

WASTE WATER: WELSH WATER

# Reliable and cost-effective solution to auto-desludging at Welsh Water's Ruthin STW

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“As well as requiring only minimal routine maintenance, the three pumps have been in continuous operation without interruption to flow. During a four year period of operation only one hose replacement has been necessary. This kind of reliability is vital for tough applications like sewage treatment.”

When Dwr Cymru built a new sewage treatment works at Ruthin, the company installed three Watson-Marlow Bredel SPX50 hose pumps for an auto-desludging application. In four years of operation, only one replacement hose has been required, proving the long term cost-effectiveness of the pump.

## THE CHALLENGE

The Dwr Cymru-owned sewage treatment works at Ruthin serves the town's population of 5,000. The site comprises three primary sludge tanks, and was upgraded to include a computer-operated auto-desludging system.

However, the works then required a reliable and cost-effective pumping solution for the desludging system, and turned to Watson-Marlow Bredel for the solution.

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## THE SOLUTION

Watson-Marlow Bredel installed three SPX50 hose pumps, one for each tank. Each runs once per hour, and handles 4-6% dry solids content primary sludge at a rate of 4900 litres/hr. They have a pump speed of 28 rev/min, and a discharge pressure of 5 bar. They are also fitted with 2.2kW cast iron frame motors with fixed speed gearboxes.

The pumps were installed complete with associated pipework and valves, and are fitted with automatic cut-out switches to protect against blockages in the suction or discharge lines. Suction and delivery lines are also fitted with surge dampers.

## THE OUTCOME

As well as requiring only minimal routine maintenance, the three SPX50 pumps have deslugged consistently at the specified rate without interruption to flow or 'rat-holing'.

The success of the pumps on abrasive sewage sludge pumping, and other similar applications, stems from a combination of the gentle peristaltic pumping action, low operating speeds, and the abrasion resistant characteristics of the hose itself.

The hose has a thick rubber core which makes it highly resilient and suitable for tough applications. It also incorporates an internal reinforcing element for enhanced mechanical strength, and its elasticity is maintained by passing it continually through a bath of lubricant.



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For further information on Watson-Marlow Bredel pumps in the Water and Waste industry, please request copies of application and technical data sheets.

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