

Rochfort Manor Pumping Station

AN EFFECTIVE SOLUTION TO REGULAR BREAKDOWNS

Looking for an effective solution to regular breakdowns and subsequent resident complaints, Irish Water turned to Xylem distributor Campion Pumps for a remedy.

The Challenge

Rochfort Manor is a well-maintained and highly-desirable residential development on the outskirts of Carlow town in Ireland. With demanding flows and fibrous content, the pumps installed at Rochfort Manor Pumping Station had been frequently plagued by blockages and breakdowns. This caused not only a surge in unplanned maintenance costs, but also major disruption, with breakdowns occurring every seven to ten days. As a live pumping station in a residential area, there was the added challenge of ensuring any work carried out did not disturb the residents and remained in operation throughout. Irish Water consulted experts, Campion Pumps who worked in partnership with Xylem to resolve the issues.

“Campion Pumps carried out a detailed site survey and using Flygt ATU401 SCADA system collected data such as power usage and flows”

The Solution

The two companies based their proposal on three core elements: blockage prevention, reduced maintenance costs and improved efficiency. Campion Pumps carried out a detailed site survey and using the Flygt ATU401 SCADA system collected data such as current power usage and flows from the existing pump station over a two week period. Following their analysis of this data and in consultation with Xylem Ireland the deployment of two 7.3kW Flygt Concertors was recommended as the best option. In order to keep the station in action, this meant only one pump could be changed at a time.

Despite being a fully-integrated, technologically advanced system, Flygt Concertor is simple and quick to install. For example: correct rotation of the impeller is guaranteed, which means there is no need to spend time physically checking.



END USER: Irish Water

COMPLETION: 2018

XYLEM'S ROLE: To deliver clog-free pumping

XYLEM SCOPE:

Campion Pumps and Xylem worked together to deliver clog-free pumping with the deployment of two 7.3kW Flygt Concertors

For Rochfort Manor, this meant that Concertor could be installed quickly, while the other pump continued operating. Its compact footprint also made it easy to navigate the restricted spaces. In addition, thanks to the ATU401, Irish Water was able to access real time views of the pump station, it's flows and power consumption figures, via a live website link.

With blockages proving to be particularly problematic for Rochfort Manor, Concertor's anti-blockage capabilities were another strong selling-point. Concertor's intelligent XPC functionality is capable of sensing the operating conditions of its environment and adapting its performance in real time to suit the changing demands of the station. Should the pump detect a potential blockage, the adaptive N-hydraulics and anti-blockage protocols will run the N-type impeller back and forth repeatedly until the debris is cleared. The pump will carry out this operation 22 times before alerting an engineer, thus reducing unnecessary and expensive callout charges for reactive maintenance.

"We haven't had a single breakdown since the Concertor pumps were installed in May 2018"

The XPC also delivers real time performance data, including: hours run, number of starts, kW consumed, current power, and number of anti-clogging cycles. This gives engineers total visibility and remote access to the pumps' operations at all times.

The Result

Brendan Garry (Laois County Council) commented: "This new solution has already brought fantastic benefits and savings. Rochfort Manor, which previously caused us regular headaches through on-going maintenance callouts and charges, is now far more reliable.

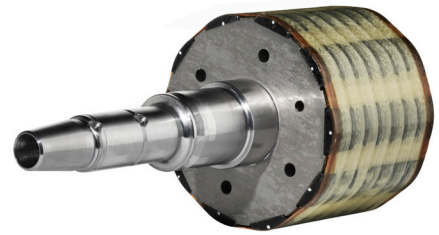
"We haven't had a single breakdown since the Concertor pumps were installed in May 2018. What's more, performance figures have shown energy reductions of more than 70 per cent. On an average day, the Concertor pumps use 13.57kW less than the previous pumps."

Energy savings like these are largely due to Flygt Concertor's patented auto-learning algorithm, which varies the speed of the pump to match and memorise the pumping stations flow requirements.

Kevin Devine, Business Development Manager at Xylem Ireland, concluded: "This is a great working example of how Flygt Concertor can revolutionise operations under even the toughest of conditions. Given the location, this pumping station is extremely busy and is continuously faced with high-rag content. For the existing pumps, this was too much, but it's the exact environment that Concertor was designed in mind for."

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The integrated control system with super premium IE4 motor efficiency contributes to the energy savings.



New and improved Adaptive N-hydraulics delivers sustained efficiency.

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