

Stockman Base Metals Project December 2017

The Stockman copper and zinc mine project is located approximately 16kms southeast of Benambra in very steep country on the headwaters of the Tambo River a tributary of the Ramsar listed Gippsland Lakes.

In May-June 2014 the Stockman Base Metals Project Environmental Effects Statement (EES) prepared by Independence Group, a WA mining company, was considered by a Victorian Government EES panel hearing. The Stockman EES covered plans by the company to re-open the old Benambra Wilga mine and develop the Currawong mine. The company also planned to recommission and massively 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 EES. On 19 December 2014 Federal Minister for Environment Greg Hunt approved the EES re EPBC Act matters.

At that stage Independence Group did not hold a licence over the tailings storage facility as a licence exemption (to exclude mining operations forever) had been imposed on the site since the tailings dam was rehabilitated at a cost of \$7million to the Victorian taxpayer in 2006. Over the next two years Independence Group did not proceed with development of the Stockman project.

In early December 2017 CopperChem, a wholly owned subsidiary of Australian public company Washington H. Soul Pattinson Company, completed the purchase of the Stockman project from Independence Group. At the same time the Victorian Minister for Resources signed off an amendment to the mining licence exemption to enable a mining infrastructure licence to be issued over the tailings dam (Government Gazette 14 December 2017).

Background

The Benambra mine has a controversial history:

- It was first operated by Denehurst for four years from 1992-96. The 1987 EES proposed a 20 year operation.
- The tailings dam was constructed in a waterway i.e. 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 royalties \$1.2 million (Vic Govt received no royalties at all from the project); 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 totalling 160ML 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). According to the Benambra Mine Rehabilitation Project Control Board the discharges caused contamination of groundwater.
- 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 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, only approx. 140 ML could be 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 exempted from any 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.

The Stockman Base Metals Project as per the EES:

- Independence Group NL planned 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 – the Stockman EES did not exclude 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 EES Inquiry Panel site visit in May 2014. The concrete grout curtain at the inside base of the dam wall has a life span of 80-100 yrs. The new plastic liners 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. The water balance modelling for the original Benambra tailings dam was completely inaccurate. In light of potential climate change impacts, there is no way the Stockman Project's current water balance modelling for the proposed expanded dam can be relied upon.
- 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 water catchment reserve for town water supply of Swift's Creek is 25km downstream. 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 GHD for DSDBI (Dept State Development Business & Innovation) calculated a Post-Closure Trust Fund 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.
- However the then Planning Minister Mathew Guy's EES Assessment Report recommended a Post-Closure Trust Fund of only \$5.5 million (misquoting the GHD report) 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.

- Minister Guy incorrectly stated in his assessment (p8) that: “No submissions raised the chosen location of the TSF as an issue.” This is completely false, VNPA, GEG, and a number of individual submitters argued that any expansion of the current tailings dam posed unacceptable risks to the Tambo River.

The Victorian regulatory authorities have previously failed to adequately protect the Tambo River. Should the tailings dam wall fail at any time in the next thousands of years there will be catastrophic consequences for the Tambo River and Gippsland Lakes.

Gippsland Environment Group <http://geg.org.au> Dec 2017