



# WET enough for you?

Over half a metre of rain in September led to flooding around the region. How does the mine site cope with significant rain events?



How does the mine site cope with significant storm events such as those we have had recently?

## Tailings Impoundment

The tailings impoundments operate with a freeboard of just over three metres, this is the distance between the water level and the crest of the impoundment. If required, the water from TSF1 can be pumped to the Water Treatment Plant. Water from TSF2 is allowed to be discharged into the river.

## Collection PONDS

The collection ponds are designed to contain any stormwater runoff. The ponds are large, and have the capacity to contain the volume of run-off generated from within their catchments during a ten year return period, 72-hour duration storm taking into account a combination of both storage volume and pumping rate.

The collection ponds are allowed to overflow beyond the 'ten year storm' event, but in doing so they must meet water quality standards within the Ruahorehore Stream.

The quality of the collection pond water has significantly improved since the commencement of construction in the late 1980s. There are two reasons for this. Firstly, we add limestone to the waste rock which improves the quality of the stormwater runoff. Secondly, much of the impoundment embankment has now been planted in pasture.

As a result, the site gained approval from Waikato Regional Council in 2014 to discharge water from three of its collection ponds to the Ruahorehore Stream without treatment, subject to conditions. Probes are installed within the ponds to measure the pH and turbidity of the water, and provided that the water is "in spec" it can be discharged. If the water is "out of spec" it is sent to the Water Treatment Plant.

## Silt PONDS

Silt ponds collect runoff from operational areas that may carry suspended solids such as clays or soils which cause turbid or cloudy water. They are similar to the ponds that you see at other construction sites and subdivisions around New Zealand. Under normal conditions suspended solids settle in the ponds by gravity, the water is discharged to the river if it meets the consent criteria, and the silt is removed from the pond over summer.

In events greater than a 'two-year storm' the silt ponds will overflow, however the ponds must not have more than a 10% increase in suspended solids compared with what is already flowing down the river from upstream. In addition, discharges from the site must not cause an adverse effect on the river, as determined by a comprehensive water and biological monitoring programme.

## PROCESS plant

Significant flooding of the Ohinemuri River can sometimes mean that the main access to site via Baxter Road is flooded and the alternative entrance from Barry Road must be used. There are no other effects at the plant.

## Underground

Heavy rain events have no immediate effect on underground operations. The rain will eventually reach the underground as it percolates through the rock layers and recharges the underground system, but this occurs much more slowly and does not affect current operations.

## Martha OPEN PIT

The open pit is currently not operating due to the rock fall on the North Wall. Stormwater flows to the bottom of the pit where it is pumped to the Water Treatment Plant.

## SOCIAL IMPACT

### Assessment 2016

Over the next few weeks, representatives of Phoenix Research from Auckland will be contacting a broad range of Waihi organisations, business representatives, community groups and individuals.

The 2016 survey is part of the Correnso Consent Conditions and is designed to identify and assess the potential social effects – both positive and negative – arising from the operation of the Correnso underground mine. All responses are anonymous.

The SIA provides a broad range of data on key community demographics, economics, and attitudes which can assist us as we plan and develop our projects, and as we update plans for eventual closure.

The data can provide useful information about community understanding and expectations, and suggest potential community partnerships or sectors in which the company could most productively be involved.

## RIVER MONITORING Programme

The site is designed and managed to ensure that any discharges either alone or in combination do not cause adverse effects on the Ohinemuri River. Monitoring of the Ohinemuri River and Ruahorehore Stream is carried out regularly and includes water and sediment quality monitoring and biological monitoring.

### WHO CHECKS our performance?

Regulatory authorities  
Waikato Regional Council  
and Hauraki District Council  
monitor site operations to ensure that the environmental conditions set out in the various consents and licences are being met. In addition, Peer Review Panels and consultants engaged by the regulatory authorities provide a further independent check.