

Design, engineering and manufacturing

UGL is Australia's leading provider of complete rail infrastructure systems solutions for mainline, metro and light rail

Through-life-support

We are uniquely positioned and resourced to support our clients in their goal of providing exceptional transport solutions through:

- Harnessing proven skills
- Outstanding partnerships and world-class technologies
- Seamless service across the full gamut of rail systems infrastructure

Specialists in the delivery of turnkey rail systems

UGL has developed unrivalled technical expertise in signalling, communications, in-cab electronics, traction power and overhead electrification.

We ensure the delivery of rail systems incorporating the best product solutions to suit challenging requirements.

OUR SERVICES

- AC & DC traction power
- Automatic Train Protection (ATP)
- Control system integration, wireless network solutions and train management systems
- European Rail Traffic Management System (ERTMS) solutions
- In-cab electronics
- Locomotive fuel saving solutions (EcoRun™ and Traper2™)
- Mainline rail, mass transit and 'dark territory' systems
- Overhead wiring
- Passenger Information Systems (ICT)
- Signaling systems

Rail Systems

South Morang Rail

Signalling and control system upgrade



UGL was contracted to undertake the signalling and train control detail design, supply and installation of Computer Based Interlocking (CBI) equipment, off-site manufacture of location cases, and testing and commissioning.

The project involved track duplications, new train stations, a major upgrade of an existing train maintenance facility, improvement works on pedestrian crossings, the construction of eight new bridges, the development of new car parking spaces and the upgrade of signalling systems.

Key benefits and outcomes:

- The new system ensures a safe journey by avoiding risk of conflict between train paths
- The project's successful completion well ahead of the scheduled date through stakeholder collaboration
- Existing field equipment remained essentially in place, a low technical risk SmartLock SML400 solution lending compatibility and cost effectiveness
- Support of future incremental technology upgrades by modern architecture using backward compatible SmartLock SML400 CBI to support the existing SSI system
- Train control and conflict resolution capability at junctions using an advanced train control system and integrated timetable

BHP Billiton Iron Ore

Extending the life of a network



Multi-disciplinary value add asset management services

UGL is proud of this long-term relationship - the longest serving contractor to BHPBIO.

From installation in mid-1970, UGL has maintained the signaling system on some 700km of BHP Billiton Iron Ore heavy haul railway. From its beginnings as a relay-based interlocking system through to the present day processor-based interlocking with ATP overlay.

Our current contract includes automatic equipment identification, mainline, yard control and hot-box (hot bearing/wheel) detection systems, and provision of essential maintenance services to UGL delivered Dash 8 and AC6000 locomotive fleets.

Midwest Rail Network

Brookfield Rail



Upgrade to allow for increased and larger rail traffic from emerging iron ore mines

Signalling and communications services were provided along with a centralised train control system from Geraldton to Mullewa, a track length of around 110km.

In support of centralised train control; synchronous digital hierarchy, Plesiochronous Digital Hierarchy (PDH)

and voice mobile radio infrastructure were deployed over the route. In addition, MW radio, PDH and voice mobile radio were deployed from Mullewa to Perenjori, a distance of 140km.

UGL constructed, installed and commissioned 15 communication equipment rooms, 13 self-supporting towers, and rebuilt an existing communications equipment room at Narngulu, near Geraldton.

Port Hedland Rail Network

Signalling and communications for Fortescue Metals Group



Scope of works:

- Civil works included boring, pit and pipe, location case foundations, communications mast foundations, solar array foundations
- Communications system installation and testing
- Establishment of concrete batching facilities
- Fabrication and testing of signaling and communications location cases
- Installation and wiring of locations cases
- Logistics management
- Project management
- Site supervision and HSSEQ
- Site-earth and testing
- Solar system installation and testing
- Standing and rigging poles

UGL constructed and commissioned a new rail signalling, communications and Intelligent Train Control System (ITCS). This technology was deployed along the entire 427km of Fortescue's track from Port Headland to Cloudbreak, and the Christmas Creek and Firetail mine sites.

UGL fabricated location cases and retrofitted new in-cab displays for Fortescue's fleet of 52 locomotives and track vehicles.

The project team comprised some 360 management staff, civil construction workers, signal electricians, communications technicians and commissioning personnel.