



Essex & Suffolk Water

At its Layer water treatment site in Colchester, the Essex & Suffolk Water Company has 18 filter beds, each with a water surface area of some 2,500 sq m.

From exposure to sunlight, algae grows very quickly on the water surface of each of the filter beds and removing it is an expensive, labour intensive task.

Street CraneXpress Ltd were contracted to produce a revolutionary system capable of significantly reducing the need for manual cleansing, to improve the cost-effectiveness of the company's water treatment process.

The brief was to design, manufacture and install a mechanical handling system capable of deploying a 2,500sq m cover over the water surface of each filter bed.

By preventing exposure to the sunlight, it was thought that acceptable water quality could be preserved for long periods of time, with little need for manual cleansing.

The resulting solution to this brief consists of three separate gantries each with a span of 45m and each of which is

fitted with a 2.2m diameter (variable speed) rotating drum. All three gantries run along two sets of track and each one traverses above a total of six filter beds. The rotating drum is used to deploy enough specially manufactured breathable cloth to cover one filter bed at a time, as the gantry is traversed over and along the water surface.

Each of the gantries, with a travelling speed of 0-10m per minute, is capable of travelling the combined 400 metre length of all six filter beds in 45 minutes.

All three gantry systems require just two operatives to cover a single filter bed in as little as 20 minutes.

The entire mechanical handling system has been successfully pilot tested and results prove conclusively, that water can be kept at an acceptable level of quality for at least six months, without the need to manually remove algae from its surface.

The project has been so successful, that water companies throughout the UK are beginning to embrace the new technology.