

Rotork assists Wessex Water's environmental improvement scheme for leisure beaches

Wessex Water has invested £26 million (€30 million) at the site to achieve improved bathing water quality for the resort of Weston-super-Mare. The improvements will ensure that the site can cope with increased population and continues to comply with standards set by the UK Environment Agency. The work has been completed ahead of the revised Bathing Water Directive, which comes into force in 2015 and introduces more stringent water quality standards.

New process plant and equipment has been constructed to improve secondary treatment by the replacement of submerged biological contactors with an efficient and reliable four-channel activated sludge plant (ASP), combined with increased final settlement capacity. This

enables newly installed ultra-violet disinfection plant to achieve better microbial reduction and meet strict consent levels in the final effluent. The upgraded site is designed to deliver a flow to full treatment (FFT) rate of 1050 litres/second.

Additional work on the site has involved the introduction of storm settlement tanks with a capacity of 21,000 m³ (tonnes) to assist the reduction of over-spills in combination with a separate programme to remove surface water flows into the area's foul sewer network.

Flow control specialist Rotork's scope of supply in the project encompasses IQ multi-turn and IQT quarter-turn intelligent electric actuators and IB manual gearboxes for motorised and hand operated valves and penstocks throughout the new works. All

electric actuators are Profibus-DPVI network enabled and centrally controlled by a bespoke SCADA system designed by the Wessex Water Automation Team. The use of Profibus technology, a standard feature of Wessex Water's automation programmes, delivers significant savings in cabling, terminations, PLC hardware and labour.

The SCADA system runs the automated processes and collects control, status and diagnostic data from each actuator. This information is available on the site and at Wessex Water's regional operation centre at Bath, where remote diagnostics has proved to be a cost effective method of maintenance and service by identifying the right operational staff to be sent to site if required. 🔥



Rotork IB gearboxes are installed for the manual operation of isolating valves at site locations including the pumping stations



This IQ3 unit, the latest version of Rotork's intelligent actuation product range, drives through Rotork IB gearboxes and extension drive shafts to control the position of the two outlet modulating penstocks on the site's new Ultra-Violet disinfection plant



Profibus-DP VI enabled Rotork IQT intelligent electric valve actuators control the air supply to the new activated sludge plant (ASP) at Weston-super-Mare STW