

## Case Study

# Water Treatment | Ballykilleen GWS

**Project:** Ballykilleen GWS Water Treatment Plant Control Panel

**Product:** Automation & Control

Ballykilleen Group Water Scheme in Co. Offaly were looking to take advantage of lower night time electricity rates when using their borehole pumps and have better control over their treatment process. IPL group designed, built, installed and commissioned a control panel for Ballykilleen GWS which met these requests by using different pumping control during the daytime and night-time. This means that during the day the four boreholes are brought online one at a time to keep the inflow to the reservoir greater than the outflow of the reservoir. At night-time to take advantage and to allow boreholes to rest during the day, all four pumps fill the reservoir to a higher level than maintained during the day. To ensure an even usage of the boreholes there is automatic duty changeover at 9 AM each day.

IPL group also took control of chlorine dosing on site continuing the flow proportional dosing on the reservoir inlet but adding failsafe dosing during a flow meter fault, automatic duty changeover each day, and assist dosing in the event of a low chlorine residual. All of this improves the reliability of the dosing process while ensuring the standby pump doesn't become airlocked due to a lack of usage.

The control panel includes a Siemens SIMATIC S7-1214C PLC as well as a Siemens SIMATIC KTP700 Basic 7" HMI. The SIMATIC S7-1200 PLC and Basic HMI ranges from Siemens are perfect for this sort of automation application as they provide the reliability and robustness of all Siemens products at a cost effective price which is perfect for small to medium automation applications.

To allow Ballykilleen to analyse their water treatment, trends and totalisers have also been set up on the panel. The totalisers allow the customer to view today's running total, the daily totals for the past 7 days, this weeks running total, last weeks total and a resettable running total for each flowmeter. There is also an alarms page where the operator can view any live alarms as well as the historical alarms. This allows the customer to analyse their previous alarms to determine if a problem is recurring.

If you're looking to optimise your pump or valve control, please contact us on 041 983 2591 or email [automation@ipl.ie](mailto:automation@ipl.ie) to discuss your application today!



Further advice on the Water Pipeline Products including specific installation requirements is available from IPL group. Measurements and weights are approximate. The designs are the property of Innovative Products Ltd (IPL group) and may not be reproduced without express permission. Innovative Products reserve the right to amend specifications or to withdraw models without prior notice. © January 2023

