

Sulzer Muffin Monster™ optimizes pump station maintenance

Care homes across the UK are experiencing difficulties as their wastewater systems have to deal with problems they were not designed to handle. Wipes, clothing, medical dressings, linen, aprons, masks, plastics, and adult sanitary items can cause inconvenient, unpleasant, and expensive maintenance problems. Hengoed Park is an award-winning residential, nursing & dementia Care Home in Swansea.

The Monster solution to a difficult sewage problem

To keep the critical sewage system running, the Hengoed Park owner - Desmond Davies - sought help from the Muffin Monster grinder. While pumps designed for "normal" sewage could cope with the occasional foreign object, problems can occur when processing the continuous, high solids loading found in applications such as care homes and hospitals. Nappies, wipes, and other foreign objects can find their way into these wastewater systems, leading to blocked pumps, pipelines, and possible disruption in operations.

Ensuring that care home staff and clients are properly educated about correct waste disposal procedures is essential. However, translating this education into actual practice can pose challenges - waste may not be disposed of correctly which, in consequence, can disrupt the sewage system. Creating awareness among staff and clients may be time consuming, and expecting immediate behaviour change from end users might not always be realistic.

It became clear the sewage loading at Hengoed Park was leading to pump failures and increasing maintenance and operational costs. Clogged sewers in care homes can also pose health and safety concerns for the staff, clients, visitors and impact on the amenity and enjoyment of the residents.



Grinder selection fit for purpose

The Muffin Monster was selected on the recommendation of Wayne Evans - Maintenance and Site Groundworker. He was familiar with the benefits of the Sulzer product from his previous experience in the municipal wastewater industry.

Due to the depth of the sewage network in front of the pump station, some modification work was required to fit the grinder in to the system. Using the experience and advice of the Sulzer team, a dedicated chamber was designed and built to house the Muffin Monster. Additionally, the manhole and concrete ring was raised above ground level.

Breaking it down

Sulzer grinders condition and reduce sewage solids into a uniform flow thereby allowing the pumps to work safely, effectively and at maximum efficiency. They protect pumps and other critical equipment from blockage and damage, ensuring the sewage can be transported to where it can be treated.

The unit selected was the 30005-012 Muffin Monster grinder fitted with 11 tooth cutters - the standard solution for care home and hospital type installations. With low speed and high torque operation, the Muffin Monster is able to handle the challenges set by the most arduous care environment.

The equipment was provided with a 2.2 kW IP68 submersible ATEX rated motor, and a smart proprietary grinder controller furnished with a load-sensing control system. This allows monitoring the operation of the unit when processing the flows and solids entering the pump station.

Maintenance free decade

"We installed the Muffin Monster in 2014 and have not needed to carry out any maintenance on the unit since then. Thus far we have saved money on the routine checks and replacement of our pumps, while ensuring that sewage problems do not impact on our site, staff, or our residents. This resulted in a decade of no problems with blocked pumps." – said Davis.

The problem of constantly failing pumps was resolved by the installation of the Muffin Monster grinder. The experience and support provided by the UK Sulzer team delivered the right solution for the customer:

"As it works so well, we have almost forgotten it is there! From having issues every few months, we have not had any for over 10 years now" – concludes Evans.