



CAPITAL WORKS PROJECT

YANDICOOGINA SUSTAINING PROJECT - INFRASTRUCTURE UPGRADE
RIO TINTO, Yandicoogina (completed April 2014)

The design and construct contract was completed over 24 months across multiple work fronts within the Rio Tinto Yandicoogina Mine Lease. This has been the largest project undertaken to date by the Linkforce Projects Team. The Linkforce offsite and onsite workforce overcame numerous challenges with this contract including:

- The construction of a temporary kitchen and dining facility for the construction workforce whilst the existing kitchen/ dining facilities were upgraded to a high standard.

- Client priority and scope changes impacted on design efficiencies.
- Limits on available accommodation for the construction workforce.
- Noise curfews working around the operations camp.

At the height of construction, Linkforce's workforce peaked at 100 personnel across a variety of trades. Approximately 300,000 man-hours were required to successfully complete the project.

CONSTRUCTION CAMP

The Construction Camp included installation of 79 x 4 accommodation rooms and 8 laundry units onto existing power and hydraulic services. Scope of work included;

- removal of pre-existing support and service infrastructure
- detailed earthworks
- new connections / upgrading / testing and commissioning of all in-situ services
- re-levelling / laying of access pathways including breakout area amongst a re-vegetated surrounding area

CENTRAL FACILITIES

The camp Central Facilities upgrade and refurbishment was designed to cater for up to 1,000 people utilising the dining facilities on any single sitting. New constructions included kitchen facilities, beer garden facilities, first aid facility, recreational and training rooms, sports court, gymnasium, communications building, recycling and maintenance sheds. Refurbished facilities included administration rooms, offices, tavern, ice rooms and ablutions.

Linkforce Engineering's scope of work covered all associated service installations for the central facilities and accommodation areas including:

- HV reticulation (kiosks, conduits and pits, back-up generators)
- LV reticulation (conduit and distribution board installation)
- potable water reticulation (potable water ring mains, 1.1 million litre water storage tank, distribution pump skid)
- fire water reticulation (fire water ring main, pump skid, hydrants/ hose reels and booster cabinets)
- communication reticulation (OPC and copper cabling, conduits and pits, CCTV and satellite installations)

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CASE STUDY

- sewer reticulation (rising main installation, gravity sewer mains, sewer pit installations and existing sewer pump replacements)

The greatest challenge Linkforce faced within the Construction Camp upgrade was the extensive expansion and refurbishment of the central facilities areas. Existing infrastructure and facilities had been run down over several years and fallen outside current compliance required by both Australian and RTIO standards.

WASTE WATER TREATMENT PLANT

Issued under a Contract Variation to our Central Facilities scope of work, Linkforce was contracted to complete all remaining mechanical tie-in, valving and

aeration installation, chemical dosing, de-watering installation, all concrete works and access platform installation for the WWTP. The challenging aspect was that the SOW was issued to Linkforce after the initial subcontractor entered into administration. Linkforce were left to assess, remedy and complete the installation in a reduced period of time.

EPCM

Linkforce designed and constructed the clients EPCM area and all associated infrastructure. Scope included 9 separate office and services buildings. Installed infrastructure included HV, LV, potable / fire water systems, sewer and communication reticulations.

135 OPERATIONS ROOMS

Greenfields installation of 49 buildings, associated services and infrastructure. This formed a further expansion of the accommodation in the main camp. Scope included design, earthworks, modular building fabrication and placement, services installation and tie-ins, re-leveling / laying of access pathways including breakout area amongst a landscaped surrounding area.

