



**2025**

# **Quarterly Report**

**January - March**

**Mt Shamrock  
Environmental Management Plan  
3 Monthly Progress Update**

Prepared for Mt Shamrock Quarry Environmental Review Committee

# Table of Contents

**02**

Introduction and History

**04**

LRMP Update

**05**

Non-Compliance and Complaints  
Air Quality – Dust

**08**

Noise  
Blasting

**09**

Surface Water, Drainage and Groundwater

**12**

Waste

**13**

Truck Tarping

**14**

Limits & Definitions, Monitoring Locations

**16**

EMP Audit action list

## **Introduction and History**

On 11 March 2008, the Mt Shamrock Quarry Environmental Management Plan Version 1:18 January 2008 (EMP) was formally enacted. This document established a framework to ensure compliance with local council, AAV, DPI, EPA and DSE requirements relating to the extension of extractive limits under Work Authority 174 (WA174). An Environment Review Committee (ERC) was formed to monitor the performance of the quarry against the EMP, the permit and WA174. The ERC consists of delegates from the relevant authorities, members of the Wurundjeri Tribe, and local residents. The ERC is chaired by an independent representative from All Possibilities Pty Ltd to ensure non-partisan administration.

This report details information on both monitoring results and management actions by the quarry in the preceding three months. This report will take the form of an exception report that is where there is a deviance from the EMP. This will be highlighted and the reasons for the deviance explained. A summary of quantifiable monitoring outcomes is also included. Figure 1.12 details all monitoring locations.

## Operational Update

- Operating hours unchanged;
- Management is unchanged with Leigh Elliott as Quarry Manager and Nathan Thomas in the Operations Manager role;
- No mobile crushing took place during Q1 2025
- No stripping and reclamation works took place during the reporting period.



**Figure 1 - Site Aerial 3rd March 2025**

## 1.0 LRMP Update

Summary of actions completed in Q1 below;

### General

- General Weed treatment and fence maintenance around Quarry;

### Netgain (NG)

- Pack spray blackberry and broadleaf weeds Northern Section of Net Gain;
- Handweed around plantings in the southern section of Net Gain. Pack spray broadleaf weeds across site with selective herbicide;
- Brushcutting in preparation for future spray works.

### Southern Extraction/ SE Extraction/0.8Ha/1.2 Ha/ 2023 Reveg area

- Pack and tanker spray broadleaf weeds for weed control with selective herbicide;
- Pack spray weedy grass species with non-selective herbicide;
- Pack spray Pampas Grass germinates with high rate glyphosate border areas of SE Extraction, Southern Extraction, .8 Hectare and 1.2 Hectare;
- Pack spray Chilean Needle Grass SE Extraction, Southern Extraction and .8 Hectare with non-selective herbicide. Infestation locations marked with pink flagging tape wrapped around a stake;
- Brush cutting weedy grass species for biomass control, fire prevention and in preparation for future spray works;
- Hand weed seeding fleabane .8 Hectare removing seed heads off-site.

### Extraction and Phase C

- Pack spray broadleaf weeds with selective herbicide.

### Southern Hillside

- Brush cutting and clearing woody debris/bark for fire risk reduction, biomass control and in preparation for future spray works;
- Tanker spray with non-selective herbicide.

## 2.0 Non-Compliance and Complaints

Non-conformances:

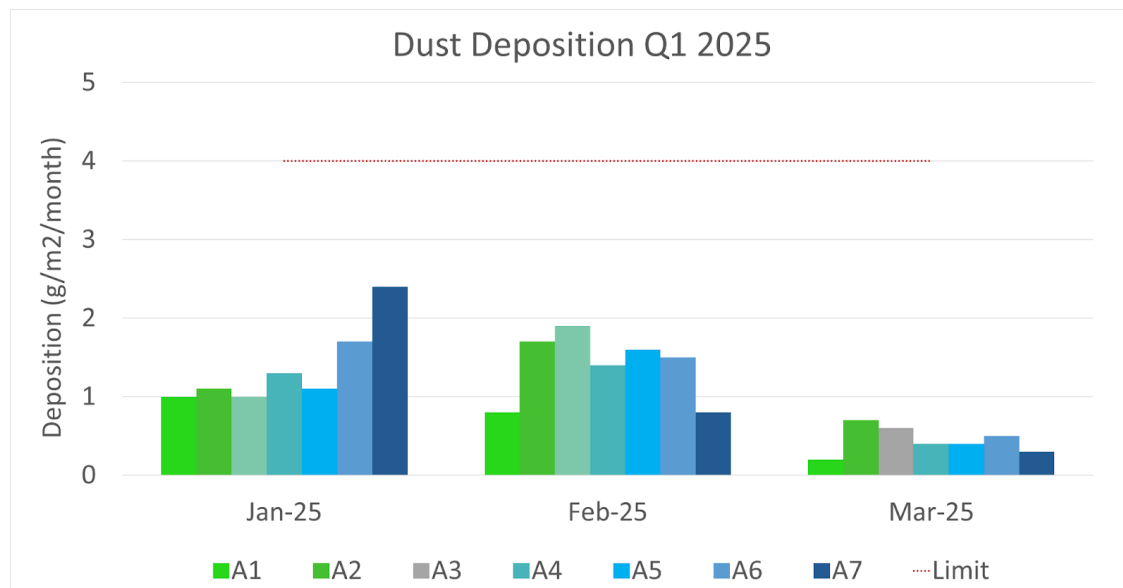
- Nil during Q1 2025

Complaints:

- Nil during Q1 2025

### 2.1 Air Quality – Dust

Dust depositional results have been graphed below for the reporting period. No exceedances during the reporting period.



**Figure 2 - Dust Deposition Q1 2025. (Limit 4.0g/m²/mth)**

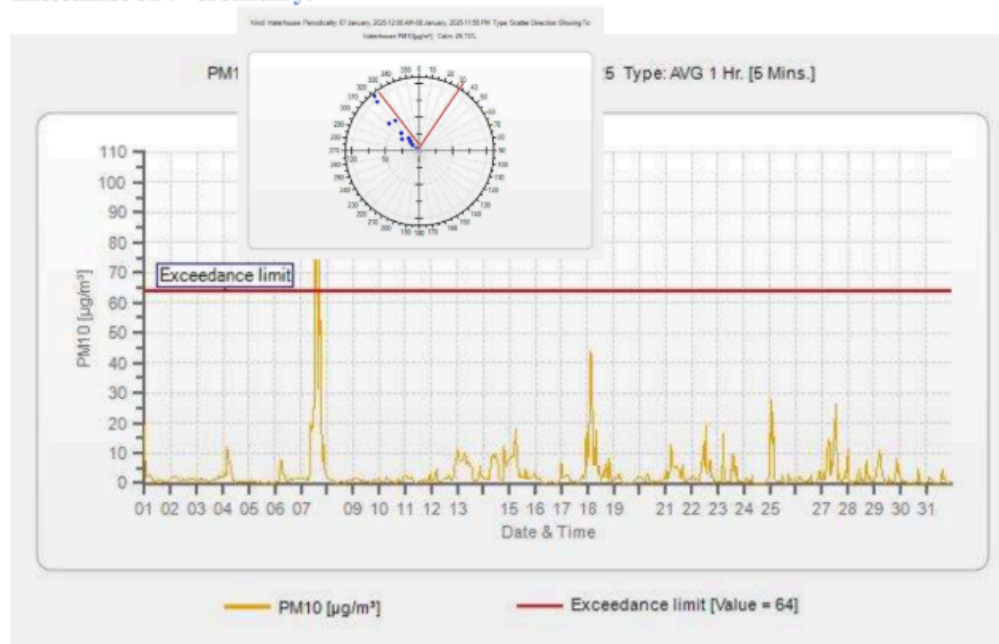
Deposition results presented are Ash analysis test, rather than Total Solids, representing true mineral dust deposition generated by quarry activities.

Reactive monitor results with a PM 10 - 1-hour average concentration greater than 64  $\mu\text{g}/\text{m}^3$  have been tabulated below. No exceedances during the reporting period attributed to the Quarry Operations. Exceedance investigations from the Blue Atmosphere PM 10 Monitoring Reports contained below.

Reactive Monitoring Station Exceedances	January	February	March
A6 – Waterhouse Property	7th Jan	2nd, 5th, 8th, 9th, 10th, 11th.	Nil
A3 - Farm House	Nil	Nil	Nil
A1 - Petty House	Nil	Nil	Nil
A4 - Pony Club	Nil	7th Feb	Nil

Table 1 - Reactive monitor results with a PM 10 - 1-hour Ave concentration  $>64 \mu\text{g}/\text{m}^3$

#### Exceedance on 7<sup>th</sup> of January:

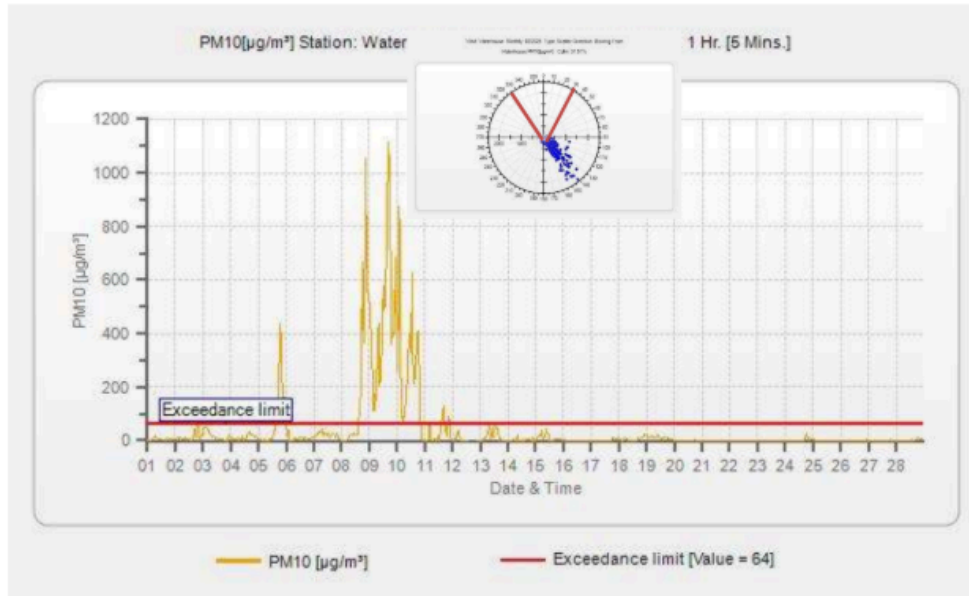


The scatter plot suggests that the source of high PM10 was from outside the Quarry Operations.

Figure 3 - Waterhouse Property exceedance investigation 7th January (Blue Atmosphere PM 10 Monitoring Report, January 2025)



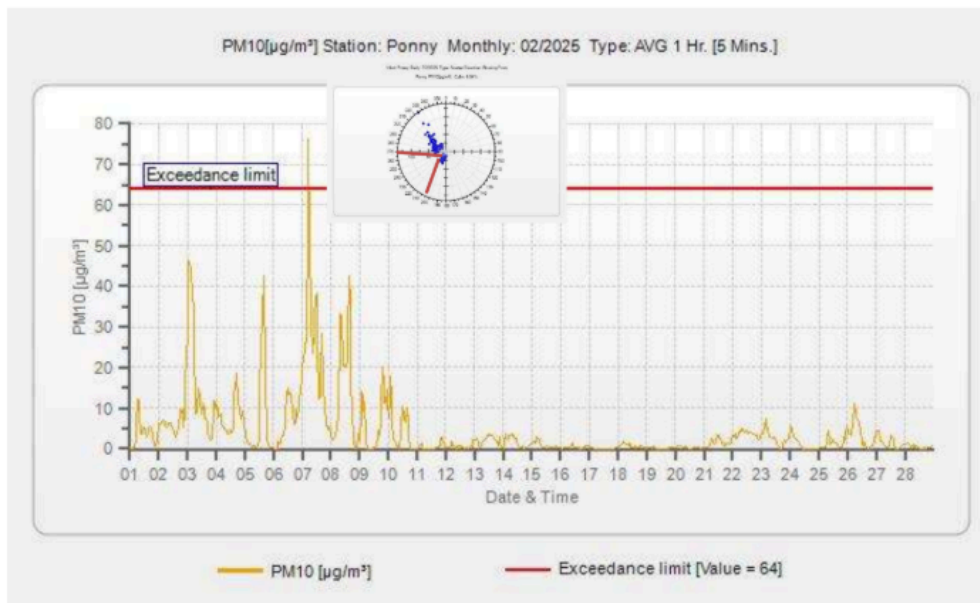
## Exceedances during February 2025:



The scatter plot suggests that the source of high PM10 readings was from outside the Quarry Operations.

**Figure 4 - Waterhouse Property exceedance investigations February (Blue Atmosphere PM 10 Monitoring Report, February 2025)**

## Exceedance on 7th of February 2025



The scatter plot suggests that the source of high readings PM10 on 7<sup>th</sup> of February was from outside the Quarry operations.

**Figure 5 - Pony Club exceedance investigation 7th February (Blue Atmosphere PM 10 Monitoring Report, February 2025)**



## 2.2 Noise

Average noise levels for the 1st Quarter 2025 are shown below. No exceedances during the reporting period.

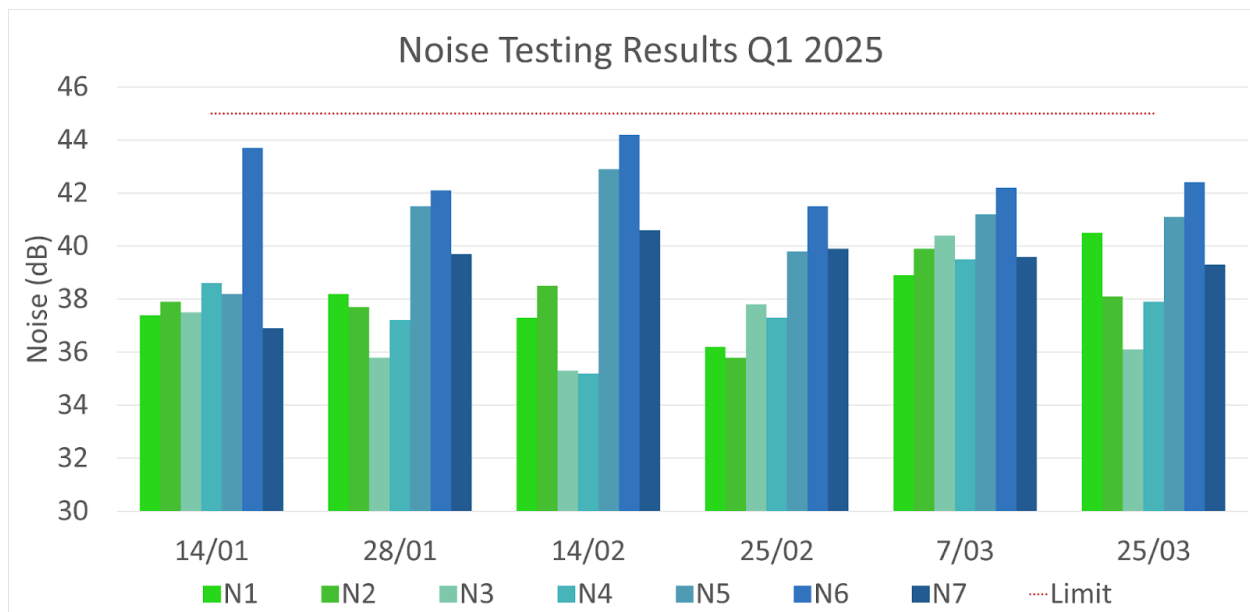


Figure 6 - Noise Testing Results Q1 2025. (Limit is 45dB under normal operating conditions)

## 2.3 Blasting

All blasting operations have been carried out in accordance with guidelines.

### Ground Vibration

No ground vibration exceedances during the reporting period. 3 blasts on the 14th March.

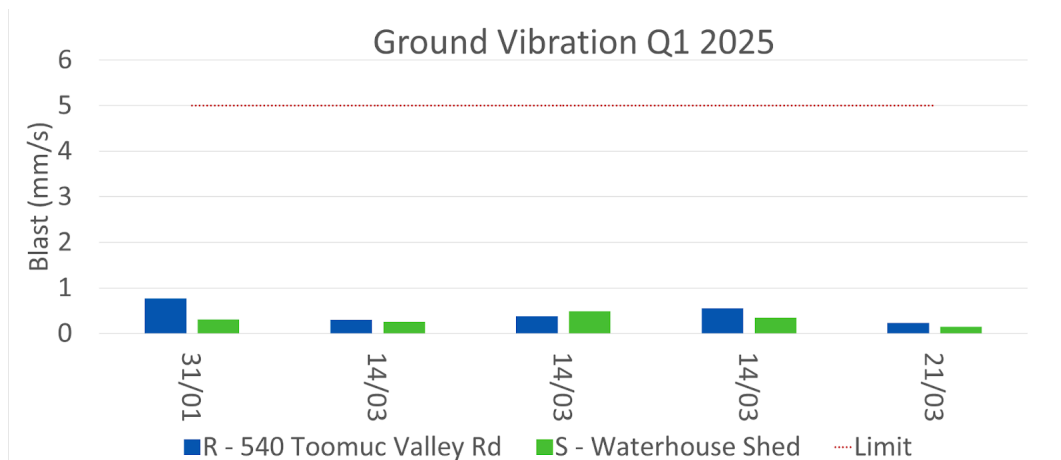
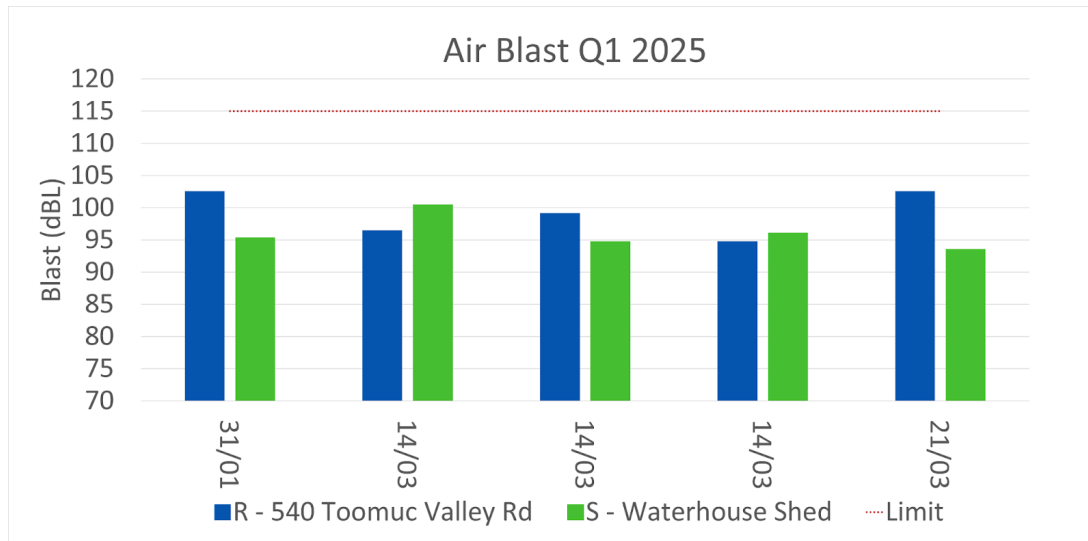


Figure 7 - Blasting; Ground Vibration Results Q1 2025 (Limit is 5mm/s for 95% of blasts in a 12 month period).

## Air Blast

No air blast exceedances during the reporting period. 3 blasts on the 14th March.

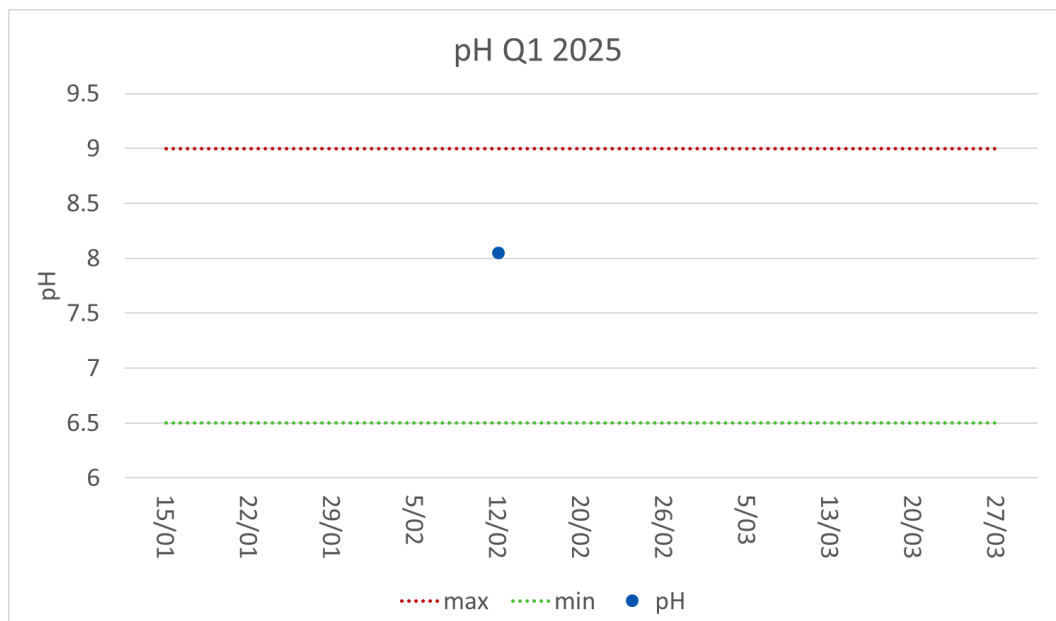


**Figure 8 - Blasting; Air Blast Results Q1 2025 (Limit is 115 dBL for 95% of blasts in a 12 month period)**

## 2.4 Surface Water, Drainage and Groundwater

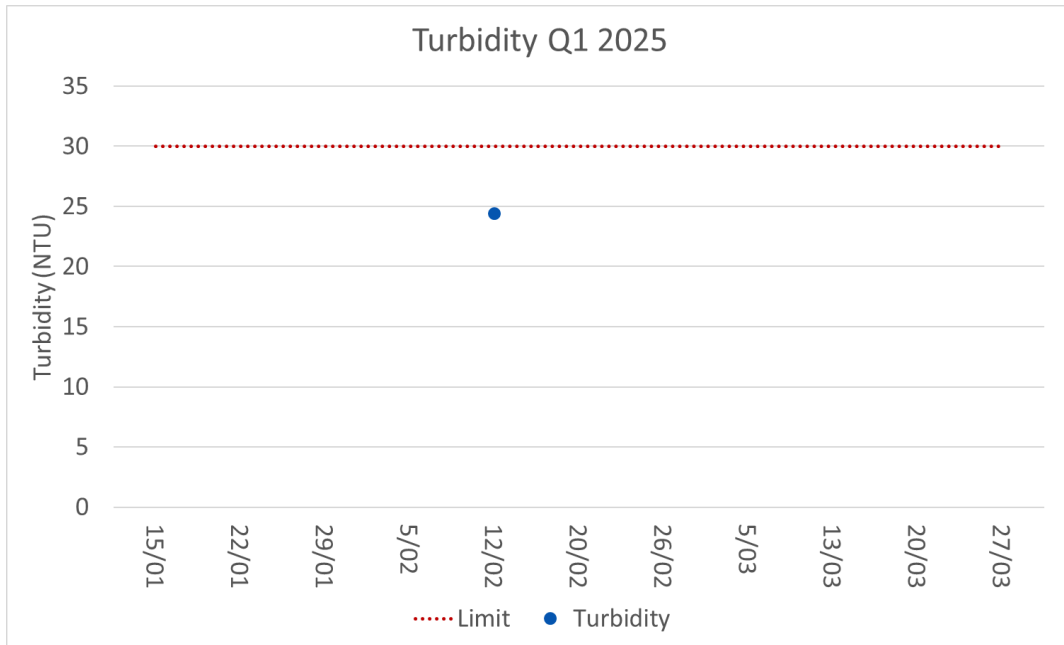
V-Notch was dry for most of Q1 2025.

**pH** – A measure of the Acidity or Alkalinity of the water limit 6.5 to 9.0.



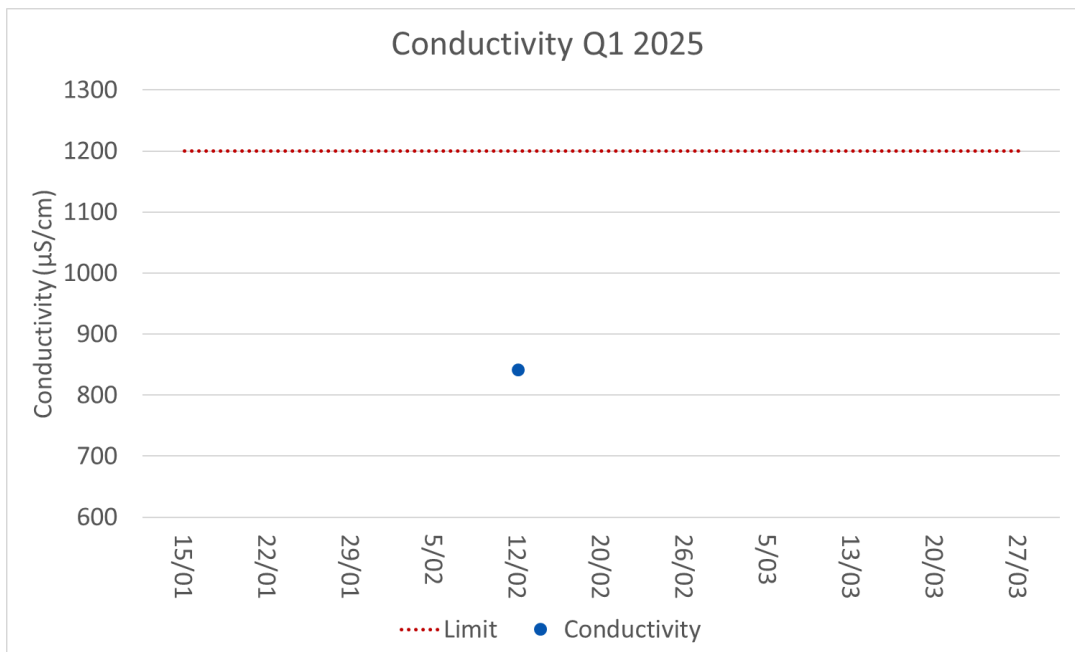
**Figure 9 - Discharge Water pH results Q1 2025**

**Turbidity** – Clarity of water Maximum 30NTU.



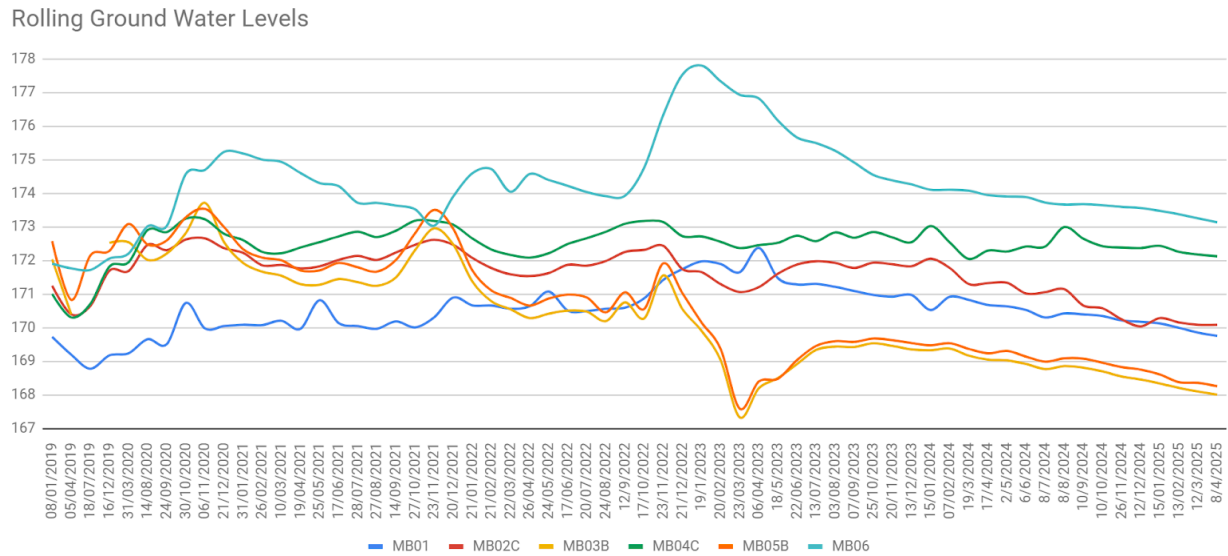
**Figure 10 - Discharge Water Turbidity results Q1 2025**

**Conductivity** – A measure of the water's capability to pass electrical current. Limit 1200 $\mu$ S.



**Figure 11 - Discharge Water Conductivity results Q1 2025**

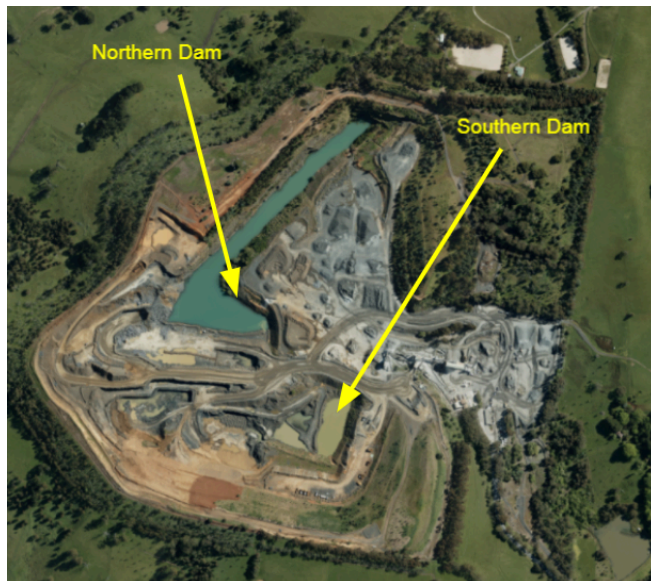
## Bore Water Measurements



**Figure 12 - Groundwater levels 2019 to present.**

## In Pit water levels

In 2020, Holcim committed to begin and report the in pit water dam levels quarterly, to aid in the annual beneficial use analysis. This was formed as part of the revised EMP submission. Location and naming conventions are shown in the map for reference. All measurements are in RL's (the same unit as ground water levels)



**Figure 13 - In Pit Water Identification**

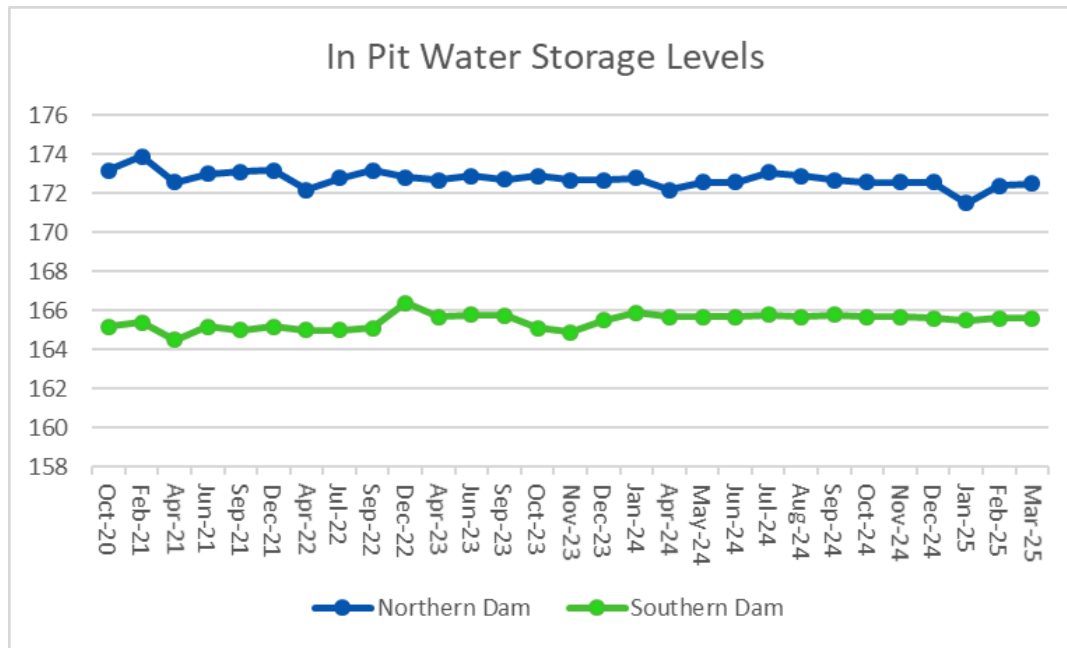


Figure 14 - In Pit Storage Levels October 2020 - Present

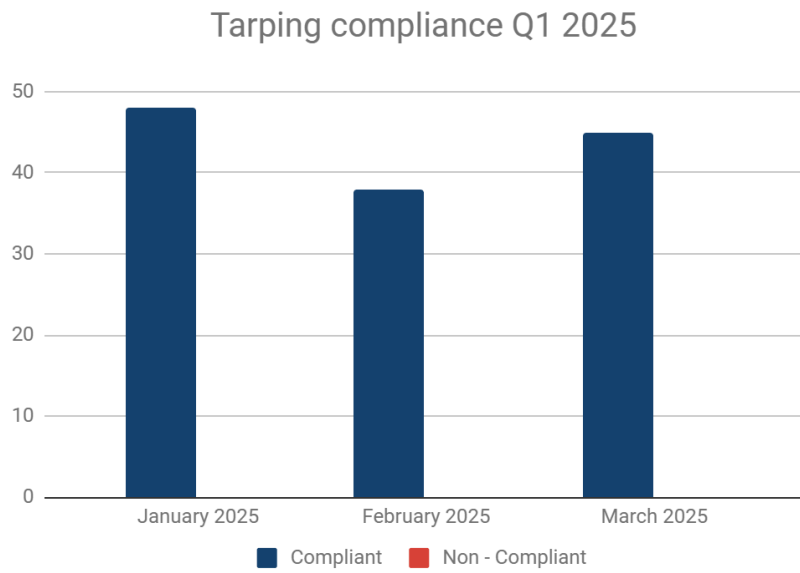
## 2.5 Waste

2025 Q1			
Categories	YTD	Av / month	Landfill Target
Landfill	*	*	<0.478t 5% reduction on 2024 Landfill. 6.04t FY
<b>Category</b>	<b>YTD</b>		
Steel	15.42t		
Recycled Oil	0		
Prescribed	0.29t		
Interceptor waste/ Hydrocarbon contaminated water	8,200L		
<b>Other</b>			
Waste Grease	200L		
Oil filter recycling	0		
Grease Cartridges recycling	1000L IBC (QTY 1)		

Table 2 - Quarry Waste Generation Summary of Q1 2025

\*Data missing - Seeking data from new waste contractor Veolia.

## 2.6 Truck Tarping



**Figure 15 - Tarping visual checks of Q1 2025**

## **Limits & Definitions**

### **2.1 – Air Quality - Dust**

#### **Dust Deposition**

Deposition bottles are stationed at 7 locations including a background monitoring location at station A7. Particulate matter sampled by this method is predominantly dust particles which, because of their size, rapidly settle from the air. Results can be affected by Ash from burning off, bird droppings and insects.

**Limit** – 4.0gm/m<sup>2</sup> mth

#### **Reactive Monitoring**

Reactive management tool with preset alarm if the PM10 1 hour average is exceeded. Reactive monitors are similar to the Hi Vol monitors.

**Limit** – 64 µg/m<sup>3</sup> (1 hour average)

### **2.2 - Noise**

Noise monitoring locations and limits set in the EMP are monitored through the use of a RION hand held monitor. Employees on site who conduct the monitoring are trained and certified in theoretical and practical assessment of the RION hand held meter and basic acoustics.

**Limits** –       45dB(A) LAeq 7:00 – 18:00 Normal Operation  
                  68dB(A) LAeq 7:00 – 18:00 Noise Attenuation Mound Construction

### **2.3 – Blasting**

Blasting is monitored for Air Blast and Ground Vibration during every blast performed on site.

**Air Blast** – a measurement of air pressure pulse travelling through the air.

**Ground Vibration** – a measurement of the shock wave passing through the ground

#### **Limits –**

Air Blast Limits – Peak Air Blast of 115 dBL at sensitive locations for 95% of blasts in a 12 month period

Ground Vibration Limits – Peak Particle Velocity (PPV) 5mm/sec at sensitive locations for 95% of blasts in a 12 month period



## 2.4 – Surface Water, Drainage & Groundwater

During discharge, water is monitored at the V Notch located at the bottom of the Donnazon property spillway. A solar powered flow meter logs flow data and the water is sampled manually by trained and certified employees. Water is tested for Turbidity, pH and conductivity. Water is monitored at Donnazzons dam regularly prior to discharge to determine if the water is ok to discharge.

**pH** – A measure of the Acidity or Alkalinity of the water. Limit 6.5-9.0

**Conductivity** – A measure of the water's capability to pass electrical current. Limit 1200µS

**Turbidity** – Clarity of water. Maximum 30NTU

### Monitoring Locations



## EMP Audit action list

(Actions are removed from this table once shown as complete)

<p><b>EMP Audit Year</b> - 2024/25  <b>EMP Reference</b> - B-2.1.2  <b>Rating</b> - Minor non conformance</p> <p><b>Non Conformance</b> - The PM10 monitoring targets specified within the EMP (currently states 64 µg/m3) need to be updated to align with the new PM10 value of 50 µg/m3 (1 day average) as specified in the Environment Reference Standard 2021.</p> <p><b>Recommendation</b> - Suggest engaging an air specialist to assist in determining a real time action threshold (e.g. 80-90% of the limit) that may assist with compliance on this issue.</p> <p><b>Status</b> - Daily PM10 results have been reported against the Environment Reference Standard 2021 value of 50 µg/m3 since June 2024 with no exceedances of the limit. Reporting against this daily limit will continue in the Monthly Dust Reports. The current EMP PM10 target (1 hour ave.) – 64µg/m3 will be used as a real time action threshold, which will allow for timely response to comply with the daily target.  The EMP Monitoring target will be updated with the new PM10 value of 50 µg/m3 (1 day average) as specified in the Environment Reference Standard 2021 if/when the 2024 EMP is approved by the Cardinia Shire Council.</p>
<p><b>EMP Audit Year</b> - 2024/25  <b>EMP Reference</b> - B-2.4.2  <b>Rating</b> - Minor non conformance</p> <p><b>Non Conformance</b> - A single (1) turbidity exceedance was recorded during the audit period (approx 38.2 NTU (Licence Limit 30). The exceedance was associated with a significant rainfall event in July 2024. The exceedance was reported to EPA with explanation of likely cause.</p> <p><b>Recommendation</b> - It is acknowledged that Holcim is progressing investigations (as noted by the February 2025 ENGENT Surface Water Assessment) to better understand capacity to increase freeboard availability in Donazzan's dam and potential to install a larger pump in Donnazan's dam to allow for larger recirculation of water up to quarry pit in preparation for significant rain events</p> <p><b>Status - Completed.</b> Holcim will proceed to work through the detail design stages of this project (geotechnical risks, potential clean/dirty water diversions, costs, etc). Action to be closed based the EPA Site Entry Report FAR-00016636. "Licence Conditions: OL_G5, OL_G7 and OL_DW2 - compliant."</p>
<p><b>EMP Audit Year</b> - 2023/24  <b>EMP Reference</b> - B-1  <b>Rating</b> - Minor non conformance</p> <p><b>Non Conformance</b> - The latest version of the Environmental Management Plan (dated 3 July 2021 and approved by the Cardinia Shire Council on 24 August 2022) needs to be updated to be in line with current legislation, particularly the Environment Protection Act 2017 and associated Environment Reference Standard 2021 which came into force in July 2021. The applicable State Environment Protection Policies (SEPP) referenced in the EMP have now been revoked and as such all references to the SEPP's need to be removed from the EMP and targets will need to be</p>

updated to protect environmental values

**Recommendation** - EMP needs to be updated to be in line with EPA Act 2017 (came into force in July 2021) and the Environment Reference Standard 2021 as SEPPs are now redundant and as such some targets will need to be updated to protect environmental values

**Status** - A revised EMP has been submitted to Cardinia Shire Council in December 2024 to address legislation updates.

Description	<b>Minor</b>	Minor non conformance - if the environmental impact of the non conformance is likely to be contaminated within the site or have limited off site impact or is a documentation issue.
	<b>Major</b>	A potential or actual significant off site impact to the environment and or legal compliance issue including non conformance with prescribed limits of the EMP