Action for the River Kennet

SUMMER 2022 | 45

Action for the River Kennet
River talk
A PARTNERSHIP OF PEOPLE WHO CARE ABOUT THE KENNET & PANG

ARK's not just about caring for the Kennet

We're also here for all its tributaries and the Pang as well

A significant expansion of ARK's work over recent years has been the recognition that all rivers are actually networks, and that their tributaries are as important as the main stem of the river. Tributaries provide essential spawning habitat, variations in habitat type and important refuges for fish when water quality in the main stem of the river declines.

Our Sparking Streams project, which you can read about on pages 4 and 5, focused most of its work on the rivers Shalbourne and Dun, relatively neglected tributaries that have huge potential to be fantastic habitat. If we get it wrong, these tributaries will be inaccessible to fish, sources of pollution and wildlife deserts. But get it right and those same smaller water courses can be important spawning grounds, sources of clean water into the main river and richly diverse habitats for a wider variety of species. Healthy tributaries strengthen the resilience of the main river and are critical to the success of the catchment. That's why we are working more on those smaller rivers, with active projects on the Shalbourne, Dun, Lambourn, Holy Brook, Priors Moor Ditch and Og this year.

In 2021 ARK became joint Catchment Hosts for the South Chilterns Catchment Partnership. We agreed to share this role with Thames 21 and the Chilterns Chalkstream Project, with ARK having particular responsibility for the river Pang. The Pang actually sits just outside the Kennet catchment. It's a tributary not of the Kennet, but of the Thames, entering the river just upstream from where the Kennet joins at Reading. However, as a chalkstream it shares many of the characteristics of the Kennet and its tributaries and we are already enjoying the challenge of applying our experience and expertise to a new river.

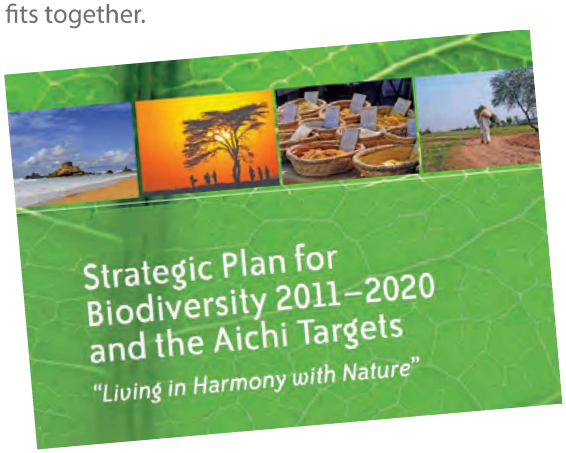
Charlotte Hitchmough

ARK volunteers helping to restore the River Dun.
***Credit:** Action for the River Kennet*

News from the Chairman

ARK and biodiversity

Nature Conservation, or to use the latest jargon 'management of biological diversity', is a bread-and-butter activity for ARK; it is at our core. But sometimes I am sure we all wonder how what we are doing here in the Kennet valley can have a global impact. I would like to take a few moments to review how it all fits together.



This year Montreal will host the 15th meeting of the international Convention on Biological Diversity (CBD). The primary purpose will be to review the delivery of the CBD's *Strategic Plan for Biodiversity 2011–2020*. This was a ten-year framework for action by all countries and stakeholders to safeguard biodiversity and the benefits it provides to people.

The relevance of this plan to the work of Action for the River Kennet is that our own government is a signatory to the CBD and therefore has a responsibility to deliver against the plan. One key response from them has been to agree to sign up to a target known as '30 by 30' – the commitment made by Boris Johnson in September 2020 to protect 30% of the UK's land and sea by 2030.

Originally, the 30% target was going to be achieved through positive management in our National Parks and Areas of Outstanding Natural Beauty, but it appears that will not be enough. In March of this year the government published its Nature Recovery Green Paper: Protected Sites and Species. As well as emphasising the need to simplify a very complex situation of wildlife designations and to use robust data to inform conservation, the paper focuses on the need to actively restore natural habitats as well as protecting them. What's more, it wants that to happen not just in designated Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) but more widely, and very importantly in active partnership with the farming sector.

ARK does all this in the Kennet and Pang catchments when we train and deploy our excellent volunteers to monitor riverfly populations and water quality, engage with riparian landowners and promote catchment sensitive farming.

Being a voluntary organisation and part of the Environmental Non-Government Organisations (eNGOs) movement, we are helping to lead the way in the conservation and restoration of biological diversity. For example, earlier this year CEOs from 14 of the world's largest environmental organizations called for the UN to set a global goal to halt and reverse nature loss by 2030, and to achieve full recovery by 2050.

So when you read this edition of River Talk you can see how we, in our own locally focused way, are doing our bit for the global Conservation of Biological Diversity.

Richard Clarke

Welcome to the Pang

A new river joins the ARK family

The barriers that prevent fish moving up and down the Pang.

The Pang is another of England's chalk streams, and like every other river in England it fails to meet Good Status. In 2021 the Pang had the dubious honour of being home to Thames Water's worst performing sewage treatment works. For more than 2,600 hours it discharged untreated sewage into the river.

As well as poor water quality the Pang faces other challenges, including the barriers to fish migration that have recently been mapped and assessed by our Thames Catchment Community Eels project. The tributaries of the Pang flow off clay rather than chalk, so it is an unusually 'flashy' river, responding more quickly to rainfall than other chalk streams. This means that communities like Pangbourne have experienced flooding and is why the very active Pang Valley Flood Forum have been working with landowners and riparian owners on schemes to slow the flow of water through the landscape.

There is clearly a huge amount to do to bring the river to good health. To this end, Thames Water has declared that the Pang will be one of its 'flagship chalk streams'. This means that they will provide funding over a 10-year period to help restore the river. The money will be released from 2025 and the next two years will be spent identifying the needs of the catchment with partners like ARK.

Further hopeful news is the establishment of three new farm clusters covering the Pang. These represent the main landowners in the catchment. ARK has already run events for the Pangbourne and Whitchurch Sustainability Group, Pangbourne Young Farmers, and the Lower Pang and Kennet Farm Cluster and we look forward to working with more of the community over the coming years.

ARK are beginning to establish a team of volunteers along the Pang. We will be running a riverfly training workshop on 17 September. If you are interested in becoming a riverfly monitor for us on the Pang please drop Mia an email. You can also come along and see us at GreenFest in Hampstead Norreys on Saturday 10 September.

Mia Rider will be our project lead for the Pang. You can contact her at mia@riverkennet.org

Charlotte Hitchmough

Drought looms

People in the south of England will look back on Summer 2022 and remember it as the 'long hot summer'. July temperatures hit 36.7 ° C in Marlborough and 37.6 ° C in Reading. The heat was combined with weeks of no rain, during which our water consumption hit record levels. Drought is not a short-term problem. Across the Thames Basin 10 of the last 12 months have seen below average rainfall and it's this ongoing lack of rain that builds to a water deficit that can't be resolved by a few wet weeks.

Right now everyone has a part to play by dramatically reducing water use. In the longer term water companies need to invest in resilient water supplies and planners need to stop assuming that water is a limitless resource. Our water comes from rivers and their aquifers and it's the rivers that will pay the price.

Charlotte Hitchmough

Sparkling Streams

Breathing new life into two of the Kennet's neglected tributaries

Throughout 2021 and 2022 ARK's Sparkling Streams Project has focused on delivering river restoration and catchment management activities in and around the Dun and Shalbourne sub-catchments of the River Kennet. It's the biggest single project ARK has ever undertaken and has resulted in positive change for two of the lesser-loved chalk streams in our catchment.

Reconnecting the historic channel and fish bypass at Eddington Mill. ***Credit:*** *© Cain Bio Engineering*
Inset: *The Kennet at Eddington Mill after restoration.* ***Credit:*** *Peter Christensen*

River restoration

The physical modification of chalk streams dates back as far as the Middle Ages and over the centuries most chalk rivers have been impounded (dammed), diverted, straightened and dredged to suit the human activities of the time.

The current generation of riparian owners and conservation minded organisations have begun the task of repairing the physical alterations of the past and are seeking to restore rivers to a more natural state.

As low-energy rivers systems, chalk streams lack the ability to self-repair and so having bold and imaginative landowners willing to see the physical restoration or 're-wiggling' of rivers is an essential step in enhancing these precious habitats for the future.

The Sparkling Streams Project was fortunate to have the support of a number of such landowners in the form of the Town & Manor of Hungerford and the Southern Streams farmer cluster. Working alongside ARK and the North Wessex Downs AONB this partnership was able to undertake a series of river restoration and habitat enhancement works.

The flagship restoration project was on the middle Kennet at Eddington Mill, where the mill structure has for many centuries impounded the river and restricted the free passage of fish. In 2016 the ageing weir at Eddington Mill collapsed. This restored the natural gradient of the river upstream of the weir, but the sudden drop in water level left an overly wide linear channel, with high banks and heavy bed scour. The concrete remnants of the weir also formed an on-going barrier to fish passage.

In October 2021 Cain Bio-Engineering were appointed to deliver the restoration works, which included constructing a bypass channel, restoring and enhancing the main river upstream of the weir and landscaping the lake and surrounding land in this setting close to Hungerford town centre.

Key features:

- A 'nature-like' fish bypass that reconnects the historic course of the river and enables fish to swim freely around the mill for the first time in centuries.
- Lots of large woody material (LWM) to aid channel-narrowing, sinuosity and provide cover and complex habitat.
- Angler-accessible berms that help to narrow and meander the channel in tandem with the LWM on the opposite bank.
- Creation of backwaters, wetland and wet-woodland habitat.
- Lowered bunds and regraded banks to reinstate floodplain connectivity.
- Lake restoration involving scalloped edges, lowered bunds and marginal planting.

Elsewhere ARK worked with the Wild Trout Trust and the Environment Agency to deliver several small-scale restoration and habitat enhancement projects on the Dun and Shalbourne. These included restoring a 100m stretch of river near the headwaters of the Shalbourne where important spawning areas had been dredged and filled with sediment. 150 tonnes of flint gravel were added back into the river to raise the bed and create a meandering two-stage channel with a short pool, riffle sequence and hopefully plenty of opportunities to support future trout redds.

Similar works were carried out on the Dun where historic modifications and overgrazing had left the river too wide and with little marginal and in-stream cover. Clean gravels were used to create fresh spawning habitat and lots of large woody material was added to the channel to provide some sinuosity and scour. The channel was stock-fenced and a cattle crossing was installed to allow access for livestock and machinery.

The Shalbourne: before and after the completion of works. ***Credit:*** *Rupert Kelton*

Catchment management

Alongside works to the rivers themselves, the Sparkling Streams Project took a wider catchment-based approach to help tackle some of the more modern pressures on water quality and quantity that exacerbate the physical damage of the past. Again, with the help of the Southern Streams farmer cluster the project provided a range of nature-based solutions across the Dun and Shalbourne catchments including a rain garden at Shalbourne primary school, new wetlands and leaky dams, and lots of tree and hedge planting. As ever, much of the work was carried out with the generous help of ARK volunteers.

Legacy

The Sparkling Streams Project was funded for just one year by the government's Green Recovery Challenge Fund but has created a legacy of ongoing habitat enhancement work.

On the river Shalbourne ARK are building on activity from the project to deliver river restoration and improve fish passage, with money from North Wessex Downs AONB's Farming in Protected Landscapes (FiPL) fund. Further work with the Southern Streams farmer cluster is also under way to create a new wetland at Wilton as part of a joint Water Stewardship project sponsored by Amazon Web Service and Rivers Trust with additional support from FiPL. On the River Dun, meanwhile, ARK and the Southern Streams farmers are using further FiPL funding to improve water quality and enhance wet meadow habitat.

The Sparkling Streams Project has also helped ARK expand our skills and capabilities as a Trust and continued to build our network of landowners and riparian owners open to exploring opportunities for restoring our rivers and catchments.

Charlotte Hitchmough and Rupert Kelton

Saving our eels

ARK and our partners ride to the rescue of an endangered species

New volunteers and new data for making decisions about fish passage are two of the big wins to come out of our exciting and now successfully completed Thames Catchment Community Eels Project.

The critically endangered European eel (*Anguilla anguilla*) spends the majority of its life in our rivers before returning to the Sargasso Sea to spawn. Eels only spawn once in their lifetime, so each eel that reaches maturity, completes that astounding migration and contributes to the next generation really does count!

Man has built many obstacles in rivers that prevent eels from migrating, swimming upstream and dispersing to reach suitable habitats and food sources or to escape from pollution. More data was needed to inform the Thames River Basin Eel Management Plan and enable strategic planning for projects to improve river-corridor connectivity for eels.

This need for up-to-date information inspired the citizen science ObstacEELS element of our project. We were not only able to raise awareness of how important eels are to the river environment but also to excite local people about their rivers in general. As a result we got them directly involved in collecting robust data for us to analyse and use.

Over the last year 31 volunteers have been trained to become our ObstacEELS citizen scientist volunteers, between them covering 135km of river bank along the Kennet (including the Kennet and Avon Canal) and a further 28km along the Pang.

They were trained to identify barriers to eel migration via introductory live Zoom workshops, followed up with in-person training on the riverbanks of the Kennet and the Pang, delivered by our Project Officer Mia Ridler.

Through co-ordinated team walkovers on the middle and lower Kennet and the Pang our volunteers identified and photographed the types of barrier, scored them for passability using a standardised system called EBAT (Eel Barrier Assessment Tool), and recorded all these details directly into the newly modified Rivers Obstacles App.

Before recruiting volunteers for ObstacEELS, Mia had, along with colleagues from partner Rivers Trusts, been part of the development of this new and innovative approach to training,

Mia with some of the ObstacEELS volunteers out surveying. ***Credit:*** *Karen Smith*
Inset: *Recording obstacles on the Rivers Obstacles App.* ***Credit:*** *ARK*

mapping and scoring. She was herself trained by Zoological Society of London (ZSL) at a 'Train the Trainer' day held at the beautiful Avington Estate in Berkshire.

At the start of the project, we had baseline data from a range of sources, pulled together by Thames Estuary Partnership (TEP). By the time we finished 126 barriers had been surveyed on the Kennet (including the Kennet and Avon Canal). Sixty-four of these were 'new', so not present in the baseline data. On the Pang, 39 barriers were recorded, of which 15 were 'new'. Finding all these barriers was quite shocking, but it means we now know much more about the problem and can take this into consideration as opportunities arise. We have shared our findings with the members of the Kennet Catchment Partnership, including the Environment Agency. We've also met supportive landowners as well as gaining valuable new volunteers. Lots of our ObstacEELS volunteers are now regularly joining our other volunteering opportunities, helping us at the same time as expanding their own knowledge and interests.
The bigger picture is that this was a partnership project, led by Thames Rivers Trust with South East Rivers Trust (SERT) and Thames21 (T21) also delivering ObstacEELS. In turn, all the partners worked closely with Thames Estuary Partnership and Zoological Society of London (ZSL).

TEP cleaned the data and fed it into their publicly accessible online Thames Fish Migration Roadmap, which helps visualise connectivity throughout the river corridor. The same data has also contributed to the wider Thames River Basin Eel Management Plan.

The project focused on five rivers, although data was collected from a larger sample of 24 rivers which between them contained no fewer than 457 barriers. Of these, 278 were identified as 'new' and for 442 of them it was possible to record specific information about eels.

Using the Kennet and Pang data Mia has, with the help of other stakeholders, created a local Fish Migration Vision map for each river. These show where in the longer term we'd like to see barriers either removed or modified through the installation of an eel pass or a by-pass channel. Individual barriers were then prioritised on the basis of the number of kilometres of river that would be opened up, how far downstream the barrier was (the closer to the Thames, the more eels there are) and if it was not part of already-planned fish-passage works.

In the short term we are seeking to secure funding for the installation of eel passes at our two top priority sites, County Weir on the Kennet in Reading and Tidmarsh Mill on the Pang. The Thames Catchment Community Eels Project funded a desk-based assessment, topographic surveys and production of outline designs for eel passage at both these locations.

The longer-term goal is to create a more ambitious multi-year project and to expand the partnership. We would like to roll out ObstacEELS surveying to other Kennet catchment rivers, to spread eel educational outreach to the wider community, and to get more of the river open not only for eels but other species of fish as well.

The Thames Catchment Community Eels Project was funded by the government's Green Recovery Challenge Fund (GRCF) and ran from December 2020 to March 2022.

Anna Forbes

Training the trainers at Avington.
***Credit:** Anna Forbes*
***Left:** The roadmap for fish migration.*

ARK People

Maisie Jepson

I moved to Marlborough three years ago and love that the river is so accessible through the town. When I asked if I could help monitor the riverflies, I took over at Cooper's Meadow which is ideal. I'm a Farm Adviser, so it is really useful for me to have an understanding of the health of the river.

Karen Smith

I grew up in rural Berkshire and have always felt connected to the natural world. Since early retirement and Covid, volunteering with ARK has helped me rebuild. From building a rain garden to ObstacEELS, redd spotting and water vole surveying, it's been a joyful learning adventure – even in the rain.

Zoe Cliffe

When I first looked for caddisfly at the age of eight, who knew I would return to it so many years later? As a riverfly monitor I can now identify many other river invertebrates – my favourites are the flat-bodied *heptageniidae*. I also enjoy sending my daughters photos of my new office – the River Kennet!

Josh Purton

My passion for fisheries and conservation started at a young age, now I'm the River Keeper at Craven Fishery. Reality here is over abstraction, and pollution is destroying the river at an alarming rate. On the plus side, a new migration channel will soon allow our fish to migrate to cleaner spawning grounds.

Dates for Your Diary

Green Fest '22
Saturday 10th September
10.00am to 5.30pm
Find us in the **Nature Zone** – An area on the Dean Meadow Hampstead Norreys RG18 0TD

ARK AGM
Tuesday 11th October
6.30pm for 7.00pm at Bear Hotel, Hungerford
Speaker: Chalk stream expert, author and presenter Charles Rangely Wilson.

Our volunteer activities are all published on our website at www.riverkennet.org

easyfundraising.org.uk
feel good shopping
Learn how you can support ARK every time you shop online just visit:
www.easyfundraising.org.uk/arkactionfortheriverkennet

Websites Worth Visiting

The Mammal Society's Mammal Mapper app is a great way for anyone to report sightings or evidence of mammals, including water voles and otters. It's quick and simple to use and you are contributing to national data.

To find out more visit: www.mammal.org.uk/volunteering/mammal-mapper/ or look for 'Mammal Mapper' in the app store.

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Members of ARK receive a copy of this newsletter either by mail or email.

If you'd like to find out more about ARK, volunteering opportunities or membership please visit our website at www.riverkennet.org or contact Anna Forbes: anna@riverkennet.org

We hope you have enjoyed this newsletter and if you have any comments or ideas for future issues, do please pass them on!

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