



A BLUEWATER BIO TECHNOLOGY

Ledbury STW, Phosphorus Removal

Project Description

Ledbury STW is a medium size activated sludge plant in Herefordshire, treating domestic sewage and trade effluent from a brewery. The current total population equivalent (PE) is over 14,000, and expected to approach 20,000 in 2028.

In AMP6, under the Water Framework Directive (WFD), the site had to meet more stringent discharge standards, including tightening the total phosphorus (TP) consent from 2 mg/l to 0.3 mg/l, with an Iron consent 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 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'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®** 4v2800 plant. Fully automated and instrumented tertiary filtration system for Total Phosphorus removal.

Project Duration

FilterClear delivered: February 2020

Installation time ~ 5 days

Commissioning time ~ 6 days

Compliant by: March 2020

Client Contact

Client organisation: **Severn Trent**

Contact person: **Derick James** (Project Manager)

Ledbury STW Process Parameters

Average flow	192 m ³ /h
Maximum flow	578 m ³ /h (160 l/s)
Design Influent TSS conc. (incl. chemical solids)	32 mg/L (average) 43 mg/L (98%ile)
Effluent TP consent	0.3 mg/L (average)
Effluent Fe consent	4 mg/L (95%ile)



Project Name:	Ledbury STW
Client:	Severn Trent
Capacity:	160 L/s
Main Contractor:	ClM6
Project Scope:	Design, supply & commission

Project Highlights

- Off-site manufacture
- Consent of 0.3 mg/l TP and 4 mg/l Fe
- Rapid installation and commissioning
- No separate flocculation tank needed

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