



REQUEST FOR EXPRESSIONS OF INTEREST
FOR
DESIGN, SUPPLY, CONSTRUCT, COMMISSION AND OPERATE
A 300 PERSON MINING VILLAGE

June 2018

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1. Introduction

1.1 General

KGL Resources Limited (KGL or Principle) is developing the Jervois Copper Project in Northern Territory, Australia. The project is located north of the Plenty Highway, approximately 390km east of Alice Springs.

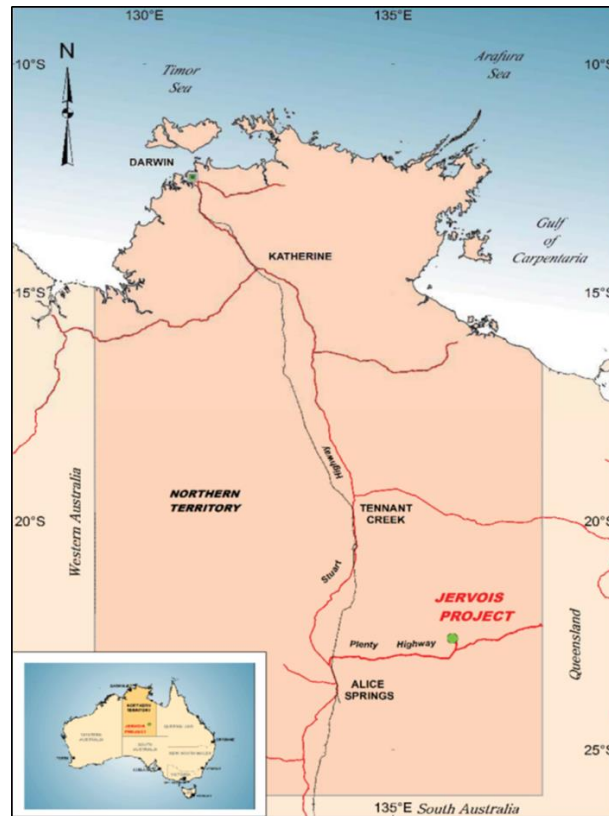


Figure 1 – Project Location Map

The project involves mining several copper deposits. The project has an indicated JORC compliant resource that will be developed over the next two years.

The project involves mining copper ore from open cut and underground mining operations. Also included is a treatment plant for crushing, grinding and flotation processing together with associated mine infrastructure.

As result of this development, an accommodation village will be required.

This document sets out the minimum requirement for design, supply, construction and operation of the accommodation village.

1.2 Preliminary Planning Dates

Expression of Interest to be received by KGL by close of business 17th August 2018

Feasibility Phase – completed by end 2018

Construction/Survey (incl. early execution works) commences – second half 2019

Mine Production to commence – 2020

1.3 Scope and Design Requirements For this Expression of Interest

1.3.1 Scope

Design, supply, construction, commissioning and operation of the following buildings:

- Residential Accommodation – 4-person modules to accommodate 300 people for operations
- Provision for residential Accommodation for 4 x Disabled / Couples
- Laundry
- Village Administration / Reception
- Dry Mess including Kitchen
- Communications
- General Storage
- Power Supply and distribution
- Sewage treatment plant
- Water treatment plant and potable water reticulation
- Internal roads, car parks and Loading/Turnaround Area,
- Recreation
- Gymnasium

1.3.2 Sustainability

The supplier/contractor shall propose design elements to address sustainability into its design and construction including, but not limited to the following:

- The design features for sustainability shall be nominated as separable portions in the pricing
- Sustainability planning – orientation of roads and accommodation, optimisation of below ground services routes, and identification of all opportunities for integration between services
- Passive solar design - orienting buildings to reduce solar heat gain
- Landscaping - to enhance visual amenity, channel wind, provide shade, and harvest and retain surface water within the catchment where possible
- Saving water – reducing the amount of valuable treated groundwater used and wastewater produced, use of water efficient appliances (e.g. washing machines) and use of waterless urinals
- Wastewater Reuse – incorporation of infrastructure to allow for reuse of reverse osmosis plant reject water, laundry wastewater and Wastewater Treatment Plant effluent for irrigation of site landscaping
- Energy efficiency - selection of all appliances to include optimisation of energy resources and glazing efficiency
- Waste management – incorporating infrastructure and equipment within the design to enable the recovery, packaging and transport of recyclables including cardboard, scrap steel, glass and aluminium cans
- Sustainable construction – using materials, suppliers and methods that are environmentally accredited, e.g. prefabrication. Integration of chosen design elements into existing manufacturing and the use of local and/or recycled materials in construction.

1.3.3 Budget Price Requirement

- +/- 25% accuracy on budget price will be required from successful applicants by 17th August 2018.
- Provide estimate and duration for any temporary camp for the construction requirements for the buildings separately.

1.3.4 Availability Requirement

Assuming the indicated project start confirmation in the 2nd quarter 2019 (nominally 1st May 2019):

- Provide an estimated schedule for the supply, construction and commissioning assuming that final design, costings and contractual arrangements have been confirmed by end of the first quarter 2019.

2. Specific Inclusions in the Scope of Works

The Contractor's scope shall include the design, engineering, supply, fabrication, transport, mobilisation and demobilisation of materials installers, offloading, installation, site services, plus commissioning and operation of the Village.

The works shall include, but not be limited to, the work described below.

2.1 Preliminaries

2.1.1 Approvals

The Contractor shall obtain all necessary State Government and all relevant statutory authority approvals, licences and permits, except those listed in Section 6, associated with construction and operation of all the buildings/facilities, these include, but are not limited to, the following:

- Building Licence (Northern Territory),
- Preliminary Notices and Notices of Completion (Office of Energy),
- Health Department (via Northern Territory)
- Dry Mess,
- Sewerage,
- Dangerous Goods Site Licences for the storage of fuel, etc.
- The Contractor shall arrange payment of all associated fees to lodge applications.

2.1.2 Drawings and Documentation

The Contractor shall supply contract documentation, including, but not limited to, Management Plans, Work Method Statements, Schedules/Programmes, Inspection and Test Plans, design drawings, calculations, reports, equipment lists, data sheets, test reports and certificates, Engineer's Certificates, as built drawings, Installation, Operation and Maintenance Manuals and Manufacturer's Data Reports, and all other documentation as required by the statutory authorities

The Contractor shall provide the Principal with mechanical, electrical and instrument equipment lists. These shall identify all major and minor equipment items within the Contractor's scope of supply.

2.1.3 Mobilisation and Demobilisation

The Contractor shall provide:

- Mobilisation (including attendance at Principal-provided inductions) and demobilisation of all Contractor's site construction facilities, plant, equipment, personnel and consumables to/from site,
- Fully trained personnel, who possess the appropriate licences and permits,
- Transportation of employees to and from site,
- Transportation of materials and equipment to and from site.

2.1.4 Site Construction Facilities, Temporary Services and Waste Disposal

The Contractor shall provide any and all site construction facilities as are necessary for the carrying out of the Works, including but not limited to offices, crib rooms, workshops, storage and ablutions. These shall be sited to the Principal's approval and removed on completion of the Works.

The Contractor shall provide any and all temporary services including but not limited to potable and construction water, power and telecommunications required for the Works. All temporary services

shall be removed to the approval of the Principal on completion of the Works.

The Contractor shall allow for the collection, packaging and removal of all construction waste and recyclables. The Contractor shall segregate waste into separate waste streams (e.g. scrap metal, glass, cardboard and aluminium cans, hydrocarbon-contaminated waste, etc) for recovery to an approved Landfill and Recycling Facility.

Until such time as the Wastewater Treatment Plant is operational, the Contractor shall transport all sewage from his Site Construction Facilities to a licensed wastewater treatment facility. Once the Wastewater Treatment Plant is operational, the Contractor may transport sewage to the Wastewater Treatment Plant.

2.1.5 Design

The Contractor shall be responsible for all design and services required to complete the works in to a level accepted by the Principal.

With reference to all necessary technical documents, the Contractor shall design all aspects of the camp including, but not limited to, general arrangement/layout, all buildings, outdoor recreational facilities, associated site services, fire protection, detailed earthworks, internal drainage structures, and communications and entertainment systems.

The Contractor will design and complete the bulk earthworks including the waste water treatment plant at the accommodation camp site.

2.1.6 Set Out

The Principal will establish survey control points near the sites. The Contractor shall set out the Works on site in accordance with the pre-determined project survey control points.

2.1.7 Buildings/Facilities

Using the Contractor's designs approved by the Principal, the Contractor shall fabricate, factory test/commission, store (as required), transport to site, offload, install, commission and operate the buildings and facilities.

2.1.8 Detailed Fit out Requirements

All permanent buildings and facilities shall be supplied as new construction. The equipment fittings and fixtures that form part of the buildings and facilities shall also be supplied new.

2.2 Wet Fire Protection

The Camp buildings and facilities shall be designed and constructed for compliance with all Northern Territory codes and requirements.:

Services and Equipment:

- Fire Fighting Equipment,

The Contractor shall provide a dedicated fire water system for delivery of fire water (connection to potable water supply) to fire hydrants and fire hose reels.

Supply and erect a dedicated fire water tank. The tank size shall have a minimum capacity to allow for 3 fire hose reels to run continuously for 4 hours.

Supply and erect dedicated fire water reticulation piping,

3. Communications

The Contractor shall design, supply, transport to site, offload, install, test and commission the village communications cable infrastructure and entertainment systems.

3.1 Communications Systems and Services

The supply and installation of phones, computers, network systems (i.e. switches, routers and servers) and communications is to be included.

3.2 Cabling

Fibre optic cable and coaxial TV cable will reticulate from the Communications Building to each building that requires data access points and/or TV points.

3.3 Communications Building

The general building construction shall be weatherproof and vermin-proof comprising a rigid steel framework clad using metal cladding with thermal insulation barriers.

The building shall be secure, free from dust, damp, humidity and external draft.

The equipment inside the building shall be effectively sealed against the ingress of water under any weather conditions.

The Communications Building shall be 'fire isolated' from other buildings/facilities by providing physical separation of no less than 10 metres. This building shall be constructed using non-combustible materials.

3.4 Phone and Internet

The Contractor shall provide the facilities trenching, conduit, ducting, cable management and cabling to support communications data access points in the following areas:

- Village Administration/Reception Building
- Dry Mess
- Kitchen Manager's Office
- Kitchen,
- Housekeeping Facility
- Gymnasium
- Laundry Unit
- Accommodation Rooms

3.5 Television

The Contractor shall provide:

- All TV head end receiving and transmitting equipment and TVs,
- All accommodation rooms, the Dry Mess, Village Administration Building, the Gymnasium.

Fees and licensing costs for pay TV are to be paid by the Principal.

4. Electrical Services

- All electrical services shall be designed and tested in accordance with AS3000 and the Building Code of Australia requirements.
- Exterior lighting consisting of pole mounted area lighting and building mounted lighting.
- Car park lighting and road lighting shall be provided within the village.
- Path lighting shall be provided throughout the village
- Provide automatic lighting control for exterior lighting
- RCD protection shall be provided to all lighting and general power sub-circuits.
- Emergency and exit lighting shall be provided throughout.
- A lightning protection system shall be provided
- Each building shall be supplied with its own submain cable with each submain provided with automatic circuit protection and isolation facilities.
- A substation for the non-accommodation buildings and areas shall be provided
- A fire detection system and an occupant warning system shall be provided.

5. Mechanical Services

5.1 General

5.1.1 Description of Works

The works comprise the design, supply, delivery, fabrication and installation of the building mechanical services comprising heating, ventilation and air conditioning (HVAC) systems to serve the various buildings, comprising the following:

Village Complex

- Residential Accommodation
- Laundry
- Dry Mess including kitchen
- Village Administration
- Communications
- General Storage
- Recreation / Gymnasium

5.2 Design Requirements

5.2.1 General

The HVAC systems shall comply with the relevant codes, standards and statutory requirements.

The air conditioning systems shall be designed to achieve:

- summer 24°C
- winter 21°C

Plant capacity shall be based on relevant outside summer and winter design conditions

recommended by Australian Institute of Refrigeration, Air conditioning and Heating.

Range of Outdoor Conditions: Air conditioning units shall be capable of continuous operation between -3°C and 46°C.

All equipment shall be suitable for continuous operation under the site conditions, such as maximum temperature and humidity levels, based on relevant data available from the Bureau of Meteorology.

5.2.2 Noise and Vibration

Selection of equipment and design of equipment space and associated distribution services shall provide acceptable noise and vibration levels in the occupied space of the building complex in which the equipment and associated distribution services are located.

6. Contractors Previous Experience

The Contractor is required to provide:

- Evidence of previous experience providing the equipment and service outlined in the scope to the mining industry.
- The Contractor's Employment Policy
- The Contractors Employee and Industrial Relations Plan proposed for the works.

7. Work Excluded

The following work is specifically excluded from the Scope of Work:

- All environmental, native title and heritage approvals,
- Land tenure,
- Geotechnical and hydrology studies of the site,
- Establishment of survey control points,
- Landfill site,
- Supply and delivery of fuel to site

8. Battery Limits

The principle will provide:

- Cleared, graded and compacted site,
- Access road