

AUSROCKS NEWSLETTER No 15 Summer 2013

Welcome....

to the Ausrocks Summer Newsletter. 2013 has been a busy year for Ausrocks in terms of business development, software acquisition, workload and training. Our staff levels were increased by two personnel with the engagement of our Technical Officer Nick Virisheff early in the year and then Wendy Wood, Senior Town Planner in September. Our “return business” clients have steadily increased and we are proud of the ongoing associations that have developed with our clients.

Hopefully 2014 will provide an increased demand in the quarrying, mining and tunnelling industries with an ongoing call for innovation and quality planning that Ausrocks can offer.

Alan Robertson, Director Mob 0402 445 418

Gabion Baskets

Originally designed by Italian engineers in the 15th Century as a quick and simple fortification, Gabion literally means “big cage” in Latin.

This simple concept of having a steel wire mesh cage filled with rocks, sand and other earth materials revolutionised civil engineering at the time. Today, Gabion stone not only plays an important role in many aspects of civil and mining engineering, but it is also an integral aspect of environmental landscaping.

Because of the minimal shape and ease of construction, Gabion “Baskets” can be stacked together to create a strong and rigid structure that becomes impervious to almost all loads and impacts.

These structures are now increasingly used in the construction of retaining walls, dams and flood mitigation as well as for landscaping where they can make an impressive wall or barrier. Some of these cages will have life expectancies of up to 120 years or more, and only begin to show signs of strain as the wire mesh deteriorates.

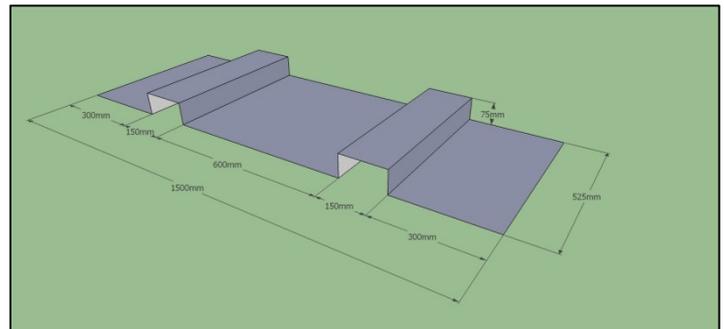
This can occur if the integrity of the galvanised mesh is affected by cutting or severe abrasion. This is reduced significantly if the gabion is fully galvanised and is not damaged during assembly and placement.

The cost effectiveness and straightforward design means Gabion Stone Baskets remain one of the most viable structures in any form of environmental engineering.

Ausrocks is trialling modified “flat pack” galvanised mesh Gabion Baskets from Gabion 1 who are custom making the gabions for Ausrocks. These are assembled and filled with graded sandstone and basalt material for ease of handling with forklifts at the quarry (loading to trucks) or at the worksite with forklifts, Telehandlers or Integrated Tool Carriers. The innovative design will make working with Gabion Baskets a much more efficient and safe operation and *in-situ* lateral shear strength will be increased due to interlocking of the gabions. **Watch the updated Ausrocks website for the development of this system.** www.ausrocks.com.au



A Conventional Gabion Wall



A Schematic of the Ausrocks folding mesh Gabion Base

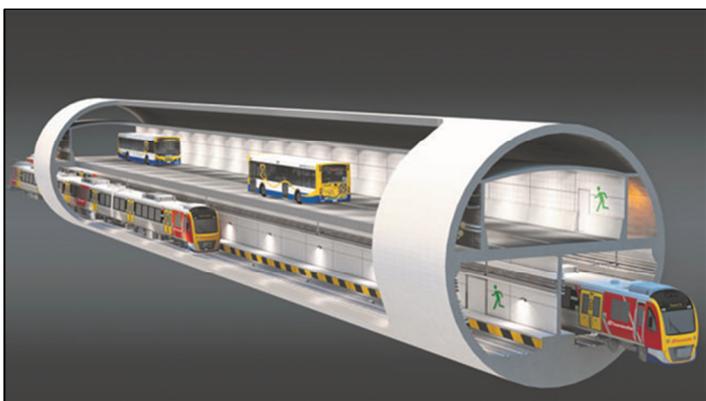
For more details contact the Ausrocks office or for information on mesh gabions, contact David Bird or his website **www. Gabion 1.com.au**. David’s Email is gabions@gabion1.com.au and his telephone number is 02 8007 3949.

Tunnelling News

The Mt Coot-tha Quarry component of the Legacy way Tunnel was closed off in January 2014 between the Brisbane City Council and Transcity, the tunnel developers. The Mt Coot-tha Quarry component of the Legacy Way Tunnel including the Conveyor Tunnel under the Botanical Gardens was an astounding success in terms of safety performance, innovative design and materials handling.

Two new major tunnelling projects are planned for Brisbane.

UBAT (underground Bus and Train Project)



Schematic of Brisbane's Underground Bus and Train Project

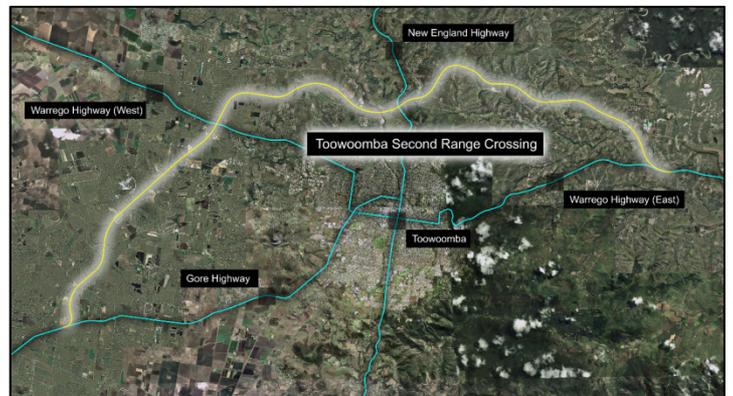
The Newman Government's \$5 billion tunnel plans will revolutionise public transport travel in inner Brisbane with a 5.4km joint bus and train tunnel linking Dutton Park to Bowen Hills.

The so-called Brisbane Underground will include a station at Woolloongabba for sports fans and another along George St to service the new entertainment and casino precinct, as well as the university. A third station will be built alongside busy Roma Street Station. The alternative tunnel route into the city will alleviate train congestion on the Merivale Bridge, which is near capacity during peak periods, and reduce the number of buses that regularly back up along Victoria Bridge.

The Toowoomba Second Range Crossing

The QLD Government has announced that the Toowoomba Second Range Crossing is finally underway. After years of deliberation the 41km project that links Helidon with the western side of the range is expected to begin in 2015 and be completed by 2018. This project provides a much needed alternative to the current Toowoomba range crossing and will result in a significant improvement in traffic flow along the Warrego Highway.

Potential time savings are estimated at 30-40 minutes and a reduction in fuel savings will also be expected as the new route has a much gentler gradient and avoids 16 traffic lights.



<http://www.treasury.qld.gov.au/projects-queensland/projects/toowoomba-range-crossing/>

The \$1.7B project will require a significant quantity of quarry products to be sourced from existing and new quarries (potentially) in the Lockyer Valley and Toowoomba Regional Council areas.

At this stage it is uncertain what the cut to fill ratio will be but there are at least 28 areas requiring a significant cut to maintain grade. In any case the demand for roadbase and aggregates from local quarries is expected to be high resulting in a 'boom' for the Toowoomba quarry industry. The project also incorporates numerous over/underpasses, four viaducts and a 700m underground tunnel under the New England Hwy.

AUSROCKS PTY LTD

“Clever Innovation in the Mining and Quarrying Industry”

Seriously Big Trucks Underground

The size of trucks for underground transport of ore and waste has increased significantly in the last 10 years. The new breed of underground trucks uses tray capacity, power and associated uphill speed, measured as t.km/hr as the key input to high performance trucking with haulage from underground depths as great as 1600 vertical metres. The big players in underground trucking are:

- Atlas Copco MT6020, 60t capacity
- Sandvik TH663, 63t capacity
- Powertrans/Murray Engineering DAT60, 60t capacity
- Caterpillar AD60, 60t capacity.

The table below summarises the key performance attributes of the four truck types. For further information on truck comparisons, contact Alan Robertson.

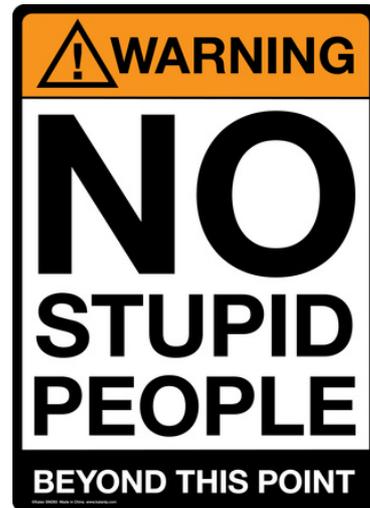
Truck	Gross Power (kW)	Gross Weight (t)	Power to Weight Ratio (kW/t)
CAT AD60	600	110	5.45
Atlas Copco MT6020	567	104.6	4.85
DAT 60	820	115	7.13
Sandvik TH663	567	103	5.5

A Few Notes on Town Planning

2013 saw many changes to state government legislation including the introduction of the Greentape Reduction Initiative in March and an overhaul of State Planning Policies resulting in the introduction of one State Planning Policy in December. The Greentape Reduction Initiative allows small quarries to comply with eligibility criteria and standard conditions, making an application for an Environmental Authority a more streamlined process. Larger quarries are still required to submit a “Site Specific” application but overall we have found the Department of Environment and Heritage Protection much easier to deal with and willing to negotiate on the finer points.

2013 also saw the introduction of a single referral agency (the State Assessment and Referral Agency or SARA). We are yet to see the results of this but we are hoping that the development assessment process will become more simplified and effective.

More Interesting signs



This sign was supplied by John Siemon.....no wonder not many people get into his office these days!!

If you have a funny sign, please send to:

Alan.Robertson@ausrocks.com.au

Ausrocks are specialist consultants to the mining, quarrying and tunnelling industry. Our capabilities include:

- Quarry Development Plans.
- Site surveys including stockpile surveys.
- Quarry Development Applications.
- Town Planning.
- Site Resource and material assessments
- Environmental management and monitoring
- Valuations

For more information:

Visit: 17/71 Jijaws St, Sumner Park, Q4074

Ring: (Office Hours) 07 3376 6839

Ring: (After Hours) 0402 445 418

Email: alan.robertson@ausrocks.com.au

Our Web-site is: www.ausrocks.com.au

For Town Planning enquiries, please contact Wendy Wood at 32 Cottman St Buderim Q4556:

Mobile: 0418 405 006

Email: wendy.wood@ausrocks.com.au