

Stockman Base Metals Project, Benambra - East Gippsland April 2019

The Stockman Project is located 16 km southeast of Benambra on the headwaters of the Tambo River which flows into the Ramsar listed Gippsland Lakes. Stockman is owned by WHSP Stockman Pty Ltd, a subsidiary of Round Oak Minerals, which is itself owned by Washington H Soul Pattinson.



Photo Lisa Roberts

Background

The original Benambra copper and zinc mine was operated by Denehurst Pty Ltd from 1992-96. State government 'investment' in the project totalled \$5.8 million; the company paid no royalties.

In 1998 Denehurst went into administration and walked away from the site forfeiting its \$375,000 rehabilitation bond. The company left behind a tailings dam containing 700,000 tonnes of tailings, leaking acid and heavy metals (zinc, copper, cadmium, manganese, lead and arsenic) into Straight Creek on the headwaters of the Tambo River. The dam had been constructed without a spillway and was at risk of breaching.

In 2004 the tailings dam was exempted from any future mining licence under the MRSD Act, i.e. no mining licence could be issued over that area.

In 2005-06 the Department of Primary Industry rehabilitated the mine site and tailings dam at a cost of almost \$7million and following its rehabilitation renamed it Lake St Barbara.

In mid-2014 Independence Group's (IGO) Stockman Base Metals Project EES was made available for public comment. The company proposed to re-open the old Wilga mine and develop the Currawong mine, a nine-year operation processing 9 million tonnes of ore, producing 7 million tonnes of tailings. IGO also planned to reopen and massively expand the old tailings storage facility (TSF). At that time the company did not have a mining licence over the TSF.

30 October 2014, the then Victorian Planning Minister Mathew Guy, approved the Stockman Base Metals Project EES. However IGO did not proceed with development and in December 2017 the project was sold to Washington H Soul Pattinson.

14 December 2017, the then Minister for Resources Tim Pallas, amended the mining licence exemption over the TSF.

24 July 2018, Earth Resources Regulation issued WHSP Stockman Pty Limited a mining infrastructure licence to re-open and expand the TSF on the headwaters of the Tambo River.

17 April 2019, Earth Resources Regulation approved the Stockman Project Work Plan. Water Quality Objectives for trigger levels of heavy metals in surface water and groundwater were apparently not included in the Work Plan. The Work Plan is not a public document.

Threats to water quality in the Tambo River

Between 1999-2005 the EPA permitted releases of 160 ML of contaminated tailings water, from Lake St Barbara to prevent the dam overtopping.

In late 2005 an additional 140 ML was released prior to remediation works on the dam wall and construction of the spillway.

At the time the EPA permitted discharge limits for zinc that were 20 times higher than ANZECC limits for 95% freshwater aquatic species protection. This was exceeded to such an extent that releases had to be halted with zinc levels almost 800 times higher than the objective.

The Stockman Base Metals Project EES 2014 identified that tailings dam water contained elevated levels of zinc, copper and cadmium.

The tailings dam continues to leak (despite earlier remediation works) contaminated water at a rate of approx. 86,000 litres per day from the northern abutment of the dam wall.

The spillway also operates as a flow through system into Straight Creek (which runs into the Tambo River). There is no baseline water quality data for Straight Creek. The EES (C7, xvi) identified the TSF has impacted water quality in Straight Creek through historic discharges (i.e. controlled discharges during remediation and uncontrolled discharges via the TSF spillway) and as well as seepage to groundwater.

At a site visit in February 2018, Gippsland Environment Group collected water samples from seepage emerging from midway up the dam spillway and from a pondage at the foot of the dam. Results identified zinc levels 12 to 21 times higher than ANZECC 95% freshwater protection limits and copper was 9 to 50 times higher.

Risks of Tailings Dam expansion

Before WHSP Stockman Pty Ltd can begin work on the dam wall to expand the size of the tailings storage facility (TSF), the water level will have to be lowered by 3 metres over the entire 8ha dam surface area.

The discharged water will go into Straight Creek and then enter the Tambo River.

East Gippsland Water draws water from the Tambo River for the Swift's Creek town water approx. 30Km downstream from the TSF.

There has been no study of the impact of the cumulative load of heavy metals discharged from the TSF. According to the EES there has been no assessment of the net flux or environmental fate or ability of the downstream aquatic environment to assimilate the contaminants without harm. Exposure to heavy metals can cause cancer and acute organ damage.

Tailings dam failure

The original tailings dam was constructed using a concrete grout curtain (lifespan 2-80 yrs) and a 2mm thick Carbofol 406 geomembrane liner, (lifespan possibly 30 yrs, according to IGO engineer at EES panel site visit in 2014) on the inside of the dam wall to prevent seepage of contaminated water into Straight Creek and the Tambo River.

WHSP Stockman plan to raise the dam wall, in a series of lifts, from its current height of 20 m above the valley floor to 45 metres, increasing the dam surface area from 8ha to approx. 35 ha. The tailings have to remain covered with at least two metres of water forever.



Photo EMF

The High Density Polyethylene (HDPE) liners to be used in the expansion of the tailings dam have a lifespan of only 100-200 years. Reliance on HDPE liners is a short-term seepage control measure yet the toxic tailings must remain quarantined from the aquatic environment for the next thousand years.

A 2015 international study¹ of tailings storage facility failures identified 50% of all dam failures have occurred since 1990 and that the failures were due to the increasing prevalence of older TSFs with a small footprint being pushed higher than originally planned.

There has been **NO** independent dam break analysis undertaken for the Stockman project.

WHSP Stockman's Post-closure Trust Fund Deed (4 Dec 2017) of \$5.7 million **does not** include the cost of replacement of the dam liners or grout curtain or any major rehabilitation works in the event of dam failure. The liners and grout curtain cannot be replaced without emptying the TSF.

The residual risk of dam failure remains with the Victorian Government i.e. the taxpayer.

¹ LN Bowker & DM Chambers (2015) *The Risk, Public Liability & Economics of Tailings Storage Facility Failures*, Centre for Science in Public Participation.

Water diversion from the Tambo River

The Stockman EES identified that the project would require 2.5 GL of water including 230ML of freshwater which the proponent planned to obtain from the Benambra Plain borefield as annual flows in the Tambo River were highly variable and considered too unreliable.

At the July 2018 Omeo community meeting the new owners of the project WHSP Stockman Pty Ltd announced it had revised its water balance modelling and now intended to source additional freshwater requirements from the upper Tambo River. The company refused to provide their water balance report to Gippsland Environment Group.

The WHSP Stockman has a 15megalitre (ML) diversion licence for Straight Creek and plans to apply for another 5ML from Straight Creek and potentially 80ML from the upper Tambo River.

When Gippsland Environment Group made a site visit to the tailings dam with Earth Resources staff in February 2018 the north branch of the Tambo River at McCallum Rd was dry. The Tambo below Swift's Creek ceased to flow this summer (2018-19) and at end April 2019 is still not flowing.



Any water diversions from the upper Tambo River will exacerbate the impact of climate change on downstream flows to Swifts Creek and the Gippsland Lakes.

The Stockman Project poses unacceptable long term risks to the health of the Tambo River and Gippsland Lakes.