



2026

Quarterly Report

January - March

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

Prepared for Mt Shamrock Quarry Environmental Review Committee

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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 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 and figure 13 details all monitoring locations.

At the date of distribution of this report; the operating version of the EMP is Revision 4, approved by Cardinia Shire Council on 30 April 2026.

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, stripping and reclamation works took place during the reporting period.



Figure 1 - Site Aerial April 2026

1.0 LRMP Update

Summary of actions completed in Q1 below;

General

- General Weed treatment and fence maintenance around Quarry;

Netgain Offset (NGO)

- Completed woody weed, ground flora and scrambler weeding through both NGO areas.

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

- Collected microlaena stipoides and wallaby grass from 0.8 and 1.2ha Reveg areas;
- Slashed with mower and brush cutting weedy grass species for biomass control, fire prevention and in preparation for future spray works;
- Bagged flowerheads and completed a woody weed sweep for spear thistles;
- Herbicide sprayed large unplanted zones beyond 0.8 and 1.2ha targeting ground flora weeds;
- Sprayed out new 2026 planting zone and bare section beyond 0.8ha for pampas grass;
- Completed woody weeding sweep through the graveyard area;
- Slashing of tall thistles and clearing out weeds around back slope plantings.

Phase A and B;

- Slashed with mower and brush cutting weedy grass species for biomass control, fire prevention and in preparation for future spray works;
- Targeted spear thistle beyond cyclone fence phase A+B.

Pest Animal Control;

- One visit from a deer management crew with animals harvested.

2.0 Non-Compliance and Complaints

Non-conformances:

- Nil during Q1 2026

Complaints:

- 10/03/2026 - INC-0274758 - Unsubstantiated community complaint regarding Shot 2603. Community member claimed the blast shook her walls and caused minor cracking to her plaster around a doorway. Ground vibration monitoring result was 2.09mm/s well-below the 5 mm/s limit.

Terrock investigation - HVP-2603_GV Investigation.docx - *The PPV level of 2.09 mm/s recorded at the Rises monitoring locations on 10 March 2026 was higher than recent experience though is below the 5 mm/s limit that applies at residences near the quarry. The resident complaints that emerged were likely driven by other factors that increased blast perceptibility including;*

- *The use of 100ms delays in back row blast holes that resulted in series of reinforcing wavefronts arriving at 100ms intervals and relatively low ~9.5 Hz frequencies in all directions, increasing blast perceptibility.*
- *Increased confinement from the blast being buffered that resulted in increased seismic energy and above average PPV levels.*

- The possibility that more residents west of the quarry were inside their houses at blast time compared to other blast times.

2.1 Air Quality – Dust

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

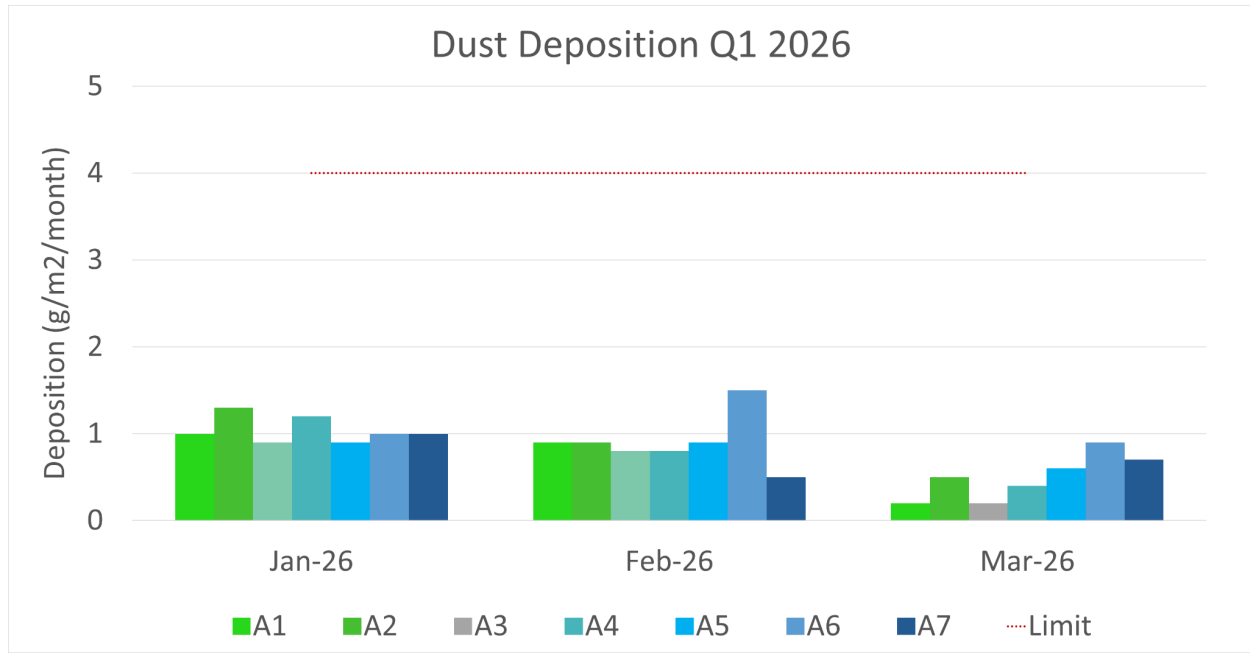


Figure 2 - Dust Deposition Q1 2026. (Limit 4.0g/m2/mth)

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 µg/m3 have been tabulated below. No exceedances during the reporting period.

Reactive Monitoring Station Exceedances	January	February	March
A6 – Waterhouse Property	Nil	Nil	Nil
A3 - Farm House	Nil	Nil	Nil
A1 - Petty House	Nil	*Data Missing	*Data Missing
A4 - Pony Club	Nil	Nil	Nil

Table 1 - Reactive monitor results with a PM 10 - 1-hour Ave concentration >64 µg/m3

*Petty Station data logger was damaged by an electric storm. No data 18th Feb to end March.

Reactive monitor results with a PM 10 - 24-hour average concentration greater than 50 µg/m³ have been tabulated below. No exceedances during the reporting period.

Reactive Monitoring Station Exceedances	January	February	March
A6 – Waterhouse Property	Nil	Nil	Nil
A3 - Farm House	Nil	Nil	Nil
A1 - Petty House	Nil	*Data Missing	*Data Missing
A4 - Pony Club	Nil	Nil	Nil

Table 2 - Reactive monitor results with a PM 10 - 24-hour Ave concentration >50 µg/m³

*Petty Station data logger was damaged by an electric storm. No data 18th Feb to end March.

2.2 Noise

Noise Monitoring location at Huxtable Road Reserve (HRR) arena added to Holcim noise monitoring program in March 2026, monitoring location “N8”. Average noise levels for Q1 2026 are shown below. No exceedances during the reporting period.

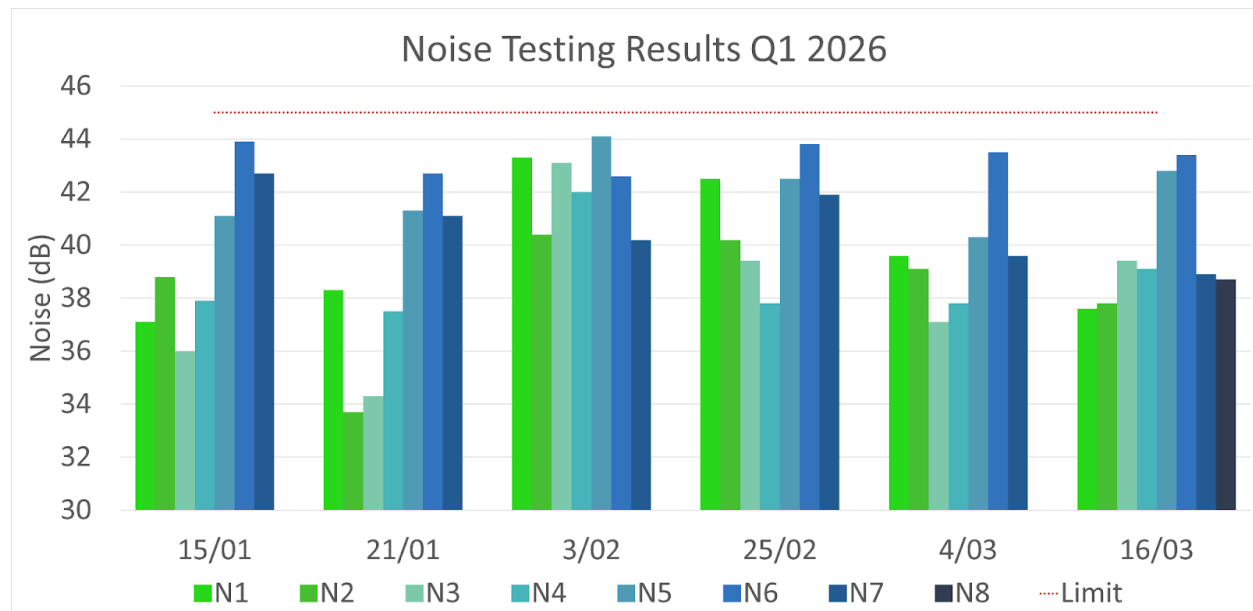


Figure 3 - Noise Testing Results Q1 2026. (Limit is 45dB under normal operating conditions)

2.3 Blasting

Ground Vibration

No ground vibration exceedances during the reporting period.

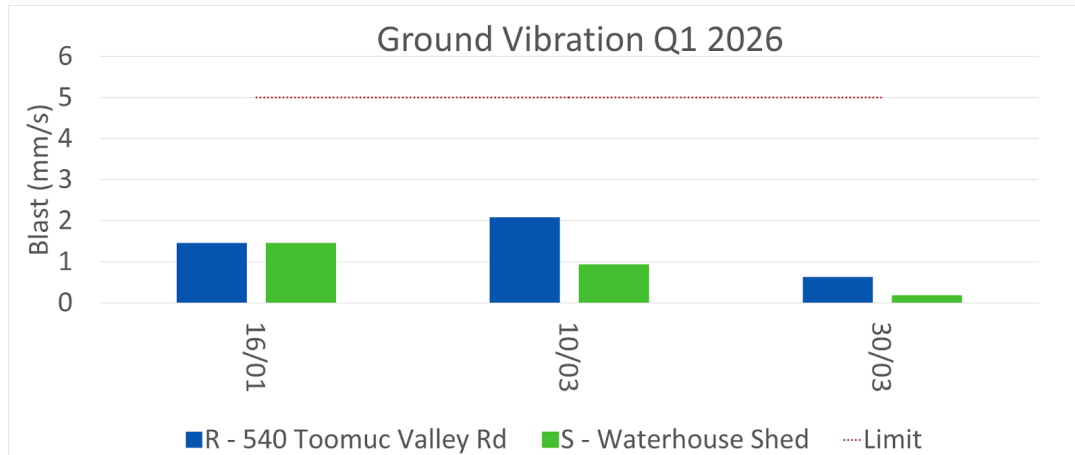


Figure 4 - Blasting; Ground Vibration Results Q1 2026 (Limit is 5mm/s for 95% of blasts in a 12 month period).

Air Blast

No air blast exceedances during the reporting period.

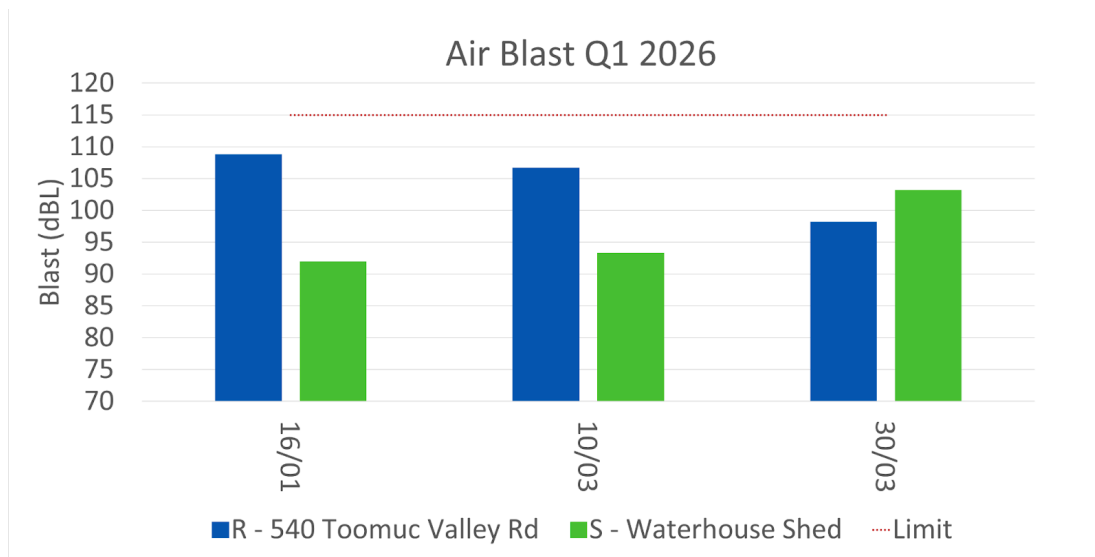


Figure 5 - Blasting; Air Blast Results Q1 2026 (Limit is 115 dBL for 95% of blasts in a 12 month period)

2.4 Surface Water, Drainage and Groundwater

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

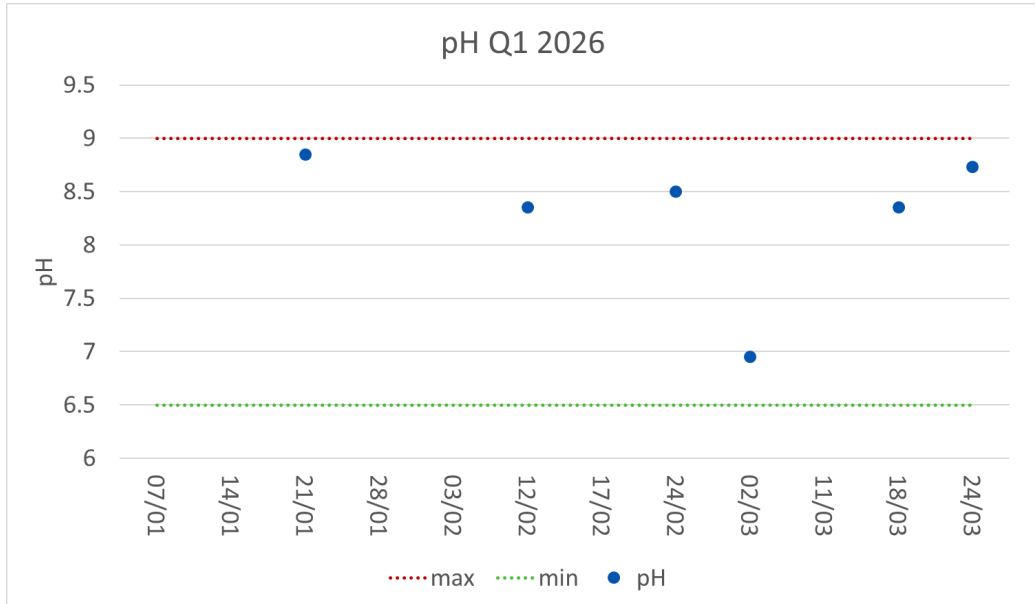


Figure 6 - Discharge Water pH results Q1 2026.

Turbidity – Clarity of water Maximum 30NTU.

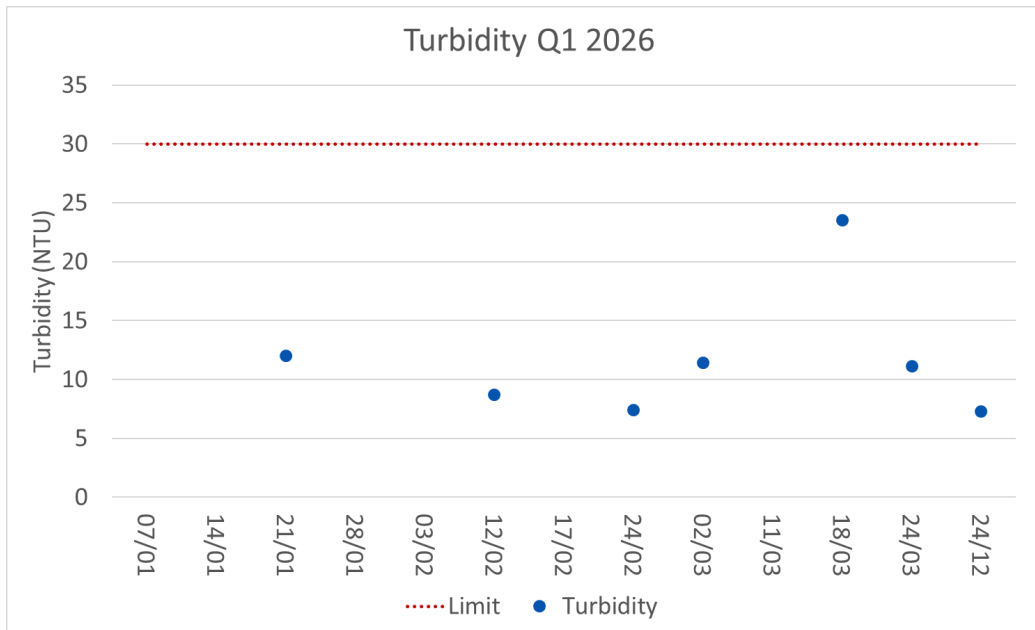


Figure 7 - Discharge Water Turbidity results Q1 2026.

Conductivity – A measure of the water’s capability to pass electrical current. Limit 1200 μ S.

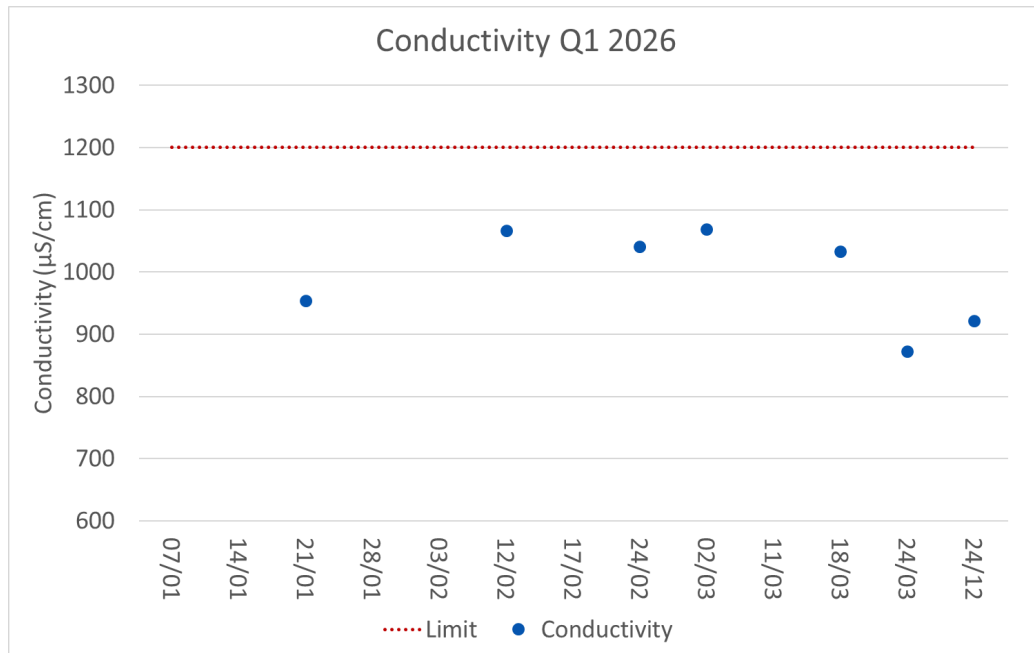


Figure 8 - Discharge Water Conductivity results Q1 2026.

Bore Water and In-Pit Water Measurements

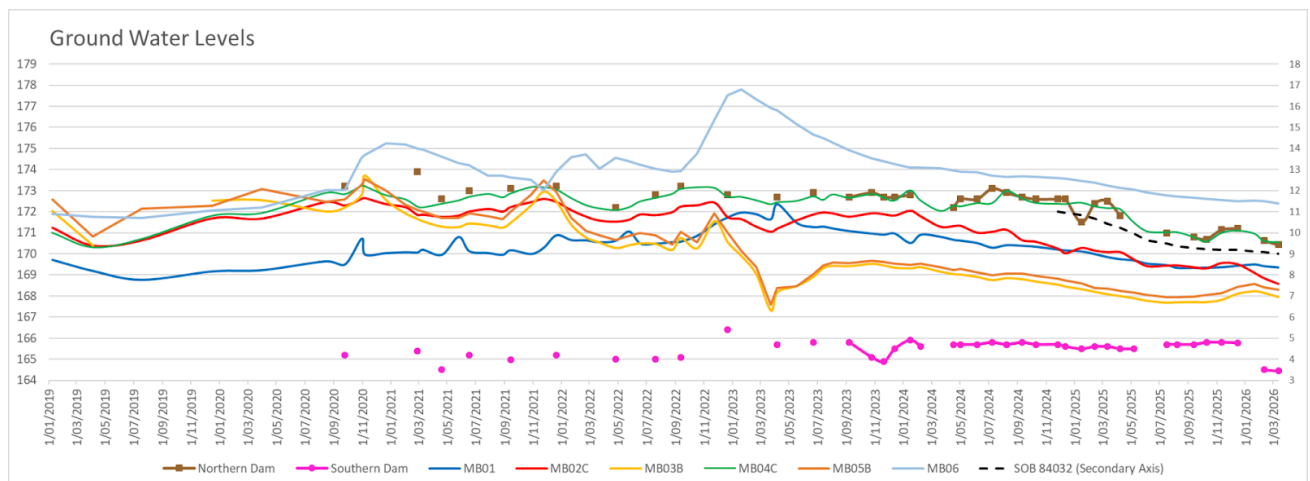


Figure 9 - Groundwater and In-Pit Water Levels 2019 to present.

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 10 - In Pit Water Identification

2.5 Waste

2026 Q1			
Categories	YTD	Av / month	Landfill Target
Landfill	1.06	0.353	<0.391t 5% reduction on 2025 Landfill total 4,940kg.
Category	YTD		
Steel	4.64t		
Recycled Oil	5000L		
Prescribed	0.18t		
Interceptor waste/ Hydrocarbon contaminated water	5,960L		
Other			
Waste Grease	200L		
Grease Cartridges recycling	660L Cart (QTY 1)		

Table 3 - Quarry Waste Generation Summary of Q1 2026

2.6 Truck Tarping

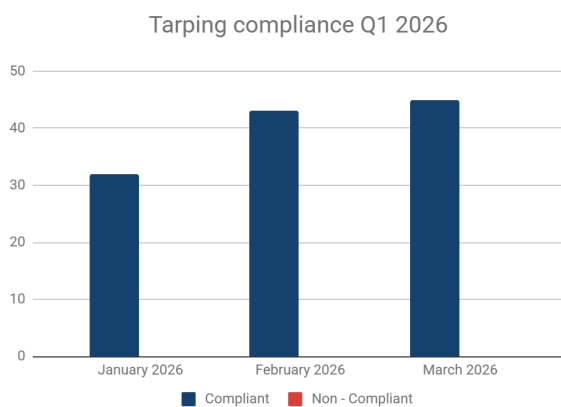


Figure 12 - Tarping visual checks of Q1 2026

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/m² 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/m³ (1 hour average)

Limit – 50 µg/m³ (24 hour average) - ERS 2021

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 1200 μ S

Turbidity – Clarity of water. Maximum 30NTU

Monitoring Locations



Figure 13 - EMP Monitoring Locations

EMP Audit action list

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

EMP Audit Year - 2025/26 EMP Reference - 2.6.2 Rating - Minor non conformance Non Conformance - GHG Target not achieved for the 2025 year – 0.08% reduction. However, it is acknowledged that this is largely due to circumstances outside the operational control of the quarry. For example, the quarry produces product under specific operational modes in response to market demand for products. With the downturn in the market and products required by the market this has meant less energy efficient operational modes are able to be used. The current target of reduction of 3% from year to year may not be achievable given many factors are outside the quarry operations control. Recommendation - Consider normalising GHG emission targets from year to year. Current target of reduction of 3% from year to year may not be achievable given many factors are outside the quarry operations control. Status - Under review.
EMP Audit Year - 2025/26 EMP Reference - 2.12.3 Rating - Minor non conformance Non Conformance - Compressor air discharges through a drier with the condensate line currently discharging to land behind the compressor shed. Condensate should be captured and disposed of in accordance with applicable regulations or discharged to trade waste under an applicable trade waste agreement. Recommendation - Arrange for compressor condensate to be collected, contained for evaporation, and disposed of in accordance with applicable regulations or discharged to trade waste under an applicable trade waste agreement. Status - Oil water separator has been ordered. Will be installed May 2026.
EMP Audit Year - 2025/26 EMP Reference - 2.14.3 Rating - Minor non conformance Non Conformance - Sighted Work procedure PAKJSA35 – Refuelling at Hardstand Fuel Tank (11/10/22) and sighted work procedure sign off sheet. However, there is no signage at fuel tanks describing filling procedures. Recommendation - Display fuel refuelling procedure at new 30 KL diesel tank and mobile diesel tanks in accordance with EMP Management measure section 2.14.3 Status - Complete. Work procedure PAKSWP35 is now displayed at the fuel tank.
EMP Audit Year - 2024/25 EMP Reference - 2.1.2 Rating - Minor non conformance Non Conformance - 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.

Recommendation - 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.

Status - Complete. 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.

EMP Audit Year - 2023/24

EMP Reference - B-1

Rating - Minor non conformance

Non Conformance - 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 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 - Complete. Included in Environmental Management Plan version 4 (approved 30/04/2026)

Table 4 - EMP Audit Non-conformance recommendations/actions

Description	Minor	Minor non conformance - if the environmental impact of the non conformance is likely to be contained within the site or have limited off site impact or is a documentation issue.
	Major	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