



CDenviro

RECYCLING WASTEWATER
SOLUTIONS

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WASTE WATER SOLUTIONS

The UK produces approximately 11 billion litres of waste water each day, from homes, businesses, and water collected via sewer networks. This results in around 3,800 tonnes of dry solids being produced across just over 9,000 sewage treatment works every day, equivalent to over 1.4 million dry tonnes of sewage sludge or 21 kg per person per year.

Our solutions ensure maximum recovery of organics for energy generation, minimise waste volumes and downstream operational costs, and produce dewatered fine material suitable for further utilisation or landfill and the lowest possible cost.

We provide systems for wastewater clients with requirements in the following areas:

Sludge and Tanker Waste Screening

High-Flow Screening

Anaerobic Waste Reduction

Slow Sand Filtration



SLUDGE AND TANKER WASTE SCREENING

The first stage of sewage treatment in a wastewater treatment works (WWTW) is the removal of rag and grit from the energy bearing liquid effluent.

Originally screening took place in order to protect downstream assets from blockage and wear. With the advent of energy generation from sludge, the protection of these valuable assets has never been so important.



Our S:MAX screening technology successfully removes both grit and rag from sewage sludges, sewage screenings and tank cleaning residues, creating segregated, washed stockpiles of grit and rag for reuse or disposal.

These solutions bring the following benefits to the sludge screening process:

ELIMINATION OF BLOCKAGES

The screen's simple design means that whatever type of material is pumped onto the screen, it will process it. There is nowhere for rag to block within the screening system.

HIGH PROCESSING RATE

Due to high-frequency vibrations, our screens can operate up to 77L/s at a dry solids content of 6% and can comfortably work on high thickness sludge. The result is that our screens can process directly from inter-site tankers, avoiding the need for buffer storage tanks.

HIGH SCREENINGS RETENTION RATE

The screening size (i.e. the separation size) can be easily modified depending on the application in which it is being used. The vigorous nature of the screen ensures it is virtually impossible for particles larger than the screening size to pass through the screen.



HIGH-FLOW SCREENING



Preliminary Screening is the first process at a waste water treatment works. Its purpose is to remove objects such as rag, paper, plastics, and metals from the high flows entering the works to prevent damage and blocking of downstream equipment, piping, and processes.

CDEnviro screening technology is suitable for applications with high flows and low solids content.

Our separation techniques solve two major problems at the primary treatment stage in a WWTW.

1. High-flow effluent screening for solids above 2mm ensures consistent effective separation of contaminants from organic material flowing into a treatment centre.
2. Processing accumulated grit and silt settled at the bottom of detritors allows operations to run smoothly without problematic materials obstructing or damaging the system.

HIGH WATER FLOWS

The HI:FLO Dewatering Unit is designed to quickly treat high water flow rates in applications where low to medium concentrations of solids, from 0.8mm upwards in size, are required to be quickly and efficiently removed from water, to allow its reuse or discharge.

Flow rates from 1000 m³/h upwards can be treated effectively, with the capacity increasing with aperture size where only larger size solids are present.

GRIT ACCUMULATION

CDEnviro technology is designed to wash and dewater grit from the bottom of an overloaded detritor while removing organics and dewatering grit.

Recovered grit may be reused depending on its source and character, or can be sent to landfill at a cheaper rate due to effective dewatering.

ANAEROBIC WASTE REDUCTION

Grit is a major problem within anaerobic digestion. This type of material can include eggshells, bone, lime, ash, glass and various other inert high-density materials. Grit settles in the digester, reducing the capacity in the tank and therefore decreasing the digester's efficiency.

Digesters require regular cleaning to increase the retention time of bio-solids in the tank as well as reduce the costs of heating it. Removing grit increases digestion and the life of the sludge pumps and other parts. In-line grit-removal technology allows for grit to be removed from the AD processes, without the need to shut down.



D:MAX - EFFICIENT SOLIDS REMOVAL

The D:MAX uses vibrating platform screen technology in a mobile screening & classification system to efficiently remove grit, rag and other troublesome solids from a waste stream.

The pre-treatment of waste prior to disposal is a requirement from many global landfill directives and the introduction of the D:MAX ensures all requirements are exceeded in terms of the level of treatment afforded to the feed material.

A MOBILE SOLUTION

The D:MAX can be easily moved around a number of sites if required, facilitating processing in situ at a variety of locations. This minimises the transport movements required to bring waste material to a processing site.

The D:MAX is pre-wired, assembled and factory tested before leaving CDEnviro Headquarters.

The D:MAX is trailer mounted with its own onboard generator, ensuring rapid and efficient deployment at each location.

SLOW SAND FILTRATION



Slow sand filtration has been a reliable method of water purification for hundreds of years, requiring no chemicals or electricity to operate.

An important part of the slow sand filter purification process is maintaining the cleanliness of the sand to ensure clean water and an optimum rate of flow through the filter.

A consistent supply of clean, dry filter sand which is uniform in size and meets all the requirements for slow sand filtration media is essential for the process to work.

THE G:MAX SOLUTION

The G:MAX system expertly cleans and dewateres the sand used for filtration, and delivers a finished product ready to be laid back down on the filter beds.

The G:MAX is fed through a hopper and feed conveyor offering operators increased efficiencies with minimal interruption to their current process.

A radial conveyor ensures that the maximum conveyor stockpile capacity is utilised.



SOLUTIONS



**ANAEROBIC
WASTE
REDUCTION**
ANDIDRAIN
Carlisle,
UK



**ANAEROBIC
WASTE
REDUCTION**
MTS CLEANSING
SERVICES
Rochester,
UK



**SLOW SAND
FILTRATION**
ESSEX &
SUFFOLK
WATER
Essex,
UK



**SLUDGE AND
TANKERED
WASTE
SCREENING**
THAMES WATER
Berkshire,
UK



**SLUDGE AND
TANKERED
WASTE
SCREENING**
SOUTH WEST
WATER
Cornwall,
UK

WHAT OUR CLIENTS SAY ABOUT US

CDEnviro offers superior solutions and service levels, so much so that our clients become Clients for Life.

“The D:MAX units from CDEnviro allow us to combine the latest technology with our expertise to offer customers the most efficient and cost effective solutions.”

Spencer Crust
Operations Director, MTS Cleansing

“All the evidence from the first sixteen weeks of operation is that yet another area of significant cost and interruption to plant operation has been successfully dealt with by the S:MAX. We are now sending 50% less waste to landfill than was previously the case. We are also recovering a range of materials from the waste and converting them into commercial products which have uses in a variety of applications.”

Nick Williams
Digester Manager, Severn Trent Water

“The Sludge Reception Centre is such a strategic part of operations in the Fife & Tayside area. The screen is an extremely critical piece of kit and we mitigate downtime by the use of the available PMI. We also hold a full set of critical spares. This means there is no lead time for replacing any parts.”

Karen Smith
Team Leader at Scottish Water, Perth



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