

# Case Study

## Electro Mechanical Services



### Summary



<b>Industry:</b>	Water and Wastewater
<b>Application:</b>	Aeration Removal and Refurbishment
<b>Actual Saving:</b>	Estimated £15,000
<b>Payback Period:</b>	Unknown



## Horizontal Aeration Lane Equipment

ERIKS successfully repairs potentially catastrophic aeration lane equipment breakdown

### ISSUE

ERIKS received a call from a large UK water treatment company, requesting a site visit to rectify an issue with horizontal aeration lane equipment.

On attending site and having in depth discussions with local site staff it was clear that the unit had been making some considerable noise and vibration prior to its complete failure.

The main problem was not only the failure of the aerator unit but the fact that the whole section of aerator some 6m long by 1.5m in diameter, which normally spans the ditch had completely disappeared.

Not only did the client have an issue with losing an aerator but also the fact that the failed unit had clearly fallen into the ditch below, the draining out and removal of the unit was impossible due to the impact on the treatment process.

Also any attempt to tanker away the aeration would be highly costly and almost impossible due to flows and volumes of aeration media.

### OUTCOME AND BENEFITS

Repair costs were reduced due to repair rather than replacement of the aeration unit. The lifting out of the unit in this way also meant no interruption to the already weak process, and more importantly completely safe for all staff undertaking the job.

There was also gains in reduction of lost process time and any associated supporting treatment costs relating to additional temporary aeration.





## SOLUTION

With all these factors to consider ERIKS had to come up with a plan to remove the unit from the ditch without any draining down. With the ditch being full of zero visibility water and around 4m deep, the removal was set to be a challenge.



It was agreed that placing any person in the ditch was not an option. Although divers have been used in previous occasions, this was not possible during this project as the ditch was fast flowing with heavy deposits. Combined with a unit that has many sharp edges, the risk of possible injury was too great.

It was decided that we would use a crane mounted hydraulic grab, the grab could be lowered into the water traversed across until we hit the unit, then raised and lowered to lift out the unit to a point where the correct use of lifting slings could then be applied.



This was done with great success, finding the unit almost on the first go, followed by the successful lifting of the unit from the ditch.

With the unit out, a full inspection indicated that we could undertake a refurbishment of the unit rather than a full replacement.



## MORE INFORMATION

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