Ark
Action for the River Kennet

SPRING 2017 | 36

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

ARK in the community

With the support of Tesco Bags of Help, the ARK-led Ramsbury Community River and Wildlife Project is nearing completion.

This innovative scheme has enabled us to work closely with groups and individuals from the village to improve spaces for wildlife and the community in a range of ways.

At the Ramsbury Triangle we've run five all-day river restoration sessions for volunteers old and new to learn new skills and help look after their river. Special thanks are also due to Hungerford's A4 Hire for donating their digger and to the Howe Mill Estate and their riverkeeper Eddie Starr for their input.

The villagers also turned out and planted Yew trees at the Recreation Ground – hedging is a fantastic habitat critical to the existence of many species of wildlife and it does an excellent job slowing down and reducing runoff pollution that enters the river.

ARK worked with Wiltshire Wildlife Trust at the trust's Ramsbury Meadow Nature Reserve to build new river and pond viewing platforms and steps built from non-slip recycled plastic. The Scouts are also now enjoying outdoor sessions around their new purpose built fire pit.

The final element to this project is our input to a new wildlife garden at Ramsbury Primary. Designed by Hampton Court Gold medal winner Wendy Allen, it features lots of water efficiency measures.

Anna Forbes

"Thanks to the excellent project management of ARK's Anna Forbes and the help of so many volunteers the project has made a popular walk in the village and the Ramsbury Triangle more accessible to everyone as well as helping the Recreation Centre, the Scouts and the school. The Parish Council is extremely grateful to ARK for obtaining this money and making sure that it was used to best advantage."

Sheila Glass, Chairwoman of Ramsbury & Axford Parish Council

News from the Chairman

I took over as Chairman of ARK from Geoffrey Findlay in December and I want to take this opportunity to thank him for his total commitment to the River.

During the six years he chaired ARK, Geoffrey led the charity to become not only a well-respected and trusted authority on the River Kennet but also an effective deliverer of practical activity that conserves and enhances the river. Some of the many things that were achieved on his watch include the creation of the Stonebridge reserve, fencing and grazing Cooper's Meadow, the growth in membership to over 500 members and securing numerous grants and awards. We now have a small but dedicated team, a growing band of volunteers, a professional office and a reputation that massively belies our modest size. Thank you, Geoffrey.

My association with ARK is by no means as extensive as Geoffrey's. I have been on the Committee for over ten years providing advice and guidance on both local and strategic environmental issues. I first became involved with ARK when I moved to Manton and took up the post as the first Director for the North Wessex Downs Area of Outstanding Natural Beauty in 2003. Today I work for a national charity, the National Association for Areas of Outstanding Natural Beauty, as head of collaboration and policy.

Going forward I hope to build on Geoffrey's legacy by helping ARK, the staff, volunteers and members plan for a sustainable future. Working with members of the committee and staff I am determined we will show how ARK can chart its way through what will be very challenging times and not just survive but prosper.

Since the financial crash of 2008 the number of small and medium-sized environmental charities being wound up has increased dramatically. Continued fiscal constraint means that the public-sector bodies that ARK works have also seen deep cuts to their funding. This could be seen as an opportunity for us as we could effectively step into the vacuum left by these declining public bodies.

ARK has a track record of delivering very efficiently using volunteers and goodwill to its optimum, but it cannot do this without its core staff and budgets. I see a key task for me, as the new Chairman, to secure resources that we can rely on year on year. So, I will be looking to work with local businesses and organisations such as Thames Water and other conservation groups to agree on how ARK can be supported to deliver our shared aspirations for the River Kennet over the coming years.

Richard Clarke

Photo: *In January we held our fourth annual Volunteer Gathering, a thank you for all of their hard work and a chance for volunteers who help us in different ways and on different days to meet one another. This year's party was held in the home of volunteer Bruce Hayllar and his wife Tricia.*

How clean is our river?

Chalk stream water is often referred to as 'gin clear', and this clarity is a defining characteristic of our chalk stream environments.

As rain lands on the rolling chalk downlands of Wiltshire and Berkshire, it seeps slowly through the fissures in the chalk to the aquifer beneath. Here it becomes the source of the Kennet's rivers and streams as a series of springs. The process of infiltrating through the chalk naturally filters many pollutants and sediments out of the water and it flows from the ground clear, cool and constant.

Despite this promising start, our river is not as clean as we might hope.

Our water quality testing shows clearly that the river is carrying high nitrate loads, right from the moment the water sees daylight. This is due to a phenomenon known as the 'nitrate time bomb'. It is a legacy from a period of particularly intensive farming that involved the application of high levels of nitrogen-based fertilisers to get good crops from poor soils. Not all the fertiliser was used by the crops and the excess has steadily worked its way through to the groundwater.

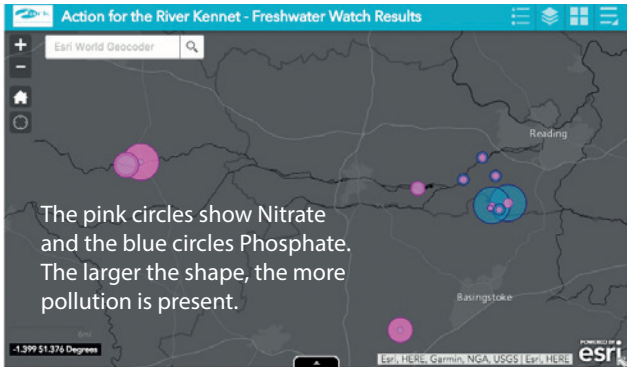

Photo: *Example output from Nitrate and Phosphate testing in the Kennet Catchment*

The situation has become so acute that water from boreholes such as Ogbourne can't be used for drinking water because the nitrate concentrations pose a risk to human health, specifically 'blue baby syndrome'. To avoid this risk, water companies dilute water with high levels of nitrate with cleaner sources, or have to install additional treatment measures to bring the level below the drinking standard of 50mg/l.

In the river, high nitrogen levels act as a fertiliser, promoting excessive algal growth which smothers green plants and deprives the water environment of oxygen. The Fresh Water Habitats Trust has set a value of 1mg nitrate per litre as a definitive value for 'clean' water in rivers. Any value higher can be considered a result of human impact. Our volunteers are finding values of between 5 and 10 mg nitrate per litre in the Kennet and its tributaries, although interestingly nitrate concentrations decrease downstream.

Our volunteers are also testing for phosphate. Phosphate is a nutrient essential for plant growth but, like nitrate, too much of it can be a problem. It causes algal blooms and, in extremes, kills fish. It is strongly associated with pollution from sewage treatments works and septic tanks. The Fresh Water Habitats Trust describe a healthy limit for phosphate as 0.05 mg per litre for a low altitude, high alkalinity river like the Kennet. Any value higher than this indicates pollution. Our water quality test results show that phosphate levels are consistently too high, with our lowest recorded level 0.07 rising to 0.5mg phosphate per litre. There are localised peaks, which appear to correlate with sewage treatment works, urban areas and stretches with a predominance of septic tanks, although we need more detailed testing to confirm this.

Finally, our volunteers have been testing for turbidity – ie how clear the water is. And it is almost always 'gin clear', except following heavy rain storms when we see lots of sediment from fields and roads flowing into the river, making it temporarily cloudy. This sediment settles into the gravel, which clogs up the spawning sites making it unsuitable for trout nests.

Charlotte Hitchmough

Farming without ploughing

George Hosier explains cover cropping and direct drilling to some Kennet farmers.

The Hosier family have been farming at Wexcombe since George's great grandfather bought the farm in 1920. George now runs the 625 hectare mixed farm, home to 50 suckler cows, 120 ewes, one drill, one sprayer, one fertilizer spreader, one set of rolls and one combine. No plough or any other cultivation kit.

George establishes all his crops by direct drilling and has widened his rotation to include cover crops and catch crops. These mixed crops (made up with ten species) keep the soil covered, continue to feed the soil microbes during the winter, catch nutrients that would otherwise have been leached and provide feed for the livestock. The animals also play a key part in the rotation, eating the cover crops and treading the residues down into contact with the soil.

Now in his fourth year of cover cropping and direct drilling, George is already noticing better soil structure, less blackgrass and crucially better financial margins.

Timothy Clarke

Helping farmers to help the Kennet

ARK continues to offer advice on soil and nutrient management to farmers in the Kennet valley in partnership with Catchment Sensitive Farming (CSF).

Many farmers are now keen to benchmark the health of their soils, not just in terms of soil chemistry but also taking into account the soil biology. We can now measure such parameters as soil carbon, soil respiration, earthworm numbers and varieties and frequencies of soil fungi and soil bacteria. ARK and CSF have offered this analytic service to farmers in the Kennet catchment, so they can establish a baseline from which to improve their soils.

Healthy, functioning soils with high levels of carbon store more water and nutrients, drain more easily and grow better crops than soils low in organic matter. Surface run-off is reduced, because water can infiltrate more easily into the soil. Fewer nutrients will be leached into groundwater because the healthy soil is able to keep them bound on to stable soil aggregates.

Three years ago, the ARK farm advice programme started to highlight the importance of soil health and cover crops. This coincided with an increase in interest among farmers in 'new' techniques that had the potential to regenerate the biology in their soils. Three years on, ARK have held two very successful direct drilling and cover crop events at George Hosier's Wexcombe Farm and a soil organic matter workshop at Henry Wilson's Fishers Farm. One-to-one farm visits continue to be offered, tailored to specific farm needs.

Timothy Clarke

Photo: *Manton residents joined ARK volunteers in January to restore the gravel beach access point to the river in the Jubilee Field, Manton.*

Rain gardens for healthier rivers

ARK are starting an exciting new project to capture and slow rainfall.

As soon as a drop of rain reaches the ground, what happens to it influences the river – so every area can be thought of as a 'rain scape', even your own garden.

Rain gardens are simply shallow depressions in the ground which capture rain from the areas surrounding them and allow it to soak slowly into the ground instead of running off to combined sewers, road drains or puddles in the road. The gardens are designed to hold water for no more than 12 hours at a depth of up to 15cm.

They are planted with a variety of plants which bring colour and interest as well as providing a home for wildlife, particularly pollinators. Rain gardens are not designed to be permanently saturated, but they need to be planted with species which will tolerate 'wet feet' for short periods. You can download a free guide by visiting www.raingardens.info

Storm water or downspout planters are plant-filled boxes which intercept, filter and slow rainfall coming from roofs. They are designed to reduce localised flooding and smooth out the impact of heavy storms, giving time for overstretched drainage networks to cope.

ARK's first planters will form part of Preshute School, Manton's entry in to Britain in Bloom. Over the next few months we will be working with other schools, including Chilton Foliat, to find ways to make playgrounds more water friendly by identifying opportunities to slow down rain and let it soak in to the ground.

In May we will run our first rain garden workshop with Marlborough Gardening Society for anyone who wants to learn more about making a rain garden at home. We are delighted to be working with Wendy Allen, designer of the RHS Gold Medal winning 'Rainchain' garden at Hampton Court Flower Show.

As areas become more urban, with fewer permeable surfaces, and climate patterns change towards periods of intense rain storms, slowing the flow of water through our landscape is becoming more important. By doing this we can reduce river pollution from sewer overflows and from runoff from roads, tracks and fields. As well as reducing surface-water flooding we can maximise the quantity of water that soaks into the ground, gently refilling the aquifer to keep our chalk streams flowing for longer.

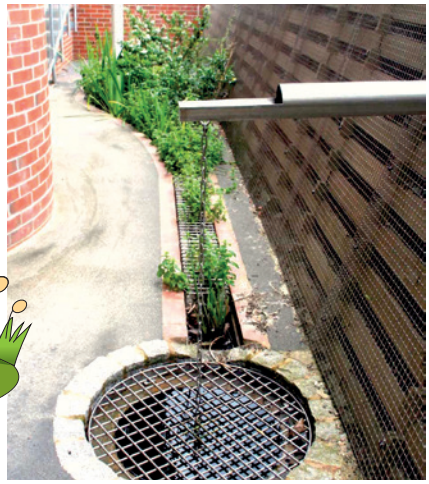

Photo credit: *Robert Bray Associates*

Charlotte Hitchmough

Good news from Thames Water!

ARK members will be well aware that the River Kennet has suffered a longstanding problem of over-abstraction and that we have been campaigning vociferously for more than 20 years to get water abstraction reduced.

The exciting good news is that Thames Water's new pipeline to transfer water from south Swindon to the Kennet Valley will enable the groundwater source at Ogbourne to be closed and abstraction from the source at Axford to be reduced when flows in the Kennet are at low levels. This 18.2 km pipeline and associated pumping stations is being commissioned in March and will be available for use from 1 April 2017 when the licences are reduced in order to provide protection for the River Kennet.

ARK and Thames Water are currently organising a community event near Axford to celebrate the reduction, to take place late June – more details to follow in due course.

Charlotte Hitchmough

More fish passes on the way…

It is well documented that to be successful, fish need to be able to get access to a range of different habitats.

For instance trout require clean gravel and fast flowing water to lay their eggs, but newly swimming fry need to be able to get to sheltered reedy margins in order to survive the first few weeks of life, safe from predators and with access to food. Even Dace, which appear to stay in the same place all the time, move surprising distances at night, and then migrate to much lower river reaches in winter, only to return to the upper reaches the following summer.

Over time man has built weirs, sluices, mills and impoundments, breaking the river into sections which fish can't escape from, and this limits their survival.

During 2017 ARK will be working with river owners and the Environment Agency to open up more of the Kennet to fish passage, with four new fish passes between Elcot and Stitchcombe planned for this year. Working with the Kennet Catchment Partnership we are investigating the potential to make a further three structures on the River Dun passable too.

Charlotte Hitchmough

Trout and Eels in Schools

Our educational collaboration with Thames Water continues to thrive.

We have taken trout tanks into five schools this spring term – more than ever before – and we are planning for five schools to join the eels project in the summer term too. Michael Stevenson at Berkshire Trout Farm has once again generously donated eggs and food, kindly holding back 10 trout hens for late stripping to fit with the school terms and is also on hand with support if needed during the project.

The typical school project starts with delivering and setting up the tank ready for the eggs to be delivered a few day later when we're confident the system is stable and equipment working reliably. We explain routine checks and top tips for trout care to the teachers and are on call for worries and concerns as the eggs hatch into alevins.

As the fry develop, we return with another classroom session on Invertebrate Identification, The Water Cycle or the ever popular Bin It Don't Block It session. Finally in late March we accompany each school to their local river for the release back into the Kennet – a fitting culmination and celebration of the children's diligence in caring for the juvenile trout.

Photos: *By happy coincidence, we visited Focus School, Reading as their first egg hatched revealing to the children the huge yolk sack and barely visible translucent alevin's body – they were captivated.*

Juliet Bonser

Lending a helping hand to the River Dun

The River Dun is a pretty chalk stream tributary of the Kennet and is becoming the focus of a series of projects.

Our relationship with Bearwater, Hungerford continues to grow thanks to funding from Thames Water's Rivers and Wetlands Community Days. In April we are leading a river habitat improvement project on the River Dun as it flows through Bearwater, with local individuals and groups, as well as Cognatum staff. Places on our four community river days are filling up fast and we are thrilled to see how many Hungerford residents want to learn new skills while helping restore a local stretch of river.

Last year we set up a new riverfly site on the Dun, which is now monitored monthly by local resident and trained ARK riverfly monitor Ivor Regan. Bearwater manager Anne Maddison, gardener Andrew King and resident Ron Rowland are undertaking quarterly water-quality testing and we are water-vole surveying too. All of these studies give us information to evaluate the state of the river locally and contribute to national data sets.

The residents at Bearwater will be a big part of this project and will be welcome on the riverbank to chat with the volunteers and see what we are doing and why.

Meanwhile in Froxfield the Parish Council approached ARK for advice on how they could make the river more accessible for the village to enjoy, and make sure that the river and meadow are good place for wildlife. We held a very well attended first workshop in February to explore what the villagers want from the river and meadow that they own. We have secured some funds from the North Wessex Downs AONB towards the first phase of design and work and we look forward to working with the Parish Council to make the most of this beautiful river in the middle of the village.

Charlotte Hitchmough and Anna Forbes

New Zealand Pigmy Weed

In our last Newsletter we reported that New Zealand Pigmy Weed (*Crassula Helmsii*) had been found in Wilton Water. Sadly it has now been identified in the nearby reservoir ditch

Photo credit: *Wikimedia Commons*

and the leat. It's a very difficult species to control as even a tiny fragment on a duck's foot can re-establish itself elsewhere. It is more prolific in still or slow moving water and once established is almost impossible to eradicate.

You can help by recording any sightings using Plant Tracker. This is a web site created to track locations of non-native species across the country. Go to www.planttracker.org.uk and record where you've spotted New Zealand Pigmy weed (or any other non-native species) and help build a national picture to focus resources. There is also an app available to download via the website which shows detailed pictures for identification while you're on the move.

Linda Nemeth

ARK People

Imogen May

I started volunteering for ARK in 2015 as part of my Bronze Duke of Edinburgh Award, and have continued since. I was slightly apprehensive as to whether I would enjoy doing outdoor work but from the first day I thoroughly enjoyed it. It has enabled me to learn more about wildlife and the environment, and I have even had the opportunity to become a water vole surveyor. I would thoroughly recommend it.

Anne Maddison

As the Manager of the Bearwater Retirement Estate, Hungerford, a bonus is that the beautiful River Dun runs through our grounds. Whilst previous work experience prepared me for my role with elderly residents, ARK have been instrumental in helping me learn about the life of a chalk stream. We now assist with water quality testing, and look forward to the River Dun Restoration Project in April.

Judy Pitts

For many years I have enjoyed walking along the River Kennet with my family, watching the changes in the river. Prompted by the conservation and improvement work carried out by ARK we became members. I now volunteer and collect donations, stuff envelopes, go redd-spotting and Riverfly monitoring and don waders to 'play in the river' helping with the river improvement projects.

Dates for Your Diary

19, 20, 26 and 27 April
Community River Days on the River Dun at Bearwater, Hungerford from 10am.

8 April, 12 May, 16 June and 15 July
Moth Night at the Scrub Area of Stonebridge Meadow, Marlborough – times to be advised.

Monday 29 May
ARK will have a stand at the Ramsbury Country Fair, Hilldrop Farm, Ramsbury. Visit www.ramsburyweek.co.uk/ramsbury-country-fair/ for more information and ticket sales.

Saturday 26 August
Oxford University Dramatic Society (OUDS) perform '*As You Like It*' on the riverbank at Harbrook, Ramsbury.

For more details on all these events see our website or contact anna@riverkennet.org

Websites Worth Visiting

The Catchment Based Approach (CaBA) is a community-led way of engaging people and groups from across society to help improve our precious water environments. CaBA Partnerships are now actively working in more than100 catchments across England and Wales.
www.catchmentbasedapproach.org

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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 email 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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