DZP Environmental Impact Statement (EIS) Explained – Transport

Background

The purpose of the Environmental Impact Statement (EIS) is to outline all of the possible environmental and social impacts that a project may have on the surrounding area and people and the ways in which Alkane intends to mitigate and minimise this impact.

The DZP is based on the mining and production (minerals processing) of the metals zirconium, niobium and rare earths on site at Toongi, located about 25km south of the city of Dubbo in the Central West of NSW.

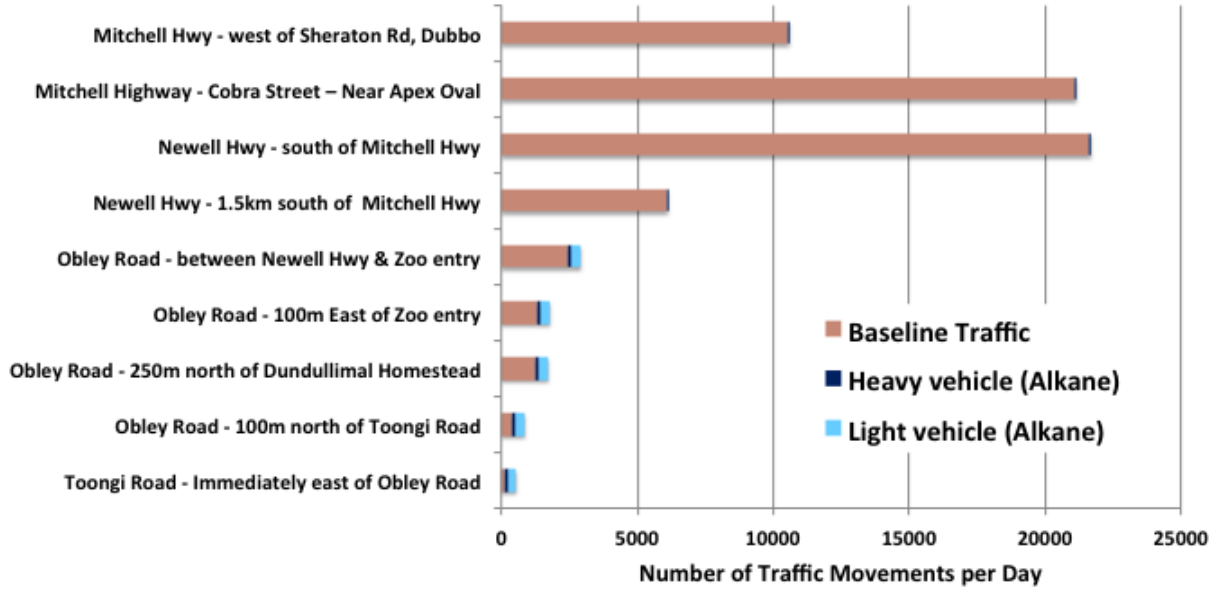
Transport options

The EIS outlines three possible options for the bulk supply of materials to the DZP site:

- **A - Rail to Toongi.** Approx 3 trains per week and road for materials not suitable for rail
- **B - Rail to Dubbo and road to Toongi.** Transfer materials at Dubbo
- **C – Road to Toongi.** Truck all materials to Toongi by road (small amounts of containerised materials would still be transported by rail as per Option B).

Option C is currently the most viable option, based on logistical issues that are impacting the supply of key materials required for the day-to-day running of the DZP. However, Alkane continues to investigate future opportunities for rail transport. More details are provided later in this document.

Option C - Forecast traffic 2016 – Assumes all traffic will travel by road once plant is operating



Safety concerns with Option C – All road

Local community members have expressed concern regarding additional project-related traffic on Obley Road. Alkane remains committed to safe transport, and will provide a significant road upgrade along the length of the Obley Road. This includes straightening of bends, installing bridges and culverts, monitoring trucking schedules to minimise traffic issues during school bus hours, and improving the road entry to the Taronga Western Plains Zoo. The Alkane team will schedule the roadwork upgrades to commence as part of the beginning of the construction activities.

Significant improvements to the local roads and creek crossings

As part of the Dubbo Zirconia Project (DZP) Alkane has outlined a commitment to providing significant upgrades to the local road infrastructure in the order of $12+ million.

The five key areas include:

1) **Upgrade of 27km Obley Road to B-double standard**
    a. Road will be improved/upgraded for a 20-year life road
    b. Entire length of road will be 9 m sealed road over an 11m gravel formation (two 3.5m lanes plus sealed shoulder of 1m on both sides)
    c. Straightening of some sections of the road to improve road safety

2) **Upgrade of Obley Road/Toongi Road Intersection.** Turning lanes will be extended north of Toongi road

3) **Building a bridge over Wambanganglang Creek to a 1-in-20 year flood height**

4) **Improvement of creek crossings at Hyandra and Twelve Mile Creek**

5) **Upgrades to Dubbo Zoo entry safety**
    a. Improving the road condition between Newell Highway and Zoofari Lodge entrance
    b. Lengthening the turning bay and acceleration lane at zoo entrance
    c. Further measures such as street lighting opposite entrance to be considered in consultation with the Zoo & Council

Road vs rail – Reassessment over the next 4-5 years

Alkane has recently initiated a major logistics study that will investigate all sources of process materials and their transport to site.

Some of the Dubbo and Toongi community members have expressed a preference for the Toongi railway to be reactivated in order to manage transport of materials to and from the DZP site. The Alkane team is aware of this preference and remains committed to exploring rail transport opportunities. Alkane itself prefers the use of rail as it expects both financial savings and impact reduction on implementation.

At this stage of the project, there are five key issues preventing the immediate reactivation of the rail line and use of rail:

- **No consolidated supply of four key materials in Newcastle –** The purpose of the Toongi rail line would be to transport four key materials from Newcastle to Toongi three times per week in order to deliver sufficient materials to support DZP operations. However, whether Alkane can source all four of these materials from a Newcastle supply base (without significant additional trucking simply to deliver the materials to Newcastle) remains unclear, and firm commitments from relevant supply partners will not be given until the DZP receives project approval. Negotiations with prospective suppliers are ongoing.
- **Rail pathing through coal traffic to Newcastle –** The DZP train would be scheduled to run from Newcastle to Toongi. Guaranteed train pathing and scheduling of a new train service on an already busy line is a complicated logistical issue which takes time to arrange after material supply is determined. Alkane continues to explore its options with the relevant rail providers.
- **Capital cost of rail upgrade to Class 1 track $30M –** Alkane is currently the only proposed user of the rail line. As rail brings potential benefits to any future users, on resolution of the other key issues preventing rail Alkane would seek infrastructure assistance from government to upgrade and reactivate the track. As the DZP and ancillary services/industries grow, we hope that upgrading the rail line would assist in building a business case for investment from multiple groups.
- **Supply of new purpose-built locomotive/rail** - The advance order time for the special – purpose locomotive, carriages and rail required for the project are approximately two years with full payment of $5 million to be made upfront. Alkane cannot commit to a third party rail transport provider, thereby allowing purchase, until the DZP has been approved.
- **Community acceptance of rail re-opening –** As per Alkane's commitment to building strong community relationships, community acceptance of the rail project is a crucial component of its success.

These issues have the potential to be resolved over the next 4-5 years, creating clarity for future rail transport options. Alkane will continue to monitor the situation and review these opportunities as they arise. Updates will be available on the Alkane Resources website at www.alkane.com.au