

Tailings Dam Capping

West Wallsend, NSW

A custom-built batch plant, capable of producing up to 300m³ of slurry per hour, was developed to cap an existing tailings dam without requiring surface access, unlike conventional civil practices, while processing up to 3,800 tons of fly ash per shift.



The project

As part of the mine closure requirements at the Glencore West Wallsend site, an existing tailings dam required capping to remove future public safety concerns linked to tailings dams. The project involved hydraulically placing a fly ash and water slurry over the tailings to create a cap and meet the safety requirements linked to the closure and remediation plan.

The challenge

The process had not been performed on this scale previously meaning each element required bespoke design, careful consideration and risk assessments with all stakeholders to ensure its success.

The solution

A custom-built onsite batch plant setup was developed and installed with all weather and environmental consideration in place. The process involved managing upwards to 100 truck and dog deliveries of fly ash and per shift, utilizing up to 750,000 litres of recycled water and pumping slurry at a set density to the desired placement spigots. Routine maintenance and plant redundancies ensure minimal downtime throughout the works.

Project facts

Owner(s)

Glencore

Keller business unit(s)

Keller Australia

Main contractor(s)

Keller Pty Ltd

Solutions

Remediation

Markets

Industrial

Techniques

Mine infill or cavity grouting