

DOWNER MINING'S MINE RECLAMATION AND LAND REHABILITATION SERVICES BUSINESS (REGEN) OFFERS THE MINING INDUSTRY COMPLETE SOLUTIONS FOR MINE CLOSURE, AS WELL AS PROGRESSIVE REHABILITATION AND STAND-ALONE WATER INFRASTRUCTURE AND MANAGEMENT.

Our team's wealth of experience in mining, rehabilitation and mine closure means that we can work hand in hand with our clients to understand their business drivers, and tailor each unique program to meet specific sustainability and post-mining land use criteria.

We integrate cost-effective bulk-material movement and civil capability with engineering expertise and ecosystem knowledge to provide our clients with the trusted efficiency of Downer Mining – a proven Tier 1 mine operator.

Where specialist solutions are required, we can efficiently partner with other rehabilitation and closure experts using our own proven systems and controls. Our extensive range of capabilities includes:

- Providing all components of a mine closure plan, including landform design, progressive rehabilitation, waste rock/ spoil management and water-management structures, to a standard that meets regulatory requirements, corporate and industry standards, and aligns with environmental and stakeholder aspirations and values
- Bulk earthworks, including landform profiling, tailings storage facility decommissioning and closure, leveraging Downer Mining's cost-effective earthmoving capability and track record
- Civil capacity, including topsoil handling and placement, ripping, final grade profiling, water-management structure construction and erosion mitigation structures, such as rock armouring
- Revegetation of native ecosystems or other agreed post-mining land use using seeds or seedlings, including soil preparation and amelioration requirements, such as fertilisers
- Post-closure management and maintenance, such as weed control, erosion repairs and landform/ecosystem monitoring, to demonstrate post-mining criteria and stability.



FROM WASTE DUMPS TO NATURAL LAND FORM: SUNRISE DAM, WA

Waste dump rehabilitation has been a large component of Downer Mining's 16-year mining services contract at Sunrise Dam.

In accordance with AngloGold Ashanti's Rehabilitation Management Plan, we have conducted application and profiling of topsoil on waste dumps and the tailings storage facility in preparation for eventual mine closure. To date, a total of 640ha of land has been rehabilitated to ensure that the mining environment is returned to its natural land form.



LARGE PROJECT COMPLETED EARLY: BLACKWATER CREEK DIVERSION, QLD

The diversion of approximately 10.2km of Blackwater Creek at the Curragh Mine in Central Queensland was an ambitious and technically challenging project to re-establish an important ecological corridor.

Undertaken for Wesfarmers Curragh, the project involved relocating the creek to enable access to coal reserves beneath it. It comprised bulk earthworks, civil works, and the rehabilitation of approximately 167ha of land with 35,000 seedlings, hydromulch pastures and native shrub species. With key objectives of reinstating habitat, creek biodiversity and ecological function, the project exceeded its vegetative cover and flora species diversity targets 12 months ahead of schedule.

WESTERN REGION

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SURFACE WATER MANAGEMENT: CHRISTMAS CREEK, WA

ReGen has partnered with Karlayura Enterprises, a 100% owned and managed Aboriginal business, to form Karlayura ReGen Joint Venture (KRJV). In February 2015, KRJV embarked on its first project – surface water management works for Fortescue at Christmas Creek mine.

The scope of works included the construction of levees and a floodway, elevation of a haul road and upgrades to four turkey nest dams. Completion of the project ensured ongoing compliance with regulatory obligations by diverting water away from active mining areas.

The project exceeded its stretch target of 40% Aboriginal representation in its workforce, providing opportunities for the local community through employment, skills development and enterprise.

KRJV finished the project on time and on budget, with an outstanding safety and environmental record.

KEY PERSONNEL ROSS BROWNING General Manager ReGen

Ross has 17 years' experience in the rehabilitation of mined lands across Australia and overseas, including projects undertaken for BHP Billiton, Xstrata, MIM and Downer Mining.

MARCUS DE HAAS Senior Project Engineer

Based in Western Australia, Marcus has been in the mining industry for 10 years. Before joining the team at ReGen, he worked on a wide range of civil infrastructure projects. He has been involved in both the technical and operational phases of projects, from tendering and project start-up, through to operational management and closure. Specific areas of expertise include landform construction and Traditional Owner partnerships.

JIM RAYNER Operations Manager

Jim has 33 years' experience in the West Australian mining industry. Originally qualified as a mining engineer, he has worked across a range of areas, including open-cut and underground mining and drill and blast, and has been involved in key rehabilitation projects, including Sunrise Dam, WA.



COST-EFFECTIVE REHABILITATION SUCCESS: BAAL BONE, NSW

At Xstrata Coal's Baal Bone mine near Lithgow, we not only successfully returned 300ha of highly disturbed land to its early 1900s state, we did so at a cost that was significantly lower than the original estimate.

The comprehensive mine rehabilitation and closure project was carried out using limited topsoil reserves and capping material, and below average rainfall. The Baal Bone project team also met the challenge of updating the pre-war landform designs to incorporate modern infrastructure, such as power lines.

