

# AUSROCKS PTY LTD

CONSULTING MINING ENGINEERS

ABN 64 056 939 014

## AUSROCKS NEWSLETTER No 9 December 2011

### Introduction

Ausrocks has a great year and has enjoyed the continued support of our clients, Associates and Government Authorities in our role as consultants to the mining, quarrying and tunnelling industry. We are proud to have participated in the development of a number of exciting and new quarrying, tunnelling and industrial minerals projects in Queensland, New South Wales and New Guinea over the past year. Some of these projects include:

- Providing technical advice and preliminary designs to the Mt Coot-tha Quarry and Transcity for the spoil placement for the Legacy Way Tunnel.
- Planning and assistance in the preparation of a number of Development Applications for new and expanding sand and hard rock quarries in Queensland, particularly in Western Queensland.
- Preparation of Quarry Management Plans, valuations and assistance in the compilation of Resource estimates for a number of quarry projects.
- A number of specialised projects using our employees' experience in mapping, environmental management and software skills.

Our Ausrocks employee numbers have increased with the vacation employment of Kayleigh Jones, an Environmental Management student from the University of Queensland. Dale Brown has left the office for three months to work for New Hope at Jeebropilly, continuing a long term family tradition, returning to Ausrocks in March 2012. Karl Hansen heads off in February to the Central Queensland coalfields to commence with BMA as a graduate engineer.



**All the best for Christmas and New Year**

***From Alan Robertson, Director.***  
[Alan.Robertson@ausrocks.com.au](mailto:Alan.Robertson@ausrocks.com.au)

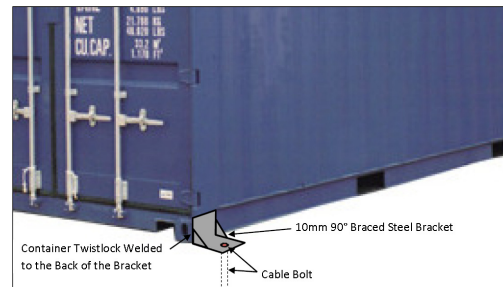
**Note: The Ausrocks Office will be closed from COB Thursday 22 December 2011 and will re-open on Monday 9<sup>th</sup> January 2012. We will be available during the break for emergency callouts. Phone Carl or Alan.**

### Cyclone Tie Downs for Sea Containers

Now that the 2011-2012 Cyclone Season is well underway, it is important that sea containers are well tied down to ensure they don't become deadly weapons in a cyclone. Ausrocks was asked to prepare container tie down designs for 6m and 12m containers for Cardross Mining in North Queensland. Part of the project for Cardross involved investigating tie down designs used in Cyclone areas in Port Hedland, WA. The following were the key outcomes of the investigations:

- There are a number of options for safely tying down containers.
- The worst case scenario is empty or partly loaded containers in Cyclone prone areas. Empty containers weigh approx. 2.4t (6m) and 4t (12m). A container is most prone to move in a cyclone if the wind can get underneath it.
- Options for tying down containers are dependent on the equipment resources available, type of ground and the permanence\* of the containers.

In the Cardross situation, Ausrocks designed a 90° bracket welded to a standard container Twistlock (which fits to the lower corner castings) to be installed and secured using readily available cable bolts with a barrel and wedge anchor. A typical bracket configuration is shown below. An alternative to the cable bolt is a threaded deformed bar with appropriate washer and nut.



Ausrocks investigated the types of wind loading in Type C4 (North Queensland coast e.g. Innisfail) and Type D Cyclones (Port Hedland area) and provided designs based on the type of earth and rock encountered in the drilling process and associated Factors of Safety. Other options for tie downs include concrete blocks either above or in-ground with appropriate bolts, using the same plate or using cables which pass over the top over the container and can be tensioned using a turnbuckle (for transportable offices, ablutions etc).

*\*Designs may be subject to Local Building Codes.*

For further information, please contact Carl or Alan at Ausrocks.

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## “Clever Innovation in the Mining and Quarrying Industry”

### Storm Detector

Lightning storms pose a significant risk to personnel and plant especially when carrying out blasting operations. Generally a site’s Blast Management Plan will dictate that charging operations should cease in the event of a lightning storm. The onus is then put on the Shotfirer to determine when to ‘call it quits’ and by the time the shotfirer hears thunder he or she is already within range of a lightning strike. Without constant access to a local weather station this decision is inherently risky. An excellent way to manage this risk is to use a Lightning Detector.



The Thunderbolt Lightning Detector can detect electromagnetic signals emitted from lightning flashes up to 120km away. The use of electromagnetic signals allows this system to operate independently, much faster than weather reporting systems, which is ideal for remote sites. The signal is analysed to provide up to date information on the storm such as approach speed and ETA. This instant information is invaluable to a Shotfirer who can then make an on the spot decision to continue operating or cancel in the event of an oncoming storm.

### The Net Cost Benefits of Water Additives for Dust Suppression

Green Choice’s Marine 3 Technologies offers a groundbreaking patented anionic surfactant that has been extensively researched and developed from seawater over a period of 11 years. The M3T neutralises the magnetic charges of the water particles, greatly reducing the surface tension. M3T differs from other agents which are either alcohol, oil or chemical based, containing solvents, glycol or ammonia, are toxic and definitely not environmentally friendly. For road watering to reduce dust, a typical concentration is 0.03% by volume. Road watering frequency can be reduced by up to 66%.

Check out the My Green Choice Website at [www.mygreenchoice.com.au](http://www.mygreenchoice.com.au) or contact Clive Reed 0433 277 303 [clive@mygreenchoice.com.au](mailto:clive@mygreenchoice.com.au) or Steve Purser 0401 741 989 [steve@mygreenchoice.com.au](mailto:steve@mygreenchoice.com.au)

### Signs We Have Noticed



*(This one we noticed on the Internet)*

If you have seen an interesting sign please send it to: [alan.robertson@ausrocks.com.au](mailto:alan.robertson@ausrocks.com.au)

### Fire & Rescue Service at the Ausrocks Office



Recently the Fire and Rescue Service was called to the Ausrocks office to rescue a neighbour’s parrot “Biggy” who had flown the coop into the large tree in front of the office at Macdonnell St Toowong. The bad news was that the firemen couldn’t entice Biggy down. The good news was that he was found, albeit a little worse for wear, a few days later at Milton.

Take a look at the Ausrocks website and look at our photo gallery developed by Dale Brown. [www.ausrocks.com.au](http://www.ausrocks.com.au)