

PROVIDING AN ENHANCED IRRIGATION PUMP STATION CONTROL SYSTEM FOR A SHEEP FARM

"The shepherd always tries to persuade the sheep that their interests and his own are the same" - *Stendhal*

Industry
Water

Sector
Irrigation

Segment
Control Systems



Project

- The client is a premier breeder of Poll Merino sheep based in Southern Tasmania.
- The facility operates multiple centre pivot irrigation systems to distribute water around the property to grow feed for the sheep.
- Management of the water was a complex manual on-site process. The system needed to balance the operation of the Pump Station with filling the irrigation dam, supplying the pivot irrigators whilst optimising energy consumption in line with energy tariff periods.
- The management team identified the opportunity to address this issue by installing an automated and optimised PLC control system with remote SMS control and monitoring.
- Cromarty Automation was engaged to conduct the works.

Solution

Cromarty Automation worked collaboratively with the client to:

- Develop a detailed electrical design and specification.
- Produce a detailed electrical drawing set.
- Create a system user manual including Functional Description.
- Project manage the works.
- Build and test the control panel.
- Develop and test the PLC code.
- Configure and test the SMS monitoring and control.
- Perform on-site commissioning.



Outcome

The client's requirement for frequent on-site interaction and intervention was significantly reduced, being primarily replaced by occasional remote control and monitoring using SMS. The control was simplified and optimised, considering multiple variables such as energy tariff time periods, pivot demand, dam storage level and various system pressures. This control system subsequently provided an economic benefit through efficient system operation and thanks to the remote monitoring of faults, enabled timely corrective responses to maximise system up-time and made the sheep very happy.