



# Case Study: River Rhee pumping stations



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A full set of schematics for the kiosk and the motor control centres were produced, with the majority of the fabrication worked completed off-site to reduce installation time



## Borehole pumping stations

The Environment Agency (EA) in Cambridgeshire has completed a project to renew and update the pumping control systems for three borehole sites on the River Rhee. Located around the town of Royston, the old kiosks and motor control centres (MCCs) had reached the end of their service life and were identified for replacement.

This project covered five pumps, averaging approximately 40kW each, that had been in service for nearly 30 years. With reliability

and efficiency identified as key performance indicators, the EA needed these sites to be upgraded without causing any disruption to the local water control scheme.

## Design & Specification

The project was awarded to ECS Engineering Services, a long-standing framework contractor for the EA. Site visits to each location allowed the design engineers to produce a full specification for the new control panels as well as designs for the new kiosks. The

designs were compiled so as to minimise the installation time on site, which in turn would minimise the length of time that each station would be offline.

Working with a leading panel builder, ECS designed three new MCCs to improve the reliability and control of the pumps by using greatly improved technology for measuring water levels and more reliable electrical control and communication with the central control room.





The new control structure included the latest in PLC technology as well as improved water measurement devices and communications systems



ECS engineers completed the commissioning and testing of each installation before they were handed back to the EA



The latest water level and flow measurement devices were installed to ensure reliable operation of each pumping station

## Installation & Commissioning

Careful project coordination and planning ensured that the brief period during which each pump was offline did not impact on the overall performance of the water control scheme. A combined team of experienced site engineers completed the removal and renewal of the pumping control stations, while all the time working to the highest standards of health and safety. Commissioning of each site was completed before being handed back to the EA.

## 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.

