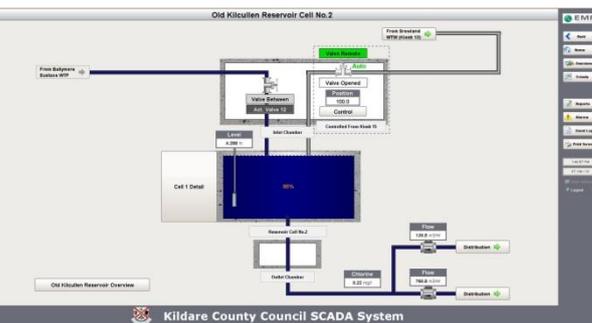


River Barrow Abstraction

Srowland to Ardscurr Pipeline Automation



System Components

- Ignition SCADA Software
- Schneider PLCs
- 4 RF Aprisa SR Radios

Introduction

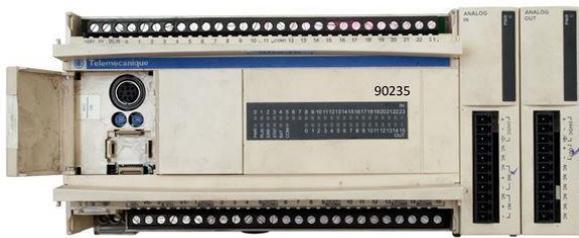
The River Barrow Abstraction Scheme is a water treatment and distribution scheme that involved the construction of a 40ML/day capacity drinking water treatment plant at Srowland, Athy, Co. Kildare and the laying of approximately 7.5km each of 400mm dia. and 700mm dia. ductile iron rising mains from Srowland to Ardscurr. The water treatment plant was constructed under a DBO contract while the rising mains were constructed under a separate traditional contract. The 400mm diameter rising main transfers treated water from Srowland water treatment plant to the existing Ardscurr reservoir. The 700mm diameter rising main connects to another new 700mm diameter main at Ardscurr which in turn supplies the existing Old Kilcullen reservoir. A number of actuated butterfly valves, pressure sensors and flow meters were provided under the pipeline contracts. In 2012, EMR was awarded a contract to design, install and commission a telemetry and automation system to monitor and control the network and provide automatic burst control.

Project Description

The contract called for the installation of an automation system comprising pressure and flow monitoring at 15 roadside locations along the length of the pipeline and the automated control of actuated valves at these sites, together with the monitoring and control of the reservoir sites at Ardscurr and Old Kilcullen. Control centres were called for at these reservoir sites providing operators with access to realtime information from all sites and the facility to execute remote control of all actuated-valves on the network. In addition, all critical information needed to be relayed back to the Dublin Telemetry Network. Having carried out a comprehensive radio survey, EMR's RF engineers determined that high powered, ComReg-licensed UHF digital radio would provide robust and reliable communications between the roadside sites and the control centres and that radio coverage could be achieved without the need to erect obtrusive masts at the roadsides. Our in-house team of technicians built the electrical distribution and automation panels using a Schneider PLC platform and installed and commissioned the roadside kiosks and control panels.

River Barrow Abstraction

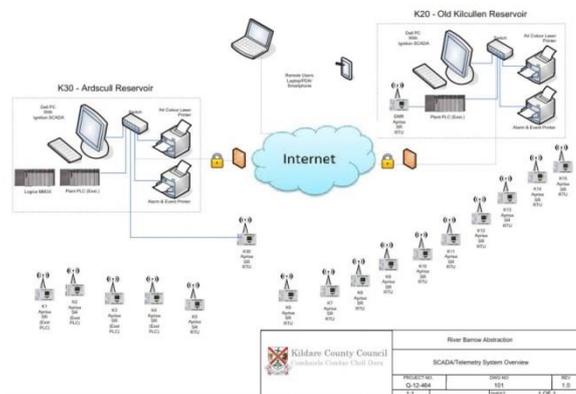
Srowland to Ardscurr Pipeline Automation



EMR's automation engineers developed the PLC and SCADA software to provide a complete turnkey installation. The SCADA and telemetry network incorporates realtime monitoring and control, local and remote operation, alarm and event logging and alarm notification to field personnel using Ignition SCADA software from Inductive Automation. The new system now provides Kildare County Council personnel with a secure automation system, which is essential to ensure efficient operation of the water network as well as providing automated valve closure to minimize water loss in the event of a burst. This project represents one of three similar projects undertaken by EMR in Kildare in the period 2012/13 with EMR's engineers and technicians carrying out the installation of actuated valves, pressure and flow measurement instrumentation, electrical and control kiosks as a single M&E/ICA turnkey project.

About EMR

Established in the early 1980s, EMR has grown to become one of the leading system integrators in the fields of wireless communications and automation systems with customers throughout Ireland, the UK and Cyprus. Our team includes automation and RF engineers, network planners, installation and system support personnel who together have delivered significant systems for organisations including ESB, RTÉ, Cyprus Broadcasting Corporation, Northern Ireland Water, County Councils, Eircom and UPC to name but a few. EMR is accredited to ISO9001, 14000 and 18000 and is committed to the highest standards in all areas of our business.



"Given the tight timelines associated with the delivery of the project and the importance of the automation network to allowing the new Srowland water treatment plant to enter service, we were very pleased with the way the project went. All project personnel in Kildare County Council, Nicholas O'Dwyer and EMR worked together closely to ensure that the system was delivered on time and to budget."

Brian Martin, Director of Sales (SCADA & Automation Networks), EMR Integrated Solutions