

## EFFICIENT WASTE WATER FILTRATION

### at Wessex Water Effluent Plant

Built to comply with the EU Urban Waste Water Treatment Directive, Wessex Water's £20 million Secondary Treatment Plant at Avonmouth, near Bristol, features eight computer-controlled Sequencing Batch Reactors that treat primary settled sewage by means of an air-enriched activated sludge process.

Following final treatment and settlement, top water effluent is recycled and used to clean the belts on the three sludge belt thickening lines that thicken surplus sludge from the SBRs prior to further processing.

As part of the process, the final effluent is passed through a series of screens to remove grit and particles. Originally the system incorporated a simple strainer upstream to remove any smaller particles and prevent blockages in the belt cleaning nozzles. However, this was constantly blocking, requiring cleaning on a daily basis.

To overcome the problem, Wessex Water installed a Boll 6.18 Automatic Filtration System, comprising 200mm filter unit with 40 elements providing a filtration level of 1mm. Unlike alternative systems, the Boll filter can also perform at pressures as low as 2 metre head. As a result, the Avonmouth system is fitted upstream, protecting the pump from damage as well as preventing nozzle blockages.

Richard Thackeray, Site Project Manager, is pleased with the new filter. "The Boll filter works very well. Maintenance is a big site issue for us. With the enormous amount of plant on-site and a need to strive for efficiencies, we haven't got time to continually unblock strainers."

**Client** Wessex Water  
**Contractor** MJ Gleeson Group plc  
**System** Boll 6.18 Self-cleaning Filter



The Secondary Treatment Plant at Wessex Water's Avonmouth site.



Sludge thickening belts are cleaned using filtered waste water (guard removed for photograph).



Bollfilter 6.18 filter installed upstream on the waste water supply.