

Emergency treatment solution

IMMEDIATE TREATMENT SOLUTION TO PREVENT BACTERIA ENTERING THE SEA

Disaster struck for a large municipal utility supplier based in a tourist hotspot in the UK approaching the hottest weekend of the year. A fire had broken out in the control room of a treatment works destroying the switchgear which controlled the final stage of the effluent treatment process - ultra-violet (UV) disinfection. As a result, untreated effluent had the potential to make its way into the sea.

UV disinfection is a common solution within the world of water treatment, and relies on high-performance and energy-efficient, long-lasting UV lamps to destroy more than 99.99% of all waterborne pathogens in just seconds. It is generally the final stage of the treatment process, as much of the wastewater has already been filtered and initially treated. However, by failing to go through the UV disinfection the water passing into the sea was at risk of carrying dangerous viruses such as e-coli into the vicinity of the nearby tourist beaches.

Following the fire, the Environment Agency swiftly issued warnings to the surrounding beaches, and declared that if emergency remedial work could not be carried out with immediate effect then all local beaches were at risk of being closed until further notice. With the very real threat of both contaminated beaches and the knock-on effect on the local tourism industry at such an important time of the year increasing by the minute, the local Water Company took immediate action.

“Given both the time of year and location of the Wastewater Treatment works, it was imperative that a fast and reliable temporary treatment solution was put into place”.

Early the following morning, once the fire had been put out, the water company called upon the expertise of Xylem Water Solution's rental team. Within minutes of taking the call, Xylem's team of engineers began to form an emergency strategy plan alongside both the Water Company and their delivery partner with the remit of having the issue under control within 24 hours - the deadline before enforced beach closures would have to be implemented.



XYLEM'S ROLE: Rental Contractor

COMPLETION: 2015

XYLEM SCOPE:

Xylem Rental Solutions offer a unique 24/7 Nationwide emergency service. Products available include skidmounted Wedeco UV systems, allowing for the treatment of water on-site or in remote locations.

Mick Boyle, Rental Manager at Xylem Water Solutions, helped oversee the project: "Given both the time of year and location of the Wastewater Treatment works, it was imperative that a fast and reliable temporary treatment solution was put into place, to prevent dangerous levels of bacteria entering the sea and potentially putting beach-goers at risk."

The final plan entailed a two-stage treatment strategy. First, a temporary UV reactor was supplied to site to immediately stem the flow of untreated wastewater entering the sea. Xylem chose to supply a containerised Wedeco LBX 850 EWL reactor, which was housed within a shipping container for easy transportation. The solution also incorporated a Flygt N-pump and supporting pipe work; all of which could be quickly connected to the Treatment Works original infrastructure.

Mick continued: "The initial temporary UV solution was completed at 10.30pm on the day of the call, less than 12 hours after the final plan was decided. As a result, no beaches were forced to close and the local tourism industry was able to continue to operate unhindered in one of its busiest times of the year".

"Once the UV system was up and running and the water was again subjected to a full treatment process, we were able to tailor it specifically to the Water Company's longer-term needs, by changing it to a gravity-fed solution as opposed to one operated by a pump. The temporary treatment system stayed in place until Xylem's Treatment team had designed, supplied and successfully tested a new permanent solution".



Case study: Emergency rental treatment

Containerised Wedeco LBX 850 EWL reactor, housed within a shipping container for easy transportation.

**For more information on Xylem Rental:
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