

The River Nidd and its tributaries – what do we know and what can we do?

Background

The Nidd Action Group (NAG) was started in 2021 by a group of Nidd Flyfishers.

Public concern about Storm Water Overflows from Sewage Treatment Works resulted in an initial meeting in Darley in August 2022. The meeting forming NAG took place in Knaresborough on October 3rd 2022.

Aims of the Group: To make the river Nidd safe for humans and to ensure a diverse ecology for all wildlife along the river.

- A major concern is the pollution of the river Nidd by sewage.
- We wish to improve the water quality of the Nidd and its tributaries, and the standards required for all rivers

During 2023

- Maddy Wright, A University of Leeds post graduate student, collected E. coli and nutrient chemistry data, as part of a bid for the Lido at Knaresborough to be designated for Safe Bathing Water – submitted for consideration by March 2024
- two water quality surveys (*on August 3rd and October 17th respectively*) were carried out at 45 locations from top to bottom of the river Nidd and its tributaries, assessing concentrations of E. coli, nutrient chemicals and metals. (*see p4.*)
- a Nidd flyfishers Water Quality Monitoring Network completed a year's monthly WQ sampling at 13 locations above Knaresborough
- Yorkshire Water submitted their proposals for their AMP8 business plan 2025-2030

What do we know about the Nidd?

Human Health:

- The University of Leeds survey during the early Bathing Season of 2023 showed overwhelmingly **Poor** bathing water results around the Lido
- **E. coli concentrations** found were consistently **Poor** especially in the middle and lower catchment *on both dates surveyed*
 - **in the main river** at locations 16, 19, 25, 27-37 and 43-45. (*Immediately upstream of locations 16 (Darley STW), 19 (Killinghall STW), 25 (Harrogate North STW), 27, 36 (Knaresborough STW), 43 Hunsingore STW) and 44 (Hammerton STW)*)
 - **in the becks surveyed** in Oak Beck (locations 23 and 24), Bilton Beck (26), Crimble Beck (38-40, 42)

[Sample Site Map E. coli only](#)

Environmental Health:

- Above 'EQS moderate' levels of **phosphate concentrations** were found *on both dates surveyed*:
 - **In the main river** at: locations 13 (*below Glasshouses STW*) and 14, 28 and 33, 34 and 36 (*below Knaresborough STW*), 37, 43-45 (*below Hunsingore and Hammerton STWs*)
 - **In the becks surveyed at**: Ripley Beck (*location 20, below Shaw Mills STW*), Oak Beck (22-24), Bilton beck (26), Crimble beck (38-42)
- Nidd flyfishers in their monthly sampling found **average phosphate concentrations** above EQS local 'moderate' standards at three locations downstream from STWs (*Glasshouses (PB), Darley and Harrogate North*)
- **Nitrate concentrations** do not have WFD critical values, but significantly high values were found on both occasions at locations 20, 25, 26, 37, 41 and 42, and 44 and 45
- **Mercury concentrations** above critical levels were found at locations 8 and 10, and more surprisingly 28-30

[Sample Site Map ecology only](#)

- **DEFRA** publishes Event Duration and Monitoring data, currently annually, showing the frequency and duration of storm overflows that enter the Nidd Catchments.
 - 2022 (the latest data available) showed 2000 spills totalling 12,000 hours into the Nidd, with 14 assets spilling more than 40 times in that year (1367 spills for a total of 9155 hours). Many of these 14 assets can be associated with STWs and CSOs above the 'pollution hotspots' – high concentrations discovered in the NAG surveys in 2023

What don't we know?

- **Where the high concentrations of E. coli and Phosphates found in our surveys come from.**
 - The pollution we found may have come from a variety of point and diffuse sources – from waste water or from agricultural practices, urban run-off etc
 - Sewage discharges (treated or untreated) may come from Storm Water Overflows at STWs, from Combined Sewer Overflows (CSOs) or misconnected or blocked pipes in domestic or commercial premises
 - Outfall pipes may discharge surface water containing leached fertilizer or animal slurry into becks or the main river
- **Detailed drainage and wastewater management plans (DWMPs)**, including network maps are produced by YW and made available to EA.
 - We need to be sure that the sewerage network is known with specified dimensions and mapped in a comprehensive drainage map linking domestic and commercial premises via pipes and CSOs to STWs via becks and the main Nidd. These are the networks where

blockages, equipment failures and poor maintenance may lead to discharge of contaminants into our river network.

- **The physical habitat** and functioning of lengths of selected river or becks that define the river and riparian habitats that enable diverse water dependant wildlife populations.
- **The ongoing water quality** of key sections of the Nidd and its tributaries

Outstanding Questions	Source of Information	Support that NAG might offer
1. Do we know the drainage networks throughout the Nidd Catchment, linking sources of pollution and surface water to CSOs, outfalls, becks and the river Nidd and STWs?	YW, EA and NAG	Meetings and explanations would enable better understanding of the sources of the pollution hotspots we have found. Local citizens may offer local insight into specific localities One – off Outfall Safaris would provide valuable information about the location and condition of outfalls and the pollution status, particularly of the urban becks, and engage citizen volunteers in their local waterways Urban Pollution Patrols or Pollution assessment volunteers can provide a first line of response to assess the situation and report back to the EA.
2. Do we understand the modelling of this network that led to YW investment proposals (and predicted outcomes)?	YW, EA and NAG	Understanding the predicted impacts (often modelled) of YW business plans on the current sewerage network might enable the local knowledge of citizens to be included in potential infrastructure
3. Do we understand what YW is doing currently (e.g. at Killinghall STW) in AMP7 and what is proposed in AMP8 (2025-2030)?	YW, EA and NAG	Detailed scrutiny of YW proposals before, during and after planned infrastructure actions
4. Which Individual pollution hotspots are a result of human, agricultural or urban sources of pollution?	YW, EA and NAG	Focused water quality surveys in limited areas, highlighted by NAG’s surveys in 2023 to clarify sources: This may include eDNA surveys to establish whether human or animal sewage is involved.
5. What is the ongoing water quality of our Nidd Catchment area, monitoring the change over time, related to YW investment	EA and NAG	To sample water quality using proven standardized citizen science methods: <ul style="list-style-type: none"> • in regular surveys by ‘river guardians’, or • in one off annual ‘riverblitzes’
6. What is the detailed habitat status of sections of the Nidd or becks?	YW, EA and NAG	Modular River Physical Survey for Citizen Scientists (MoRPh) audits of 100-400 metres of chosen river or becks by NAG trained volunteers
7. How can we engage citizens and visitors and celebrate the beauty and amenities of the Nidd and its tributaries?	Citizens and NAG	Projects such as Riverkin and Hello Lampost Home - Hello Lamp Post (hlp.city)

David Clayden NAG Chair, 12 January 2024

