

Mandurah Communications and SCADA Upgrade

The Mandurah Water system consists of assets in and around the city of Mandurah, approximately 75Km south of Perth. The greater Mandurah water scheme includes the following sub schemes, Mandurah, Dwellingup, North Dandalup and Pinjarra.

The Mandurah communications and SCADA system used obsolete ABB remote terminal units installed in 1994 which were now no longer being supported and spares have not been manufactured for some time. They communicated via analogue Motorola data radios operating in the 900MHz telemetry band, and some remote sites were linked via standard Trio data repeaters. These radios were also obsolete and Motorola was no longer providing support for them either.

Initial works involved establishing a high volume data backbone using Trio digital radios and fibre optic Wide Area Network, connecting the regional locations to the Perth centred operations centre.

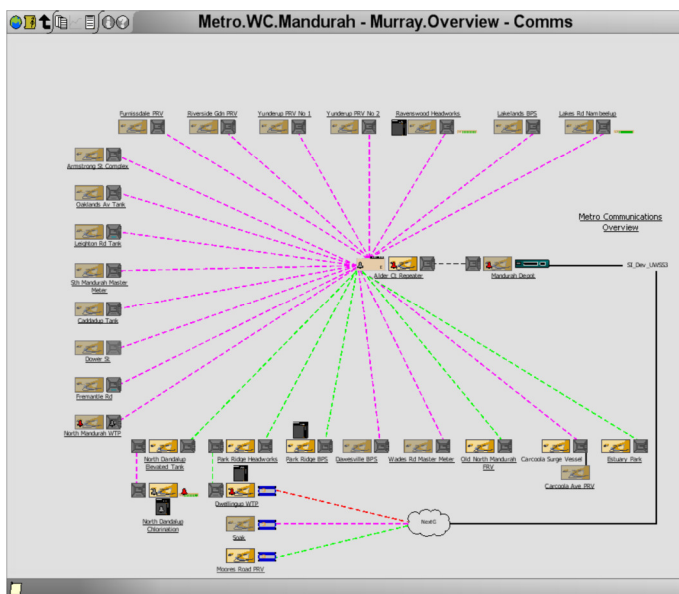
The analogue field radio network was subsequently replaced with new Trio digital radios which were Ethernet and DNP3 compliant, while the existing RTUs were replaced with new RTUs



(either ABB or Serck) depending on site functional requirements. Also the top end SCADA HMI was transitioned from ABB MicroSCADA to Serck SCX6 system.

The project included deciphering and documenting operational functionality, enhancing and optimisation such where opportunity clearly existed. By default it also required highlighting or making operational field devices and instrumentation where they were in a non-operational state.

All works, including cutovers associated with the \$8M project were carried out on live and operating assets, with the project taking 18months to deliver, coming in significantly under budget as a result of technical assessments and modified delivery strategy.



MO Consultants delivered the following services to the above project:

- **Study Manager**
- **Project Manager**