

# HYBACS®



A BLUEWATER BIO TECHNOLOGY

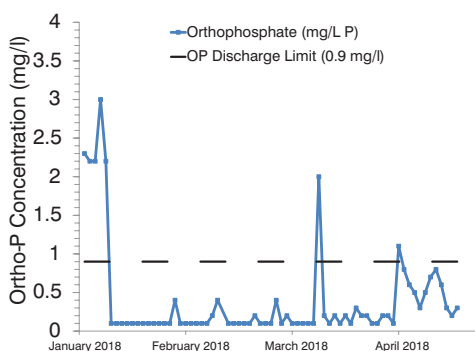
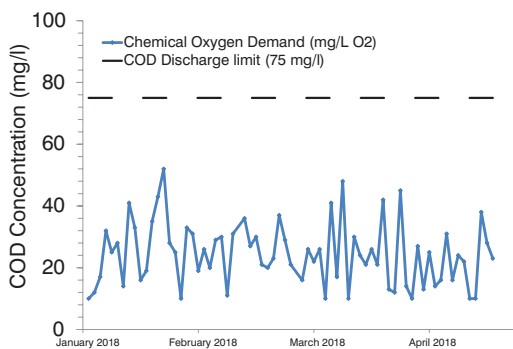
## HYBACS Upgrade at Tsakane WwTW

### Project Description

Following rapid catchment growth, East Rand Water Company (ERWAT) required an upgrade from 10 MLD to 20 MLD at its Tsakane WwTW. The existing works comprised a single biological nutrient removal (BNR) reactor which could not be taken out of service for long periods of time.

Bluewater Bio, through its local partner Headstream Water, supplied 12 SMART units to enable the upgrade. The SMART units were arranged with stainless steel inlet and outlet channels, all of which were pre-assembled and tested in the factory prior to delivery. Design for Manufacture and Assembly (DfMA) reduced the time on site and project risks and ensured a high quality of manufacturing.

Installation of the SMART units took just 3 weeks. The HYBACS upgrade was commissioned in early 2018 and, in April 2018, the works achieved Green Drop status by demonstrating consistent compliance with the regulatory standard.



Project Name:	Tsakane WwTW
Client:	East Rand Water Company (ERWAT)
Capacity:	20,000 m <sup>3</sup> /day
Project Value:	£1.3 million
Main Contractor:	Headstream Water
Project Scope:	12 SMART™ units

### Project Highlights

- Upgrade existing BNR plant from 10 MLD to 20 MLD
- Supply and install 12 SMART units
- Commissioning and post-commissioning support services

### Tsakane WwTW Process Details

	Design Value	Actual
Average Flow	20,000	17,200 m <sup>3</sup> /d
Peak Flow	40,000 m <sup>3</sup> /L	28,000 m <sup>3</sup> /L
Population equivalent	77,000 PE	-
COD concentration	75 mg/L 90%ile	27.8 mg/L
TSS concentration	30 mg/L 90%ile	<10.6 mg/L
Amm-N concentration	7 mg/L 90%ile	0.47 mg/L
NO <sub>3</sub> -N concentration	9 mg/L 90%ile	3.5 mg/L
OP concentration	0.9 mg/L 90%ile	0.24 mg/L

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