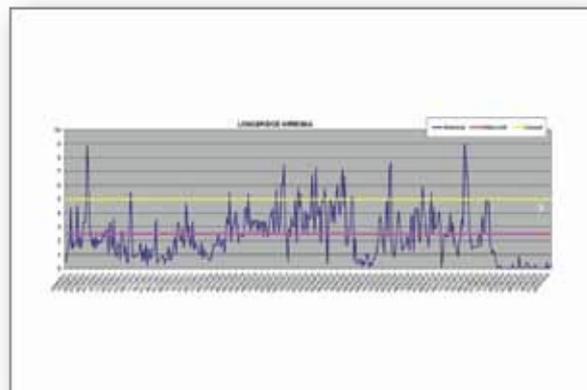


# SEVERN TRENT – LONGBRIDGE



## 2H Water Technologies helps Severn Trent Water achieve “remarkable” reductions in NH<sub>3</sub> Ammonia levels

... installation of BIOdek™ plastic trickling filters cuts ammonia levels down from 4mg/l to 0.2mg/l ...

2H Water Technologies worked with the process engineering arm of Severn Trent water over an extensive period evaluating the potential use of a Nitrifying Trickling Filter at Longbridge STW, Warwick. The works utilised a rock media trickling filter plant which met its BOD requirements with the existing filters but not the future Ammonia consent.

Various solutions were evaluated including changing some of the rock filters to plastic but as the existing filters were all in good condition it was decided to add a Plastic Media Tertiary Nitrification stage. This option had various advantages:

- The Low Carbon Footprint capability of this process
- The easy facility to install 2 filters now and make provision for a third to handle the expected load increase
- The simple operational requirements of this single moving part design
- A footprint that fitted into the available space on site

The design to handle 440l/s flow with the capability of all the flow being handled by each distributor in an emergency was accommodated in 2 off filters 16.2 m diameter with 3.6m media depth of BIOdek FKP615 with 190m<sup>2</sup>/m<sup>3</sup> media to produce a 5mg/l ammonia consent from an ammonia load of 423kg/d at 11.3mg/l.

2H worked with Severn Trent, their contractor Costain and design engineers MWH to ensure that the tanks, main support structure and distributors were designed to meet the requirements of the media and the process.

*“With the Longbridge plant now consistently recording ammonia levels so low that they’re nearly off the scale, installing BIOdek™ plastic trickling filters has proven to be a remarkable success,”* said Tom Pawson, Delivery Manager – Waste Water, Severn Trent Water.

The installation of the media and the support system were completed in two weeks as planned keeping the project on schedule.

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