



A BLUEWATER BIO TECHNOLOGY

Dyserth STW, Phosphorus Removal

Project Description

Dyserth Sewage Treatment Works (STW) is a medium sized trickling filter works. Under the Water Framework Directive (WFD), the site had to meet a new total phosphorus (TP) consent of 0.5 mg/l, and an Iron consent of 4 mg/l.

To achieve these new consent standards, MMB (Welsh Water's delivery partner) installed a **FilterClear**[®] plant with ferric dosing upstream of primary settlement. Provision was made for a 2nd point ferric dose into a static mixer upstream of the **FilterClear**[®] plant, but this has not been necessary.

The decision was based on a comprehensive whole life cost (WLC) assessment of various tertiary solids removal (TSR) plants.

The **FilterClear**[®] skid was 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**[®] 3V1260 plant. Fully automated and instrumented tertiary filtration system for total phosphorus removal.

Project Duration

FilterClear[®] delivered: Mar 2020

Installation time ~ 2 weeks

Commissioning time ~ 2 weeks

Compliant by: July 2020

Client Contact

Client organisation: Welsh Water

Contact person: Richard Matthews
07881 014542

Dyserth STW Process Parameters

Average Flow	1,021 m ³ /d
Maximum Flow	2,506 m ³ /d (29 l/s)
Design influent TSS concentration*	28 mg/L (average) 46 mg/L (98%ile)
Effluent TP consent	0.5 mg/L (average)
Effluent iron consent	4 mg/L (95%ile)

*includes an allowance for chemical solids



Project Name:	Dyserth STW
Client:	Welsh Water
Capacity:	29 L/s
Main Contractor:	MMB
Project Scope:	Design, supply & commission

Supplementary information

- Off-site manufacture
- Consent of 0.5 mg/l TP and 4 mg/l Fe
- Rapid installation and commissioning
- No separate flocculation tank needed

BLUEWATER BIO



Winchester House, 259-269 Old Marylebone Road,
London, NW1 5RA.

UK: +44 (0)845 519 5800
Int: +44 (0)20 7908 9500

@ enquiries@bluewaterbio.com

www.bluewaterbio.com