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# Wireless data transmission keeps reliability high and costs low at Bjerringbro Wastewater Treatment Plant, Denmark

FOR A WASTEWATER TREATMENT PLANT, RELIABILITY IS OF GREAT IMPORTANCE. THE REMOVAL OF WASTEWATER AND STORMWATER IN EXTREME SITUATIONS MUST HAPPEN WHEN REQUIRED. COSTS ARE ALSO IMPORTANT, AND THE KEY IS TO ENSURE COST-EFFECTIVENESS WITHOUT COMPROMISING THE RELIABILITY AND THE SUSTAINABILITY OF THE WASTEWATER TREATMENT PLANT.

At Bjerringbro Wastewater Treatment Plant in Denmark, data registered by Dedicated Controls is effectively transmitted wirelessly via a CIM 250 communication interface module has reduced the need for manual inspection, improved preventive maintenance and ensured reliability of the wastewater facility.

## THE SITUATION

Prior to the installation of the wireless solution at pumping stations connected to the Bjerringbro Wastewater Treatment Plant, manual inspections were necessary on a weekly basis for local pumping stations and daily for main pumping stations, to ensure correct operation and to detect possible faults. This required that staff were present at the treatment plant every day of the week, all year round.

Previously, the warning system at one of the local pumping stations consisted of a lamp placed high up on a lamppost, and a reaction to a warning depended on the lamp being seen and reported! Now, wireless transmission sends the full register of

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### TOPIC:

All necessary expertise for installations - Support before, during and after commissioning

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### LOCATION:

Denmark

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### COMPANY:

Bjerringbro Wastewater Treatment Plant in Denmark

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pump pit activity every ten minutes to the SCADA system at Bjerringbro Wastewater Treatment Plant.

#### THE GRUNDFOS SOLUTION

Using the terrain cabinet at the Engvej Øst local pumping station as an example, the robust cabinet includes a meter and a sewage pump controller (Dedicated Controls) with a CIM 250 module which has a GSM/ GPRS modem with its own IP address and mobile phone number. The use of a SIM card to establish the wireless connection makes installation extremely easy, as the GSM/GPRS operator delivers the communication infrastructure. Data is communicated wirelessly every 10 minutes to the central SCADA system. In an alarm situation, the SCADA system ensures correct alarm handling. Winpager software – a log program for SCADA on the computer at the treatment plant – sets the schedule, ensuring the alarm is sent to the correct person(s) at the right time, according to 5 pre-determined levels of alarm situations and response times.

The data transmitted includes the main status of pump pit and pumps and you can request active alarms and warnings. The types of alarms include sewage overflow, low flow, dry running, undervoltage, blocked motor/pump, overtemperature, klixon, and others that can be adapted according to your needs. Currently, there are about 200 of these cabinets installed in Denmark with Dedicated Controls transmitting wirelessly via the CIM 250 module.

#### THE OUTCOME

The immediate benefits of the wireless communication offered by the CIM 250 arise from the system showing how a pumping station is running over an entire day. This helps save time and money by reducing the need for manual inspections and helping make better planning possible. In time, this means greater reliability from better preventive maintenance. Time is saved with alarms. Personnel only get called out if absolutely necessary and they can act earlier. In addition, the wireless system provides operational data for control and statistics. This increases the possibility for even greater measures for ensuring maintenance planning, operational reliability, and also for optimising efficiency in the future, because all data is saved in a database.

#### QUOTE:

*“The wireless control unit with Dedicated Controls saves us time and removes the need for routine visits to our many pumping stations,” says Kaj Lorenzen, Driftsleder, Bjerringbro Renseanlæg. “Wireless transmission means we get data here and now – and that’s data we can use.”*

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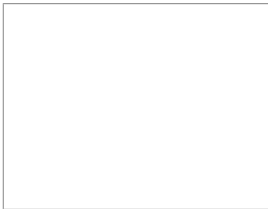
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