



A BLUEWATER BIO TECHNOLOGY

Codsall TSR, 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 Bio'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 Phosphorous 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 - 2 weeks

Client Contact

Client organisation: **Severn Trent**
Contact person: Kristian Roberts (Project Manager MMB)
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Codsall TSR 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 TSS	5 mg/L (average)
Effluent TP target	0.5 mg/L

*includes allowance for chemical dosing



Project Name:	Codsall TSR
Client:	Severn Trent
Capacity:	15,000 PE, 100 L/s
Main Contractor:	Mott MacDonald Bentley
Project Scope:	Design, supply & commission

Supplementary information

Innovation: Utilisation of FC vessel headspace for flocculation removing the need for costly mechanical flocculation and associated operational requirements.

DfMA: Fully assembled and tested off-site at Bluewater Bio's works significantly reducing site and overall project durations.

BLUEWATER BIO



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