



# ARTESIS MAKES WAVES WITH WESSEX WATER

**Customer:**

Wessex Water

**Location:**

Yeovil, Somerset

**Application:**

Analysis and diagnostics of six pumps including two borehole pumps

**Product/services:**

MCM unit and diagnostic services

**Key customer benefit:**

Accurate diagnosis of the condition and failure of a pump to within a few days

**Benefits-at-a-glance:**

- Optimisation of performance and efficiency of equipment
- Accurate prediction of anomalies and potential failures
- 24-hour analysis
- Ability to analyse and report on inaccessible equipment
- Reduce the cost of failure, downtime and maintenance, ensuring continued customer satisfaction

**Artesis has recently proved to regional water and sewerage treatment business Wessex Water, its ability to diagnose equipment problems and anomalies accurately and reliably, after a pump failure occurred at one of the company's pumping station near Yeovil, within days of the date predicted by the Artesis team.**

**Details of the application**

Wessex Water, which serves areas within the South West of England, invested in the new maintenance technology from Artesis to optimise the efficiency and performance of its pumping equipment.

With an initial pilot period of 18 months, the Motor Condition Monitor (MCM) units were installed into the motor control cabinets of six pumps including two borehole pumps – a focal area for both the customer and Artesis. It was in the monitoring of these two boreholes that the Artesis predictive maintenance system detected a variety of problems and pinpointed the exact time to carry out maintenance work.

**Overcome the obstacles**

The condition monitoring of borehole pumps is especially challenging due to their inaccessible location underground and the wide range of potential failure modes that can occur – many of which would remain undetected by other monitoring techniques. As the MCM solution is installed in the motor starter panel and monitors both the electrical and mechanical parameters of the pump it is proven to be ideal for inaccessible applications.



In using GPRS technology, the Artesis team are able to gain remote access to the MCM unit installed onsite. This enables them not only to monitor the equipment 24 hours a day but also provide real time accurate diagnosis. Highlighting and diagnosing an abnormality or problem early on can make the difference between a minor repair and a major, costly failure.

Following the installation of the units at the Wessex Water site the Artesis diagnostic team monitored the pumps remotely, providing detailed condition and performance reports.



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### Accuracy and efficiency

One year into the trial Artesis warned Wessex Water of the condition of both the borehole pumps. After monitoring these two pumps closely for a further four months, Artesis advised that one of them should be replaced due to an impeller related problem.

To evaluate the accuracy of the MCM system the pump was left to run, adopting the ‘run to failure’ strategy. Within a couple of days of Artesis’ predicted date, the pump failed. With this degree of accuracy Wessex Water was able to recognise the immeasurable benefits of using the predictive maintenance solution, potentially saving themselves tens of thousands in downtime, repairs, equipment and customer satisfaction.

### Valuable investment for future proofing

Commenting on the pilot scheme and the success of the Artesis service, Dave Durkin, head of operational services at Wessex Water said: “As a company we actively explore the latest technology across all sectors of our business, particularly those that have the potential to improve customer service, reduce our process risks and save money.”

“The accuracy and reliability of this predictive maintenance solution proved remarkable. For a relatively low cost we will be able to install this equipment into our critical assets and save ourselves a considerable amount of money on both maintenance and repairs.

The technology also allows us to schedule and optimise our maintenance intervals, helping to maximise productivity and efficiency.”

“We are now looking to invest in more MCM units for installation in our plants across the Wessex Water region.”

