



Princes Highway Upgrade Foxground and Berry Bypass



Case Study
GCM16-02

Year
2016

Client
RMS, NSW /Fulton Hogan

Site/Location
Berry NSW

Region
New South Wales

Scope
Highway Cuttings

Rock Type
Granite

Rock Hardness
Up to 80Mpa

Total Production
140,000m³

Production Rate
173 m³/hour

GET Consumption
26.6bcm/pick

Safety
Zero LTIs

Mechanical Availability
86%

Project Highlight
Significant Improvement to Project Program & Costs

PROJECT SUMMARY

Fulton Hogan contracted Global Civil and Mining (GCM) to assist with the excavation of rock on a number of significant cuttings along the Princes Highway Bypass near Berry.

The rock along the alignment was very consistent and hard. Initially Fulton Hogan had drilled and blasted in some areas and employed rock breakers elsewhere. The blasting caused damage to the rock in the walls and rock breaking was very slow and expensive. Without a change there was a risk to the Project's program. Furthermore excavations were being carried out alongside the very busy Princes Highway and close to some nearby housing.

Key project objectives were:

- To keep the existing road safely open at all times;
- To minimise the damage to the underlying rock in the batters and floors;
- To eliminate over excavation;
- Increase production so as to improve the project program; and,
- To reduce overall costs.

GCM mobilised a Wirtgen 2500 Surface Miner (2500SM). The 2500SM rapidly milled the rock creating the rock cuttings right up to the edge of the existing Princes Highway. In the process the excavated material was crushed to less than 100mm in size and mixed. The result was a homogenous sub base material that was recycled and used along the alignment in fill areas.

The 2500SM, which is fitted with GPS level and position controls, cut the walls with great precision and with no damage to the remaining rock in the walls. The result was the creation of walls that were structurally very competent. It was also used to accurately box out the highway in preparation for the placement subbase material.

Due to the success of the 2500SM the initial 50,000 m³ scope has increased to well over 140,000 m³, costs are down and the cuttings excavation program is back on track.

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