

# Projects



Resource Development  
Consultants



### Wodgina Stage 1 Upgrade Project Sons of Gwalia Project Management and EPCM Services

MSP provided project management and EPCM services for the \$12.0m Wodgina Tantalite Stage 1 Upgrade Project to increase the overall final product recoveries incorporating a coarse spiral circuit, additional tables and re-commissioning the inline pressure jig and fines recovery circuit.

The project also included the capacity expansion of the gas fired power station and associated infrastructure.



### Murray Basin Mineral Sands Project Cable Sands and Sons of Gwalia Engineering Design and Project Management

MSP provided design and project management services for the establishment of Murray Basin Titanium's Mineral Sands Project.

The project involved the relocation and refurbishment of a 500 tph floating dredge concentrator and 15 tph dry separation plant and all associated infrastructure.

The project was successfully completed within the \$45.0m budget and 18 month time frame.



### ISK Mineral Sands Project ISK Mineral Sands Engineering Design and Project Management

MSP as the project managers and engineers designed and supplied ISK Mineral Sands a state of the art 150 tph wet concentrator and 18 tph dry separation plant.

The total project capital was in excess of \$12.0m and was delivered within the Client's tight schedule and budget.



### Golden Grove Glass Plant Expansion Project Rocla Quarry Products Feasibility Study, EPCM Services

MSP were engaged by Rocla to review and provide recommendations to debottleneck their existing Golden Grove glass sands facility.

MSP undertook a detailed sampling and testwork programme of the existing glass circuit and made recommendations to upgrade and expand the facility output capacity from 60,000 to 120,000 tpa.

MSP was then awarded the contract for the full design and implementation of the facility.



**MSP Engineering Pty Ltd**  
Resource Development Expertise  
Mineral Sands & Industrial Minerals

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## RESOURCE COMMODITY EXPERTISE

### Industrial Minerals

Mineral sands  
Tantalite  
Tin  
Silica sands  
Salt  
Graphite  
Manganese

### Precious & Base Metals

Gold  
Silver  
Nickel  
Copper

## PROCESS EXPERTISE

Crushing & grinding circuits  
Material handling systems  
Recovery circuits including gravity & cyanidation  
Flotation circuits  
Hydraulic transportation  
Plant upgrades & expansions

## INFRASTRUCTURE EXPERTISE

Remote area housing & camps  
Mine site infrastructure  
Power stations  
Pump stations  
Air strips & wharfs  
Cyclone refuge shelters  
Waste water & sewerage systems



### Resource Development Consultants

Previously known as McSweeney Partners Pty Ltd, with over 40 years experience as a leader in its field, **MSP** has established a reputation of providing simple, innovative and cost efficient solutions that successfully deliver projects which consistently exceed client expectations and performance targets.

**MSP** has a state of the art office facility with dedicated professional and para-professionals including process, mechanical, structural, civil and electrical engineers, design managers, draftspersons, project managers, construction managers and supervisors, and project controllers.

**MSP's** delivery of services is characterised by a:

- Collaborative approach with valued clients based on its years of experience in the resources industry.

**MSP Engineering** is a Western Australian based resource development consultancy specialising in the evaluation, engineering design, project management and construction of minerals processing facilities and associated infrastructure, both in Australia and overseas.

- Capability to mould the engineering and project delivery models to meet the Client's time, quality & cost expectations
- Project management systems and personnel with a culture that supports an Integrated owners team approach, or the provision of total turnkey solutions through Lump Sum, Guaranteed Maximum Price or EPCM project delivery models.

In the past 10 years **MSP** has provided over \$ 300 million in project studies and evaluations, project management and engineering services to its Clients.

These projects have been completed within tight schedules and budgets in accordance with its client's expectations.

## MSP'S KEY CAPABILITIES

### Project Studies and Evaluations

Conceptual scoping studies  
Pre-feasibility studies  
Bankable feasibility studies  
Definitive feasibility studies

### Engineering Design

Metallurgical & chemical process engineering design  
Mechanical engineering design  
Civil engineering design  
Structural engineering design  
Electrical & instrumentation engineering design

### Project Management

Engineering design management  
Integrated owners team representation  
Construction management  
Commissioning & training  
Health, safety & environmental management  
Estimating & scheduling  
Procurement, expediting & logistics management  
Project costs & contracts management  
Risk management  
Quality management systems

### Design and Construction

Lump Sum, Guaranteed Maximum Price & EPCM



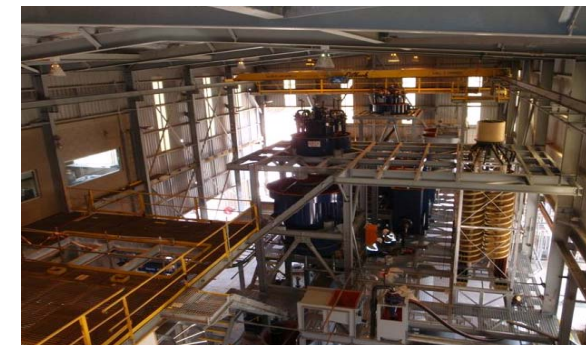
## Mineral Sands and Industrial Minerals Expertise

**MSP** has extensive experience and expertise in the design and construction of both mineral sands and industrial mineral projects throughout Australia and overseas.

**MSP** has been serving the resources industry for over 40 years providing solutions in gravity particle separation technology in both wet and dry applications and has consistently provided innovative and cost effective solutions to its Clients.

**MSP** has designed and built commercial concentrate facilities for the following industrial mineral commodities:

- Mineral sands circuit
  - Zircon
  - Garnet
  - Ilmenite
  - Rutile
- Alluvial & hard rock tin
- Alluvial & hard rock tantalite
- Silica / glass sands
- Tungsten
- Manganese
- Graphite



### Greenfield Projects

**MSP** provides services from preliminary metallurgical assessment, pilot plant trialing, flowsheet development and optimisation through to full feasibility studies, design and construction solutions, commissioning and process debottlenecking.

### Brownfield Projects

**MSP** works with its Clients to provide process improvement solutions to maximise efficiencies and returns on existing operations.

For further information regarding **MSP Engineering's** capabilities and recent project achievements please visit our website.

[www.mspengineering.com.au](http://www.mspengineering.com.au)

Or contact **MSP** to discuss your project requirements

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## PROJECT IN FOCUS

### GREENBUSHES LOW GRADE LITHIUM PROJECT

In late 2007, Talison commissioned **MSP** to undertake a scoping study to recover fine lithium product from its HMS circuit at its Greenbushes Operations, located south of Perth in Western Australia.

In a close partnering arrangement with Talison, **MSP** were able to fast track the project to detailed design and construction. **MSP** were awarded the complete process, engineering design and construction contract in February 2008, with a tight project schedule and target completion date of February 2009

The scope of works and deliverables included the engineering, procurement, installation and commissioning of all mechanical and electrical equipment, key structures and civil works, services and spares, in conjunction with the design, programming and implementation of all plant control systems.

The project was delivered in three phases. Phase One was commissioned in November 2008, incorporating the raw water and dewatering circuit. Phase Two incorporated the feed preparation circuit. Phase Three, being the balance of all plant and associated circuit.

The project achieved practical completion on 2<sup>nd</sup> February 2009 and within the planned schedule and budget.

**MSP** recognises the valued assistance and collaborative approach provided by Talison and their team onsite.