

CASE STUDY

Knostrop



The issue

Sludge treatment facility upgrade

Sweco was appointed by Black & Veatch to design, commission and guarantee the DE-amMONification (DEMON) process at the state-of-the-art sludge treatment facility on the outskirts of Leeds.

The contractor was supported by aeration specialists Suprafil, who were subcontracted to supply and install the aeration system.

Knostrop waste water treatment works has been treating sewage from domestic properties and industry for almost 100 years. The upgrade aimed to make the treatment of sludge on site more efficient and

effective. The anaerobic digestion plant treats all the indigenous sludge from Knostrop WWTW. In addition, the site is a regional sludge treatment facility and receives imported sludge in both liquid and dewatered cake forms.

The digested sludge is lime sanitised to pH9 and dewatered on site before being recycled as a soil conditioner. At maximum capacity the plant will remove 3,150kg of ammonia per day.



The solution

Belt and braces approach

Due to the high temperature of the effluent produced at the anaerobic digestion plant, Suprafil installed 256 Oxiflex OM 2m tube diffusers in the bottom of each of the two cylindrical aeration tanks rather than the standard plastic diffusers.

The pipework was upgraded to stainless steel, and the new hardware was installed around existing equipment in the tank. Additional supports were also fabricated and installed by Suprafil's in-house team to accommodate the high inlet flow.



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The result

A solution that stands the test of time

Suprafil have used their knowledge and expertise to ensure that the multi million pound revamp of Yorkshire Water's Knostrop sewage treatment works stands the test of time.

Summary

The design, pipework fabrication, installation and project management were all dealt with in-house by Suprafil's team of experts.

The plant was handed over to Yorkshire Water, with Suprafil completing their work within a 6-month window.