



Press Release

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Bluewater Bio Limited

United Utilities deploys Bluewater Bio's HYBACS process to upgrade its Whaley Bridge wastewater treatment works in Derbyshire

HYBACS selected to satisfy stricter treatment standard

Bluewater Bio Limited, a leading provider of treatment solutions to the water industry, is pleased to announce that United Utilities Water Limited ("United Utilities"), through its key capital delivery partner Mott MacDonald Bentley ("MMB"), has selected Bluewater Bio's enhanced activated sludge process, HYBACS[®], to upgrade Whaley Bridge Wastewater Treatment Works (WwTW). The site, which discharges into the River Goyt and treats a population equivalent of approx. 50,000, additional capacity is required to meet a more stringent ammonia consent of 3 mg/l, as part of the Water Framework Directive.

The upgrade at Whaley Bridge will include the installation of six SMART[™] Units as well as improvements to the inlet works and storm tanks. SMART[™] units are high-rate bioreactors that, when installed upstream of an aeration lane, form BwB's proprietary HYBACS – **HYBrid ACtivated Sludge** – process.

The existing configuration of the works comprises an activated sludge stream operating in parallel with a trickling filter stream. Originally the activated sludge process was constructed as a 'Vitox' process though is currently operating as a conventional aerated ASP. By deploying the SMART Units upfront of the existing ASP reactor additional load and flow can be treated to a higher standard within the existing process units thereby unloading the remaining trickling filters and enabling higher levels of ammonia removal to be achieved across the works as a whole. At Whaley bridge the site is highly constrained preventing a more conventional expansion and so being able to meet tighter treatment standards without additional land take is a major benefit.

The SMART units themselves will be assembled and tested offsite in accordance with the principles of Design for Manufacture and Assembly (DfMA), which reduces the risks associated with site work. Being able to install the units off-line means that treatment process is not interrupted during construction. This simplicity of upgrade means that the plant will be operational in autumn 2017.

John Martin, MEP Manager at Mott MacDonald Bentley, commented: “Through early contract involvement with Bluewater Bio, MMB and UU were able to move quickly to order placement post contract award. This collaborative approach has driven considerable savings in time and CAPEX whilst at the same time MMB are very confident that the HYBACS technology will meet the specified process performance. Being in a position to let the contract with BWB early in the project delivery has allowed MMB to focus on the other areas of the project scope. The technology itself is simple to integrate with the existing process and it is anticipated that the seeding and commissioning phases will be uncomplicated and robust. We look forward to completing the project with BWB and we have every confidence that the project will be a great success for both parties.”

Fergus Rooksby, Commercial Director of Bluewater Bio, commented: “We look forward to working with both United Utilities and MMB in upgrading the works at Whaley Bridge. HYBACS offers compelling benefits over alternative solutions when needing to upgrade ASP plants, either for tighter discharge consents, capacity increases, or indeed both.”

“One of the key themes we are seeing this AMP is that the water companies are under even greater efficiency challenges. HYBACS, with its modularity and excellent DfMA qualities, is able to address some of these challenges by being able to swiftly upgrade an Activated Sludge plant by simple offline installation of SMART Units, with no interruption to the process. Its ability to maximise the use of existing assets helps to further reduce CAPEX. As we move forward for the remainder of this AMP and into the next, with tighter ammonia consents coming into force, we fully expect HYBACS to capture a significant proportion of similar schemes.”

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For further information or to arrange a briefing, please contact:

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About Bluewater Bio

Bluewater Bio is an award winning global specialist in technologies for cost-effective water & wastewater treatment. Headquartered in London, Bluewater Bio's range of best in class technologies have been deployed at over 80 sites globally.

Next generation proprietary technologies

With several fully commercialised technologies proven at utility scale, complemented by an active New Product Development pipeline, Bluewater Bio's capabilities now include:

- HYBACS® (enhanced activated sludge process)
- FilterClear™ (high throughput multi-media filtration)
- CFIC™ (second-generation moving bed bioreactor)
- GHG-Tox® (nitrification and greenhouse gas monitoring)
- NeoTech™ (highly efficient UV system)
- Operational & Maintenance services (supporting a population equivalent of c. 1 million)
- World Class R&D team, based at Cranfield University, UK

Bluewater Bio's growing technology portfolio is focused primarily on the rapid upgrading, optimisation and monitoring of water and wastewater treatment plants.

The company has a particular emphasis on reducing:

- Capital, operational and compliance costs
- Energy & chemical consumption
- Physical & environmental footprint
- Greenhouse gas emissions
- Construction and commissioning times

Bluewater Bio not only develops its own innovations but also scours adjacent markets for complementary IP, licence opportunities and partnerships.

Through this aggregation strategy, Bluewater Bio aims to be the natural choice for cost effective treatment, re-use and monitoring provision across the water, wastewater and process industries.