

Flagstone Estate – Earthworks



Project Details

Flagstone Estate is a new community well under construction 35km's South West of Brisbane.

Site conditions in this area are difficult to undertake construction work in, due to the hilly nature of the land and the sandstone material.

The Flagstone site required a cut to fill solution to level out proposed roads and housing blocks. Drill and Blast material the least preferred option due to the requirement of the site material being needed as fill, this would have required crushing and screening to meet the engineer's specification, which would have added extra costs, as well as restrictions due to nearby residents who had recently moved in to the estate. Excavators with hammers would have blown the already tight program out of the water.

GCM proposed on utilising 2 x 2500 Wirtgen surface miners to undertake the work fitted with GPS to ensure all earthworks were done to design, which on this site was fairly detailed due to the difficult levels. The main feature of utilising surface miners was the milled material would be suitable to meet the engineers specification for use straight back in as fill (on average 75mm minus), with the additional benefit of being able to work in close proximity of residential areas.

GCM worked closely with the client Allroads in working out best methodology for the earthworks to happen. In this case required GCM to work very closely alongside a fleet of scrapers which picked up and placed the material ready for compaction.

Case Study
GCM17-07

Year
2017

Client
Allroads

Site/Location
Jimboomba

Region
Queensland

Scope
Bulk Earthworks

Volume
75,000 BCM

Production
175 bcm per hr.

Rock Type
Sandstone

Rock Hardness
30 to > 90 MPa

GET Consumption
40 bcm per pick

Mechanical Availability
80%

Safety
Zero LTIs

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