

Thames Water to trial energy-saving treatment technology

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Thames Water has teamed up with Mapal Green Energy to launch an innovative energy-saving pilot scheme at its Chesham sewage works that it hopes will cut the cost of treating wastewater in some of its older biological reactors by up to 50%.



Mapal's floating fine bubble aeration system in full flow

The Mapal system uses a tried and tested floating fine bubble aeration system that provides a far more efficient method for oxidising wastewater than traditional mechanical surface aerators, which are known to be costly to operate and, in many cases, unreliable.

The test, which is expected to start in May, will involve fitting 13 floating fine bubble aeration units to the existing oxidation ditch, which ordinarily handles a flow rate of 14,450m³ every day.

Anglian Water has been piloting the equipment at its Stanbridgeford site since June 2013 and it has so far "exceeded expectations", while further installations are already up and running in more than 35 locations worldwide, including Israel, Brazil, South Africa, Angola and the Congo.

The Mapal system has delivered energy savings of up to 70% against the cost of mechanical surface aeration systems, which are still used at 30 of Thames Water's 350 sewage works.

The company's wastewater innovation manager, Pete Pearce, said: "We were attracted by two obvious benefits of Mapal's system: the clear potential for energy savings, which fits well with our constant focus to drive down operating costs, and its ability to be retro fitted without any significant down time to day-to-day operation of the treatment plant.

"Reactors do not have to be drained and installation is rapid and easy, resulting in minimal disruption for us."

As well as energy savings, Thames Water is also hoping for reductions in maintenance costs, as the system requires no moving parts in the treatment tank.

It can also be adapted for aggressive and hazardous liquids and is therefore suitable for application across a wide range of industry sectors where secondary wastewater treatment requires a solution based on aeration.

Aerators are automatically adjustable to water depth and, because they float, are always level, delivering an even flow of oxygen within the reactor.

Mapal UK sales manager Andy Carling said: "This will be a wet and live installation, which will make for a very fast changeover. The units are made from robust stainless steel structures, so will have a long life, and as a modular system we can add to or take away from the installation quickly and easily."

Mapal Green Energy will be exhibiting at **IWEX** from April 1-3 at the NEC, Birmingham.

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