

# FilterClear™

## Brockhampton STW, Phosphorus Removal

### Project Description

Brockhampton STW is a medium sized activated sludge works treating the Cheltenham catchment, comprising domestic sewage, trade effluent and the effluent from the Cheltenham race course. The works treats a FFT of 105 l/s. The consent limits are: TSS 25 mg/l, BOD 15 mg/l, AmmN 5 mg/l.

In AMP6, under the Water Framework Directive (WFD), the site has to meet more stringent standards, including a new total phosphorus (TP) consent of 0.25 mg/l, and Fe of 4 mg/l. To achieve these new consent standards, Costain (Severn Trent's main contractor) installed a chemical dosing facility and a FilterClear plant. The decision was made based on a comprehensive whole life cost (WLC) assessment of various tertiary solids removal (TSR) plants. The FilterClear plant was fully assembled and hydraulically tested off-site at Bluewater Bio's works, before being transported to site for installation on a flat concrete slab.

### Scope of Works

Design, procurement, manufacture, installation and commissioning of Bluewater Bio's proprietary FilterClear 4v2040 plant. Fully automated and instrumented tertiary filtration system for Total Phosphorus removal for the works final effluent. MCC and cabling by main contractor.

### Project Duration

Award to delivery to site ~ 12 weeks  
Installation time ~ 4 days  
Commissioning time ~ ongoing

### Client Contact

Client organisation: **Severn Trent**  
Contact person: **Jeremy Swift**  
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### Brockhampton STW Process Parameters

DWF	4,220 m <sup>3</sup> /d
FFT	9,072 m <sup>3</sup> /d (82 l/s)
Design Influent TSS concentration*	34 mg/L ave 39 mg/L 95%ile
Influent TP concentration	1 mg/L 95%ile
Effluent TP consent	0.25 mg/L (average)
Effluent Fe consent	4.0 mg/L



Project Name:	Brockhampton STW
Client:	Severn Trent
Capacity:	105 L/s ; 16,000 PE
Main Contractor:	CIM6
Project Scope:	Design, supply & commission

### Project Highlights

- Off-site manufacture
- Consent of 0.25 mg/l TP and 4.0 mg/l Fe
- Rapid installation and commissioning
- No separate flocculation tank needed

## FilterClear®



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