Improving gauging station functionality

Supporting the Environment Agency on its AOMR Framework, we completed essential gravel removal and relocation at Thorverton Gauging Station in Devon.

stonbury

In **summary**

→ River gravel build-up had disrupted flow-measuring telemetry at a key gauging site

→ We removed and relocated gravel within the river system to enhance river geomorphology

→ The project restored the station's operations while improving aquatic habitats

The **need**

The build-up of over 1,000 tonnes of river gravel had disrupted telemetry, impacting flow measurement accuracy at a key gauging site near Exeter.

The **solution**

In preparation for the project, our fisheries team conducted a fish rescue using electrofishing to safely relocate eels and several species of fish. We rested the fish before releasing them upstream. To ensure the safety of all personnel working in and around the river, we completed water rescue drills under the guidance of our SHWEQ Regional Manager.

Over two weeks, we strategically relocated the gravel within the river system, targeting a gravel-depleted section of the River Exe. This effort aimed to improve both habitat quality and river geomorphology, while also facilitating the repair of an eroded riverbank. We planted willow roots into the new substrate to provide ongoing bank stabilisation.

Environmental protection was central throughout the project. Track mats were instated in the site compound to protect underlying ground and an eco welfare unit was installed for team breaks. All plant ran on bio-oils and underwent rigorous inspections.

To minimise fine sediment dispersal while maintaining an open channel, we implemented a phased removal plan using the gravel island to separate the work area until final extraction, avoiding unnecessary plant movements. Downstream, we installed a bubble curtain to contain sediment and deter fish from entering the working area. We also continuously monitored dissolved oxygen levels to safeguard aquatic life.

The **benefits**

- Improving flow data accuracy and restoring the gauging station to full functionality

- Enhancing river morphology to improve flow dynamics and improve habitat, supporting biodiversity

- Showcasing a sustainable, environmentally conscious approach to river asset management

- Promoting long-term stability and habitat resilience by repurposing gravel removed from the River Exe to repair an eroded riverbank and reinforce it naturally with newly planted willow roots

7
species rescued and relocated

1,000
(in excess of) tonnes of gravel relocated upstream on the River Exe to repair an eroded bank