

Bishop Dike

History & Background

Bishop Dike is an artificial channel which runs from Sherburn-in-Elmet to the banks of the Ouse at Cawood, with a long history of use from supply of water to the local mills through to a method of transporting local materials. In more modern times this has been used more directly as a way of managing land/surface water drainage.

When water levels in Bishop Dike are high, excess flow is transferred into the Selby Dam catchment via the overflow structures upstream of Cawood (locally known as the bathtubs) in order to prevent water backing up further along Bishop Dike. The radial sluice gate upstream of Cawood has a purely flood defence function which is designed to prevent flooding in Cawood. In summary, when Bishop Dike Pumping Station is unable to discharge sufficient water, the resulting backwater effect causes an increase in water levels upstream of the pumping station.

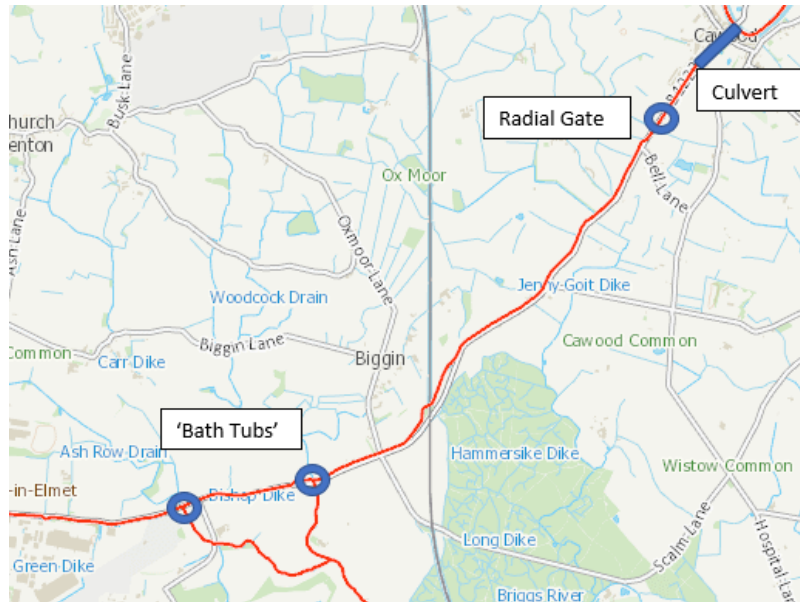
The opening of the radial sluice gate is controlled by the downstream water level in Bishop Dike and therefore when water levels increase the gate will close, preventing flow from upstream moving towards Cawood and therefore maintaining a static water level between the gate and Cawood. Once flow is able to discharge into the Ouse, causing a net decrease in the water levels upstream of Cawood, then the gate opens allowing flow from the upstream reaches to flow towards Cawood again.

Once the gate is shut the overflow structures are designed to maintain the water levels in Bishop Dike by removing any excess flows that result from the backwater effect from the radial sluice and transferring them into the Selby Dam system which has a greater capacity to deal with the excess flows.

Operational Assets

- Following the winter flooding of 2020/21 we conducted a thorough inspection and review of all our assets on the catchment, detailed on the map below. The culverted section of the dike in Cawood from Castle Garth to the Pumping Station was inspected on 3rd June 2021. This showed that no blockages were observed during the CCTV survey and water was flowing unrestricted. The majority of the culvert also appeared to be in an acceptable structural condition. This will continue to be inspected and maintained as required.
- A review of the Radial Gates reported no underlying issues regarding their condition and operation. These are inspected quarterly with Planned Preventative Maintenance every 6 months including greasing of all the moving parts.
- These measures and repairs mean that our assets are operating as expected, with the watercourse discharging under gravity whenever possible and pumping when conditions in the Ouse prevent a gravity discharge.

- We have also met with the Operational Field Manager at Yorkshire Water to discuss our operational activities in the catchment and how we can work more effectively together.
- Yorkshire Water have carried out repairs to the penstock and undertaken maintenance at the pumping station.



Next Steps

- The Internal Drainage Board annual weed control is due to be completed in the coming months.
- We are convening a meeting between ourselves, the Internal Drainage Board and Yorkshire Water. This will ensure that we understand the interaction of all assets and operational activities in this location, as well as the overall interconnectivity and management of the catchment, to ensure the system continues to operate in the way it was designed and to make any improvements deemed necessary.
- We are also working in partnership with The Yorkshire Dales Rivers Trust who have been leading the Rivers in Elmet Project. The project has been predominantly funded by the Agency and aims to address sediment, nutrient loading and habitat modifications in five adjoining waterbodies (Collingham Beck, Thorner Beck, Cock Beck, Mill Dike and Bishop Dike) in the lower Wharfe and lower Ouse catchments. The project is now in its second phase of delivery (April 2020- March 2023). For more information please visit. [Rivers In Elmet Project - Yorkshire Dales Rivers Trust \(ydrtr.org.uk\)](https://ydrtr.org.uk)

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