

CASE STUDY

Application: Dalmuir Wastewater Treatment Works
Location: Glasgow, Scotland
Product: Mónasorb

Bespoke Mónasorb Solution for Scotland's Key Wastewater Treatment Site



CAPITA



Project Summary

Anua worked with Capita to design, install, test and commission two bespoke Mónasorb units, which utilise activated carbon for the removal of odorous gases at Dalmuir Wastewater Treatment Works. The bespoke design was built off-site at Anua's factory in Somerset and designed to be 100% operational during maintenance periods, meeting the clients remit for minimal disruption to the running of the overall facility during installation and maintenance.

Situation

Dalmuir Wastewater Treatment Works in Glasgow is one of Scotland's key wastewater treatment sites and serves approximately 650,000 local people.

Operated by Saur Services Glasgow, the site was under a two year programme of improvements aimed at increasing the operability of the site and reducing H2S levels and odours.

The site previously relied upon one odour control system to treat odours emitted from five different areas and due to an increase in demand of the treatment works the existing odour control system was becoming overloaded.

To reduce load on the existing system the client requested an odour control solution



to treat odours from the pre-treatment inlet channel and the intermediate pumping station.

The design scope also stated a requirement for a system which could be installed and maintained with minimal disruption to the running of the facility.

Solution

Anua worked with the Capita, to design, install, test and commission two bespoke Mónasorb units, which utilise activated carbon for the removal of odorous gases.

The airstream is split between two 1.8m x 1m Mónasorb units positioned adjacent to the existing pre-treatment tanks and designed to take half the loading from the existing odour control unit.

Anua Mónasorb dry scrubbing system is based upon a combination of the principals of adsorption and chemical oxidation and can be utilised for the treatment of airstreams contaminated with low to mid-level or infrequent concentrations of odorous or volatile organic compounds (VOCs).

The Mónasorb odour control units and interconnecting ducting were constructed completely within Anua's manufacturing facility and assembled on site, fulfilling Saur Glasgow's remit and in turn causing minimal disruption to the site.

Result

The innovative, holistic approach to the design meant that the system could be 100% operational during maintenance and constructed off-site, reducing on-site installation by 50%.

Our built-off-site solutions also benefit from improved quality, due to being manufactured in the controlled environment of our production facility, accredited with ISO 9001.

Performance Results	
Parameter	Value
Design extract rate	4000 Am ³ /hr
Inlet temperature	20°C
Inlet humidity	70 %RH
Inlet H ₂ S concentration (ave)	5 ppm
Inlet H ₂ S concentration (max)	15 ppm
ICF Outlet H ₂ S concentration	<30 ppb
Mercaptans (R-SH) concentration (ave)	2 mg/m ³
Mercaptans (R-SH) concentration (max)	10 mg/m ³
Outlet Mercaptans concentration	0.05 mg/m ³
NH ₃ concentration (ave)	1 mg/m ³
NH ₃ concentration (max)	3 mg/m ³
Outlet NH ₃ concentration	0.2 mg/m ³
AMINES (RNH ₂) (ave)	1 mg/m ³
AMINES (RNH ₂) (max)	3 mg/m ³
Outlet (RNH ₂) concentration	0.2 mg/m ³

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