

# Forward, together



THIESS GROUP

**THIESS**



**FLEETco**



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## Acknowledgment

As a global services provider, we acknowledge and respect the history and contributions of First Nations peoples. Across our offices and sites, we recognise and value our responsibility to live and work on country, and with communities, respectfully and with care.

This Capability Statement was produced on the lands of the Yuggera and Turrbal People. At Thiess, we honour and respect Aboriginal and Torres Strait Islander peoples as having the longest continuous culture on earth. We recognise Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of this land, and pay our respects to the Elders past, present and emerging for they embrace the memories, traditions, and culture of Australia.

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# Thiess companies partner with clients and communities across geographies, commodities and cultures to deliver bespoke and sustainable solutions, in mining and beyond.



Our pioneering spirit drives superior performance in the face of any challenge, from autonomous mining and climate change to deep mining and rehabilitation.

We are ready to create a better future for our clients, communities, partners and people. We are ready to go **forward, together.**

### Trusted partnerships

Our success over the past 90 years is built on our commitment to listen and understand the business needs of our clients, so we can safely deliver value and certainty. These partnerships are built on trust, and they empower our people and communities to be better and do better.

### Pioneering spirit

Curiosity is part of our DNA. We work closely with our clients to enable innovation and integrate new technology, as we continue to diversify our business across different commodities, geographies and services. It's this proactive and flexible approach that allows our clients to thrive among rapid change.

### Sustainable solutions

The world around us is changing rapidly. Our clients are facing new challenges and they need Thiess to develop effective and sustainable solutions, leading ESG practices and strong community engagement. They know that working with Thiess delivers positive change and creates lasting value.



### CASE STUDY: COLLABORATION AND INNOVATION FOR A NET ZERO EMISSIONS FUTURE

Net-zero emissions mining will only be achievable when breakthrough technology, such as large-scale electrification and hydrogen fuel cells, become commercially available for large mining fleet. We're partnering with clients and other organisations to drive research and development of this technology.

Thiess is working with Mitsui to electrify mining equipment such as battery drive haulage trucks. Other initiatives include investigating retrofit electrification of existing diesel haul trucks; lower carbon fuels and the introduction of hydrogen trickle-feed technology to reduce diesel usage.

MACA is also collaborating with Mitsui, AVL and other battery and engineering companies, to investigate electrification of dump trucks, with a current focus on battery design and packaging.

# Our global business

## THIESS GROUP

### THIESS

Thiess delivers sustainable solutions in open cut and underground mining in Australia, Indonesia, Mongolia, and North and South America. Established in 1934, Thiess operates across diverse commodities, geologies, environments and cultures.

### THIESS rehabilitation

Thiess Rehabilitation offers world-leading mine rehabilitation services by miners, who are also environmental experts. This includes progressive mine rehabilitation, mine closure including infrastructure removal, abandoned mines, and contaminated land requirements.



MACA is an international contracting group providing services to the mining, infrastructure and construction sector industries. They provide tailored solutions to meet the needs of all their clients and end-users.

### FLEETco

FleetCo is a global dry hire equipment provider. They provide access to comprehensive plant hire and equipment ownership packages and innovative capital replacement solutions within Australia.



RTL Thiess' 88 per cent investment, RTL Mining and Earthworks, provides mining, civil construction and heavy earthmoving plant hire services, as well as general and over-dimensional transport services from its base in the Latrobe Valley, Victoria, Australia.

## Our operations

7

countries

41

projects

5

rebuild centres

14,000+

employees



### Operations

- IRON ORE
- COPPER
- GOLD
- LITHIUM
- METAL
- NICKEL
- METALLURGICAL COAL
- THERMAL COAL

### Functions

- OFFICE
- INTERQUIP
- REBUILD FACILITY
- REHABILITATION
- CRUSHING
- CIVIL & INFRASTRUCTURE

## Our services



Engineering



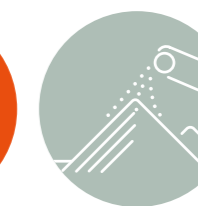
Minerals  
Extraction



Asset  
Management



Civil &  
Infrastructure



Crushing &  
Processing



Rehabilitation



# Engineering

The Thiess Group of companies offer a range of mine engineering services for all stages of a mine's lifecycle.



## Technical studies

We leverage in-depth knowledge from decades of in-field experience across a range of commodities and mining methodologies to deliver tailored, flexible technical studies. Our study services range from high-level, early stage scoping assignments on greenfield projects, to detailed technical studies geared for immediate implementation on operational projects, to peer review of client or consultant developed studies.

## Design

Our practical, life-of-mine expertise provides the strongest foundation for operations because we design based on direct experience across the full mining lifecycle. Through mine optimisation and optioneering, we further challenge every aspect of a design to ensure short and long-term goals are based on sound, fit-for-purpose economics. Our multidisciplinary specialist skill and experience provides clients with safe, certain and efficient operations.

## Planning

Our life-of-mine planning provides the foundation and economic direction to support robust short-term delivery and long-term value. We work closely with our clients to optimise production outcomes, balancing mine life, resource recovery and unit cost targets, with client priorities, schedules and market demands. Proven systems give supervisors ready access to information to make informed, agile decisions and effectively manage change on site, with remote technical support from our in-house team of multi-disciplinary experts.

## Estimation

Our robust estimating capability delivers fully costed mine plans that give clients economic certainty. Our skilled team of dedicated estimators are part of a multi-disciplinary mine planning team that tests thinking to refine strategies and identify the best options. Detailed costs are analysed and benchmarked against our extensive knowledge bank of diverse operations, further reducing unknowns and contingencies to create a total mine planning package that positions projects for long-term project performance and economic success.



CASE STUDY: PIONEERING THROUGH-SEAM BLASTING AT MOUNT OWEN

Thiess' advanced terrace mining and through-seam blasting at Mt Owen Mine in Australia successfully overcame the deposit's complexities – delivering efficient excavation, higher resource recovery and reduced costs.

The deposit comprised multiple, often steeply-dipping, coal seams mined in thicknesses between 0.3– 11m. Thiess worked with specialist suppliers on an electronic initiation system that enabled larger blasts with more seam intercepts, and longer delays between smaller seam interburdens, to reduce thin coal seam loss. Combined with high precision drill guidance and strata recognition, the team achieved lower coal disruption blasts to improve coal flow scheduling and resource recovery.

Without through-seam blasting, working on the steeply-dipping strata would have made mining at Mt Owen uneconomical and significantly shortened the mine life.



# Minerals extraction

## Autonomous mining services

Autonomy enables sustainable operations through enhanced safety, increased productivity and improved efficiency. Our expertise and experience span autonomous drilling and haulage systems, and semi-autonomous tractor systems.

Since our autonomy journey began over a decade ago, Thiess has combined leading-edge insight with our extensive operational experience to provide a range of autonomous services, helping our clients realise the benefits of automation sooner.

## Drill & blast

Our capability spans technical, drilling, plant and equipment, product supply, and explosives loading. Our integrated approach between our experienced, site-based drill and blast engineers, operators and maintainers; our in-house drill and blast specialists; our wider multi-disciplinary technical team; and our strategic partners and suppliers provides the final piece in maximising resource recovery and optimising productivity and production – safely and consistently.

## Load & haul

We deliver fully resourced load and haul solutions across diverse commodities, pit sizes, complexities, methods and conditions. We optimise safe, efficient haulage through expert haul road design, fleet scheduling and management. Our experienced field teams also draw on our extensive in-house technical and functional support for faster turnaround in problem solving and service delivery. Whether establishing a new mining operation or optimising an existing mine, our goal is to empower cost-effective resource recovery.

## CASE STUDY: LEVERAGING AUTONOMOUS OPERATIONS

Since our autonomy journey began in 2012, Thiess has combined leading-edge insight with our extensive operational experience to provide a range of autonomous services.

In 2023, Thiess began mining operations at the new Olive Downs Complex in Queensland with 21 autonomous haul trucks and three autonomous drills. It represents a significant milestone for the Olive Downs Complex to deploy both Cat® MineStar™ Command for hauling and Command for drilling – Caterpillar's autonomous hauling and drilling solutions.

In 2022, Thiess, WesTrac and Caterpillar partnered to deliver successful autonomous drilling trials at a New South Wales project. Autonomy improved efficiency, resulting in a 7.7% reduction in fuel consumed per metre of drilling.



We tailor our operations approach to each mine's requirements, challenges and opportunities, supported by the latest third-party and our proprietary design and execution technologies.



**Global  
Autonomous  
fleet**

June 2023

- 16 autonomous haul trucks
- 8 autonomous drills
- 6 autonomous dozers

# Asset management

Our approach to managing and maintaining mining plant and equipment is focused on reliability, availability, productivity and cost efficiency.

### Asset management

Thiess companies manage, operate and maintain one of the largest and most diversified fleets for a mining services provider globally. In addition to our significant truck-and-shovel fleets, our portfolio includes low-emission underground plant, technology-enabled and autonomous-ready drill fleets, and the most reliable explosives loading equipment.

We can tailor a solution to meet any need and provide access to the industry's most comprehensive plant hire and equipment ownership packages and innovative capital replacement solutions through FleetCo, a wholly owned subsidiary of Thiess, alongside other leading suppliers. Our team can also provide expert care for client-owned fleets.





### Asset maintenance

Our flexible asset maintenance services are focused on industry-leading and cost-effective equipment performance, availability and reliability. We pair sophisticated systems and processes with our highly experienced maintenance teams across a range of predictive, preventive and run-to-failure maintenance techniques. Data insights help us cost-effectively increase asset efficiency and manage fleet reliability and increase asset productivity by informing decisions such as changes to operations, maintenance and capital strategies.

### Dry hire

We can enable access to the industry's most comprehensive plant hire and equipment ownership packages through FleetCo, a wholly owned Thiess company, which provides innovative capital replacement solutions alongside other leading suppliers. Our experience and strong supplier relationships enable us to provide solutions to any client challenge, regardless of scale.



-  **327 excavators**
-  **1464 haul trucks**
-  **365 dozers**
-  **166 graders**



### CASE STUDY: SOURCING AND SUPPLYING TWO 550T EXCAVATORS ACROSS THE COUNTRY

In mid-2021, a Western Australian client requested two 550t excavators, to be on site by March 2022. Fleetco identified suitable plant in Queensland and started addressing the logistical challenge of coordinating permits and transport on both sides of the country

More than 2,700-employee-hours were required to prepare the excavators for delivery. To move the massive equipment, 14 trucks travelled a combined total of more than 300,000km to their destination.

By listening to our client, and working closely with supply partners, FleetCo safely delivered on budget, a solution that met the client's tight deadline.



# Civil & Infrastructure

We deliver 'whole of life' project scope, from design and engineering to project management, construction, maintenance and end performance objectives.

#### Road maintenance and construction

We deliver safe, innovative and effective project solutions, often constructed in or adjacent to operating environments demanding strict safety, interface and traffic management processes and effective stakeholder and community liaison. We also provide asset management solutions to maintain road networks for state and local governments – creating safe, efficient and reliable journeys.

#### Bulk earthworks

Focusing on innovation and delivery, our works span across both brownfield and greenfield sites. We combine our high-level engineering capability, construction and infrastructure expertise with our knowledge of Australia's terrain, to ensure the best possible solution is applied to project conditions.

#### Civil construction

We offer experienced project management teams and high quality plant and equipment to successfully deliver 'construct only' or 'design and construct' civil infrastructure projects, in both greenfield and urban brownfield environments.

#### Our capabilities include:

- earthworks (bulk and detailed)
- road and pavement construction
- bridge construction
- traffic management
- reinforced concrete structures
- tailings storage dam construction
- rail formation
- drainage
- services and utilities
- evaporation ponds
- construction
- mine infrastructure
- mine airport runways.



#### CASE STUDY: SAFE, TIMELY DELIVERY OF IRON BRIDGE EARLY WORKS AND AIRSTRIP

The original project scope was for all early works bulk earthworks for the new mine development including accommodation village and road upgrades.

Given the excellent performance on the above, MACA was awarded an additional package for airport airside – airstrip bulk earthworks, pavements, lighting and highway access road.

The team successfully completed complex pavement construction including cement stabilisation of borrow material and crushing and grading of runway basecourse material. They safely accelerated the project with zero LTIs, to meet the Client's date for Practical Completion despite significantly increased quantities to those tendered.





# Crushing & processing

We're proud of our track record in delivering small to large scale projects, new and refurbished plant and equipment and consumables to the mineral processing, energy and resource sectors.

## Processing plant upgrades

From the engineering study to the delivery of a successful project, we have the capability of executing various contracting models depending on client requirements.

Our capabilities include:

- engineering, procurement, construction contracts
- structural, mechanical and piping (smp) installation
- conveyor systems
- process plant upgrades
- tank build and installation
- refurbishment and recommissioning.

## Crushing, screening and mineral processing

We construct, build, commission projects, and maintain an extensive fleet of mobile and fixed plant machinery. We configure our plant to suit evolving operational requirements to provide our clients with a tailored solution at a quantifiable cost, with minimal mobilisation and lead time. Our skilled teams provide safe, innovative, and efficient services for peak production for our clients across different mine

## Materials handling

From design to construction and delivery, our material handling experts combine their knowledge to deliver optimal mineral processing solutions, including direct shipped ores (DSO), construction aggregates, sands and rail

ballasts, and recycling material such as recycled aggregated pavement (RAP).

We pride ourselves on exceeding production targets, with our mobile plants processing up to 650 tonnes per hour, and our fixed plants handling up to 2500 tonnes per hour.



## CASE STUDY: PROJECT EXCELLENCE AT IRON ORE CRUSHING AND SCREENING PLANT

MACA delivered a crushing and screening plant for BHP Billiton Iron Ore Pty Ltd in Newman, Western Australia, which produced lump and fines directly saleable ores (DSOs). The project was a complete package from design phase through build to operate and maintain – designed for a nominal 12Mtpa to a sprint capacity of 15Mtpa.

MACA successfully completed the design and construction within a tight time frame and delivered it on schedule, with three years of injury-free operation.



# Rehabilitation

Mining is about value, and that value isn't fully realised until land is returned to a sustainable state. Thiess Rehabilitation offers mine rehabilitation services by miners who are also environmental experts.



## Construction

Our environmental specialists and operational teams use our optimised designs as the foundation for progressive rehabilitation delivery. Our rehabilitation construction services include bulk profiling and shaping of mine spoil; construction of water management, erosion and sediment control structures; final surface preparation and topsoiling; and tailored revegetation programs. Our rehabilitation works are fully integrated with wider mine plans. This provides advantages such as reduced materials movement, minimised rehandling, improved productivity, reduced construction costs, and improved environmental outcomes.

## Monitoring and maintenance

Our specialists can accurately monitor rehabilitation success, reviewing vegetation health and diversity, and identifying erosion, using drones to capture footage of rehabilitated areas. This technology cost-effectively provides a complete overview of large areas of land, delivering a more accurate picture of rehabilitation performance. Clients ultimately gain a strong body of evidence of their rehabilitation outcomes, supporting progressive certification of rehabilitated land and reducing ongoing rehabilitation liabilities.



### CASE STUDY: TECHNOLOGY DELIVERS VALUE ACROSS REHABILITATION PROJECTS

Thiess Rehabilitation harnesses a range of technology to deliver value across the entire rehabilitation lifecycle.

In 2022, the team collected more than 100 hours of drone flight data across rehabilitation projects – delivering a more accurate dataset while saving approximately 200 days in conventional surveying time, and around 8.42tCO<sub>2</sub>e.

They completed trials using multispectral sensors to track vegetation health and water management in rehabilitation areas. They are currently trialling UAV-mounted LiDAR sensors that can penetrate vegetation to detect erosion that would otherwise not be visible; and looking at drone opportunities for species identification, seeding and weed management.



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