Manufacturing industry
Trade effluent oil removal system

The customer is a world leader in the manufacture and supply of steel tubular products to the construction, engineering, energy and automotive markets. The site specialises in the production of large steel pipes, which are used in the oil & gas, petrochemical, power generation and water industries.

Anglian Water was asked for assistance from the customer to evaluate the site's effluent treatment options and to develop a detailed performance specification for a tailored solution, which if implemented would enable the customer to ensure ongoing compliance with the site trade effluent consent.

The customer's specific concerns were:

- existing on-site treatment was limited and was nearing capacity;
- the site discharge consent for oil was being tightened, increasing the risk of a breach in consent;
- the customer had significant plans for expansion and were concerned that any increase in production would lead to the site failing its consent;
- failure to meet consent could result in the site being forced to reduce or even stop production;
- site personnel did not have the time or specialist knowledge to develop solutions in house.

Optimiser quantified and qualified the specific nature of the site effluent and developed a detailed performance specification for an on-site effluent treatment plant. The customer subsequently placed orders with a third party supplier, and Optimiser went on to assist with the commissioning and handover of the plant.

Optimiser assisted by:

- sampling wastewater streams to determine the droplet size, distribution and concentration of oil found in the site effluent;
- reviewing the latest technologies and treatment options used to separate oil from water with a specific focus on the oils found on site;
- identifying suppliers that would be capable and were interested in tendering to supply a suitable treatment plant;
- attending site visits with suppliers prior to obtaining budget prices for the supply, installation, commissioning and handover of an effluent treatment plant;
- providing outline design options, cost estimates and proposals in a business case format to enable the customer to obtain approval for the necessary capital expenditure.

recommendations:

Optimiser recommended the installation of a coalescer unit to separate out oils from the final effluent.

The recommendation was accepted by the customer and Optimiser was further employed to develop detailed tender documents

Optimiser went on to complete the following work:

- produce a performance specification for an oil coalescer plant, enabling the customer to invite detailed tenders from suppliers;
- answer queries from suppliers during the tender period;
- Complete a detailed review of the returned tenders;
- analyse differences in the tenders and hold further discussions with suppliers to enable the bids to be compared on a like-for-like basis;
- produce a report on the returned tenders and provide technical support during supplier interviews to assist the customer in the final supplier selection process.

benefits:

Optimiser identified a solution for the site trade effluent problems which would enable the customer to:

- **remain compliant** with the site trade effluent consent minimising the risk of prosecution;
- **meet a tightened discharge consent** enabling production to continue without restrictions;
- **treat increased volumes of effluent** as site production increases **;**
- **reduce water / wastewater costs.**

By using Optimiser, the customer was able to obtain true independent advice, which was offered at a considerably lower cost than comparable ‘wastewater consultants’.

Other customer benefits included:

- **improved knowledge** of the site effluent;
- **continued focus on core business activity.** Optimiser made the tender selection process easy and minimised the amount of input required from the customer, enabling them to concentrate on their core business activity.

ongoing support:

Provision of general engineering support during commissioning, handover and acceptance testing of the plant, including the development of a HAZOP procedure for the ongoing operation and maintenance of the plant.