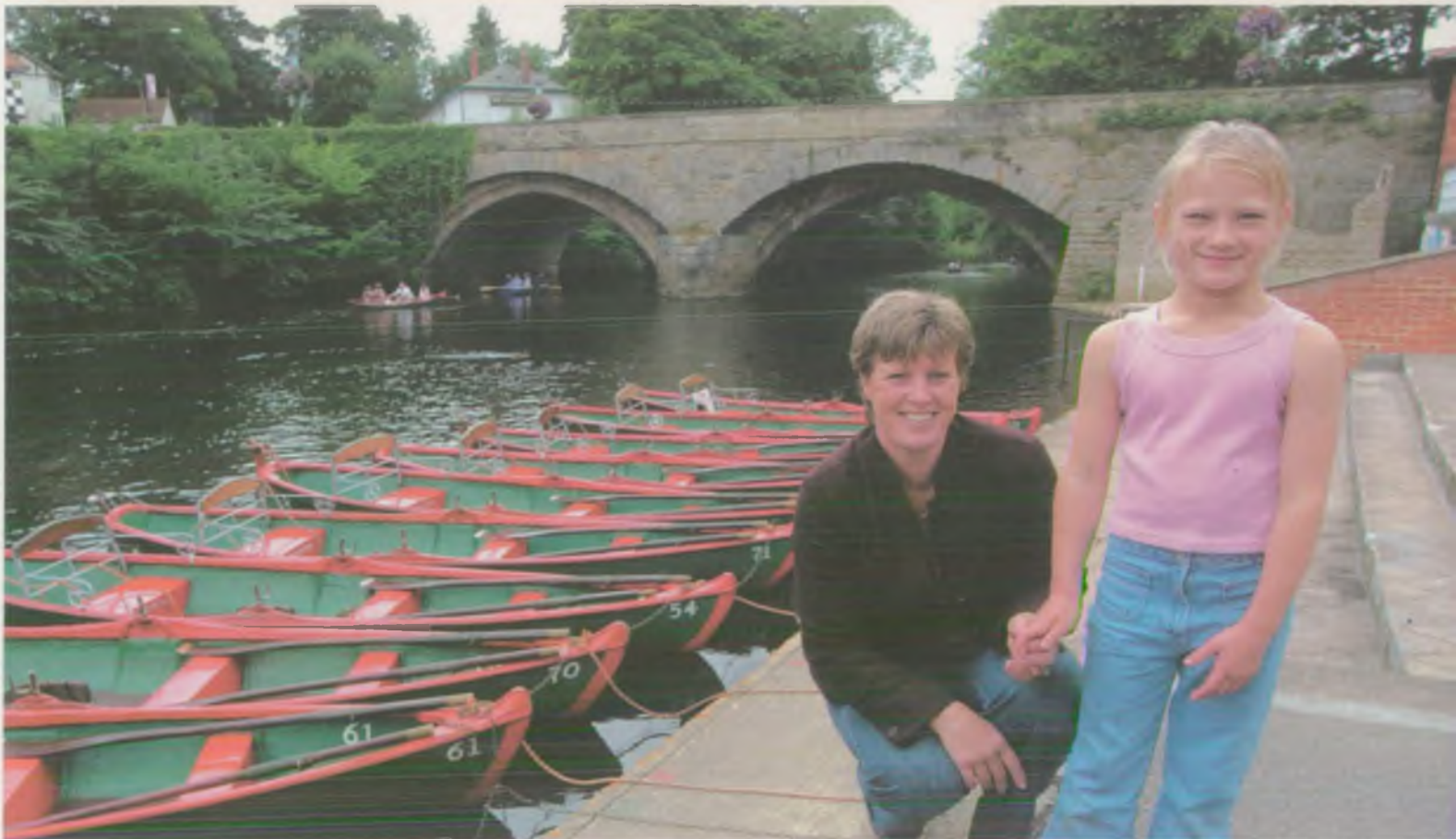




River factfiles

The Nidd & Wharfe catchment

get to know your rivers




We are the Environment Agency. It's our job to look after your environment and make it a better place – for you, and for future generations.

Your environment
and the ground you
Government and
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The Environment
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The Nidd and Wharfe start their lives in remote and beautiful countryside. The Nidd rises near Great Whernside at the edge of the Yorkshire Dales National Park and then winds eastwards to join the Ouse at Nun Monkton.

The Wharfe rises high in the Northern Pennines close to Ribbleshead. It is formed at the meeting of Oughtershaw and Langstrothdale Becks at Beckermonds and then flows east before entering the Ouse. The last 16 kilometres of the Wharfe is tidal.

The Nidd & Wharfe catchment



Total catchment population:
Approximately 250,000

Total catchment drainage area:
1,555 square kilometres

Main tributaries of the Nidd:
Oak Beck, Darley Beck, River Crimple

Main tributaries of the Wharfe:
River Dibb, River Skirfare, River Washburn, Collingham Beck, Firgreen Beck, Cock Beck, River Fleet

Length from source to sea:
Nidd 97.2 kilometres
Wharfe 123.2 kilometres

Highest point in catchment (above sea level or Ordnance Datum):
Nidd 595 metres
Wharfe 560 metres

Much of the upper catchment is rural, with population and industry concentrated in small and medium sized towns, such as Ilkley, Tadcaster and Harrogate.

While the Nidd and Wharfe may not have been subjected to the harsh punishments suffered by their urban counterparts during the Industrial Revolution, water quality is still a major issue.

All industries can exert their own pressures on the environment,

including farming, tourism and mineral extraction. Even the beauty of the countryside can bring its own problems. For example, a substantial increase in visitor numbers can place considerable strain on undersized, rural, foul drainage systems.

So although it may appear that this catchment has little to fear from pollution, that is not the case. We and many other organisations still have to remain vigilant.

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How clean are your rivers?

Most stretches of the Nidd and Wharfe have good water quality but pollution is still an ever-present threat. Agricultural effluents pose a particular problem in rural areas and can have devastating consequences if they find their way into a watercourse.

Silage liquor, which is produced when farmers compress cut grass for winter feed, is around 300 times more polluting than untreated sewage. Cattle slurry is highly polluting and sheep dip chemicals cause problems even at low concentrations. A single pollution incident can cause the deaths of thousands of fish.

We have to keep a close eye on the potential problems industry can cause. This is particularly true for the River Wharfe, which is home to industries such as brewing, paper manufacture, coal mining and mineral extraction.

Water quality classification 2004

The River Nidd and its tributaries,
149.5km



- Class A – very good 27.76%
- Class B – good 52%
- Class C – fairly good 2%
- Class D – fair 17.6%
- Class E – poor 0.05%
- Class F – bad 0%

Class A and B rivers are of a high quality – clean enough for salmon and trout to live in and to be used for drinking water. They also support a variety of invertebrates (worms, insects etc) including mayflies and stoneflies.

Class C and D rivers are often home to coarse fish such as roach and chub and sometimes trout in C waters. These rivers can be used for drinking water if it is treated and a good variety of invertebrate life can be found.

Class E rivers can still support coarse fish but cannot be used for drinking water.

Class F rivers are badly polluted. Worms and midges can live in them but fish cannot.

The River Wharfe and Its tributaries,
279km



- Class A – very good 60.5%
- Class B – good 29%
- Class C – fairly good 4%
- Class D – fair 0%
- Class E – poor 6.5%
- Class F – bad 0%



Did you know you can check out the state of your local river by using our website?

By accessing the 'What's in your backyard' section you can choose any one of the 7,000 sites where our officers sample and test the water quality. All you need is a postcode or a place name. Check out your river at www.environment-agency.gov.uk.

One of the best tests of a river's water quality is to find out what's living in it. The Wharfe was once home to a self-sustaining salmon and sea trout population, which need good quality water. The good news is that they are returning to the catchment once again in encouraging numbers thanks to both water quality and habitat improvements.



Fisheries

Both the Nidd and the Wharfe are home to high quality trout and coarse fish, with the species found in greater abundance in some sections than others due to variations in water quality.

Numerous weirs on both rivers act as barriers to fish movement and we are working with other organisations to gradually overcome these obstacles, by using fish passes and other improvements.

The Nidd

Trout can be found as far downstream as Knaresborough and grayling down to Tockwith. Dace, chub, gudgeon, perch and the occasional roach are found downstream of Birstwith Weir, which acts as a barrier to upstream fish movement. Downstream of Knaresborough, bream, barbel, pike and ruffe are also common.

The headwaters above Angram reservoir and several of the tributary becks are almost fishless. This is thought to be due to the acidity of water running off the peat moorland.

The Wharfe

The upper sections contain only trout with grayling appearing in the Buckden area. The river remains predominantly a trout and grayling fishery as far down as Ilkley. Chub, dace, perch and gudgeon and some roach also appear in this stretch of river with the numbers increasing through Burley-in-Wharfedale.

Downstream of Harewood Weir, the fishery is mostly made up of dace, chub, grayling, gudgeon, roach, trout, pike and barbel, with some bream between Wetherby and Boston Spa. At Tadcaster the river is a good coarse fishery with chub, dace, barbel, bream, pike, perch and eel.

Wildlife and conservation



Rare and protected species, including water voles, otters and our native white-clawed crayfish, are to be found in this river catchment and work is taking place to protect them and their habitats. In the last century, around 17 species of plants and animals became extinct in the UK, emphasising the need to care for our native species and the areas in which they live.

This catchment is rich in areas that are recognised both nationally and internationally for their importance to wildlife. The diverse countryside offers a range of habitats from spectacular gritstone and limestone scenery to beautiful moorland. The Wharfe catchment rises in and is a major feature of the southern Yorkshire Dales National Park with much of its reaches designated as Sites of Special Scientific Interest. A large area of the upper Nidd catchment is designated as an Area of Outstanding Natural Beauty.

We work with many other organisations to protect and improve these valuable habitats and the wildlife they attract.

Water voles and otters inhabit both Nidderdale and Wharfedale.

Native white-clawed crayfish, depressed river mussel and Lamprey are all present in the Nidd and the Wharfe.

Dwarf bladder moss and violet crystalwort grow throughout the catchment.

Fine lined pea mussel can be found in Wharfedale.

Spiriverpa lunulata, a species of **stiletto fly**, can be found in Wharfedale.

River shingle beetle can be found in Nidderdale.

Pollution watchdog

Pollution prevention and control is a vital part of our work. We are responsible for regulating many industrial processes to make sure they are not damaging the environment.

Major investment by industry over the past couple of decades, as well as much tougher limits on discharges to air, land and water, have all had benefits for the environment.

This work and investment is continuing throughout the Nidd and Wharfe catchment and will hopefully bring about further improvements in water quality and a reduction in pollution incidents.

But the work doesn't stop at big industrial processes – other businesses and the farming community also need to be

pollution aware. We work with all these sectors to highlight the simple ways they can help protect the environment and even save money at the same time.

Slurry and fertilisers can have a devastating effect on water quality, wildlife and fish stocks. Every year we have to deal with damaging incidents caused by inadequate storage facilities or poor working practices.

Some of these are caused by the collapse of lagoon walls, leading to the release of slurry, which runs across land into watercourses and

can wipe out fish stocks for miles downstream. Overfull slurry stores can also cause problems if heavy rainfall gets into them and they overflow.

Thankfully the picture is not all doom and gloom. Simple steps can prevent problems and we are working with farming organisations in a bid to wipe out bad practice and reduce damaging incidents.

Reducing impact on the environment case study

Two paper mills in the Otley area have taken steps that will ultimately have benefits for the River Wharfe and the wider environment.

P. Gamett and Son Limited has spent around £10,000 looking at the underground drains on its site in a bid to prevent leaks into the environment and make sure all contaminated liquids are sent to a local effluent treatment plant.

This work will reduce the chances of any waste liquids finding their way into the river, therefore reducing the risk of pollution and helping to protect water quality.

The company has also cut its water

usage by almost half for every tonne of paper produced after investing £6,000. The mill now re-circulates vacuum sealing water, which previously wasn't re-used.

The mill is also putting together further proposals to invest between £50,000 and £100,000 on further water reduction systems.

Reducing the amount of water used in an industrial process means that less water is taken out of the environment – which is especially crucial during drought conditions. It also means that less waste matter, is produced.

Whiteley Limited has replaced a major section of underground drain

after tree roots damaged it. This work will reduce the chances of any waste liquids finding their way into the River Wharfe.

Whiteley Limited has also designed a new screen, which has greatly reduced the quantity of fibres rejected from its papermaking process.

As a result, the company is using less raw material to produce its paper pulp and fewer fibres are going to the effluent treatment plant. This means lower effluent treatment costs and a reduced impact on the river because less fibres are discharged into the river.

You can find out more about our regulatory role and powers, as well as details of industry discharges, on our website at www.environment-agency.gov.uk. Find out what's being emitted from industrial sites in your area, including into controlled waters. Go to 'What's in Your Backyard' click 'search for other topics' and click on 'pollution inventory'.

Water source

Water is essential to life and we have a duty to make sure our water resources are used properly. To do this, officers closely monitor water in the environment. Abstraction licences are issued to regulate who can take water from the environment and the amount that can be taken over a period of time.

Both the Nidd and the Wharfe are vital sources of public water supply, mainly for the major towns and cities of West Yorkshire. A number of reservoirs collect and store water for public supply and these can also provide a valuable boost to reduced river flows when needed.

Water is taken, or abstracted, directly from the rivers for numerous purposes, including

drinking water, agriculture and industry. Groundwater is abstracted for similar purposes, via wells and boreholes, from underground rock layers called aquifers.

The Sherwood Sandstone is a major aquifer in the lower reaches of the Nidd and Wharfe which supplies water to Leeds, Bradford and Harrogate. Spring water from small aquifers is used for water supply in

Nidderdale and Wharfedale.

Nearly all abstractions of water have to be licensed and the licence says how much water can be taken, how often and under what conditions. It may not be granted at all if the abstraction would harm the environment or adversely affect other water users.

Watching the waste



Every year more than 400 million tonnes of waste is produced in England and Wales, with about 25 million tonnes of this from households. All this waste has to be safely handled and disposed of.

The great bulk of waste at the moment is disposed of in landfills. When it breaks down it produces a liquid called leachate, as well as methane gas. Landfill site operators have to make sure this liquid

doesn't escape into groundwater or rivers by lining their sites with impermeable barriers.

We regulate the movement and disposal of waste through a system

of licences. We also work with landfill site operators and other businesses to make sure that deposited waste does not pose a risk to the environment.

What's under your feet?



Limestone rocks in Upper Wharfedale and Littondale date back to the **Carboniferous period**.

The Nidd rises mainly on **Carboniferous millstone grit** with **Carboniferous limestone** appearing in a few isolated places

The **Carboniferous millstone grit, sandstones and shales** form an area of grit moorland in the catchments of the rivers Washburn, Dibb, Barden Beck and other tributaries of the Wharfe.

Dealing with flood risk

Recent years have shown how communities across the UK are at risk of flooding. Climate change will probably increase this risk and so it is as important as ever that people are aware of the steps they need to take to help protect themselves and their property if they live in a flood risk area.

We have invested heavily in both flood defence and flood warning systems throughout the Nidd and Wharfe catchment.

The hard and older rocks found in the upland areas of Wharfedale and Nidderdale have a low capacity to store water.

This, combined with the steep slopes of the area, means that the rivers are very “flashy” and rise rapidly. This can lead to flooding and Wharfedale has experienced major flooding on several

occasions in the last 50 years, including October 2000 and February 2002.

Measures to help improve the level of protection for communities include washlands, which store floodwaters, as well as floodbanks and floodwalls.

We are starting to look at the catchment as a whole, rather than communities in isolation, in a bid to tackle flood risk. The way land is managed in the uplands of a catchment has impacts much further

downstream and every development in the floodplain can have an effect on flood risk.

In addition, on-going maintenance clears silt, debris and vegetation from the river channel and banks and wherever possible we include environmental enhancements in its schemes.

Around 2,000 properties are at risk of flooding in the Nidd and Wharfe catchment.

Many of these receive flood warnings from the Environment Agency, with the number growing all the time.



Get the most from your rivers



Walking – The Pennine Way touches the very top of the Wharfe near its source on Cam Fell and close to where the Dales Way strikes over towards Dentedale. There are also many short walks, which wind in and around the two rivers and their tributaries. Within the Nidd catchment there is the Nidderdale Walk, from Hampsthwaite to Scar House Reservoir. Pioneer Walk crosses both river catchments from its start at Dacre banks through Kettlewell to Malham.

Angling – There are numerous angling opportunities throughout the area. For more information get a copy of our North of England Angling Guide by contacting us on 08708 506 506.

Canoeing - The River Dibb joins the Wharfe at Appletreewick where national status events are held. Casual canoeing takes place on the Nidd down to Knaresborough.

Useful contacts

Grassington Tourist Information Centre 01756 752 774 grassington@ybtbic.co.uk

Harrogate Tourist Information Centre 01423 537 300 rp12@harrogate.gov.uk

Ilkley Tourist Information Centre 01943 436 200 ilkley@ybtbic.co.uk

Knaresborough Tourist Information Centre 01423 866 886

Otley Tourist Information Centre 0113 247 7707

Pateley Bridge Tourist Information Centre 01423 711 147

**Would you like to find out more about us,
or about your environment?**

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