



Water control and fabrication specialist ECS Engineering Services has continued its work on the Environment Agency's Romney Weir by fabricating nine radial gates for use at the facility. Designed to operate on the weir for at least 60 years and minimise operating costs - the new gates add to already extensive renovation work carried out in the area by ECS.

ECS was contracted to produce one 2.38m wide x 1.13m high and eight 2.68m wide x 4.43m high radial gates for installation by their in-house engineers at the weir. The entire design process of each gate was carried out in-house by ECS, with all designs adhering to BS EN 1090-2 certification. The gates were required to geometrically match the existing gates at the weir and mirror their crest level, preserving the water dynamics through the weir.

Efficiency at Romney Weir boosted by nine new radial gates

Case Study: 047 Efficiency at Romney Weir boosted by nine new radial gates



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Radial gates are intrinsically economic in design, providing a light-weight solution that can be open and closed with minimal effort, consequently reducing energy costs for end users during operation. ECS has a proven track record in such installations, having recently completed a similar project at Old Windsor Weir. As ECS is also able to offer completely customised radial gates to client specifications and execution class 3 standards, the company was an obvious choice for the project.

Each radial gate was fabricated in-house by

ECS from steel to the required Environment Agency MEICA specification and applicable CE standards. All sealing arrangements on the gates were also redesigned to offer the maximum service life, reducing maintenance requirements. Each of the eight larger gates weighed in at four tonnes upon completion. Following construction, a painted protection system was also added to the gates, guaranteeing a minimum service life of 25 years without maintenance.

Once installed, the new gates will be connected

to a new Rotork actuator based drive system allowing maximum control over gate speed and positioning, therefore enabling precise control of water flow through the weir. This will be managed via a control kiosk incorporating a PLC and HMI control panel.

ECS are existing framework contractors to the Environment Agency and continue to support both the Agency and its WEM framework contractors in its continuing multi-million pound renovation of these types of structures on the River Thames.

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