

East Yorkshire Rivers Trust

EAST YORKSHIRE RIVERS TRUST

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RIVER HEALTH GETS £1.6 MILLION BOOST

A £1.6 million project to improve river health and water quality in England has been launched by the government.

The new partnership scheme, called the Catchment Based Approach (CaBA), will encourage local communities and environmental groups to take on more responsibility for improving the health of their local rivers, as well as the surrounding natural environment and wildlife.

Rivers are the lifeblood of our country. They give us the water we need for our daily lives, and sustain our wildlife. That

is why this new scheme is so incredibly important. Ensuring we have enough water, not just for us, but for future generations is an issue of huge importance. Everyone has a part to play and can make a real difference.

Input from the Environment Agency, the Rivers Trust and water companies like Yorkshire Water have been vital in shaping the scheme.

The scheme has been designed with flexibility for local communities in mind. It will ensure that local projects are targeted to address the specific water

and natural environment needs in each catchment.

The creation of these catchment groups is being helped by Defra funding.

The East Yorkshire Rivers Trust has been granted the position of Catchment Host for the River Derwent with our partner, the Yorkshire Wildlife Trust.

The catchment of the River Hull system includes the Humber drains and the River Foulness. YWT are awarded the Catchment Host for the Hull system with East Yorkshire Rivers Trust as their partner.

THE CATCHMENT-BASED APPROACH TO MANAGEMENT OF THE YORKSHIRE DERWENT

A healthy water environment is essential for the well-being of the people, businesses, visitors and wildlife that depend on it. Everyone uses water, to drink, wash, for business and recreation. However, to get and retain a healthy water environment the whole community needs to be actively involved. Various legislation drives this process for catchments such as the Yorkshire Derwent and Hull and East Riding, such as the Water Framework Directive and Habitats Directive.



River Derwent at Kirkham, North Yorkshire

In June 2013, the Department for Environment, Food and Rural Affairs (Defra) published a policy framework to encourage the wider adoption of an integrated Catchment Based Approach to improving the quality of the water environment, which incorporated findings from the pilot phase. The objectives for the Catchment Based Approach are:

- To deliver positive and sustained outcomes for the water environment by promoting a better understanding of the environment at a local level; and
- To encourage local collaboration and more transparent decision-making when both planning and delivering activities to improve the water environment.

Adopting the approach will promote the development of more appropriate River Basin Management Plans (which underpin the delivery of the objectives of the Water Framework Directive) but will also provide a platform for engagement, discussion and decisions of much wider benefits including tackling diffuse agricultural and urban pollution, and widespread, historical alterations to the natural form of channels.

This renewed focus on the catchment-based approach has led to new catchment partnerships being set up to drive local delivery. The partnerships are working on a wide range of issues concerning the water environment but also address other issues that are not directly related to river basin management planning. The information gathered will inform the work

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of the Yorkshire Derwent and Hull and East Riding catchment partnerships in developing their visions, aims and priorities. However, it is not intended to duplicate or supersede any existing initiatives already planned or in progress locally.

Catchment partnerships look at the water environment in terms of all the ecosystem services connected to a healthy catchment and aim for better integration of planning and activities to deliver multiple benefits (for example, supporting the delivery of objectives for the Water Framework Directive, Biodiversity 2020 and flood risk management).

The East Yorkshire Rivers Trust is leading the catchment partnership for the Yorkshire Derwent in conjunction with the Yorkshire Wildlife Trust, whereas for the Hull and East Riding, it is the Yorkshire Wildlife Trust which takes the lead, with assistance from the East Yorkshire Rivers Trust. The catchment partnerships will inform the river basin district planning process led by the Environment Agency and become integral to the way that Water Framework Directive objectives are delivered. They will provide a degree of flexibility to respond to local evidence as it becomes apparent.

Since these catchments are so large that it would be easy for insufficient attention to be given to local problems, thereby affecting the degree of engagement with local communities, it has been decided that local partnership consultations should be based on operational sub-catchments.

These consultations will be important to agreement about the main problems preventing a healthy water environment in the Yorkshire Derwent, and how the Environment Agency should work with others to address them. Inclusion of local issues will help shape the final river basin management plans. To this end, catchment summaries are being produced as supporting documents for the consultation on the draft update to the river basin management plans and for the catchment partnerships. The Environment Agency has chosen the Yorkshire Derwent as the trial catchment for this process in the Yorkshire area.

The Yorkshire Derwent management



River Seph, Rye sub-catchment

catchment has been divided into the following operational catchments:

- Rye
- Yorkshire_Upper_Derwent
- Yorkshire_Middle_Derwent
- Yorkshire_Lower_Derwent

The operational catchments have distinct characteristics and pressures, and require a different mix of measures to achieve long-term objectives for the water environment and reduce the risks of flooding. In addition, groundwater in the Derwent catchment has been split into the following 2 operational groundwater catchments:

- Vale_of_Pickering_Corallian_Limestone
- Derwent_Malton_Corallian_Limestone

The catchment summaries

Please look out for local consultations by the catchment partnerships at which these catchment summaries will be presented that will help you to understand progress with the river basin management planning process so far, at a more local scale. These will include some initial economic appraisal to identify what actions are most cost beneficial. By understanding this information and letting the Environment Agency know what you think, you will have an opportunity to influence the big decisions about what actions will be taken over the next six years, to improve the health of your water environment.



River Derwent at Hay Bridge, Upper Derwent



Barmby Barrage, Lower Derwent

River invertebrate monitoring

The River Invertebrate Monitoring for Anglers, which is spearheaded by the Riverfly Partnership, continues to monitor the health on many of the rivers in the East Yorkshire Rivers Trust area with sampling sites on the Hull/Driffield Beck system, Derwent, Scalby Beck, Rye, River Seven, Pickering Beck, Oxfolds/Costa Beck and Dove. In most cases the invertebrate populations show the rivers to be in a healthy state (particularly Pickering Beck, which has good populations of all the key indicator species). Water quality in Oxfolds/Costa would still appear to be an issue as indicated by very low (or non-existent) numbers of Gammarus at some sites.

Of particular interest this year has been the vast numbers of *Agapetus fuscipes* cased caddis larvae in samples from Driffield Beck and an encouraging recovery of *Serratella ignita* (Blue-winged Olive) nymphs in a number of waters.

There are big changes afoot in the Riverfly Partnership with a new National Monitoring Initiative Coordinator (Ben Fitch) and online recording of data will soon be available, which will make life easier and should permit the viewing of data from other teams.

We hope that there will be a training event planned in our area in the not too distant future so that even more rivers can be monitored.

Many thanks are due to the dedicated teams of anglers who sample these sites every month.

***Agapetus fuscipes* pupa**



***Agapetus fuscipes* larva**



***Serratella ignita* nymph**



***Agapetus fuscipes* adult**

Controlling Invasive Non Native Species (INNS)

The Trust has continued to work with other conservation groups, land owners and fishery interests in controlling such plant species as Himalayan Balsam, Japanese Knotweed and Giant Hogweed.

We have mapped the catchments of the Rivers Riccall and Dove and are in the process of bidding for funding to put in place a strategy to begin the control of mainly Himalayan Balsam on these watercourses.

The control of the dangerous plant Giant Hogweed has continued this year with the treatment of groups of this plant on various watercourses in the Derwent Catchment.

The Trust has adopted various techniques such as cutting, foliar spraying and stem injection.

With some funding from the Environment Agency we will continue with these control measures and advise farmers where appropriate, in the safe control of INNS using herbicides, where their use is close to watercourses.

In countries where most of these introduced plant species are native, there are natural insects and fungi that control the unchecked spread of these plants.

Ongoing research in Britain into the use of these natural control measures is well established and field trials have commenced in secret locations.

Once these trials have been proven successful the use of the natural controls will be adopted.

Japanese Knotweed



This species is not as common on watercourses in East Yorkshire. Where it is found it is sprayed in late summer while it is in flower. This plant can also be controlled by stem injection. This method is very successful and can be undertaken in poor weather conditions.

Giant Hogweed



Research on control methods used:

Cutting

~ Do not cut plants more than 5cm above ground level since this encourages vigorous regrowth from the base of the plant. If a stem or part of a stem is left, then giant hogweed branches and produces new flowering shoots. Above ground cutting of the vegetative (rosette) stage extends their lifespan by postponing the time of flowering. Cutting the stem has only a cosmetic effect as it is seldom effective since the substantial root reserves allow regeneration and cutting during seed setting helps to spread the seeds even further. Cut flowering stems often have sufficient reserves to allow setting and maturation of seed heads, and production of viable seeds.

Root Cutting

~ Individual plants may be killed by cutting at a 45 degree angle 15cm below ground level with a spade in April or May. At this time root cutting is ideal when the soil is moister and softer than in early summer and before flowering. This will damage the root and prevent regrowth from the base, hence why a single treatment is effective. However, cutting is laborious and plants may be missed.

It is not practical for control of dense colonies but ideal for single plants and small stands. Soil erosion may have deposited extra soil on top of the plant base and so these plants should be cut at a greater depth. Cut parts should be pulled out of the soil and left to dry.

Barmby Tidal Barrage

On the 24th May 2014 the EYRT planned and organised a special day. This coincided with the International Fish Migration Day. It was held, by kind permission of the Environment Agency, at Barmby Barrage.

This structure was built in 1974 at the confluence of the Yorkshire River Derwent and the River Ouse by what was then Yorkshire Water Authority. The barrage was part of a water abstraction facility at nearby Loftsome Bridge Water Works. This structure has been an obstruction to fish migration since it was established.

World Fish Migration Day was an international event aimed at highlighting the changes in waterways that help returning species across the globe to repopulate areas from which they have been excluded.

There were three drivers for the day:

- Work in partnership with the EA to highlight the changes in the management of the Barmby Barrage, which is going some way

to address the connectivity issues of the Derwent.

- Raise the profile of the Catchment-Based Approach on both the Derwent and the Hull and so bring as many interested parties together to collate local concerns about each river and plan to address them in partnership.
- The date was one which had been chosen to bring a global perspective to an important aspect of all catchments.

Dr David Bellamy was our very special guest in helping us to raise the profile of these issues. As well as attending all day he also stocked the Derwent with elvers to highlight the demise of this important species.

The feedback from all who attended was very positive. The considerable interest of the attendees made it possible to gain their local knowledge of the river catchments as well as create 'networking' opportunities. This enabled the Trust to benefit from the added information that was captured on the day.

As Catchment hosts, the EYRT will be

arranging more events to enable a catchment plan to be agreed that takes all aspects of water and land use into account.

Working with the Water Ways Partnership there will be local events in your area soon so look out for these events and make sure you share your concerns, hopes and aspirations about your River Derwent and Hull.



River Hertford Habitat Demonstration Day

The East Yorkshire Rivers Trust collectively organised a habitat demonstration day on the straightened River Hertford, near Scarborough, recently. We negotiated the relevant permission from the land owners' IDB and the Environment Agency.

Materials for the day had been sourced locally by the EYRT – this consisted of brush wood and large woody debris. Gauge boards were purchased and installed before any work was carried out to ensure no increases in depth could compromise land drainage or flood defences.

The work was in conjunction with the Environment Agency, which funded the project, and the local Internal Drainage Board which had given its full support.

A team from the Wild Trout Trust, Gareth Pedley and Tim Jacklin, guided the in-stream works with support from a number of the Scarborough Conservation Volunteers. Together with representatives from the Internal Drainage Boards, land owners and angling interests they all came together to make this project viable.

Two days work by the team made a significant difference to the geomorphology and habitat of this formally engineered channel. This was made apparent to the volunteers in that as we tidied up at the end of the day a number of small grayling had taken up station behind one of the installations, which we took as a vote of thanks.



CHALK STREAM RESTORATION

Work has started on two chalk stream sites on the River Hull headwaters as part of a programme to improve in-channel habitats across the catchment. The Natural England and Environment Agency Restoration Strategy identifies measures needed to help bring the River Hull Headwaters Site of Special Scientific Interest (SSSI) from unfavourable condition towards a favourable condition as a UK wide government target for all SSSIs.

At two locations on the West Beck SSSI and a further location on Eastburn Beck, works have been carried out in partnership with Yorkshire Wildlife Trust, Driffild Angling Club, West Beck Preservation Society and the riparian landowners to restore degraded sections of the chalk streams.

At Eastburn Beck a 0.8km section of the stream was identified as in need of improvement works to re-meander an over-straightened channel. This couldn't be achieved by re-contouring the channel itself but, after site visits and design works were drawn up, a plan to enhance the existing channel through the use of green engineering using 'live' materials from the site itself was implemented in winter 2013 through to early spring 2014. Willow trees lining the banks were coppiced or pollarded and an over-mature willow was crown-reduced with the materials gained from this work put to use in the channel.

Flow deflectors and willow brush mattresses were installed along with the creation of low flow berms to simulate a meandering channel and narrow up the wider sections. Two backwaters were also created, one within the channel itself and a second in adjacent land, but still connected to the stream. This will slowly vegetate and naturalise, having a dual function as fish refuges along with areas of slack water to trap silt.

On the West Beck at 'The Bottoms' similar work to that undertaken at Eastburn was employed with creation of low flow 'D' berms, installation of flow deflectors and creation of riffle and pool habitat. This work was done along a 0.5km section with further work planned. Downstream on the West Beck, at Snakeholme, works have begun to prolong the life of the group of over-mature willows through crown reduction and pollarding. The brush material has again been put to good use with in-channel features being installed.

The restoration works have been done to not only improve the morphology and form of the chalk streams themselves, but also to improve in-channel habitats.

Creation of low flow berms combined with flow deflectors and pool and riffles helps to clean the silt off the river gravels, providing improved fish spawning and feeding habitat with improvements for aquatic invertebrates. The greater the diversity within the channel, the greater the diversity of species able to survive. More aquatic invertebrates means more food for fish and specialist mammals such as the water shrew as well as our iconic species like the kingfisher. Low flow channel features should in turn lead to greater plant life which in turn supports more insect life along with greater food and habitat for the water vole. All of this is done using sustainable river restoration methods utilising materials found on site.



Left: Coir matting protecting the new bank

Addressing Silt Issues

The River Derwent Restoration Plan in its present form focuses on the SAC (downstream of the Rye confluence) and has some very important indicators of the problems affecting the Derwent's poor ecological status.

Silt pathways are one of those indicators which are recognised on many pages within the report. In some locations where the silt pathways are self-evident then silt traps that have been constructed in the past 12 months are already showing signs of being effective.



However as the area has been investigated further some areas of concern have been identified outside of the SAC. These issues are being addressed as a priority whilst at the same time embracing the Catchment Based Approach in working with all interested parties, in particular Catchment Sensitive Farming to address issues on the whole Derwent catchment.