

Bulk Materials Handling

We make things happen. Problem-solvers with a passion for transforming our world.



Mining & Metals

Beca is a leading provider in the mining and metals market across Australia, New Zealand, the Pacific and Asia, underpinned by a global network of technical specialists, project managers and advisors. We provide multi-layered engineering, project management, operations and maintenance services throughout the project lifecycle.

We draw on the experience and knowledge of our entire team across the Beca Group to deliver mining solutions. We collaborate with our clients and with contractors to understand the requirements of each project, and then assemble a team of engineers, project managers, project services and construction managers best suited to complete the task.

With a strong commitment to build and maintain long-term relationships, we make it our goal to thoroughly understand your business and deliver your project successfully.



Mechanical

- Mobile plant
- Dump stations
- Crushing & screening
- Overland & plant conveyors
- Stacking / reclaiming
- Tankage
- Milling & grinding
- Process equipment & piping
- Load out
- Industrial ventilation
- Pyrometallurgic equipment
- Pressure vessels / boilers



Structural

- Heavy industrial process building
- Bins, hoppers, silos, domes & stacks
- Workshops
- Mine site amenities
- Reinforced concrete structures



Process

- Process design
- Site wide utilities
- Debottlenecking
- Process simulation



Civil

- Foundations
- Roads
- Bridges
- Haul roads
- Dump station retaining walls & abutments
- Stockpile pads
- Rail loops and sidings
- Airstrips
- Ports, jetties & wharves
- Landfills



Electrical

- High voltage
- Low voltage
- Network balance & protection settings
- Instrumentation, control & automation



Environmental

- Environmental impact assessments
- Audits, licensing & permits
- Environmental monitoring & modelling
- Environmental management plans
- Social assessments & community engagement
- Sustainability & waste management



Water

- Site wide water balance & management
- Supply mains & pump stations
- Raw water supply
- Process water treatment
- Stormwater modelling, sediment control & flood studies
- Fresh water diversions & levees
- Erosion and sediment control planning



Geotechnics

- Dry cake tailings solutions & slurry tailings storage conversions
- Earth & rock fill dams
- Mine pit geotechnical
- Plant site geotechnical
- Seismic engineering & hazard studies
- Subsidence

Bulk Materials Handling

Effective material handling systems are the backbone of the movement, storage, control and protection of materials, goods and products throughout the process of mining, manufacturing, distribution, consumption and disposal. The focus is on the methods, mechanical equipment, systems and related controls used to achieve these functions.

Beca has significant experience in bulk material handling systems for iron ore, coal, nickel, iron sand, zinc, slag, woodchips, cement and many other materials.

Our expertise includes new plants and upgrades to existing facilities, and expertise in the design and construction of conveyors, stacker/reclaimers, rail un-loaders, ship loaders, stockyards, and crushers including in-pit crushing and conveying.

Our materials handling experience includes:

- Conveyor systems, plant conveyors, underground conveyors, overland conveyors
- Storage facilities, Dump hoppers, Bins, Stockpiles
- Mobile equipment, stackers, reclaimers, tripper conveyors
- Dozer and Front end loader reclaim systems
- Crushing and screening stations, fixed and mobile, wet and dry
- In-pit crushing and ROM transportation systems
- Loading facilities, truck, train, ship
- Transfer points, innovative soft transfers
- Slurry pumping and piping systems
- Port and marine infrastructure development
- Material flow simulation (i.e. pit-to-port coal chain modelling)
- De-bottlenecking / optimisation studies
- Sampling systems



Open Cast Mining

We provide geological, mining, on-site and off-site infrastructure engineering services to support the development of a mine project throughout the full life-cycle, from ore exploration, design, construction and operations through to mine closure.

We work closely within a planning framework established for permitting and operating approvals. This generally requires impact studies with baseline data gathering and interpretation.

Our trained water and earth science practitioners are skilled in characterising the nature and behaviour of soils, rocks, surface water and groundwater. They blend this knowledge with an understanding of open pit mining, materials handling, ore feed preparation and delivery, ore processing and tailings waste management to develop design solutions for geotechnical, seepage, surface water and groundwater problems.

Our civil engineering capabilities are broad reaching and able to meet the majority of on-site and off-site infrastructure design needs.

Wharf and Jetty Services

New wharf or jetty structures are a key element of many port and industrial projects and are major capital expenditure items. The successful delivery of new facilities requires a global understanding of port and industrial operations, a skill that Beca has developed through involvement in significant port expansions and industrial projects.

The design-build process is a recent trend for project delivery of new facilities. Beca frequently assists facility owners with initial planning, investigation and environmental consenting work. We also combine with contractors to tender for design build projects and through this process, have developed relationships with a number of major New Zealand and international contractors.

Project Management

Our project managers seek to thoroughly understand our clients' objectives, drivers and constraints. We add value by bringing our leadership experience to meet or exceed our clients' short and long-term objectives/

We focus on providing project and people management skills to enhance our clients' project and business successes; appointing a dedicated team and selecting an appropriate project delivery method methodology.

Strong teams are the foundation of every successful project. We pride ourselves on our ability to build, work within, and lead teams of clients, consultants and contractors to attain mutually satisfactory results.

We use open communication, supported by a range of tools and techniques to meet our clients' needs.

About Beca

Proudly employee-owned, Beca is one of the largest and most diverse engineering and related consultancy services companies in the Asia-Pacific. We assist clients across a wide range of markets including Industrial, Power, Buildings, Public Sector, Transport and Water. As well as numerous engineering consultancy services, we provide holistic project services from concept to commissioning, including project management, cost management, planning, urban design, architecture, land information, valuations and software services.

Beca operates from three key market hubs: New Zealand, Australia and Asia. With more than 3,000 technical and decision support staff, we strive for excellence and client satisfaction, building on our long service record as trusted advisors to many existing clients and delivering value to our new ones.

Contact Us



Jon Bentley

Business Director - Mining & Metals

+61 7 3733 0605

jon.bentley@beca.com

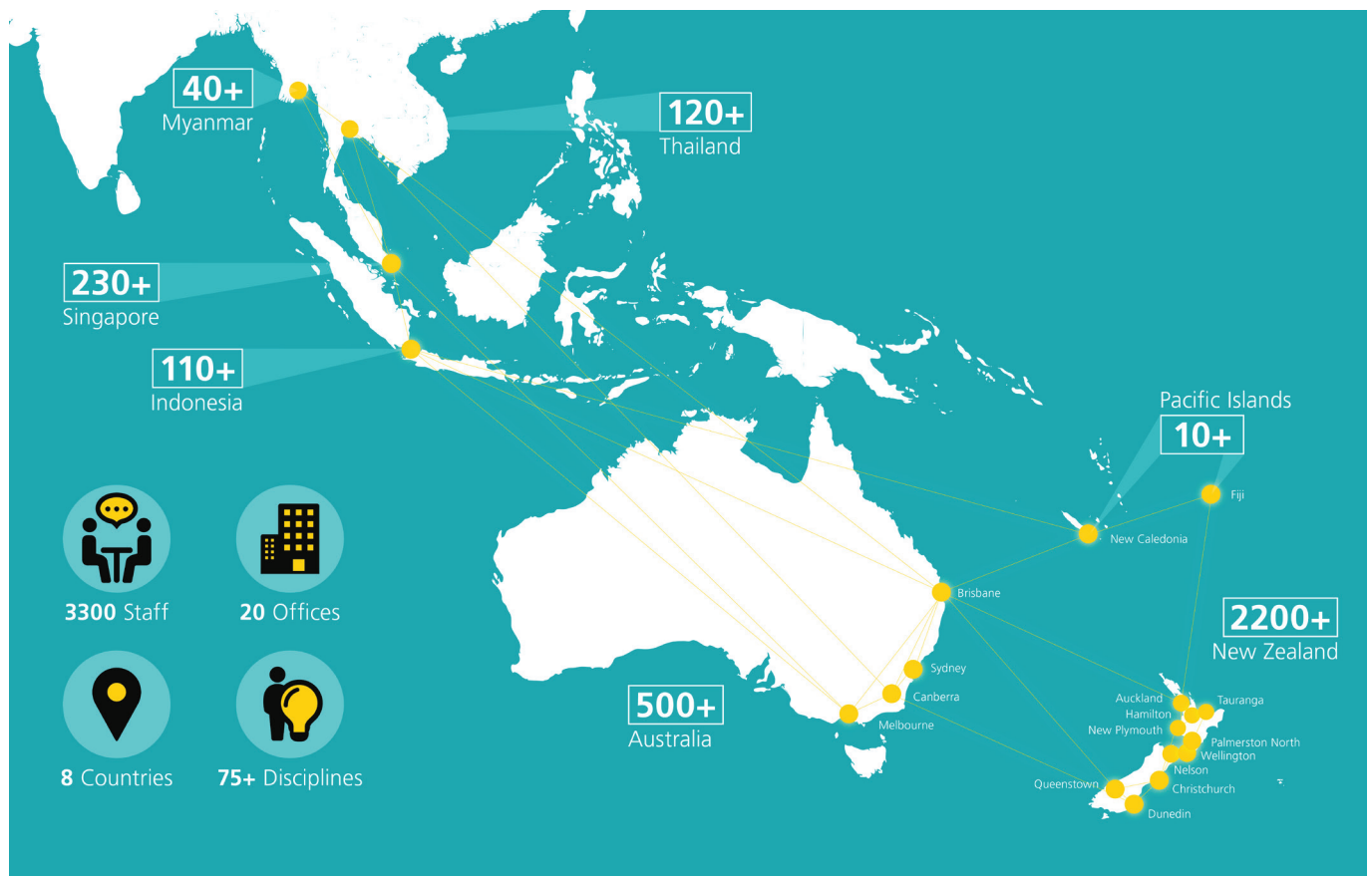


Ross Plumpton

Segment Manager – Mining & Metals

+64 9 300 9759

ross.plumpton@beca.com



www.beca.com

[linkedin.com/company/beca](https://www.linkedin.com/company/beca)

twitter.com/becagroup

facebook.com/BecaGroup

