

Case Study

Tackling Costly Sewage Pumping Issues at Large Midlands NHS Hospital.



The Challenge

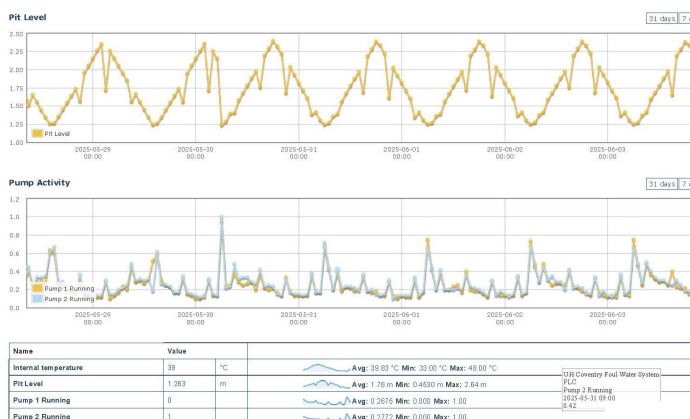
This NHS hospital faced continuous blockages at its wastewater pump station. Debris and FOG (fats, oils, and grease) buildup was blocking the system, requiring expensive tankers to remove the waste. The system was costing the hospital a fortune in tankers, and the hospital's pump station was unfit for purpose. A more robust solution was needed.

The Solution

We deployed the only solution of its kind to resolve this costly problem. Velocity Sentinam uses advanced pump technology consisting of specially engineered wastewater pumps that feature intelligent control systems, automatic cleaning functions and robust materials. We designed the system to perform reliably in critical environments.

The solution for this customer solved these problems:

- FOG and floating debris: The advanced pump technology lowers fluid levels to skim the FOG and debris from the surface. This takes place multiple times a day, preventing buildup.
- Blockages: By regularly skimming the tank, the levels of fat buildup were eliminated, avoiding blockages. We also introduced adjustable start/stop controls to optimise sump cleaning, improving operational consistency and delivering a cleaner system.
- High solid content: The heavy-duty, industrial-grade pumps are engineered to cut through all sorts of blockages, including FOG and other debris such as cloths and towels.
- Expensive tankers – our solution eliminates wastewater blockages; therefore, tankers are no longer required.



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|---------------------|----------------------------------|---------------------|-----------------------|
| Pump 1 Running | <input checked="" type="radio"/> | Pump 1 Fault | <input type="radio"/> |
| Pump 2 Running | <input checked="" type="radio"/> | Pump 2 Fault | <input type="radio"/> |
| Skimming Active | <input checked="" type="radio"/> | System Fault | <input type="radio"/> |
| Pumping Down | <input checked="" type="radio"/> | Pit Low Level | <input type="radio"/> |
| Backup Float Active | <input checked="" type="radio"/> | Pit High Level | <input type="radio"/> |
| Set Point: 1.400 m | | Pit High-High Level | <input type="radio"/> |

Netbiter Temperature: 39 °C

Technical Specification

- ✓ We installed industrial-grade submersible cutter pumps with an extended knife system.
- ✓ The industrial-grade pumps are backed up by SenIQ, our intelligent bespoke control panel fitted with inverter drives, a radar level control system, HMI/PLC controllers, remote monitoring, flashing sound beacons and BMS connections.
- ✓ Energy optimisation – our system detects the incoming flow rate and controls the duty of the pump to match.
- ✓ Remote monitoring – our SenSync product delivers live system tracking with immediate fault detection and alert delivery. This reduces the need for onsite diagnostics. Automated notifications via SMS, Email or building systems, deliver peace of mind that the system is fully operational and working as it should.
- ✓ SenSync reporting - recognises trends over time, indicating wear on the pumps, valve issues and other performance-related issues.

The Outcome

The installation of the Velocity Sentinam product has delivered significant operational and financial benefits to our hospital customer:

- **Reduced Costs:** An annual saving of three-quarters of a million pounds (for tankers to empty the constant blockages).
- **Minimised Downtime:** Zero blockages and callouts mean less disruption to daily operations.
- **Improved Monitoring:** the SenIQ control panel and SenSync remote monitoring deliver 24/7 visibility, giving the customer peace of mind that the system is operating at its optimum.

This efficient solution ensures the hospital can operate smoothly, with fewer interruptions and with better cost management and energy savings.

Our Proserv maintenance contract is also now in place so that we can look after and service the pumps in the future.

