent to becks to create more varied habitat. Farm visits have been done, and some of the recommendations will be used for agri-environment scheme applications. Leaky dams are due to be installed on some farms this winter, as well as new fences and hedges.



Flimby

Funding: £158,000 (DEFRA's NFM programme)

We've installed leaky dams and woody debris structures in Penny Gill and Flimby Gill. Over the winter we'll be planting over 3,500 trees at four sites across the area upstream of Flimby.

Bootle

Funding: £166,000 (DEFRA's NFM programme / Walney Extension Community Fund)

We've installed leaky dams in Kinmont Wood and set up monitoring to document their effectiveness. Lots more projects are being developed including water storage areas, further leaky dams, hedging and bankside fencing. We'll also be planting 3,000 trees over the winter.



New wetland at Seascale

Flood risk in Seascale will be reduced and water quality improved following our joint project with Cumbria County Council to upgrade drains and create a new wetland habitat to naturally filter water.

The Council developed plans for the project, which included our design for the wetland, after initial investigations by themselves, the Environment Agency, Copeland Borough Council, Natural England and ourselves. As well as reducing flood risk by making space for water and improving water quality as polluted water passes through the reeds, once established the wetland will provide important habitat for several species including birds and invertebrates. This project is a fantastic example of how, by working together over a number of years, we can achieve multiple benefits to both people and wildlife. We're looking forward to seeing how the wetland develops over time.

We'd like to thank the landowner and the fantastic team from Balfour Beatty who spent a very muddy day planting the reedbed as part of their Adopt-a-Beck Corporate Social Responsibility volunteering day.



Reducing pollution in Crookhurst Beck

The latest phase of a project to improve water quality in Crookhurst Beck – which flows into Allonby bathing water – is coming to an end, but an exciting new chapter is beginning...

Since 2013 we've been working with farmers to reduce pollution entering the beck, through United Utilities 'Catchment Wise' programme. The beck had a 'poor' status under Water Framework Directive, largely due to high phosphate levels from agriculture and wastewater treatment works.

We've installed six interventions on farms, including a slurry store, fencing to keep livestock away from riverbanks, and farmyard rainwater storage and dedicated wash-down areas. We've also been working closely with farmers to provide practical advice and cost effective solutions to improve water quality. Since 2016, Lancaster University PhD student Josh Gittins has been researching the effectiveness of the interventions and his results will be published in April 2020. We hope to see significant water quality improvements in the beck and thank funder United Utilities and our other project partners, Natural England, the Environment Agency and Lancaster University.

The work doesn't stop here though. We've now been awarded Natural Course funding to continue working with farmers to promote awareness and understanding of new Farming Rules for Water introduced in 2018.



Sellafield Adopts a Beck

Sellafield has become the latest organisation to Adopt-a-Beck and has chosen the River Keekle. The organisation is committing £229k over the next three years to the People on the Keekle project, which will see a mixture of habitat improvement works and community and school engagement activities on the lower reaches of the river that run through Cleator and Cleator Moor.

Habitat improvement works will include riverbank stabilisation, eradicating invasive non-native species, creating more diverse habitats, improving fish habitats, providing nest boxes and planting trees. Local communities will be able to get involved through volunteering events,

and a wide range of school and family activity sessions will be run.

This project will be a fantastic complement to our ongoing river restoration work on the Keekle and we're excited to be working with the Sellafield team.

We'd also like to say a huge thank you to NUGEN who were the first major donors to Adopt-a-Beck – adopting Kirk Beck and Black Beck for the last three years – and encouraged Sellafield to carry on funding this fabulous scheme.



News in brief

Thank you, fish survey volunteers!

A huge thank you to the 30 volunteers who donated 574 hours of their time to help with our annual Derwent catchment fish survey. Despite a wet summer raising river levels, we managed to survey 161 sites from July to September. We recorded over 5,000 salmon and trout and were excited to see salmon at some sites where we've not seen them before. Look out for the survey report in early 2020.



Project Officer Ruth Mackay (right) with volunteers Bonnie and Neil

westcumbriarivertrust.org/projects/fish-surveys

Welcoming our new interns

We're delighted to welcome our new interns, Esther Foster and Chris Gray, to the team. Esther will be helping our project officers with our work across the region and coordinating our series of Babbling About Rivers talks, while Chris will be helping our Learning and Engagement Officer run our programme of school and family activities.

westcumbriarivertrust.org/about#meet-the-team

Trees, trees and more trees!

This winter we'll be planting almost 30,000 trees across West Cumbria! Trees are fantastic for reducing the amount of soil entering watercourses by stabilising riverbanks and holding water in the landscape. We'll be running several volunteering events where you can give us a hand – keep an eye out for a date near you!

westcumbriarivertrust.org/events

New volunteering groups

Can you help us out in Flimby or Bootle? Our two new volunteering groups go out monthly to help with our natural flood management projects near the villages. You'll be doing things like tree-planting, constructing leaky dams, and monitoring river levels. Events are listed on our website, or contact chris@westcumbriarivertrust.org about Flimby or caitlin@westcumbriarivertrust.org for Bootle.

westcumbriarivertrust.org/events

Event calendar

5 December	Volunteering	Flimby Flood Group: Hedge planting
11 December	Volunteering	Wasdale Wednesday: Christmas party
17 December	Family	Keswick Live Advent: Handbell Carols
19 December	Volunteering	Derwent River Watchers: Litter pick
8 January	Volunteering	Wasdale Wednesday: Tree planting
9 January	Volunteering	Flimby Flood Group: Hedge planting
6 February	Volunteering	Flimby Flood Group: Tree planting

Events are subject to change and more will be added after we've gone to print! For full details and all the latest information, see our website or contact us on 017687 75429.

westcumbriarivertrust.org/events

Farewell to our Chairman

As we approach the end of another fantastic year for the Trust, we must announce the retirement from the Board of our Chairman, David Calvert. David has been a trustee for eight years and our Chairman for the past three years. In that time the Trust has gone from strength to strength, with more staff being employed, an expanded volunteer network created and bigger projects undertaken than ever before. We thank David for his contributions and enthusiasm over the years and wish him all the very best for the future.

What is it?

This is a data logger, made by Onset, that records pressure. By comparing a logger in the air with one under water, we can tell how deep the water is. We've got lots of loggers in streams recording their depth every 15 minutes.

This data helps us understand how our rivers respond to rainfall and evaluate how well our natural flood management features are working. Natural flood management aims to 'slow the flow' and store water in the landscape for longer, so the water should be shallower downstream of the features we have installed.

