New Pump/Mixing System Puts Troublesome Train Toilet Waste Pumping Station Back On Track

An innovative mixing solution from Landia has solved a long-standing issue at a troublesome pumping station that receives wastewater from trains in the South of England.

The existing duty pump in the 30m³ chamber kept blocking: unable to fully deal with the solids from trains' toilets, which over time, greatly reduced the site's capacity.

"When we first visited the pumping station, I couldn't quite believe the volume of accumulated solids," said Landia's Howard Burton.

"But on the other hand, knowing what some people still unfortunately consider fair game to flush down a public toilet, it perhaps wasn't that much of a surprise at all!

"The point is that standard duty pumps can't really handle this type of application, and the resulting hassle, downtime, reduced capacity and greatly increased maintenance costs are inevitable!"

The situation had in fact become so bad with the non-liquid waste from the railway network's controlled emission toilets (CETs) that staff had had to resort to manually addressing the build up of solids with rakes.

"Our customer had looked at options for various twin-shaft grinders, but found the costs prohibitive," added Howard Burton from Landia.

Written by Chris French

“Grinders certainly have their place, but costs aside, this was for us, a case of not needing a sledgehammer to crack a nut – and that with our simple EradiGator system, a viable and affordable solution was at hand.

“There are continuous passes through our proven Chopper Pump’s external knife system, whereas with a grinder, there will be the one, single pass. In this tough application, we included our shredder propeller, which is proving increasingly popular."

Following the installation of its freestanding system at the railway facility’s pumping station, the existing duty pump has effectively been protected; able to pump wastewater again without blocking.

Meanwhile, the Landia system gets to grips with the main task of reducing the particle sizes of the invading solids, so that the lift/pumping station can operate as it is meant to.

“Another advantage of our tailored solution,” continued Howard Burton, “is that it requires no additional infrastructure. It’s a drop-in, plug-and-play solution. Also, everything is set up on a timer, with just 15 minutes per hour required, meaning low energy costs from a 5.5kW (7.3HP) motor, and a much easier system all round for our customer. No more rakes!”

In the USA, Landia has also had considerable success with its EradiGator and AeriGator pumping/mixing solutions for problematical lift/pumping stations.

In Daphne, Alabama, where its main lift station at Windscape was besieged with ragging issues to the point of having a vac truck there at least once per week, Landia’s EradiGator immediately resolved the problem.

Likewise in Madisonville, Texas, where despite the installation of two pumps that were sold as ‘able to cope with typical lift station debris’, blockages were a regular occurrence.

Here, a Landia AeriGator (with a Landia Chopper Pump supplied with a hardened-steel knife system) brought about a long-lasting solution. The system’s venturi nozzle enables the pump to deal with variances in the lift station scum.

For lift stations close to residential areas, the AeriGator unit has also been effective in reducing odours.

Written by Chris French