

## CASE STUDY

# Kendal



### The issue

#### Trialling a new approach

Following an initial trial of Nereda Technology with United Utilities at Davyhulme, provider Royal HaskoningDHV were impressed by the full design-fabrication-installation solution Suprafil were able to offer.

Suprafil began to install a full scale application of the Nereda system in Kendal, Cumbria for United Utilities. The project was also the first time delivery contractors LiMA had worked on one. As such, all three parties were keen to ensure this project went as smoothly as possible.

Suprafil spent several months researching the technology in depth and developing the team's understanding of the technical challenges involved. This was done to demonstrate their knowledge and give LiMA and United Utilities confidence that Suprafil knew what they were doing and would be able to deliver.

Suprafil proceeded to pull together the full design to meet the requirements of the £2.15million project. All the component parts were manufactured in Lancashire. It was a 5-month programme from receiving the order to delivery, with a further 12-week installation phase.



## The Solution

### Tried and tested

One of the key factors in the selection of a Nereda system was the relatively reduced footprint the plant uses.

However, another characteristic is the fact they involve around four times as much pipework than conventional activated sludge plants. A lot of this pipework is at high level and needs supporting. The Suprafil team designed and built the supports.

The pressure was on to meet the design deadlines and ensure the installation went smoothly so the team could keep to programme and safety. The timescales were tight, but Suprafil met all key milestones and delivered on programme.

Because of the nature of the Nereda plants, the team had far more pipework to install than at conventional sites and there were far more fixings.

Therefore, in order to reduce installation time on site, the company used Design For Manufacturing processes to build as much as possible offsite. However, that meant a full-time pedestrian crane was required on site for offloading assemblies that weighed 2-3 tonnes each.

## The result

The installation of the innovative Nereda technology at Kendal WwTW was a first for all three parties.

Nereda's key advantage over conventional activated sludge is principally down to the nature of the granules. Unlike with conventional processes, bacteria are concentrated into a compact granular structure producing excellent settling characteristics.

The compact structure also produces different zones providing optimum conditions for simultaneous nitrification and denitrification, as well as biological phosphorus removal. Together this means the Nereda process is able to operate at high biomass concentrations leading to compact reactor footprints.

