

atac



Case Study Six SAF Units Hire Scheme

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Axis Water companies

Six SAF Units

CASE STUDY



Background

Sewage Treatment Works receives flows from the local village and its surrounding area with a total population of circa 5,400 PE. The existing rotating biological filter beds were becoming incapable of treating the ever-increasing flows from the catchment area. Due to the site starting to fail its discharge consent limits effluent from the site was being removed with a constant turnaround of tankers transporting liquors elsewhere.

Solution

Based on the information provided by the client of settled sewage BOD and ammonia loadings, we were asked to design a SAF system to treat 30l/sec of flow to give an output to easily meet the site consent limit. The design output required the build, supply, and installation of six SAF units with a combined footprint of over 100m² land area.

The six SAF units were configured into three streams each designed as Carbonaceous and Nitrifying.

We were also required to supply two submersible pumps complete with a control panel and a rotary lobe blower skid comprising two 30kW variable speed-driven blowers. Each blower capable to deliver a minimum of 1300m³/hr of air.

Execution

This delivery was unprecedented with the challenges we faced, mainly being COVID-19 and the majority of the country in strict lockdown. The project also required a lot of site logistics to organise with the constant flow of six tankers and a 95 Tonne crane to position, with artic lorries delivering our equipment. All within a compact site with only a single track one-way road available. From placement of order and suitable type 1 roadstone base being supplied to us, ATAC managed to deliver the entire scheme in 7 weeks.

Results

Within the SAFs seeding period, regular sampling was carried out by the client's process team. The discharge BOD and ammonia levels were quickly decreasing, which allowed a subsequent decrease in the tankering regime until the site became in consent.



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