

## Case study 10

# Trade effluent audit: doing the simple things first

### OCCAM'S RAZOR

Simple is usually best. Here, the client had been told an end-of-pipe solution was what they needed. It wasn't really. What they needed to do was prevent re-suspension of the solids in the settling tanks. And the simplest way of doing that was to make sure the solids weren't there in the first place. It sounds flippant but it's not. Adding about 15 minutes each week to a cleaning schedule has avoided a prosecution and unnecessary investment.

### CONTINUOUS IMPROVEMENT

This client has a very good approach to water efficiency and effluent management. As good as it is, however, there were still opportunities to improve things. One of those was rainwater harvesting. The factory had a large roof. Some surface water is discharged to the effluent drain, adding cost, volume and turbulence to the problem. We determined that much of the clients process water use could be met by capturing rainwater, as could some domestic use. Here, small, incremental steps are helping the client to continuously improve water management.



Clients often ask us to help them when they're close to being prosecuted for not complying with a trade effluent consent.

On many occasions, clients have received quotes for effluent treatment plant that will undoubtedly work but which is expensive to buy and install. This can, understandably, cause a great deal of stress. Here we talk about simple solutions that helped relieve a stressful situation for a client.

Our client makes a wide range of metal components that are used in many industries. The effluent from their factory contains swarf, polishing grit and cutting fluids. Despite installing an ingenious system of small settling tanks within the factory, the client was failing their consent, particularly on COD, solids and oils.

We carried out an audit & noted that while the client's general approach to water efficiency and effluent management was very good, there was room for improvement.

The settling tanks were rarely desludged. Pulsing, intermittent flows and lack of dip pipes caused turbulence which re-suspended solids in the last tank before discharge. We recommended that the client regularly cleans the settling tanks to remove the sludge. The client already collected other liquid waste for disposal via a waste management company that would also accept the sludge. A simple cleaning regime has brought the factory back into consent and avoided unnecessary expenditure on treatment equipment.

We did note that there was a chance that solids could still escape the settling tank due to the nature of the flows. We sized and costed a simple bag filter system, a design which the client will keep "in their back pocket" for the future. The total cost? Far cheaper than the original end-of-pipe solution!