



**Press
Release**

02 July 2018

Bluewater Bio Limited
(“BWB” or the “Company”)

Bluewater Bio awarded contract for HYBACS® Upgrade at the world’s largest dedicated industrial city Jubail, Saudi Arabia

The upgrade will deliver 50MLD of treatment capacity.

Bluewater Bio Limited, a leading provider of treatment solutions to the water industry, is pleased to announce that Saudi-based private utility company Marafiq has selected Bluewater Bio’s hybrid activated sludge process, HYBACS®, to upgrade its Industrial Wastewater Treatment Plant (“IWTP-8”) at Jubail, a purpose built Industrial City on the Arabian Gulf coast of Saudi Arabia. Through a competitive tender process, Marafiq selected Tunisian EPC contractor Engineering Procurement & Project Management (“EPPM”) to deliver a HYBACS solution for their current capacity shortfall. Once completed, the HYBACS process will deliver an approximate 150% uplift in capacity, treating 50 MLD of industrial wastewater from the city.

IWTP-8 comprises three parallel and separate treatment streams to treat industrial wastewater arising from the large industrial cluster in Jubail. Stream 2 includes a 3-lane activated sludge process with 8 circular clarifiers and currently treats around 20,000 m³/day. The HYBACS upgrade will increase treatment capacity to 50,000 m³/day. The Client’s specifications for the upgrade include that the existing treatment process must not be interrupted during the upgrade, the solution must be a proven technology, be highly energy efficient, have a small footprint and that the upgrade must be completed within a short timescale.

The upgrade at IWTP-8 will include the installation of 16 SMART™ Units as well as capacity upgrades to the tertiary treatment stages. SMART™ units are high-rate bioreactors that, when installed upstream of the existing aeration lanes, form Bluewater Bio’s proprietary HYBACS – **HYBRid ACtivated Sludge** – process. The primary settled wastewater and return activated sludge (RAS) will pass through the SMART units then into the three aeration lanes. The SMART units accelerate the rate of hydrolysis, enabling the plant to accept a higher load. They also provide a very high floc loading and enhance the settleability of the sludge, enabling the existing settlement tanks to accept higher flows.

Bluewater Bio's scope will include, in addition to the supply of the Company's proprietary SMART Units, process design, installation supervision and service and maintenance for the units. EPPM, in their role as Lead Contractor, will carry out all civil works construction as well as enabling works design for Civil and MEICA.

Fergus Rooksby, Commercial Director of Bluewater Bio, commented: "We look forward to working with EPPM and Marafiq in delivering our HYBACS process to help alleviate overloading at the IWTP-8. This contract will be our first HYBACS installation in the Kingdom of Saudi Arabia and marks a significant milestone in our Gulf expansion plans, building on our award-winning 100 MLD HYBACS plant at Tubli WPC, Bahrain."

HYBACS augments the widely-implemented activated sludge process, with the core benefit being that it enables an existing activated sludge plant to be rapidly upgraded for increased capacity and/or performance, by simple offline installation of SMART Units.

Fergus concluded: "With over 5 years' worth of highly compelling data from our HYBACS plant in Bahrain, meeting and exceeding the challenging discharge consents, Bluewater Bio is well positioned to capture a significant proportion of projects requiring an uplift in capacity or tighter discharge consents across both the Kingdom and the wider Gulf region. HYBACS' ease of implementation and maintenance, coupled with significant savings in operating costs and hence total cost of ownership over the lifetime of the plant, makes for a compelling solution to a common problem encountered by utility and industrial operators alike."

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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.