

# Yandi Access Road Realignment



## PROJECT SUMMARY

BHP Billiton Iron Ore Pty Ltd (BHP Billiton) has changed its railroad operating strategy and Yandi Junction has now become a fixed train driver changeover location. This has drastically increased the LV movements between Yandi and Yandi Junction. The increase in train driver movements requires the access road from the camp site (Yandi) to Yandi Junction to be upgraded to provide safe reliable access along this now critical route. This work was undertaken in close proximity to existing rail infrastructure and hence is brownfields in nature.

GCM mobilised a Wirtgen 2500 Surface Miner (2500SM) to Yandi to assist Austral Constructions in the excavation of the new access road alignment. The 2500SM cut approximately 3kms of hills up to 6-8m deep to enable the realignment of the access road. The road material (some of which was very large and blocky) was crushed to less than 100mm in size, mixed, blended and replaced. The 2500SM was able to cut the batters by stepping in 350mm every cut to leave a safe and aesthetically looking batter along the cuttings, as shown in the pictures above.

In this application GCM used surface miners to achieve excellent results. The work was carried out in a short time frame with minimal impact on operations. All trains were able to keep running while the excavation of the material was carried without any impact on the railway.

**Case Study**  
GCM17-002

**Year**  
2017

**Client**  
BHP Billiton

**Site/Location**  
Yandi

**Region**  
Pilbara WA

**Scope**  
Access road cuttings

**Volume**  
37,000 bcm

**Production**  
206 bcm per hr.

**Rock Type**  
Iron Ore

**Rock Hardness**  
30 to > 100 MPa

**GET Consumption**  
11 bcm per pick

**Mechanical Availability**  
86%

**Safety**  
Zero LTIs

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