

Tailings Impoundments At Waihi – Part Two

In this update we continue covering details of the Tailings Storage Facilities (TSFs) at Waihi.

Previously we covered how our tailings impoundments are designed to withstand even 1 in 10,000-year seismic events and the role cyanide plays in the gold process. If you missed it, you can find part one on TSFs (or any of our past updates) on the OceanaGold Waihi website at: waihigold.co.nz

CONSTRUCTION METHODS

The Waihi TSFs are formed using downstream construction embankments, similar to the design used for water storage dams. They are designed, constructed, and operated in accordance with the New Zealand Dam Safety Guidelines published by the New Zealand Society on Large Dams (NZSOLD). These guidelines are based on international best practices. Their design undergoes a rigorous engineering review under the Building Act, while a similarly detailed review of their environmental performance is required as part of gaining resource consents.

Once constructed, ongoing, independently verified monitoring of water quality, structural integrity, and other operational elements are conducted throughout the life of a TSF.

The embankment structures are engineered and constructed from selectively placed mine waste rock. They butt up against rising ground to form large impoundments which contain the tailings.

With time the tailings will consolidate and become essentially soil-like with an inherent strength, and low moisture content. Following the cessation of tailings deposition and completion of tailings consolidation, the risk of release of tailings is almost inconceivable because of its inherent strength.

WATER

The Waihi site currently operates two TSFs, with a third TSF proposed – TSF 3. Construction of TSF2 began in 1987, and TSF1A in 1999. Placement of tailings to TSF2 stopped in 2005 and currently only rainwater flows into the TSF2 impoundment area.

By 2007 (within three years), the water quality within TSF2 was of such a standard that Waikato Regional Council approved direct discharge to the river. Of particular note since deposition of tails was ceased, the TSF has become capable of supporting aquatic life and for many years the facility has been a habitat for a variety of waterfowl. The outflow is continuously monitored for turbidity (cloudiness), conductivity and pH, and is periodically tested for a wide range of parameters to ensure that its quality remains suitable for discharge.

The TSFs have been designed to accommodate all waste rock and tailings from the operations, while also allowing some contingency. For example, the embankment crest level is designed to provide a safe height above the tailings, plus stored water level. Storage capacity is provided for, with an allowance for the Probable Maximum Precipitation (maximum rainfall event), plus an additional 1.0 m minimum freeboard above that. This is to ensure that even in a severe rain event, water in the tailings ponds cannot overflow and find its way into surrounding rivers and streams.

Diversion drains above the tailings ponds intercept clean surface runoff from the adjacent hill and direct it to nearby streams, reducing the amount of water entering the ponds. Subsurface drainage within the embankments and under the tailings intercepts tailings seepage, leachate from waste rock, and groundwater, before directing it to our Water Treatment Plant.

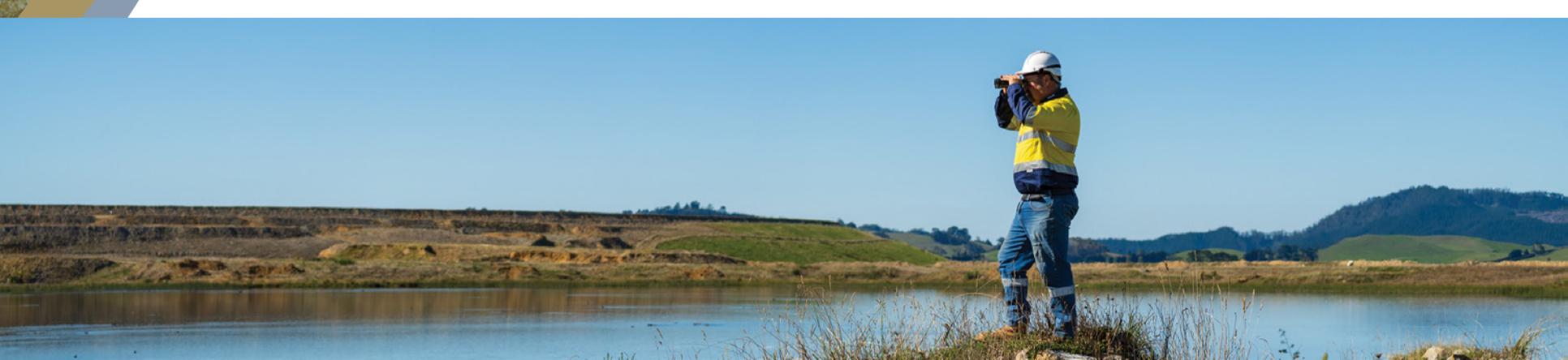
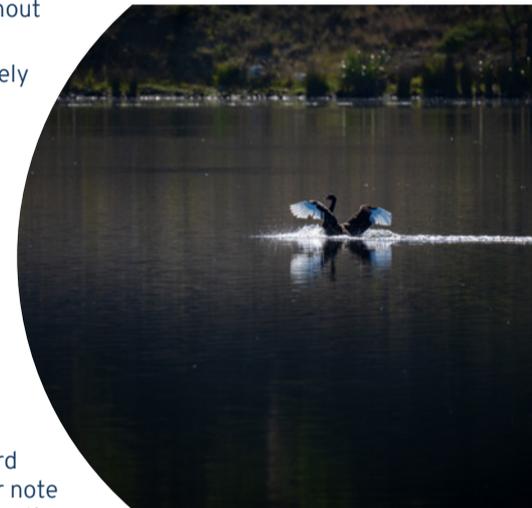
The TSFs are surrounded by a perimeter drain which collects surface runoff from the embankment and directs it into collection/silt ponds. Depending on the water quality, it is either discharged directly or diverted to our Water Treatment Plant.

CONCLUSION

OceanaGold Waihi's TSFs are formed using downstream construction embankments, similar to the design used for water storage dams. These designs are developed by experienced tailings facility engineers and subject to regulatory approvals and independent review.

In the next part of the series, we'll cover how TSFs are rehabilitated at the end of their operational life.

For even more information on tailings, the storage and monitoring processes, or the references used visit www.waihigold.co.nz/about-mining If you'd like to learn more about the proposed TSF3 or other aspects of the Waihi North project, visit www.waihinorth.info



IF YOU HAVE ANY QUESTIONS OR CONCERNS, PLEASE CONTACT US.

Community Engagement Line: 0800 924 444 | Project Information Office: 86 Seddon St., Waihi.
Email us via our website: www.waihigold.co.nz

**NOTE: WE ARE NOT CURRENTLY
BLASTING IN THE MARTHA OPEN PIT.
CHANGES TO THIS WILL BE NOTIFIED.**

Lodgement of Waihi North Project

OceanaGold Waihi has lodged an application for its proposed Waihi North Project with Hauraki District Council and Waikato Regional Council. A full consent documentation package has been provided to both councils for their consideration and review.

The consent process is expected to take some time. In the interim OceanaGold Waihi has prepared a series of summary fact sheets about the project. Members of the public are also invited to call in to the company's Project Office at 86 Seddon Street in Waihi.

Once the application has been accepted as complete by the councils, the Assessment of Environmental Effects (which contains the full technical reports submitted in support of the application) will also be made publicly available.

Further information on the Project may be found here: www.waihinorth.info



Ute Donation to Waihi Land Search And Rescue

Waihi Land Search & Rescue (LandSAR) is a group of 24 volunteers available 24/7 to undertake search and rescue missions in Waihi and other urban and remote areas in Waikato and Bay of Plenty. Over the last eight years they have been directly involved in saving the lives of seven people and assisting another 35.

Waihi LandSAR have also worked with our Mines Rescue team in the past in situations that required highly trained rope rescue specialists.

Late last year, the Waihi Operation learned we had won a 2022 Mazda BT-50 dual-cab four-wheel drive ute as part of a New Zealand-wide promotion run by suppliers, Farm Source.

Recognising that there were more appropriate recipients for the vehicle, we set out to find a suitable charity organisation to gift the vehicle to instead. Several charities were considered, with the Waihi branch of LandSAR ultimately being the best fit as both an organisation working in our local community and one that could make use of the vehicle's capabilities.

Waihi LandSAR Chairman Darren Butler said "the new four-wheel drive dual cab ute would be a huge asset for the group".



LEFT TO RIGHT: Waihi LandSAR chairman Darren Butler, Farm Source Waihi store manager Esther Hoseason, OceanaGold Operations General Manager Matt Hine, and OceanaGold Waihi employee Leroy Crawford-Flett.

ASK THE EXPERTS ABOUT...

Road and Traffic Effects – Waihi North Project

As part of the Waihi North Project, we have engaged Stantec to complete an independent Transportation Assessment to determine the project's effects on traffic on both local roads and their points of access to the arterial state highway network.

This assessment has concluded that any potential adverse effects related to traffic movement as a result of the Waihi North Project, both during construction and over the longer term, can be suitably avoided or mitigated to an acceptable level.

On the 21st of July between 10.00 am and 2.00 pm, Ian Carlisle from Stantec will be available in our Project Information Office at 86 Seddon Street, Waihi, to answer any questions you might have on the traffic effects of the Waihi North Project.

A NUMBER OF TIMES ARE AVAILABLE, BUT BOOKING IS ESSENTIAL

- Bookings can be made via
- 0800 924 444
 - waihi.info@oceanagold.com
 - visiting the Project Information Office.



IAN CARLISLE
Principal Transportation Engineer
Master of Engineering – Civil



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