



# BRIDGETOWN CAMP SCHOOL

“Where learning is fun”

To assist schools in developing the *Excursion Management Plan* required by the DOE policy *Excursions: Off School Site Activities*: <http://det.wa.edu.au/policies/detcms/policy-planning-and-accountability/policies-framework/policies/excursions-policy-and-procedures.en?cat-id=3457100>

I am pleased to supply the following information.

**Colin Bygraves**  
Camp School Manager,  
Bridgetown Camp School.

**Talison Minerals Pty Ltd – Greenbushes Operations  
&  
Greenbushes Discovery Centre.**

Physical Address P.O Box 31, Greenbushes, W.A 6254  
Phone Number 08 97825700  
Fax Number 08 97612322  
Website Address <http://www.talison.com.au/>  
Contact Person Debbie Walsh – Public Relations Officer

### **Purpose of the Excursion**

The Greenbushes Discovery Centre is a module of the South West Ecomuseum which provides a fascinating insight into the natural and cultural environment of the south west. This multi –media experience represents the town, its history, its people and places of natural beauty.

Talison Mine, Greenbushes, is one of the world’s largest suppliers of tantalum and lithium. Tantalum is mostly used in capacitors for electronics, including Sony Play stations and mobile phones. Lithium is used in glassware, TV tubes, computer monitors, fiberglass and ceramics.

Students observe the open cut operations from a viewing platform and are provided with a tour of one of the Primary Mineral Processing Plants. Both the tantalum and lithium minerals processing stream have achieved world recognized quality management system certification for mining, processing, maintenance, purchasing, packaging, dispatch and laboratory functions.

## Environment

The Talison Mine operations are situated adjacent to the Greenbushes town site, 15 kms north/west of Bridgetown. Located on one of the oldest mining tenements in Western Australia this site has a long history of mining activities dating back to 1888. With a workforce of around 300 personnel Talison is a major employer in the region.

A combination of open cut and underground mining methods are used to extract tantalum, tin, spodumene (lithium) and kaolin minerals. Tantalum deposits are very rare, with this operation being one of only three in Australia. The Greenbushes pegmatite is the world's largest hard rock tantalum resource and the largest and highest grade lithium mineral resource in the world.

The tour, unless otherwise requested, consists of:

- **Tantalum Primary Processing Plant OR Lithium Minerals Processing Plant:** Where students are guided along a designated marked tour route incorporating covered gangways, staircases and viewing platforms, as they observe large scale industrial equipment extract minerals from crushed ore.
- **Open Cut Viewing Platform:** Provides progressive seating on the relatively steep walk ramp; with a gazebo, undercover seating and information panels at the top.
- **Greenbushes Discovery Centre:** Located in the middle of the town, was once the administration building for "Greenbushes Tin Pty Ltd."

The Discovery Centre and viewing platform are reasonably accessible to wheelchairs; neither processing plants, however, have wheelchair access. The Centre has clean drinking water, hand basins, and toilets available.

## Transport

Transport is the responsibility of the school. The camp school will arrange, on request, local buses, however, most of these need to work around their school bus run commitments.

On certain occasions the camps Mitsubishi Rosa bus licensed to carry 25 students is used to transport students. The bus is insured by DOE.

## Students' Capacity

The Greenbushes Discovery Centre and Open Cut Viewing Platform are suitable for all ages, the tour of the Processing Plants, however, is restricted to years 6 - 12.

- **Tantalum Primary Processing Plant:** students will observe valuable minerals being liberated and recovered from the ore using milling, screening and gravity separation processes into a primary concentrate.
- **Lithium Minerals Processing Plant:** students will observe the spodumene being liberated and recovered into a number of spodumene minerals by milling, screening, flotation, gravity and magnetic separation processes.
- **Open Cut Viewing Platform:** overlooks the Cornwall Pit where tantalum ore was extracted in open cut mining until 2003. The portal to the underground mining operations is situated at the base of the Cornwall Pit and mining still continues in this area via the underground operations.
- **Greenbushes Discovery Centre:** includes; Greenbushes Historical Timeline; People Scope; Greenbushes Discovery Game; Animals of the Forest display; as well as old hand tools and bric a brac.

The Centre also houses a Mining and a Timber Module. The Mining Module details tantalum and lithium operations and displays each minerals products. It also features a "Discovery Decline", where students venture into the depths of, and experience the sights and sounds of, an underground mine. Drive the bogger or operate the jumbo on computer generated DVD's; peek in the refuge chamber or even set off a (simulated) mine blast!

The Timber module is even more interactive, consisting of a: virtual indoor forest; timber mill control room; kiln (or drying room); and, virtual log truck driving simulation. Wood products are also displayed.

### Supervisor/Supervisory Team

Talison management provides and fully funds admission to the Discovery Centre and a mine site Tour Guide. At the Lithium or Tantalum Plant the tour guide is joined by a "plant" staff member, often the Plant Supervisor.

Whilst Talison and camp staff may instruct, lead, demonstrate or assist in an activity, the Teacher-in-Charge is responsible for overall group supervision and discipline.

The Teacher in Charge will provide the correct ratio of supervisors to students, in accordance with DOE's policy: EXCURSIONS: *Off School Site Activities*.

<http://det.wa.edu.au/policies/detcms/policy-planning-and-accountability/policies-framework/policies/excursions-policy-and-procedures.en?cat-id=3457100>

### External Provider Information

Talison Greenbushes Pty Ltd ABN: 56 125 585 284 Public Liability Insurance: \$50,000,000

### Supervision Strategies

See: Talison Minerals PTY LTD (Greenbushes Operations) GUIDED TOURS PROCEDURES: *Attached*.

### Identification of Excursion Participants

The tour, including access to the Discovery Centre, is exclusively for the visiting school.

All participants on the tour will be supplied with safety equipment which consists of a safety helmet; safety glasses; earplugs; and an orange reflective vest.

### **Communication Strategies**

The School will have a mobile phone with them on this excursion. In addition, Camp Staff will have a mobile phone. Coverage is normally good.

Plant personnel assisting with the tour are instructed to ensure radio contact with the Control Room.

For DOEailed communication requirements between Talison staff see: Talison Minerals PTY LTD (Greenbushes Operations) GUIDED TOURS PROCEDURES: *Attached*.

### **Emergency Response Plan**

The Greenbushes Operations sets a high benchmark in safety culture and safety systems, rewarded in 2002 by receiving a Minerals Council of Australia, Mining Industry Excellence (MINEX), and Acknowledgement Award.

The site has an active emergency response team, comprising of staff from the open cut and underground operations. The team meets regularly for training exercises, and complete in state and regional competitions to maintain high skills levels.

Bridgetown CS information package includes a detailed Emergency Response Plan. In addition, Talisons's own Emergency Response Procedures are strategically displayed throughout their operations.

The Teacher in Charge is required to have up to date student medical information with them at all times.

### **Briefing Students and Supervisors**

The tour guide will conduct a safety briefing which includes:

- The proper fit and need to wear safety equipment;
- Reminding teaching staff of their responsibility in assistance with supervision of the tour group;
- Advising all tour members that if they become separated from the main party they must remain where they are. That they are not to walk through the plant unescorted;
- Instructing the tour party that they must not deviate from the designated marked tour route; and
- Advising all participants to keep their hands clear of all moving parts within the plant.

The Teacher in Charge will need to brief students on;

- The buddy system;
- General rules;
- Standards of behavior required; and,
- Consequences for breaching these requirements.

### **Other Relevant Details**

All visitors to the mine are required to wear closed footwear for protection (note: no sandals or thongs) and preferably clothes to suit, for example, long sleeved shirt and trousers or jeans.

**This information is valid until 31 January 2018**