

Stockman Base Metals Project Briefing Notes - February 2015

The Stockman copper and zinc mine project is located about 16kms southeast of Benambra on the headwaters of the Tambo River, a tributary of the Ramsar listed Gippsland Lakes.

Stockman, a subsidiary of West Australian mining co Independence Group, plans to re-open the old Wilga mine and develop the Currawong mine. The company plans to recommission and expand the old tailings storage facility (now known as Lake St Barbara)

On 30th October 2014, the then Vic Planning Minister, Mathew Guy, approved the Stockman Mine Project Environmental Effects Statement (EES).

On 19 December 2014 Federal Minister for Environment Greg Hunt approved the EES re EPBC Act matters.

At this stage, there is no mining licence issued over the tailings storage facility.

The Wilga or Benambra mine has a controversial history:

- It was first operated by Denehurst between 1992-96. The 1987 EES proposed a 20 year operation.
- The tailings dam was constructed right across Straight Creek on the headwaters of the Tambo River and destroyed 90% of a 22ha rare sphagnum swamp, now listed under both the Vic FFG Act and the national EPBC Act.
- State government 'investment' totalled \$5.8 million, including: road works \$2.9million; dam construction contribution \$1.2 million; unpaid royalty \$1.2 million; project facilitation \$0.5 million.
- In 1996 Denehurst ceased operations and went into receivership in 1998. The company walked away from the site forfeiting their \$350,000 environmental rehabilitation bond. They left behind a tailings dam containing 700,000 tonnes tailings leaking acid and heavy metals into the Tambo River. Some of the tailings were exposed to the air at risk of causing Acid Mine Drainage (AMD).
- The EPA authorised emergency discharges to Straight Ck of contaminated water from the tailings dam in 1999, 2000, 2001-2002, & 2005 to prevent the tailings dam overtopping (the dam had been built

without a spillway) and potentially failing. Zinc levels in the tailings dam water discharges ranged from 0.63mg/l to 6.33mg/l (cf ANZECC freshwater limits .008 mg/l)

- In 2006 the Vic Department of Primary Industries rehabilitated the site at a cost of almost \$7 million to the taxpayer. Additional discharges (140 ML) were also made from the tailings dam in late 2005 to lower the water level by 1-2m prior to works beginning on the dam to strengthen the dam wall and construct a spillway. Heavy metal levels in the discharges made during rehabilitation were permitted well above ANZECC limits e.g. ANZECC limit for zinc is .008mg/l but the objective during rehabilitation was set much higher at .16mg/l (EMP Nov 2005). The heavy metal levels in the tailings dam discharge water exceeded the rehabilitation objective limits a number of times, causing the shutdown of discharges during that period. Finally, although DPI had planned to release a total of 150ML, approx. 10ML was not released before work was due to begin.
- Following remediation of the Tailings Storage Facility in 2006 it was renamed Lake St Barbara and the area surrounding it exempted from future mining operations.
- Since 2011 the dam has been operating as a flow through system i.e. after heavy rains it spills into Straight Creek and the Tambo River. The rehabilitated tailings dam is also still leaking polluted water with elevated levels of cadmium, copper, zinc above freshwater limits at an average rate of 86,000 litre/day, from the northern abutment of the dam wall. There is also an acid seep at the old processing plant site on Waxlip Spur that is apparently leaking heavy metals into the Tambo River below the Straight Ck junction.

So what does the proposed Stockman mine project involve?

- Stockman plans to operate for only nine years i.e. at Wilga mine for three years then open and operate Currawong for six years.
- The company plans to expand the tailings dam to enable it to store up to 7million tonnes of additional toxic tailings –i.e. ten times the volume currently stored in the dam. The earthen rockfill dam wall will be raised another 25 metres in a series of staged lifts to a total of 45 metres above the valley floor and expand the surface area from 8ha to approx 32ha.

- Each lift will require joining of the internal plastic liner exacerbating the risk of breakage or leaks.
- However before works start on the dam wall the water level in the tailings dam will have to be reduced by 3metres - Stockman has not excluded the possibility of discharging this water into Straight Ck.
- Water quality objectives will not be established until AFTER work begins.
- 2km of Straight Ck will be diverted and an additional 0.36 ha of the nationally endangered swamp will be destroyed.
- The project will destroy a total of 600 old hollow trees and hundreds of rare mountain banksias, and threaten a number of rare flora and fauna species.
- The dam wall plastic liner installed on the original tailings dam has a lifespan of possibly 30yrs according to one of the Stockman employees at the site visit in May. The concrete grout curtain at the inside base of the dam wall has a life span of 80-100 yrs. The new plastic liners may have a lifespan of 100-200 years.
- Post-closure the tailings dam is designed to operate as a flow through system to Straight Creek and the Tambo River. The dam wall will be built to withstand a 1:10,000 year flood but that does not mean it will only spill once in ten thousand years. It simply means the dam wall will not give way. Once the tailings dam fills from upstream tributaries and rainfall the polluted tailings water will spill down the massive spillway.
- The company has not proposed to install a water processing system that would ensure any discharges meet freshwater quality standards. It intends to rely on a solar pump to recycle dam wall seepage back into the dam.
- The tailings will have to remain covered with two metres of water forever to prevent an acid reaction occurring.
- If the dam wall fails at anytime in the next thousands of years the ecosystem of the Tambo River and Gippsland Lakes will be destroyed.
- An independent dam break analysis has not been undertaken. The preliminary assessment modelling undertaken by the proponent suggested that in the event of dam failure during a possible maximum flood the tailings would be deposited within 26-28km downstream. The town water supply of Swift's Creek is drawn off about 30km

downstream. The river also provides stock and domestic water for many others. In a major flood heavy metal contamination could occur all the way down the Tambo River to the Gippsland Lakes, similar to that which has happened at Captains Flat NSW in the Molonglo River down to Lake Burley Griffin in the ACT.

- The cost of the Rehabilitation Bond has not yet been calculated
- During the EES Inquiry process DSDBI (Dept State Development Business & Innovation) calculated a post-closure cost of \$264 million for monitoring over the next thousand years. This did not include any funds for major works on the dam or rehabilitation of a contaminated river system in the event of dam failure.
- The previous Planning Minister's assessment recommended a Post-Closure Trust Fund of \$5.5 million with co-contributions from the company and the government. The Minister did not consider that the trust fund should account for catastrophic failure of the tailings dam.
- The previous Planning Minister in his assessment (p8) stated that " No submissions raised the chosen location of the TSF as an issue." This is completely incorrect, VNPA, GEG, and a number of individual submitters argued that any expansion of the current tailings dam posed unacceptable risks.
- The Benambra mining operation by Denehurst was an environmental disaster, and economically unviable. Austminex in 2001 also decided against re-opening the mine project as it was not economically viable.
- Until the economic viability of the Stockman project in the medium term is publicly proven there is no economic justification for lifting the current exemption from mining operations over the Tailings storage facility.
- There are critical economic and dam design matters that must be independently assessed.
- Stockman Project matters should be expressly determined by the Minister for Energy, rather than delegated to the Executive Director for Regulation/Resources.
- The potentially catastrophic environmental consequences of dam failure at this site should preclude lifting the exemption over the tailings dam.