



**ENVIRONMENT, SOCIAL &
GOVERNANCE SERVICES**

TRUSTED EXPERTISE. PROVEN OUTCOMES.

AT MEC, OUR ADVISORY TEAM CAN PROVIDE YOUR BUSINESS WITH THE MANAGEMENT TOOLS IT NEEDS TO PROSPER. OUR TEAM HAS SPECIALIST EXPERIENCE IN ASSET OPTIMISATION, OPERATIONAL MANAGEMENT, ESG, AND PROJECT EVALUATION.

MEC's headquarters are in Brisbane and Perth with boots on the ground in more than 20 countries, MEC continues to grow in an increasingly competitive marketplace. Experience across a large breadth of commodities, our team supports open pit and underground operations across the value chain.

The MEC team has a broad range of experience, allowing delegation of tasks to the right level. Our Team has a broad range of experience with positions held from Graduate to Principal. This team is structured to ensure that we have the right level of support for projects that are appropriate to the task at hand. Our Principals will provide the strategy, tactics, thought leadership, and guidance needed to get our clients the results that add value.

Our mining world is evolving quickly, our team will keep you on the leading edge of value-driven change and can assist you in transitioning or transforming your mining operation to leverage new and emerging tech, tools, and processes project or company requirements.



SERVICES

MEC ADVISORY AT A GLANCE

- FOUNDED IN 2005**
- 18TH YEAR IN OPERATION**
- 6TH YEAR IN GEOLOGY**
- 1759 PROJECTS COMPLETED AND COUNTING**
- 362,400 CONSULTING HOURS — COAL**
- 85 EXPERIENCED CONSULTANTS**
- 379 CLIENTS MAJOR MINING HOUSES / MINE OWNERS / OPERATORS**
- 4th YEAR IN GEOTECHNICAL ENGINEERING**
- 116,300 CONSULTING HOURS — METALLIFEROUS**

COLLABORATIVE AND BESPOKE SERVICES

When you select MEC to partner with you on your project you will find a high level of customer service and bespoke outcomes for the objectives of the project.

We deliver the outcomes that will give you the confidence and direction to move forward and achieve your internal goals. at MEC we pride ourselves on:

- ▶ flexibility and agility to work with the client, to best, meet their needs;
- ▶ providing quality client outcomes as defined by the client;
- ▶ the experience of MEC Advisory's personnel and their ability to support the full life-cycle of mining projects.

With the global acceptance of climate change models, there is a growing trend to shift from fossil fuels to renewables. MEC Advisory is uniquely placed to provide both technological and advisory support to assist mining companies to align ESG commitments to their portfolios as they address the social impact of their investments.

PROJECTS AND GOVERNANCE

MEC provides projects, project management and governance for technical services across the mining sector. The advantage of having MEC apply their governance and project management expertise to your operations is that we work to a framework for the rules, relationships, systems and processes that impact the cohesiveness and effectiveness of your technical services and operational teams. Establishing cascading and dovetailing systems allows greater transparency and accountability for delivering results and managing systems. MEC Engineers apply this know how to a wide range of projects to address environmental, rehabilitation and closure planning needs. We have established Progressive Closure and Rehabilitation Plans for many of our clients in strict adherence to government policy factoring in drainage and final landform requirements. MEC will work with owner teams or contractors to achieve the best overall outcome for the site.

Services include:

- ▶ Business Planning Governance
- ▶ Technical and Operations Systems Improvements
- ▶ Water Management Plans and Project Management
- ▶ Environmental Policy Change assessments
- ▶ Provision of professional and supervisory personnel

DECARBONISATION

MEC Mining assists mining organisations in meeting the demands of decarbonisation whilst ensuring continuity of operations, maintaining productivity and delivering for all parties (governments, shareholders and an increasingly informed public) who demand due diligence for a decarbonised future.

Our services include:

- ▶ Carbon neutral transition plan
- ▶ Detailed operational mine designs and schedules
- ▶ Planning process development
- ▶ Operational systems implementation



OUR TRACK RECORD



MULTICOM PRCP ASSISTANCE

Multicom Resources engaged MEC to undertake the progressive rehabilitation and closure planning study for their St Elmo project. The study centred around the comprehensive material movements of project across its life of mine from undisturbed topography to final landform. MEC assessed material types into blocks to simulate a strip sequence of mining to waste dumps and then material rehandle requirements for reshaping to final landform. The assessment factored in major topographical changes that would alter drainage across the site and where possible made design allowances to mirror the original drainage lines to stabilise the cadence of water flow through the system to pre-mining levels. Furthermore the study considered hydrological and hydraulic modelling to assess the impact of a probable maximum precipitation flood event on the site and local catchment factoring in the most recent climate change data.



PRCP MINERAL PROJECTS – DIANE COPPER MINE

MEC Mining was engaged by Mineral Projects Pty Ltd (MP) to assist with the waste dump and surface diversion drainage design as part of the progressive rehabilitation and closure planning (PRCP) requirements for the Dianne Copper Mine. MEC conducted a review of the available waste characteristic data to assess suitable encapsulation designs on site. The study also included backfilling a settling dam so that it would comply with final landform design; and rehabilitation of the existing waste rock dump to blend with original topography and a geotechnical closure compliant assessment of all final waste rock landforms. A key outcome of this project was the creation of surface drainage profile designs that diverts and maintains separation of clean surface water so that it can continue to run off site as part of the natural ecosystem without the requirement of treatment or capture.

BHP – STEP CHANGE

BHP contracted MEC to assist them in undertaking an opportunity assessment to identify options to enable a step-change in carbon emissions to meet their net-zero 2050 target across their WAIO Operations. MEC developed a baseline, life of asset emissions model to understand the opportunities presented by In-Pit Crushing and Conveying, Excavator Electrification, Trolley Assist, and the revolutionary Small Autonomous Battery Electric Truck Fleet or SWARM Principal to directly abate emissions and enable the early capture of “Green Electrons”. Utilising our expertise in this field MEC was able to present elegant solutions to the practical and pragmatic application of each technology to not only achieve significant reductions in emissions but simultaneously maintain or improve BaU production and quality, operational productivity and reduce strip ratios through reduced waste mining while increasing ore recovery. The study found a reduction in mine operations emissions opportunities of up to 50% from the baseline across the technology options.



PLANNING GOVERNANCE AT BHP QUEENSLAND

MEC was approached by BHP to assist in establishing guiding systems and processes in the coal business planning unit to ensure best mine engineering and planning practice was being applied across the coal division. The team had oversight of the long-term planning and budgeting process and ensured the system could dovetail across to medium and short term planning. The result was a process that defined how the remote corporate team will coordinate activities in mine planning across the business and particularly with sites to sustain value along the planning cycle.



HITACHI – INNOVATION INVESTIGATION PROCESS

MEC was selected to participate in an innovation investigation process run by Hitachi Construction Machinery across several mining operations to develop an energy power-draw estimation and map against the mine schedule by assessing various waste and ore mining and transportation assets mixes. Fleet analysis was completed on an ‘energy agnostic’ basis, informing energy intensity models across the Life of Asset. This was then used to understand variability in emissions and how to optimise the schedule where traditional mobile fleet assets were interchanged with fast charge placements and trolley track lines. Furthermore, these assessments were modeled to optimise for pit infrastructure position and asset value impact.

The project deliverable was an emissions-focused schedule that featured the best fit of low power draw waste and ore mining assets for the site given the constraints of the remote locations and the availability of green energy options.



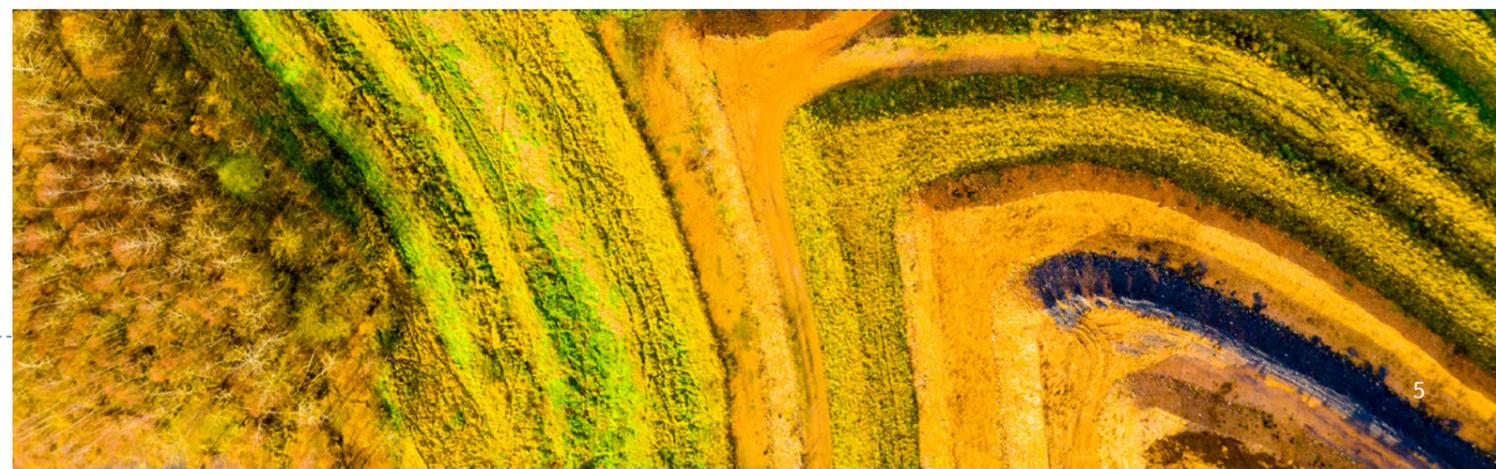
BMA – ASSESSING LOWER EMISSION MATERIAL TRANSPORT OPTIONS

BMA challenged MEC to assist them in assessing lower emission material transport options, and a future-fit mine design approach to support this. This was undertaken by profiling and assessing their carbon emissions footprint associated with the operations mining cycle and in particular the mobile fleet used across their extensive strip mine operations. MEC created a baseline mining emissions-focused schedule from current operations and then trialed a mix of alternative technologies suited to the constraints of mining in a strip mine. Factored into the consideration was altering mine designs, pit phase schedules, and most impactfully more technologically advanced and sophisticated continuous conveyor systems and modular crushing units to remove diesel-related emissions that created an opportunity for a step-change in the BMA business ESG goals without reducing throughput.



GOLDFIELDS

In its objective to reduce its carbon emissions footprint Goldfields selected MEC mining to undertake an options study and assessment of the transition plan for their Tarkwa and Damang sites to compare new asset mixes including mobile crushing and conveying systems, Trolley Line and retrofitting diesel trucks with Liquid Natural Gas. The site had unique challenges to overcome with jurisdiction over the source of power adding urgency to the success of the project. MEC’s reputation for adding value to projects was validated with findings of further savings for the site in refining the mine sequence to best utilise the new mine operations asset mix.



GLOBAL EXPERIENCE



GENERAL ENQUIRIES

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