

## NRW Civil and Mining expand their operation and grow their business using Hitachi excavators and trucks

The Middlemount open cut coal mine is located in Queensland's Bowen Basin, one of the world's premier coal mining regions. Middlemount is a 50/50 joint venture between Yancoal and Peabody Energy, the world's largest private-sector coal company. NRW Civil and Mining have been contracted to provide mining services. At Middlemount, NRW use Hitachi excavators and trucks for overburden removal and coal mining.

NRW mobilised to the site in 2011. According to Shaun Lucas, who was recently General Manager, East Coast Operations, for NRW Civil and Mining, the operation was initially a small one, but inline with the contract, capacity has increased over time. NRW are now using 6 Hitachi excavators, including:

- 1 x 190-tonne EX1900
- 3 x 360-tonne EX3600's
- 2 x 550-tonne excavators (an EX5500 and an EX5600)

NRW also have a fleet of 23 Hitachi AC-drive dump trucks, including:

- 9 x 190-tonne payload EH3500's
- 14 x 220-tonne payload EH4000's

As the operation at Middlemount expands, NRW are growing with it. Shaun Lucas states: "The initial volume of dirt to be removed was about 32 million cubic metres of overburden a year which converts to about 2.8 million tonnes of coal a year and we have been recently been asked to expand". In response, NRW are intending a significant increase to their fleet of Hitachi machinery.

NRW have implemented an extensive maintenance program for the equipment at Middlemount and make full use of the technology available, including the on-board tracking system available on Hitachi's range of excavators and trucks.

Shaun Lucas states: "The workshop guys have access to the data 24/7, and they can log in to the satellite and they



can see and provide feedback to the operations whether there's some of the loading irregularities and where they should be or often where they shouldn't be. Just having the level of technology available at our fingertips 24 hours a day is brilliant."

According to Shaun Lucas, Hitachi has also played its part in equipment maintenance. He says that Hitachi has not only considered the mechanical needs of the equipment but, without sacrificing structural integrity, also environment the tradesmen work in, especially their health and safety.



Putting production figures of the two 550-tonne excavators on site against each other provides for an interesting comparison. The EX5500 performed to NRW's planned dig rates. However, according to Shaun Lucas, the EX5600 excavator, matched with the EH4000 trucks, provided "about 30% in end-yield on top of what the 5500 does".

Sean Lucas attributes the increase in performance to the significant increase in the horse power - which translates into productivity - of the EX5600. The EX5600 is powered by two Cummins diesels delivering a total of 2238 kilowatts of usable power – up from the 2014 kilowatts of the EX5500. The improvements are appreciated and acknowledged at NRW: "What Hitachi have done with the 5600 as opposed to what the 5500 was is incredible. They have really listened to what to operations need and they have made those changes."

The other half of the Hitachi equipment equation at Middlemount – the AC-drive dump trucks - are also playing their part, especially

the 220-tonne payload EH4000s. But the quick turnaround is having some unexpected impacts. Whereas in the past the truck operators could look forward to a bit of downtime during the loading cycle, but, as Shaun Lucas tells it: "... (the drivers) get their book open and find their line and it's bang and they're off again. Three buckets in an Hitachi 4000 and it's gone."

According to Sean Lucas, "the forecast over the next 5 years is for the coal increase from a 2.87 million tonnes per annum of ROM coal to 5.4 million tonnes of coal. Obviously the increase in coal is going to mean a significant increase in the amount of overburden we need to shift and the Hitachi diggers are the right size to fit into the operation to take us to that increase."

At Middlemount, moving dirt and mining coal is ongoing. At Hitachi, product development is ongoing to improve productivity. This means that clients like NRW can move more dirt, mine more coal and ultimately grow their business.

For more information, visit:

Hitachi Construction Machinery  
[www.hitachi-c-m.com/au](http://www.hitachi-c-m.com/au)

NRW Civil & Mining  
[www.nrw.com.au](http://www.nrw.com.au)

