

SCHEME

Ivyfields Water Treatment Works, Chippenham

CLIENT

Wessex Engineering and Construction Services Ltd

WEHOLITE SOLUTION

Two 3m diameter Chlorine Contact Tanks

Bespoke Water Solution To Boost Chippenham Water Supply



A bespoke designed disinfection tank system manufactured by ASSET International Ltd for use in a project delivered by Wessex Engineering and Construction Services Ltd (WECSL) is set to boost efficiency of delivery of treated water in Chippenham and its surrounding reservoirs.

The £600k improvement programme is designed to increase operational efficiency and minimise the risk of failure at the existing Water Treatment Works in Ivyfields.

Water management solutions expert ASSET worked in partnership with engineering consultants Pell Frischmann to design two unique 'U' shaped chlorine contact tanks for the project. The system was later manufactured by ASSET from 3m diameter high-density polyethylene (HDPE) WEHOLITE pipes.

Richard Lock, Associate at Pell Frischmann, elaborated on the design process: "CFD modelling of the contact tank was undertaken during the design stage to demonstrate a true contact time of 30 minutes and to ensure that efficiency was potentially six-times greater than previously.

"To achieve this efficiency requirement; an inlet baffle was provided consisting of a 1.2m high, straight plastic baffle perpendicular to the pipe section and 1m from the inlet pipe. The bottom 150mm of the baffle was left open to allow emptying and cleaning of the tank".

THE ESSENTIAL HDPE WATER MANAGEMENT SOLUTION

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Compared with traditional materials such as concrete, the flexible and durable composition of WEHOLITE proved beneficial to the specific requirements of the project. Ian Dickie, Construction Manager for Wessex Engineering and Construction, explained: "We've worked with ASSET on a number of water infrastructure projects in the past, but this marks the first time we have used the WEHOLITE pipe for a dual purpose - as a disinfection tank and a storage pipe.

"We've utilised concrete tanks in this scenario previously, but the requirements of the project required a specialist shaped design, which ASSET's design was able to offer us".

ASSET's solution utilising a series of long length WEHOLITE pipe, allowed for time saving during the installation process. This subsequently provided

WECSL with project cost savings, reduced on site health and safety risks and proved less disruptive to the environment and surrounding community.

Simon Thomas, Managing Director of water solutions expert, ASSET International, based in Newport, commented: "We recognise that projects will demand diverse requirements, and aim to provide bespoke designs which respond to specific needs.

"Working in partnership with Pell Frischmann, we devised a structure which allows Wessex Engineering to benefit from the ease and speed of installation, coupled with a potential reduction in costs, making WEHOLITE a more attractive option compared with conventional concrete reservoir methods".



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