Copa® SAF Submerged Aerated Filter

Kempsford STW, Gloucestershire, UK

How we created value

- Increased biological capacity of an existing treatment works without major modification to existing structures
- Compact above ground design reduced civil costs
- Stainless steel SAF tank with 25 year design life reduces replacement frequency and

Project Completed
February 2008

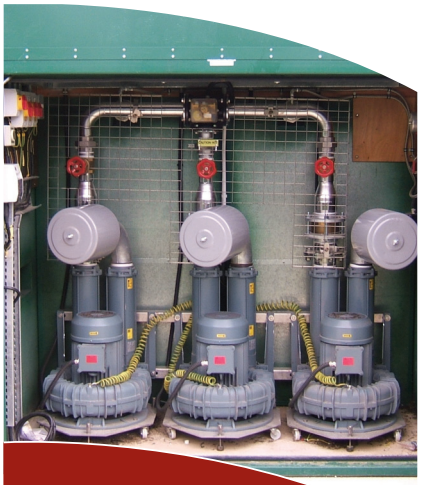
Background
Before installation of the Copa®SAF system, Thames Water's Kempsford STW treated domestic sewage using only traditional percolating filters and pyramidal settlement tanks achieving a 95%ile discharge quality of 16 mg/l BOD, 24 mg/l Suspended Solids and 4 mg/l AmmN.

Brief
Increased sewage contributions to the site resulted in a need to augment the biological capacity of the works. Thames Water decided that a new SAF treatment plant should be installed in parallel with the existing secondary process. Designed to accept approximately 60% of the incoming flows and biological loads the SAF is required to achieve the same effluent quality.

Solution
Working with Black and Veatch, Thames Water's designated contractor, Ovivo designed and installed a new Copa SAF wastewater treatment system. The new plant was capable of accepting a maximum flow of 10 l/sec and removing 40 kg of BOD and 6.4 kg of AmmN each day.

The Ovivo scope of work included the design, manufacture, testing, installation and commissioning of 4 No. Above Ground CB1000 Copa SAF biological treatment tanks manufactured in grade 304 stainless steel, incorporating fine bubble membrane diffusers and structured corrugated media. In addition, Ovivo supplied 2 sets of duty/duty/standby air blowers each with their own acoustic enclosure (pictured, right), a form 4 control panel, housed in a walk-in kiosk, a flow distribution system,

2 No. walkways with staircases for inspection of the air pattern, all interconnecting pipework and training of the site operators under this contract.secondary process. Designed to accept approximately 60% of the incoming flows and biological loads the SAF is required to achieve the same effluent quality.



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