

# Dubbo Zirconia Project (DZP) Community Newsletter

ISSUE 16 / MARCH 2016

## Development update

### Mining Lease and Environment Protection Licence granted

Alkane Resources is delighted to advise that on Monday 14 March 2016 the NSW Environment Protection Authority (EPA) granted an Environment Protection Licence (EPL) for the Dubbo Zirconia Project.

Deputy Premier NSW and Member for Dubbo, Troy Grant, and Minister for Industry, Resources and Energy, Anthony Roberts, have both welcomed the news, acknowledging the company has met the rigorous government approval process in place for new mining ventures in NSW. "This project is very exciting and will not only be a boon for Dubbo, but the state and country as well," Mr Grant said. ([Read full press release.](#))

The EPL specifies the project emission limits to air, land and water, and details environmental monitoring and reporting requirements. Part of the EPL terms include the payment of a licence fee by Australian Zirconia Limited (a wholly owned subsidiary of Alkane Resources) to effectively fund the EPA to monitor the project's compliance.

This follows the successful application for a Mining Lease, which was granted by the NSW Department of Industry Resources & Energy over an area of 2,390 hectares of land at Toongi on 18 December 2015.

### Next steps

Now the Mining Lease and Environment Protection Licence have been granted, AZL will continue to progress towards the start of construction. The next steps in this process are outlined below.

**Mine Operations Plan** – A Mine Operations Plan (MOP) detailing the first two years of construction works has been submitted to the NSW Department of Industry Resources & Energy. Approval is pending AZL's lodgment of a security deposit, which is an amount required to fully rehabilitate the site at any given time.

**Final plant design** – Finnish company Outotec, a global technology leader in minerals and metals processing, has been approached after a competitive process to determine how they might construct the bulk of the DZP mineral processing plant. Outotec will first apply its specialist engineering knowledge in this field to further refine the plant design, based on the Front-End Engineering Design (FEED) completed by Hatch in August 2015. This must be completed before any soil is turned.

**Financing** – AZL is working to finalise financing arrangements for the project. The broad strategy remains a combination of several funding options: Export Credit Agencies (ECA) and strategic partners interested in investing, project debt and finally the capital requirement will be topped up with equity. The finalisation of these arrangements will provide the green light for the above steps.

## Community questions answered

In the last newsletter, we introduced the members of the DZP Community Consultative Committee (CCC). Member names and contact details, along with minutes of meetings, are available on the Alkane website ([http://www.alkane.com.au/index.php/current\\_projects/dzp-community/dzp\\_consultation\\_committee](http://www.alkane.com.au/index.php/current_projects/dzp-community/dzp_consultation_committee)). The CCC held its inaugural meeting on 17 November 2015 and a second meeting on 2 February 2016, with a series of helpful information exchanges setting a useful platform for the future. Members of the CCC were able to share inquiries they've been fielding about the project, which gives AZL the opportunity to address them in this newsletter.

### Recruitment of DZP workforce

There are two components of the DZP workforce to be considered: the construction workforce and the operational workforce.

**Construction workforce:** Technology and construction contractors will have the overall responsibility for building the DZP for Alkane. This means it will be those companies, not Alkane, that will be employing the construction workforce. One of these companies is Outotec, the global minerals processing technology and solutions provider approached to determine how they might construct the bulk of the processing plant.

Outotec is currently conducting an Early Contractor Involvement (ECI) process to find further value in the project and determine how Outotec may build the bulk of the mineral processing plant construction through an Engineer Procure Construct (EPC) process. It is expected that Outotec itself would engage different subcontractors to fill roles it doesn't provide itself. When the time for construction approaches, Alkane will provide links to the different contractors' websites on the Alkane website. It is anticipated that local tradespeople

and service providers would approach those companies directly.

**Operational workforce:** Recruitment by AZL will occur towards the end of construction, when the plant enters a commissioning phase. The operational workforce will be made up of imported specialists who will be required to re-locate to Dubbo and local people who will be trained as operators to work at the DZP.

### Dubbo-Toongi railway line

There has been speculation as to whether the Dubbo-Toongi section of railway line will be upgraded and re-opened to support the project. This has not been ruled out, and AZL is committed as part of the project consent conditions to assess (within three years of commencement) the economic viability of using this section of rail to transport certain key processing reagents to site.

AZL is keen to establish long-term and regular reagent supply chains through Newcastle Port, which may make the reopening of the Dubbo-Toongi railway line a viable prospect. However, the project needs to be fully operational first and the reagents available via Newcastle.



Still being assessed: reopening of the Dubbo-Toongi railway line

The option of railing some reagents through to Fletcher International siding in Dubbo will also be examined, but this will not involve the Dubbo-Toongi line.

In the meantime, a 27km length of Obley Road will be fully upgraded to support B-Double transport to site during the two-year construction period and into the future. AZL is fully funding the upgrade and will pay Dubbo City Council to maintain Obley Road for the life of the approval (as per the Voluntary Planning Agreement).

### What is forced evaporation?

One of the key improvements to the DZP process announced in 2015 was the introduction of 'forced evaporation' to replace the use of liquid residue storage facilities, meaning more water will be recycled into the process and overall water consumption will be halved. But what exactly is 'forced evaporation'?

Forced evaporation is simply a method of using energy sources available on site (low pressure steam) and electricity to heat the liquid waste solution coming from the plant. This converts the water in the solution into vapour (steam), which is then removed and condensed into water that can be reused, while the remaining concentrated liquid waste solution is either fed into another evaporator or removed, typically as a slurry. This slurry can in some cases be further treated to recycle some of the metal salts within it.

Forced evaporation uses a lot less space than the alternative – a series of plastic-lined ponds, which rely on passive evaporation of water into the atmosphere.

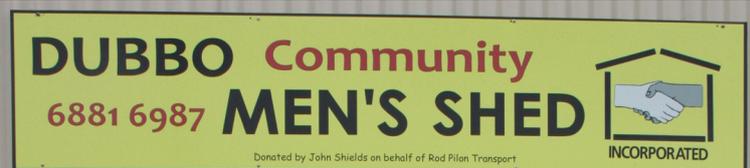
For Frequently Asked Questions (FAQ) including the questions asked at the recent community meetings please go to <http://www.alkane.com.au/index.php/faq>

## Community

### Bird deterrents

Dust gauges are important instruments on mine sites, as they measure the amount of dust (from farming activities, pollens etc) deposited in the vicinity – a requirement of the Environment Protection Licence. AZL established dust gauges at the DZP site five years ago to record baseline data against which to measure any new dust from the DZP that might be produced by construction and operation once they commence. The bird deterrents prevent the dust gauges, which are essentially glass flagons with funnels, being contaminated with droppings from perching birds.

To discourage birds from defecating on the dust gauges, AZL commissioned the Dubbo Community Men's Shed to come up with a set of 20 new deterrents. This group of resourceful community



The Dubbo Men's Shed team of bird deterrent developers

volunteers has developed an improved sturdy design that will outlive the previous versions.

### Participation in F1 and 4X4 in Schools Challenge

Alkane is a proud supporter of Dubbo College's participation in the global F1 in Schools and 4X4 in Schools programs, for which the Australian National Finals took place in Sydney during the first week of March.

The company congratulates Dubbo College's 4X4 team Zircon, which came away with second overall placing, and won 'Best Track Performance' and 'Most Innovative Design' for their home-designed and manufactured miniature four-wheel drive vehicle. The team has now been invited to participate in the July World Championships of 4x4 In Schools in Coventry, England.

Administered in Australia by the Re-engineering Australia Foundation (REA), the F1 in Schools and 4X4 in Schools challenges involve teams of secondary school students designing and manufacturing miniature F1 or 4X4 vehicles using modern engineering methods, racing them (via remote control) to determine performance, and presenting a folio and 'pit display', which are also judged. Being a Hub School, Dubbo College hosts and runs the local regional competition. The

### Contact Us

Subscribe to our Community Newsletters and find out more information about Alkane Resources and the Dubbo Zirconia Project on our website:

[www.alkane.com.au](http://www.alkane.com.au)

Or you can email us at:

[mail@alkane.com.au](mailto:mail@alkane.com.au)



Dubbo College's 4X4 team Zircon came away with second overall placing in the national championships

program is open to students at all levels of high school, with a range of competition classes. School and team registrations occur via REA in around June.

Alkane provided initial sponsorship in 2009 for Dubbo College to purchase the high-tech equipment required for the F1 in Schools program, as well as annual sponsorship and judges for the regional competition in the years since. The company applauds the interest the program generates in students for project design and management, engineering, and marketing skills.



Team Zircon's place-getting 4x4 model vehicle