

What will be left for future generations after Hillside closes?

Rehabilitation: Minimalist vs Leading Practice

If the proposed Hillside mine goes ahead, after 15 years of operation the 30 sq. km. site will contain

- a massive open pit;
- three huge waste rock dumps;
- a 400 hectare tailings dam;
- a network of haul roads; and
- a large crushing and processing plant.



Is this what we are to be left with?

What are DMITRE's regulatory guidelines?

The required mine closure and completion plan must

- *“demonstrate that the site will be progressively rehabilitated (where practical) to a stable condition and use, consistent with land use at the time mining operations commenced, or to a post-mining land use as agreed with stakeholders.”*
- The mining company should *“...identify potential opportunities to leave the site in a better state than existing.”*

Ref: "Regulatory Guidelines for Miners: Preparation of a mining lease proposal or mining and rehabilitation program. Version 4.11, Jan 2011, p 35, 36)

What have Rex promised to do?

Rex intends to implement a closure plan that not only complies with legal obligations but also reflects community expectations and delivers a sustainable outcome for the Hillside project site

(Ref: Rex Minerals MLP, 2013, 6-151).

What should Rex do to rehabilitate Hillside to leading practice standards?

- The pit void should be fully backfilled .
- All contaminated material, including the tailings, radioactive material and any remaining oxide stockpiles should be returned to the pit. The pit is a stable geological structure and so provides safe encapsulation.
- Overburden in the waste rock dumps should be used to backfill the pit .
- The final topography reshaped to match as closely as possible the original pre-mining landscape and ecosystems (vegetation) that are appropriate and self-sustainable should be reconstructed.

What are Rex proposing to do?

Unlike most existing large open-cut mines in SA, Hillside sits within **prime cropping land in a populated rural and tourist region close to holiday settlements and towns**. Rehabilitation practices that may be appropriate in remote areas – ie leaving the mine site in a stable and safe condition – are totally unacceptable for Hillside.

“Rex’s proposed rehabilitation strategy is minimal, inadequate in terms of the long-term stability of the post-mining landscape “ (1)By implementing a minimal (and least costly) rehabilitation strategy, the environmental legacy will be passed on to subsequent ‘owners’ and eventually the community and the tax payers” (2).

(1) (A Milnes 2013; Rex Minerals’ Hillside Mine – a critique of the proposal) (2) A Milnes, presentation to Rex Minerals Community Consultative Group 4th March 2014)

1. The open pit void will not be backfilled

Instead, this huge hole covering over 2 square kms and 450 metres deep will be ‘made safe’ by constructing a fence around the pit to prevent public access. Potentially toxic water will not start to accumulate at the bottom of the pit until 50 years after mine closure and will take almost 700 years to reach equilibrium. Even then, water levels will still be 45 – 60 metres below the current land surface, leaving a permanent gaping hole in the landscape (Rex Minerals, MLP Response Document, 2014; 47).

Rex’s reason for not backfilling the pit?

It is “unachievable economically and practically” (Rex Minerals MLP, 2013; 8 – 97)

If it is not economic to backfill the pit to leading practice standards the mine should not go ahead!

2. Tailings Storage Facility

During the life of Hillside contaminated tailings from the processing plant will be held in a Tailings Storage Facility within the largest waste rock dump. Post mining, the highly toxic tailings will be dewatered and left in situ within this dump. Because waste rock piles and tailings dams are engineered, man-made structures they are highly likely to fail in the long term, resulting in erosion of tailings or seepage of contaminants into ground and surface water. This would be avoided if all contaminated material was returned to the pit.

3. The Waste Rock Dumps

After mine closure, three large waste rock dumps will be left in situ and used as containment structures for contaminated tailings, residual high level radioactive materials and any unprocessed oxidised ore. This oxidised ore contains environmentally unstable atacamite that has **“the potential to cause contamination”** (Rex Minerals, MLP, 5-62). All such material should be returned to the pit for safe storage.

The dumps will be reshaped but not significantly reduced in height. The reason? **“The cost of ... reinstatement of sufficient quantities of base rock into the pit void to achieve substantially smaller WRDs that would more closely resemble surrounding land forms is excessive and would be uneconomic thus jeopardizing the economic benefits of the project”** (Rex Minerals, MLP; 8-97).

Who will wear the costs of rehabilitating Hillside to ‘leading practice’ standards?

The community and future generations should be left with no residual liability for site rehabilitation or maintenance.

(DMITRE, Regulatory Guidelines for Miners, p. 35).

If Rex leaves the open pit, the waste rock dumps and the tailings dam after mining, and this results in contamination of the surrounding environment, who will wear the cost? The local community will not have the millions of dollars that may be needed to repair the damage, and so will be stuck with the problem in perpetuity.

Although Rex will lodge a bond with the regulator to cover rehabilitation costs, any bond based on the current minimalist rehabilitation plan for Hillside would be totally inadequate to return the landscape to a state acceptable to the community.

What will happen if the mine ceases operations prematurely? There are tens of thousands of abandoned, un-rehabilitated mine sites across Australia. There are 11,000 abandoned mines in WA alone although the figure could be far higher. A former WA mine inspector said closed mines were “a gigantic legacy headache for government” with taxpayers footing the bill for fixing up abandoned mines” (Weekend Australian, Dr Nic Dunlop, Legacy Warning in Mine Collapse November 2013, page 23).

WILL THIS BE REX MINERAL’S LEGACY TO YORKE PENINSULA AND THE PEOPLE OF SOUTH AUSTRALIA?



**Remember Queenstown, Tasmania?
That legacy is still with us.**

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