



# MCA Engineering Group Capability Statement

**SAFE | INNOVATIVE | PROFESSIONAL | COST-EFFECTIVE SOLUTIONS**



Head Office  
111 Glenwood Drive  
Thornton NSW 2322



MCA Engineering Group Pty Ltd  
ABN 13 166 079 885

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# WHO WE ARE

MCA Engineering Group Pty Ltd is a leading Engineering and Project Delivery company specialising in surface and underground mining projects.

Our mission is to provide safe, innovative, professional and cost effective solutions whilst giving value for money to our clients and a fair financial return to our stakeholders.

We identified a gap in the market for the development of innovative engineering solutions to solve critical and complex challenges faced by the mining industry.

## Offices and workshops Australia wide:

- Thornton, NSW (Head Office)
- Parkes, NSW
- Adelaide, SA
- Broken Hill, NSW
- Mt Isa, QLD



## Safety comes first at MCA

We are proud of our excellent safety performance. Our strict Occupational Health and Safety Policy ensures the Health, Safety and well-being of our employees and communities in which we operate.



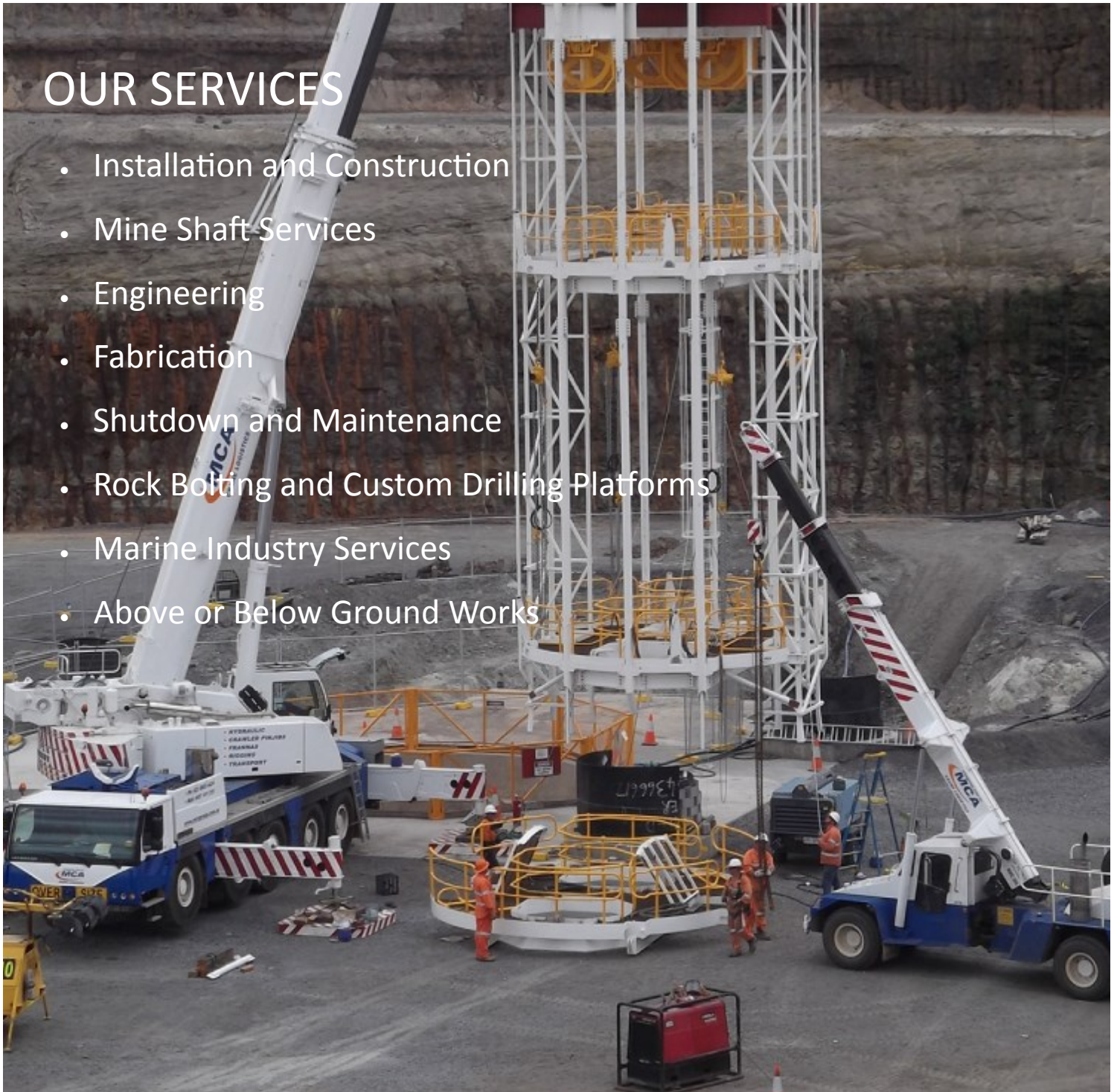
# INNOVATIVE LEADERS WITHIN THE AUSTRALIAN MINING AND CONSTRUCTION INDUSTRY

Australian owned and operated, MCA Engineering offers a wide range of services including concept design studies, detailed design and engineering through to fabrication and construction to the mining and construction industries.

We are proud to provide a wide range of engineering, fabrication, mechanical, civil, installation and construction services tailored to meet the client specific requirements. We have built our core business around the ability to provide safe, innovative and cost effective services to the mining and construction industries.

# OUR SERVICES

- Installation and Construction
- Mine Shaft Services
- Engineering
- Fabrication
- Shutdown and Maintenance
- Rock Bolting and Custom Drilling Platforms
- Marine Industry Services
- Above or Below Ground Works

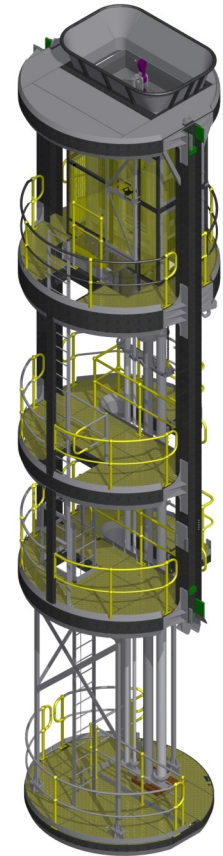
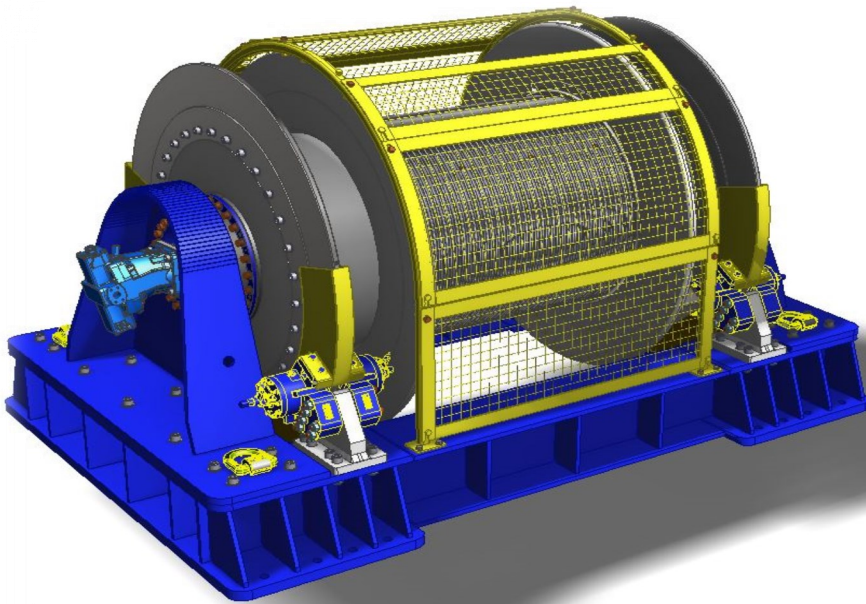


**We have a fully equipped workshop facility for design and fabrication works, supported by a talented design and engineering team.**

We specialise in shaft work, with vast experience in underground projects and talented personnel and equipment to provide tailored solutions.

# Engineering

MCA Engineering Group has strong engineering capabilities to produce detailed studies for the concept, pre-feasibility, feasibility and commissioning stages of a project.



**We offer engineering and design services to cover a wide range of disciplines including:**

- Structural Engineering
- Civil Engineering
- Mechanical Engineering
- Piping & Pumping Engineering
- Electrical Engineering
- Instrumentation Engineering
- Inspection
- Structural Integrity Assessment
- Constructability Assessment
- Certification of equipment and structures
- Risk analysis and evaluation
- Lifting study
- Estimation
- Project Engineering
- Drafting and 3D modelling
- Shop fabrication drawings
- Finite Element Analysis

# Shaft Work

MCA Engineering delivers a quality service above and below ground.



## MCA Engineering has extensive shaft work experience

Our shaft work capability includes design and construction projects and shutdown work.

MCA Engineering projects have included the design, build and commissioning of both a triple deck drilling stage concept with overhead protection and a purpose built 5 deck stage to carry out structural/concrete replacement as well as various shaft recovery projects involving the removal of redundant steel work, replacement of fixed guides and installation of new steel work.

### Shutdowns:

We have dedicated shutdown crews based out of our NSW and Adelaide branches which can be deployed with limited notice anywhere throughout Australia, working either underground or on the surface.

We specialise in all shaft related maintenance including rope changes, breakdowns, skip and brindle changes, ladder way installs, rising mains and structural steel replacement. Other Shut related work capabilities include mechanical installations, civil works, conveyor works, crusher jaw replacements and pipework (poly and steel) just to name a few.

# FABRICATION CAPABILITY

The Parkes Workshop is fully equipped to offer support to all MCA Projects both internally and externally.

The Workshop is supported by our specialised Drafting and Engineering teams and is led by competent and experienced supervisors and employees.

## Our workshop is equipped with:

- Profile Cutting Machine
- Plate Rollers
- Lathe
- Precision Milling Machine
- 450mm x 750mm Bandsaw
- 80 tonne Punch and Shear Machine
- 4 tonne Vehicle Hoist
- Hydraulic Hose Press
- Swivel Head Slotting Machine

# EQUIPMENT HIRE

We offer short or long term hire agreements for the following pieces of equipment. For a complete list of hire equipment contact one of our friendly MCA representatives.

Terex 20T Franna Cranes

24m Construction Headframe

MCA 1200 Class Winders

Caterpillar Excavator 323E L

80T Sany Crawler Crane

Freightliner B-Triple

Caterpillar 930 Loaders

MCA 25000 kg Winder

Isuzu Tilt Tray Transport

Mine Compliant Light Vehicles

Stages and Man Cages

Ropes and Attachments

# OUR PRODUCTS

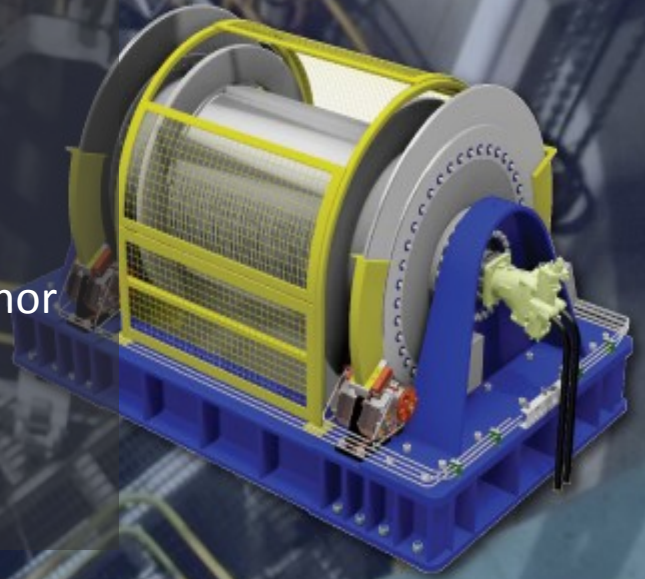
World Class Design 1200 Class Winder

MCA Air Winch

State-of-the-art Life Point Rock Bolt Anchor

MCA Hydra Drill 360

MCA Chain Jacking System



**We have developed a collection of world class, in-house designed and built products.**

The **MCA 1200 Class Winder** is a World Class, SIL-2 design that enables unprecedented fine control for large rope loads.

Designed and manufactured in Australia, the **MCA Air Winch** is the optimal solution for materials hoisting in construction, mining and marine applications.

The **LifePoint Rock Bolt Anchor** provides a state of the art solution through a unique patented load-sensing washer, indicating a complete anchor system rating of 21Kn. There is no need for secondary or external testing of the anchor fixing.

The **MCA Hydra Drill 360** is a completely self-sufficient rock-bolting installation service.

The **MCA Chain Jacking System** represents one of the safest and most efficient lifting solutions for heavy loads in confined spaces.

The **MCA 25 tonne Winder** is the perfect solution for shaft maintenance or egress systems.



# PROVEN TRACK RECORD

We have a strong track record of successfully completed projects, large and small.

We stand committed to deliver on our undertakings, having received multiple awards for our ability to provide innovative, cost effective and safe solutions for our clients.



## Crude Ore Bin (pictured above)

In one of our most accomplished achievements to date, we were successful in a bid for the design and construction contract for the refurbishment of the Copper Concentrator Crude Ore bin for Glencore.

The scope involved reinstating the bin back to its original design of 60,000 tonnes live ore capacity including a full replacement and refurbishment of the bin lining, 36 rock boxes and Syntechtron feeders.

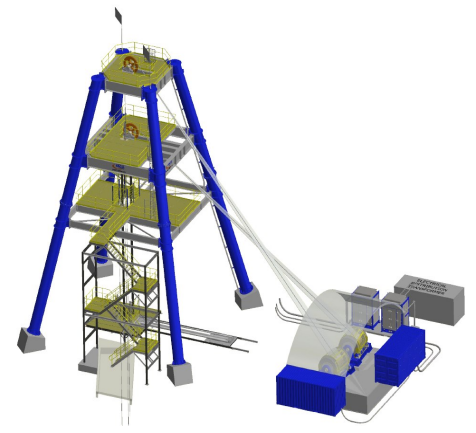
The project was completed safely over 9 months with no lost time injuries. This project was a major success for us and the project won the 2014 QLD Steel Institute, Excellence Award for Engineering Projects.



## CSA Cobar Shaft Refurbishment

CSA Cobar contracted us to install shaft services in the 1km deep shaft No. 1.

In the lead up to this project our workshop in Parkes was tasked with the fabrication of two 1200 class Winders, a 24m MCA designed and commissioned construction Headframe, Conveyances and Working Stage.



The project was achieved in 8 months from commencement and the 1200 class winders and 24m head frame have received NSW DTI registration under MDG 33 and MDG 2005.

This project also involved the civil tasks to construct the headframe and winder footings consisting of pouring 350 cubic metres of concrete.

## Cadia Reclaim Circuit

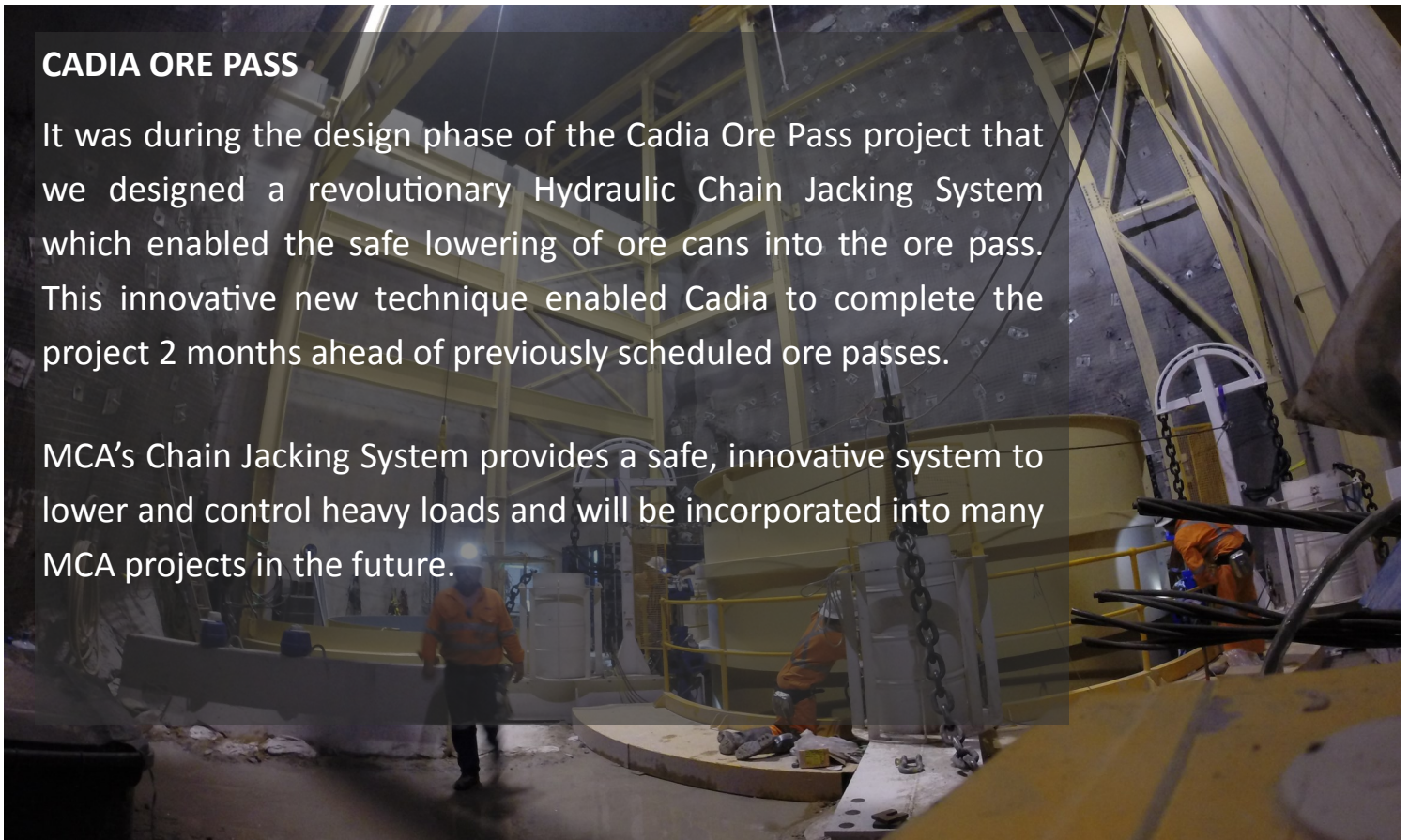
Newcrest approached us to install 1500m<sup>3</sup> of detailed concrete footings and structures for numerous projects. MCA mobilised a number of Civil Project teams with the largest being 50 personnel at short notice.

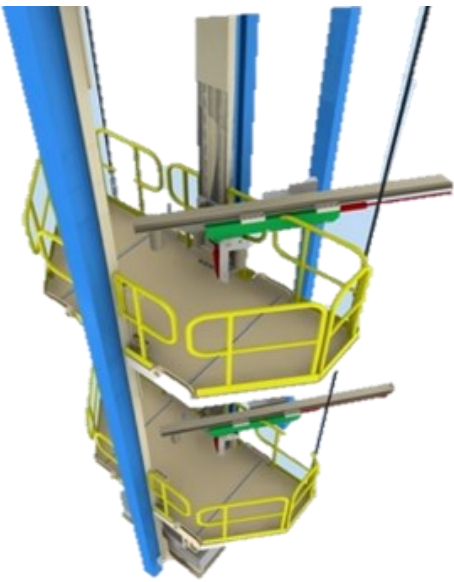
It was noted by the client that the quality of all of our civil work allowed the clients other contractors to stand all infrastructure componentry without issue or incident.

### CADIA ORE PASS

It was during the design phase of the Cadia Ore Pass project that we designed a revolutionary Hydraulic Chain Jacking System which enabled the safe lowering of ore cans into the ore pass. This innovative new technique enabled Cadia to complete the project 2 months ahead of previously scheduled ore passes.

MCA's Chain Jacking System provides a safe, innovative system to lower and control heavy loads and will be incorporated into many MCA projects in the future.





## STRONG RELATIONSHIPS

We are committed to maintaining strong relationships with all of our clients.

We are not only able to provide innovative solutions to your complex problems but we can also assist with ongoing support and maintenance services.

### **Perilya Triple Deck Stage & Major Ongoing Support Works**

In 2012 Perilya approached MCA to tender on the design and supply of a working stage equipped with a two deck drilling capability for the purpose of supporting the aging shaft. The shaft was progressively deteriorating due to ground movement leading to guide problems.

The success of the tender was a result of a fresh design for a triple deck stage complete with two drills capable of drilling SDA to a depth of 12 metres, powered by a purpose designed and built Hydraulic Power Pack. This was not just a supply contract, it required MCA to provide ongoing operations 7 on 7 off with a team.

This project has now run for four (4) consecutive years. The team now provides around the clock support in the mine, its ore handling infrastructure and is aligned with our engineering support services to Perilya.

### **Xstrata Copper, Vent Fan Refurbishment**

This project involved the refurbishment of 5 surface vent fans for Xstrata Copper. The job included fabrication of large components in the Parkes Workshop and then installation of these components on site.

It also included the blasting and painting of the Xstrata system. At the time this was the largest job that was ever undertaken by us for Mt Isa Mines. Notably, as each vent fan was shut down for the refurbishment, large structural issues were identified that were not previously noticed.

This change in scope made no difference to the delivery of the project however, and we still delivered on our promises within the nominated shutdown timeframe.





## CONTACT US

We have offices and workshops Australia-wide.

Contact us today to learn more about how we can assist you.

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