

FilterClear™

Codsall STW, Phosphorus Removal

Project Description

Codsall STW is located near the village of Bilbrook to the North of Wolverhampton. The works treats a FFT of 82 l/s, and comprises two secondary treatment streams: activated sludge stream and trickling filter stream. The consent limits are: TSS 40 mg/l, BOD 20 mg/l, AmmN 5 mg/l.

In AMP6, under the Water Framework Directive (WFD), the site has to meet a new total phosphorus (TP) consent of 0.5 mg/l, and Fe of 4 mg/l. To achieve these new consent standards, Severn Trent's main contractor MMB installed a new tertiary solids removal plant with chemical dosing and mixing/flocculation.

Technical and economic assessment by MMB was made on the basis of Total life expenditure (TOTEX).

The FilterClear skid was fully assembled and hydraulically tested off-site at Bluewater's works. Once tested and signed off the skid was 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 ~ 2 weeks
Commissioning time ~ 2 weeks

Client contact

Client organisation: **Severn Trent**
Contact person: **Kristian Roberts**
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Codsall STW Process Parameters

DWF	4,000 m ³ /d
FFT	7,085 m ³ /d (82 l/s)
Design influent TSS concentration	29 mg/L ave 40 mg/L 95%ile
Influent TP concentration	2 mg/L 95%ile (2nd point)
Effluent TP consent	0.5 mg/L (average)
Effluent Fe consent	4.0 mg/L (95%ile)



Project Name:	Codsall STW
Client:	Severn Trent
Capacity:	100 L/s ; 15,000 PE
Main Contractor:	MMB UK
Project Scope:	Design, supply & commission

Project Highlights

- Off-site manufacture
- Consent of 0.5 mg/l TP and 4 mg/l Fe
- Rapid installation and commissioning
- No separate flocculation tank needed
- 0.10 mg/l TP average during performance test
- 0.35 mg/l Fe 95%ile during performance test

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A BLUEWATER BIO TECHNOLOGY

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