



Case Study:

Acid Clean on CBDA plant

In Q1 2017 Air Technology were engaged by a customer as part of their ongoing acid cleaning scheme, to use their proprietary diffuCLEAR acid cleaning method upon the aeration lanes at a sewerage treatment works in the east of England. The works consists of an inlet works, primary settlement, secondary treatment in three lane activated sludge plant with Kaldnes media, followed by clarification in the two intermediate settlement tanks. The ASP's aerated cells are filled with Kaldnes media with course bubble aeration through 1"NB stainless steel pipes with ~3mm diameter holes.

To perform the acid clean Air Technology used formic acid which is then atomised within the pipework and carried by the air to the diffusers. This acid clings to the inside of the pipework and diffuser heads and dissolves any build-up of minerals or particles that may be blocking the air from entering the effluent efficiently. This is the preferred process as the air supply does not need to be turned off, the lanes do not need to be drained and the disruption to the sites running is minimal.

Once distribution of the acid was complete it was noted that there had been a pressure drop of 23mbarg and an increase in air supply of 2.6%. This has resulted in the blowers running at minimum speed for extended periods however despite this savings in the region of £11,000/annum are expected. This gives a payback of 0.4 years.

On top of the energy saving from reducing the pressure on the system this work will help to extend the operating life of the aeration diffusers thereby reducing future maintenance costs and also increase the efficiency of oxygen transfer resulting in additional savings.



£11000/yr
Saving

Payback
0.4yr

Air Flow
+2.6%

