



Case Study: Pumping station overhaul

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The old axial pumps were replaced with new canister pumps that will provide improved efficiency and reliability, while also being easier to maintain

Flood prevention station

The pumping station in Matlock, Derbyshire, is designed to prevent flooding to low-lying parts of the town by the River Derwent. Located at the point where Bentley Brook meets the Derwent, the pumping station diverts the water flow to three pumps which discharge the water from the brook into the Derwent. This system allows the brook water to continue flowing instead of backing up and flooding parts of the town.

As part of an on-going refurbishment

programme, the Environment Agency has undertaken a number of improvements to the pumping station. This contract has been completed by ECS Engineering Services, working as a framework contractor to the EA.

Pump replacement

The original axial flow pumps, which were installed around 1980 have been replaced with more efficient submersible canister pumps, each capable of an output of over 2,000 litres/second. The project, which included upgrades

to the electrical controls and a building redesign, was managed and completed by ECS.

Electrical control upgrades

The installation of new pumps required new pump controls and associated wiring to be completed within the motor control centres (MCCs) as well as the installation of a new change-over system for the generator supply. ECS engineers also assisted with the testing and commissioning of the pumps to ensure that the maximum benefit was gained from the project.



Extensive improvements to the control wiring for both the pumps and the standby generator were completed.



The MCC's were upgraded to provide more efficient control and included upgrades to the water level detection hardware



The new control system included an updated HMI, designed to improve information transfer between the pumping installation and the maintenance engineers

Refurbishment of buildings

To facilitate improved maintenance operations at the site, ECS was commissioned to remove the roof of the original pump building, re-route all the power and control systems and reinstate them in the remaining building to provide a safe and secure site. The remodelling also included the installation of a new, raised, GRP grating floor above the new pumps with additional access steps and hand-railing.

Complete Site Services Solutions

ECS is able to provide a complete, enhanced, site services package capable of planning, designing, managing and conducting a wide range of pumping station projects. Equipped with a large number of skilled mechanical and electrical engineers and designers, ECS can safely deliver a wide range of installation and repair work to the highest standard.

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