

ECS upgrades River Glen level sensor with solar powered system

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ECS Engineering Services, a leading electromechanical services provider, has fitted a level sensor on the River Glen in Lincolnshire on behalf of the Environment Agency. The solar powered installation will provide more accurate readings than the previous system, improving monitoring at the site.

The Environment Agency approached framework contractor ECS to replace the level sensor as the original hard-wired system was located in a stilling well that was impeded by regular silt build up and had been damaged. The plan was to move the sensor one mile upstream to where levels are more stable, attaching it to a nearby road bridge to improve maintenance access. However, the sensor would need to be lower than the coping to comply with highway regulations.

ECS collaborated with Radio Data Networks, who provided a turnkey radio telemetry solution housed in a unique solar kiosk, complete with an integrated RDNET1000 solar powered radio telemetry transmitter operating on an exclusive secure Ofcom radio channel. The team selected a radar level sensor as this offered superior performance to the previously used ultrasonic technology and allowed easy configuration via an app on a mobile phone. The level sensor was mounted on a special retractable arm, which kept it below the height restriction but allowed for easy maintenance access.

The radio telemetry system simultaneously measures the level, whilst managing the solar charging and monitoring the integrity of the solar panel. It broadcasts the level and the status at five minute intervals, providing a virtual real-time data feed via a RDNET1000 Gateway receiver, which was installed by ECS into a pre-existing Environment Agency kiosk one mile downstream at Kates Bridge near Thurlby. Data is then seamlessly shared with the monitoring team at the Environment Agency.

Providing full project management for the works, ECS carried out the entire installation. This included all civil works, the challenging erection of scaffolding over the river and gaining permission from the local authority for a road lane closure at the site. A turnkey approach simplified and expedited the project for the Environment Agency.

Andy Nicholson, Project Manager at ECS, said: “This new sensor system not only improves data accuracy, but reduces energy demand compared to the old system. The solar powered kiosk minimises the carbon footprint of the site, bringing it up to modern efficiency standards.”

As well as enhancing the Environment Agency’s hydrometry capability on the River Glen, the new installation will ensure that the site is ready for a low carbon future.

Image captions:



Image 1: ECS upgrades River Glen level sensor with solar powered system

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About ECS Engineering Services

ECS Engineering Services has over 30 years experience in delivering high quality, reliable and cost effective engineering solutions, specialising in bespoke design and construction of water, energy and environmental processing and management projects.

In conjunction with key supply partners, ECS has the expertise and capacity to design and install a wide range of water control engineering projects. With in-house fabrication services, which have CE Marking approval to EXC4, well equipped and highly skilled engineers can also complete structural steelwork, bespoke fabrication work and access metalwork to the highest standard.

With a complete range of site services available, ECS offers a full turnkey project managed service for mechanical and electrical installations including managing civils contractors and supplying pipework, control and automation work to ensure that every installation is installed and commissioned to the highest standard. Existing clients include the majority of the UK Water Utility companies, Government Agencies and Internal Drainage Boards.

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