

Successful replacement of brush rotors with FUCHS OxyStar Aerators

A small wastewater treatment plant in the north western part of England needed retrofit. At that time it mainly consisted of a screen with integrated washing and compaction, an oxidation ditch and a settling tank. Brush rotors were installed for the aeration in the oxidation ditch.

The brush rotors lead to high maintenance cost. They are also known for remarkable noise emissions, spray water problems and undesired cooling of the wastewater.

The operators faced the options to either maintain the rotors or replace them by a sturdy, highly efficient and easily to install new aeration system.



Technical Data

Actual capacity:	1,379	PE (population equivalents)
Average daily flow:	568	m ³ /d
BOD ₅ concentration (actual):	153	mg BOD ₅ /l
Effluent quality:	7.4	mg BOD ₅ /l

Existing aeration equipment

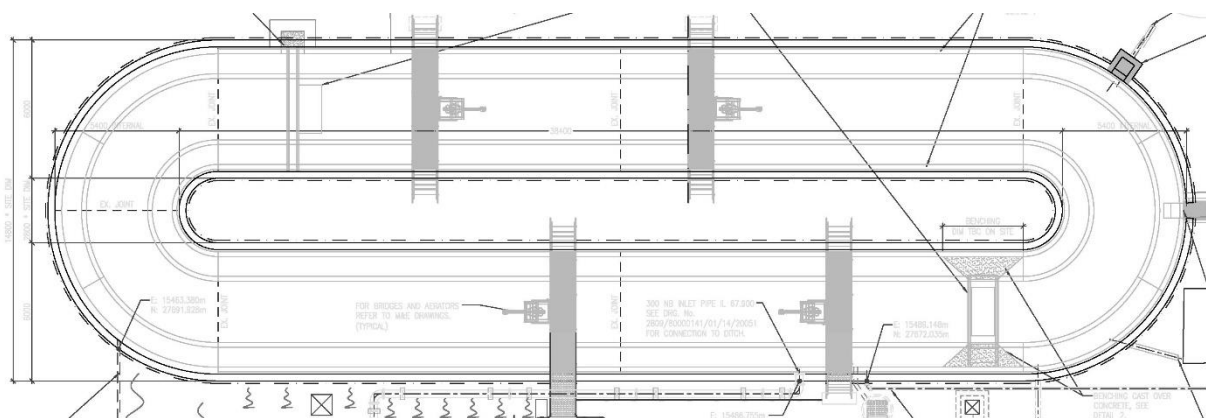
1 pc	brush rotor	4.0	kW
1 pc	brush rotor	4.6	kW

Finally, FUCHS OxyStar Aerators were chosen. Apart from combining excellent aeration and mixing with a sturdy design the OxyStar Aerators also offers easy installation. This is a valued aspect for retrofits.



In 2011 four sets of FUCHS OxyStar Aerators (3.0 HP / 2.2 kW each) were mounted at bridges. At that time the ditch was rebuilt and an additional grit trap installed. Currently, only one to two OxyStar Aerators are running at the same time providing for proper aeration and mixing.

FUCHS OxyStar Aerators are available in various sizes. They can be bridge or wall mounted or also mounted on floats. Due to their sturdy design OxyStar Aerators are highly reliable and almost maintenance free.



Arrangement sketch

Advantages of FUCHS OxyStar Aerators at a glance

- Efficient aeration
- High mixing and circulation capability and flexibility
- Outstanding quality of material and production
- Almost maintenance free – no lubricating or greasing required
- Versatile and simple modes of installation
- Easy handling and installation due to low weight
- No spray water
- Low noise emission

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