Case Study: Pumping station overhaul
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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.

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.

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.
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.

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.