



**Thorburn Australia**  
Engineering Consultants



# Electrical, Control & Instrumentation Engineers

## Capabilities Statement



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# 1 Introduction

Thorburn Australia has more than 20 years of experience servicing various mining, mineral processing and local government clients nationwide. We provide a wide range of services including project management, design and commissioning.

As Consulting Engineers, we specialise in the following fields:

- Automation & Control
- Communication & IT Systems
- Instrumentation
- General Electrical Engineering
- Hazardous Area Classification, Design & Auditing
- Safety Instrumented Systems (TUV Certified)
- Software Engineering
- HAZOP/CHAZOP
- Commissioning
- Auditing
- Drafting Service

In addition, Thorburn Australia designs and manages with a full quality assurance and risk based system. RPEQ certified engineers ensure complete compliance with the Professional Engineers Act 2002, so your project is in safe hands.

We are a professional organisation with experience, systems and capabilities equal to any major consultancy!

# 2 Resources

Structured and continual growth has allowed Thorburn Australia to expand to five professional and technical staff. We also achieve success through support provided by our partner firms and organisations.

Our experienced electrical team is accomplished in all facets of engineering from planning and design through to contract administration, construction phase, project implementation and system operation.

We have qualified Hazardous Area designers and can audit installations to comply with Queensland legislation (Auditors License 02/0224). We also have specialists in Safety Instrumented Systems (SIS).

We can conduct HAZOP/CHAZOP workshops and are expert in turning process requirements into automated systems.



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### 3 Technology

We are a progressive company that ensures all staff has access to the latest computer technologies. Our computer systems are the latest versions available and we continually update our advanced computer aided drafting software and specialised design programs.

We have capabilities in the following (and more) major automation systems:

- Schneider Quantum, Unity Pro, Citect, ClearScada, SCADAPack
- AB ControlLogix, SLC5, PLC5, FactoryTalk, Panelviews
- Siemens S5, S7 PLC's
- Conductor, Baileys, Infi90, Foxboro DCS
- ABB OperateIT,
- Wonderware, MonitorPro, Cimplicity SCADA
- Miri, Hunter WaterTec, Kingfisher Telemetry
- Connoisseur Model Predictive Control

We are alliance partners with both Schneider and Rockwell (AB).

We use SKM Powertools for:

- Load Flow Modelling
- Arc Flash Studies
- Protection and Fault Studies

### 4 Safety

Safety is of paramount importance to Thorburn Australia. This includes all aspects of the design from personal safety, process safety and construction.

We have extensive experience on Rio Tinto, BHP, Glencore, BMA, general mining sites, local councils and first tier consultancies. We therefore have a deeply embedded safety culture.

We also have a qualified OH&S practitioner (Diploma of OH&S, Cert. IV in OH&S) on staff.

### 5 Insurances

Thorburn Australia carries extensive insurances with:

- \$5M in Professional Indemnity
- \$20M in Public Liability
- Workers Compensation Cover.



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## 6 Clients & Projects

- Rio Tinto (Weipa) Cyclone Feed Pump Upgrade (1.5MW VSD), Process Water Pumps Upgrade (3x300kW VSD), C2 Conveyor Upgrade
- Rio Tinto (Gove) Site Wide Control System Upgrade (\$1M), Conveyor System VSD Upgrade, Sewerage Treatment Plant, Stacker Hosereeler, HAZOPs
- Sedgman Caval Ridge Coal Wash Plant Control System Commissioning Assistance
- Glencore Copper Control System Upgrade (\$1.9M), Lightning Protection Studies, Earthing Studies, HV Switching HMI, Paste Plant PLC, Baghouse Automation
- Glencore Zinc Control System Installation, 2 x 690kW Vent Fans Installation, Bore Fields, Compressors, Fuel Farm, Power & Arc Flash Studies
- Queensland Nickel 367 Remote HAC IO Upgrade (\$1M), 367 VSD Upgrade (\$6.5M), Various HAC Projects
- BMA/Bechtel Fuel Farm Projects - Dauniah & Caval Coal Projects
- Puma (Townsville Port) Bitumen Plant Automation Assistance
- Sun Metals Zinc Ferrite Processing Plant, HAC Design, Acid Truck Unloading, Port Acid Unloading, Various
- Incitec Pivot (Phosphate Hill) Donkey Boilers, Bore Fields, Power House PLC Upgrade Feasibility, Various
- Incitec Pivot (Moranbah) Control System Audit, HV Switchboard Risk Evaluation, VSD Replacement Options Study, Various



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- Incitec Pivot (Mt Isa) 690VAC VSD Upgrade Report, 2014 Turnaround, Various
- Inova Control System assistance, Power Station Drawing As-Building
- Evolution/Minjar 630kW Vent Fans, Power & Arc Flash Studies, RMU's, Protection Settings
- YTC Resources 710kW Vent Fans
- Sinclair Knight Merz Sarina STP HAC design, Luggage Point HAC Design
- Townsville City Council Waste Treatment Plants, Pump Stations
- Mt. Isa City Council Waste Treatment Plant, Pump Stations
- Charters Towers Council Water Treatment Plant, Dam Telemetry, Reservoir
- Cloncurry Shire Council Water Treatment Plant, Dam Telemetry
- Tablelands Council Citect Upgrades, Control System maintenance, Ravenshoe Treatment Plant
- Trility Northern Beaches WTP, Douglas Water Treatment Plant Dosing, 2x1.2MW VSD Upgrade, HV Upgrade Consulting, Various
- MSF Sugar Tablelands Sugar Mill Commissioning Assistance
- QES Various Mount Isa Solar Projects
- Mt Isa Hospital Generator upgrades, Load Shedding Control System
- EPC Engineering Fiji Sugar, South Johnstone Commissioning Assistance
- FuelFix BMA Fuel Farm MCC Design, Bulga Mine, Daroogalbie



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