



**AUSROCKS NEWSLETTER No 18 Winter 2015**

**Welcome...**

to the Ausrocks Winter 2015 Newsletter, the biggest and best edition yet!

Some great news! As of 1<sup>st</sup> July 2015, Caged Rock becomes operational as our gabion business for the manufacture of gabions for architectural landscaping, outdoor furnishing and outdoor garden use. For more information, go to the Caged Rocks website: [www.cagedrocks.com.au](http://www.cagedrocks.com.au) or Email: [info@cagedrocks.com.au](mailto:info@cagedrocks.com.au)

Ausrocks has already completed or assisted in a number of landscaping installations and now has a number of products that can be bought from our Sumner Park office or from a number of landscaping yards and quarries in Brisbane, Toowoomba and Gympie. Our Caged Rock products include the standard gabion sizes as flat packs, fire pits, planters, letterboxes, garden seats and benches. Our products are mostly Australian made (except for our 75mm x 75mm mesh which is imported) and we use Australian quarry products. Our installations have included landscaping on a Brisbane River property, the installation of a large gabion tree planter, a set of gabion steps and a low retaining wall. There have also been a number of "do it yourself" (DIY) installations including a coloured tuff garden seat by Max Thorne which is illustrated in this Newsletter.,

Despite the economic downturn, Ausrocks is holding its own as a consultant to the Mining, Quarrying and Industrial Minerals Industries both in Australia and South-East Asia. Six Ausrocks staff are involved in our consulting business which includes Town Planning through Wendy Wood at Buderim and another two (part time) employees involved with the gabion business. Values that Ausrocks employees hold dearly include:

- Always be available for clients.
- If not available, our staff personnel ensure that another staff member can address a client's requirements immediately.
- They strive to keep up with Industry developments (equipment, software etc.) and Legislation changes.
- They provide mentoring and support of students through Thesis supervision, work experience and support in the Australasian Tunnelling Society (ATS) and the Institute of Quarrying Australia (IQA).

A recent topic of conversation in the Ausrocks Office has been the "sustainable development" of new suburban development projects around Brisbane and other cities and major centres. Our concept of sustainable development is to use existing rock material on site as raw materials for the construction process including drainage rip rap, fill, retaining walls and decorative walls. This would significantly reduce the number of haul truck movements to and from the site and the greenhouse gas emissions. The concept uses a number of innovative technologies outlined in this Winter Newsletter including the use of eccentric rippers for quiet ground-breaking, mobile crushers and screens to produce the construction products (under a mobile ERA) as well as gabions for wall construction and for landscaping of individual properties.

Watch this space for future developments!

**Regards, Alan Robertson, Director** Mob 0402 445 418

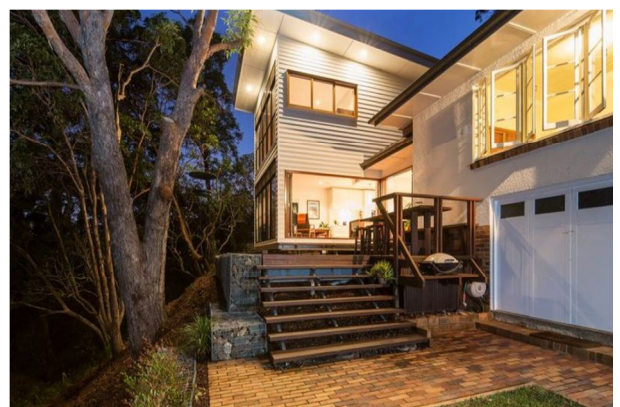
**Caged Rock**



**A garden seat using gabions and tuff rock supplied by Caged Rock.**



**A sandstone garden feature from Caged Rock**



**Low Height Gabion Retaining Wall**

If you want to see some of our gabion products or discuss your requirements, do not hesitate to visit the Ausrocks office. Ring 07 3376 6839 and ask for Alan or Nick on (07) 3376 6839.

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

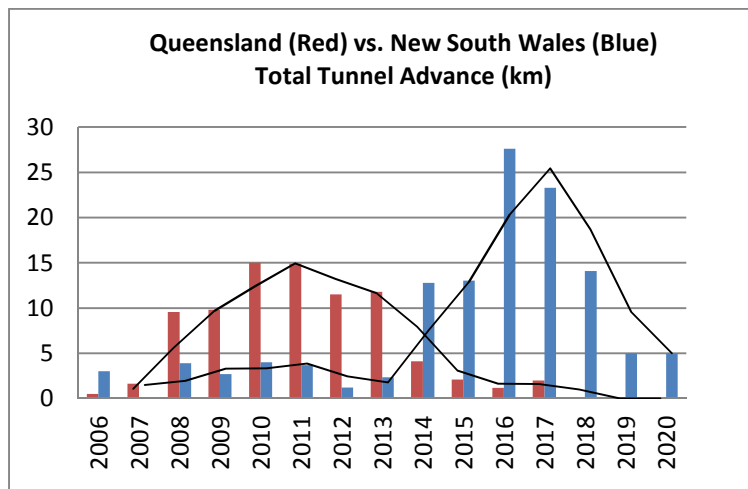
### Tunnelling News

A recent report was conducted to consider actual and proposed tunnel developments across Australasia within the next 5 years. The report provided some pleasing information for supporters of tunnelling infrastructure development and for short-term engineering opportunities in the tunnelling industry

There is a projected 80km of tunnel to be constructed over the next five years in Australasia with particularly exciting developments in Sydney and New Zealand. Tunnelling activity is expected to peak sometime around 2016 and 2017 and is projected to remain at a high level until at least the end of the decade. A majority of the tunnelling projects have been undertaken to reduce the stress on already strained traffic infrastructure. Tunnelling provides a practical method of reducing traffic congestion in major cities that are suffering from extreme urban expansion. Construction work has already begun on the Waterview Tunnel (Auckland) and the WestConnex Tunnel (Sydney) will provide a total of 38km of tunnel advance and will provide major relief for traffic flow for the two cities.

Brisbane has recently completed the Legacy Way Tunnel (the third major tunnel to be constructed within the city in the last ten years.) and it has already reduced traffic congestion in the Western Brisbane suburbs since it began operation on 26<sup>th</sup> June. Less pleasing news for Queenslanders is that over the next five years Sydney is expected to maintain the State of Origin Shield for tunnelling performance. The WestConnex project in Sydney's Western suburbs is slated to provide at least 38km of tunnels and is the largest tunnelling project to ever be undertaken in Australasia.

There are a number of proposed tunnel projects proposed for construction work post 2020 within Brisbane including a modified version of the cross-river BaT Tunnel. It must be the hope of Queenslanders everywhere that we can win back the State of Origin Shield for both tunnelling project advance and the rugby league.



Note: Limited data on new projects beyond 2018

If the State of Origin rugby league results follow the tunnelling trends then Queensland should expect to win back the State of Origin shield sometime around the end of the decade. (The author of this report has probably absconded interstate at the time of publication).

**David Tennent**, Ausrocks Engineering Student (of no fixed abode).

### Rally Car under Construction



Photo showing Roll Cage

The Ausrocks Renault rally car construction progress is well underway. The car has undergone a major rebuild and recent modifications include a roll cage fitted by Race Car Engineering. This roll cage takes the full five point harness seat belts which are attached to the rear bar. Currently the car is at French Car Care, undergoing mechanical repairs including the fitting of an alternator, extractors and a dual throat carburetor. After that the Renault goes to the auto electricians for an electrical upgrade and fitting of lights, then the body work will be completed prior to registration. Ausrocks would like to sincerely thank Mobile Conveying Services for their assistance with a tilt tray and driver Shane to move the car around. Sponsors of the car include Ausrocks, Caged Rock and Mobile Conveying Services.



## Town Planning News from Wendy

Following on from the Newman Government's drive to overhaul planning legislation, the Palaszczuk Government has introduced the Better Planning for Queensland directions paper. The paper outlines the government's commitment to planning reform by proposing a new bill to be introduced in October 2015. The paper also supports some of the changes the Newman government proposed however it will now be another year or more before the legislation is finalised.

The change in government also saw the Department of State Development, Infrastructure and Planning (DSDIP) divide into two departments; Department of Infrastructure, Local Government and Planning (DILGP); and Department of State Development (DSD).

DILGP look after infrastructure policy and planning such as state jurisdiction for development applications. DSD look after regional development and major projects including Coordinator-General projects such as the Galilee Basin State Development Area.

Speaking of the Galilee Basin State Development Area, here are some interesting facts:

- The Adani Carmichael Mine Project will export more than 60 million tonnes per annum of coal at peak production.
- The mine project involves a 310km standard gauge greenfield rail line connecting the northern Galilee Basin to Abbot Point.
- The mine is expected to create about 5000 construction jobs and about 4000 mine jobs in full production.
- The Carmichael Coal Mine will be the largest coal mine in Queensland with a potential life of 60+ years.
- Mining operations are expected to be a combination of six open pits and underground workings, each producing 10 million tonnes per annum.
- Coal exports are predominantly headed for India from about early 2017.

**Wendy Wood**

**For more information on Town Planning, contact Wendy Wood at Ausrocks in Buderim Tel 07 5746 9691 or Mobile 0418 405 006**

## Loadpro X60 Truck

Loadpro Pty Ltd has recently developed the X60 "off-road" haul truck, which has been designed to enable extended hauls and for which existing highway and articulated trucks are not suitable. The X60 sets a new standard in low operating costs as high payloads with low tare/gross vehicle weight result in less fuel burn without compromising vehicle durability. This truck is a serious contender in the large quarry truck market

Optimum power to weight ratio for vehicle performance, material specific body for maximum payload, good vehicle maneuvering and vehicle stability results in high production. Dual rear axle drive with inter-axle differential, differential lock, increased tyre ground contact, low tyre ground pressure all contribute towards the truck's excellent ability to work in wet and soft conditions where traction is required. One of the most exciting innovations of the X60 is its easy access for maintenance. It is remarkable that the modular construction allows a full truck (excluding tray) to be loaded into a single standard 12m container (40ft) in knock down form.

The Loadpro X60 options range from:

- Rigid dump bodies capacity options 30-70m<sup>3</sup> capable of 60 tonne payload
- Service modules in various configurations up to 55 KI
- Rigid water trucks up to 58 KI

- Equipment Transporters up 160 tonne payload
- Articulated tipper combinations up to 140 tonne payload



For further information on the Loadpro X60 <http://www.loadpro.com.au/index.php> or Contact Ron Schliebs, 0414 555 621

## Changes at Ausrocks

Congratulations to Kayleigh Jones who worked for Ausrocks as an Environmental Planning student 2011-2014 and now works with the Queensland State Government. Kayleigh's replacement is Lloyd Knight, a UQ fourth year student who commences at Ausrocks in July 2015.

Dale Brown, a student at Ausrocks from 2010 (except for a stint at New Hope in 2011) graduates in July this year. Dale has been supervising our gabion installations as well as working in the office.

Our gabion maker is Natascha Dreesbeimdieke, assisted by Camo Hood and Aaron Vik in the workshop and the field.

As of 1<sup>st</sup> July 2015, our Technical Officer, Nick Virisheff, looks after the administration of both Ausrocks and Caged Rock. Nick also manages the Caged Rock installations and promotion of the product.

Recently Adebayo Bayooke, Principal Mining Engineer, became a Registered Professional Engineer Queensland (RPEQ). Adebayo has also achieved Chartered Professional (CP) status with The AusIMM.

## For more information on Ausrocks and Caged Rock:

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](mailto:alan.robertson@ausrocks.com.au)

Our Web-site is: [www.ausrocks.com.au](http://www.ausrocks.com.au)

Caged Rock: [www.cagedrock.com.au](http://www.cagedrock.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](mailto:wendy.wood@ausrocks.com.au)

# AUSROCKS

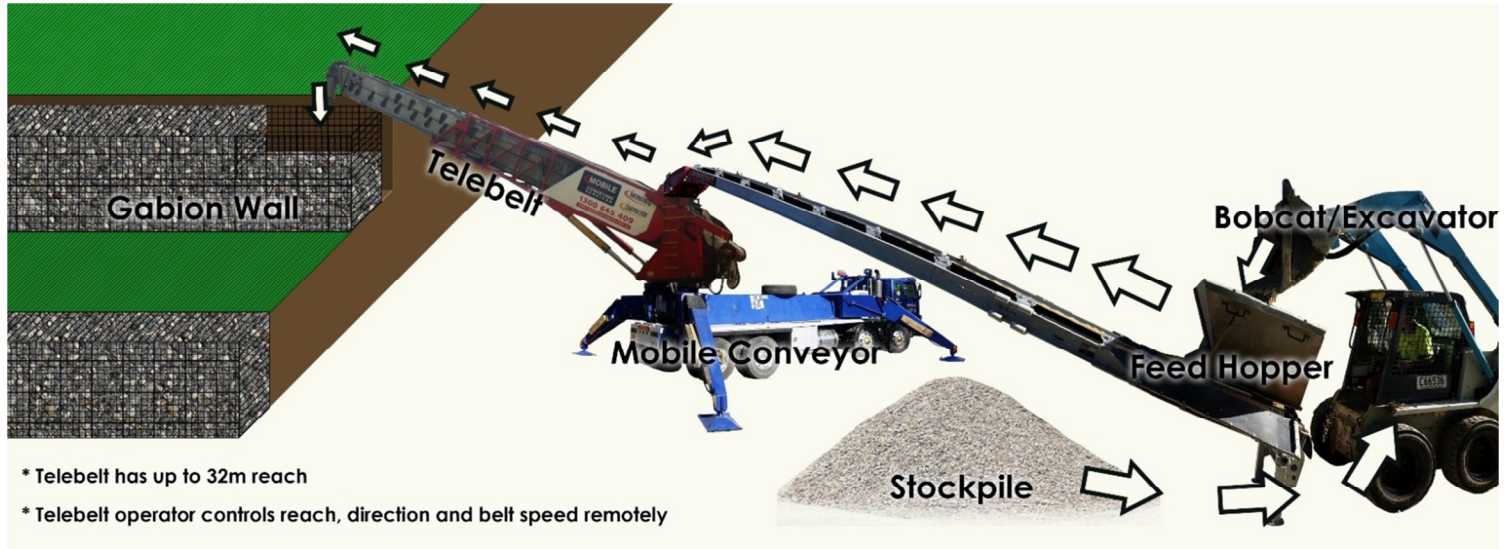
## Lightning-Fast, Safe Gabion Basket Filling

When considering constructing large gabion walls, one of the disadvantages is the high labour cost due to the significant time required to fill large runs of baskets, especially when hand-filling and/or in difficult terrain. Recently Mobile Conveying Services (MCS), a long term Ausrocks associate, proved that their high- technology experienced team could rapidly fill a

large run of gabions set up as a retaining wall with minimal staff as well as completing the job safely with minimum disruption to other activities.

The loading performance was to the tune of 92 cubic meters in an hour. That's a serious loading capacity!!!

Our partnership with MCS means that we will be utilising this method where possible in the future for large gabion wall construction through our Caged Rock business.



*Gabion filling method utilising a Mobile Conveying Services Truck-Mounted Telebel and Feeder*

## Mobile Crushing and Screening Licence

It is necessary to obtain a Mobile Crushing and Screening licence if you are operating a mobile crusher on a site that does not have the appropriate permits or where there is not an existing Environmental Authority (EA) relating to crushing and screening.

Two types of Environmentally Relevant Authorities (ERAs) are available:

- Crushing and screening recyclable or waste material >5,000 t/a (concrete, asphalt etc.) (ERA 33)
- Extractive crushing and screening activities >5,000t/a (ERA 16 3 (a)).

The process required is as follows: (Refer also EHP's definition of Mobile and Temporary ERA):

1. If you are not a Registered Operator, obtain approval to be a Registered Operator (Refer form 140423-EM745V3). Just fill in and Email to PALM at [palm@ehp.qld.gov.au](mailto:palm@ehp.qld.gov.au)
2. For quarry crushing greater than 5,000t/a, apply for an ERA 16 3 (a) for crushing and screening at quarries or other approved sites. This will be a Standard Environmental Authority. The Application form 150327-EM1283 Ver3.00 must be completed after you become a Registered Operator. As at 1 July 2015, an application fee of \$609 applies and an annual ERA fee of \$3181.10 must be paid within 20 working days of the mobile and temporary licence being issued.

3. If necessary obtain an ERA 33 (\$609 as at 1 July 2015) for crushing and screening of waste products in excess of 5,000t/a.

It is necessary to prepare an Environmental Management Plan (EMP) for use of the mobile plant in different areas. Basic information on the units to be used, including photos and specifications including dimensions and operating noise dB (A) contours, if available. When the EA is approved, the EMP will be upgraded to conform with the EA Conditions, when issued.

For more information, contact Alan Carl or Wendy at Ausrocks.



Rev GC60V Mobile Jaw Crusher

## **Our Associates**

Ausrocks maintains a long term association with our Associates and Sub-Consultants including J E Siemon Pty Ltd, ECRi Pty Ltd (Graham Shorten), Noise Measurement Services, (Max Thorne), MWA Environmental (Ben Hyde), Roadpro (Dianne Hayes) and PTT (Traffic Consultants, Chris Bull), Jamstone, Dave Chadwick at CQ-Tech Services, Phil Mackenzie, Geochempet, CivilTech STS (Jim Moss), Drilltek (Wes Rose), EcoSM (Monica Campbell), MCS and John Heilig and Associates.

Environment and Heritage Protection (EHP) released a new stormwater guideline for environmental relevant activities on 17 February 2015. This guideline details the requirements for minimum stormwater storage volume for the design rainfall event. For conventional basins, the stormwater storage volume needs to be sufficient for a 1 in 5 year 24 hour rainfall event. This figure can be obtained from the Bureau of Meteorology using the Intensity-Frequency-Duration (IFD) tables for a given location. The basin also needs to allow for sediment storage which is usually 50% of the stormwater storage volume. The rainfall depth for a 1:5yr 24hr event is generally between 120-200mm which is a considerable quantity of water and depending on the runoff co-efficient can result in more than 2ML of storage requirement per hectare of disturbance.

To meet this storage volume for the average quarry requires a decent sized basin (or basins), which can be very expensive to construct and take up a large footprint. They also require regular maintenance including erosion repair on inlet and spillway, flocculation (if total suspended solids is >50mg/L), pumping out and sediment cleanout. There are a number of ways that traditional sediment basins can be improved to reduce long term cost whilst improving environmental outcomes including;

- High efficiency sediment basins – to reduce basin size (other benefits as well).
- Automated flocculation dosing either by electronic control or using displacement method.
- Gabion protection for inlet and spillway – long term solution to erosion issues and reducing maintenance.
- Gypsum spreading on drainage infrastructure to reduce flocculation requirements and improve stability of permanent or temporary drainage infrastructure.

Ausrocks is able to assist with implementing these improvements and advising the best method of reducing your ongoing costs while improving environmental outcomes. For more information, contact Carl Morandy on 0404 778 394

### Interesting Signs and Safety Procedures



#### **We got this one off the Internet- Golf Course at Coober Peedy!**

If you have a funny sign or a sticker or a photo involving safety (or if it is just funny) that is just not quite right, please send to:

[Alan.Robertson@ausrocks.com.au](mailto:Alan.Robertson@ausrocks.com.au)

Dr Monica Campbell, an external Associate Consultant with Ausrocks for the past three years has now joined Ecological Survey and Management (EcoSM) as a Senior Ecologist. Monica will provide on-going ecological services from her office at Woombye on the Sunshine Coast, with support from the highly experienced, Brisbane-based EcoSM team. We wish Monica all the best in her new role.

Monica can be contacted as follows: Via the website: [www.ecosm.com.au](http://www.ecosm.com.au) or via Mobile: 0427 171 722 or Via Email: [monica.campbell@ecosm.com.au](mailto:monica.campbell@ecosm.com.au)



Monica's photo of a Narrow-nosed Planingale

### **The Forkliftable Gabion Concept**



Alan Robertson has devised the forkliftable gabion concept, suitable for transport by cranes (with fork attachments), forklifts and telehandlers. The gabion base is a single piece of mesh, folded to take the fork tynes.

The system was designed where gabions are assembled off site and then transported to site for placement, particularly in difficult situations. The concept also has a potential use in underground mining whereby the gabions can be used as an alternative to underground waste for constructing access barriers on sub-levels that are open to underground voids. The gabion material can be a screened by-product of road maintenance material construction and therefore the gabion is cheap to manufacture and can be recycled many times.