

# CWW West Werribee recycled water in demand



CWW engaged Parasyn as the Plant Automation Contractor (PAC) in July 2016 to provide all required services and scope items to manage, design, integrate, procure, manufacture, install, test and commission and deliver a functional plant automation and control system for the entire WWRWS scheme.

City West Water's (CWW) West Werribee Recycle Water Supply (WWRWS) Scheme consists of several sub-systems.

The sub-systems that form the WWRWS scheme include:

- Salt Reduction Plant (SRP)
- Ancillary System including:
  - Class A Water Feed and Storage Facility
  - Blending System and Werribee Recycled Water Storage Tank
  - Recycled Water Transfer Pump and Reticulation
- Ballan Road Storage Tank
- Aquifer Storage and Recovery (ASR)
- Distribution Valves (9 sites)

CWW has previously worked with Parasyn improving and deploying industrial automation solutions across their network. The timing of the completion of the West Werribee Recycle Water Scheme was not only delicate to the consumer but it was politically sensitive. Imperative to the success of the project is instantaneous collaboration on issues, risk mitigation, reporting and transparent accountability of all stakeholders, contractors and in house service providers.

At the time of commencement, each of the subsystems were at varying levels of completion and in some cases the detailed requirements were yet to be developed. This meant there were a moderate to high degree of unknowns to be managed.

Our main works included;

- Review the installed control system of each sub-system with the intention of:
  - Reviewing existing control system defects identified by CWW.
  - Documenting current status and interfaces, gaps and enhancements required.
  - Reporting to CWW on the proportion of the works that are rectification as opposed to enhancement.
- Utilise and improve the existing CWW Enterprise SCADA IT infrastructure installed at WWRWS for all the sub-systems with an expectation to minimise wastage
- Standardise the communications hardware, control system features and functionality across all sub-systems using CWW Standards
- Design, procure and install all new hardware and network equipment as required to attain the proposed integrated Control System Architecture for the WWRWS SCADA and Control systems.
- Build and configure all Network, IT, SCADA and PLC hardware to achieve desired operation and maintenance functionalities.
- Review and update the control strategy for the individual sub-systems, their interfaces and the overall scheme.
- Implement the revised control strategy for each sub-system, their interfaces and the overall scheme including integration of the existing control at the ASR
- Integrate each sub-system into an integrated SCADA System based on the ClearSCADA platform.

At the time of writing, the first and most difficult milestone had been reached. Managed Blend Class A and Potable Water to produce recycled water of a specified quality to be transferred from the West Werribee Ancillary works facilities to the Ballan Road Tanks 15 km away. Long hours, consistent daily progress checks and on demand issue resolution meetings were the norm. Daily reviews of the program schedule, risk register and resource capability by the management team ensured the first and primary milestone was met. CWW Senior level endorsement and support made issue resolution streamlined.

It has not been without its challenges. Full credit to the entire team as the success of the project relied on all team members performing at their best.

The classic line from the '80s action-adventure television series *The A Team* rings true: "I love it when a plan comes together" (Hannibal Smith).