



2024

Quarterly Report

April - June

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 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 continuing as Quarry Manager and Nathan Thomas in the Operations Manager role;
- No mobile crushing took place during Q2
- No stripping and reclamation works took place and none planned until Q4.



Figure 1 - Site Aerial 3rd July 2024

1.0 LRMP Update

Summary of actions completed in Q2 below;

General

- General Weed treatment and fence maintenance around Quarry;
- Chainsaw large fallen branches around the property;
- Stake and guard collection. Stakes and guards will be re-used where possible for 2024 plantings.

Netgain

- Cut and paint Typha, Southern section creekline Pakenham road end. Cut and paint woody weeds Southern section;
- Handweed sensitive areas of the Southern Section of Net Gain. Handweed Ivy across site;
- Pack spray blackberry and woody weeds with high rate selective herbicide Northern and Southern sections of Net Gain. Run complete except for swamp areas to be targeted in drier months;
- Broadleaf weed run in the Southern section of net gain with selective herbicide;
- Chainsaw branch fallen on fence Top of Northern section Net Gain;
- Handweed agapanthus spreading from adjacent property Northern section NE boundary fence line;
- Pack spray grassy weeds with non selective herbicide Northern section amongst established poa area to encourage recruitment over winter period;
- Deer damage was observed to be extensive.

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

- Brush cutting grassy weeds for biomass control and in preparation for future spray works;
- Tanker spray broadleaf weeds for weed control with selective herbicide;
- Chainsawing of fallen trees and limbs from strong winds impeding access to main track Southern Extraction;
- Staking and guarding Dianella species prior to spraying works to protect from off target damage;
- Hand weed fleabane, aster weed and stinkwort to avoid species seeding. Hand weeding is effective in wet weather where species are tall and less ideal to herbicide spray;
- Pack spray grassy weeds with non selective herbicide;
- Pack spray pampus grass with high rate glyphosate border areas of 2023 planting area.

Phase A&B

- Tanker and pack spray blackberry and woody weeds;
- Small patch of Chilean Needle grass discovered in an area outside known infestation to be sprayed at a later date.

Southern Hill Side

- Brush cutting large perennial grass species for biomass control and in preparation for future spray works;
- Pack spray blackberry regrowth and woody weeds throughout site;
- Pack spray grassy weeds Southern Hillside with non selective herbicide bottom section adjacent to path and entrance gate.

Pest control

- Pest Animal works conducted on 13th May 2024.

2.0 Non-Compliance and Complaints

Non-conformances:

- Nil during Q2 2024

Complaints:

- Nil during Q2 2024

Two community contacts in Q2 regarding behaviour of external truck driver behaviour on local roads. - *Tabled and minuted during the May ERC meeting.*

2.1 Air Quality – Dust

Depositional results have indicated the dust emissions tabulated below. No exceedances during the reporting period.

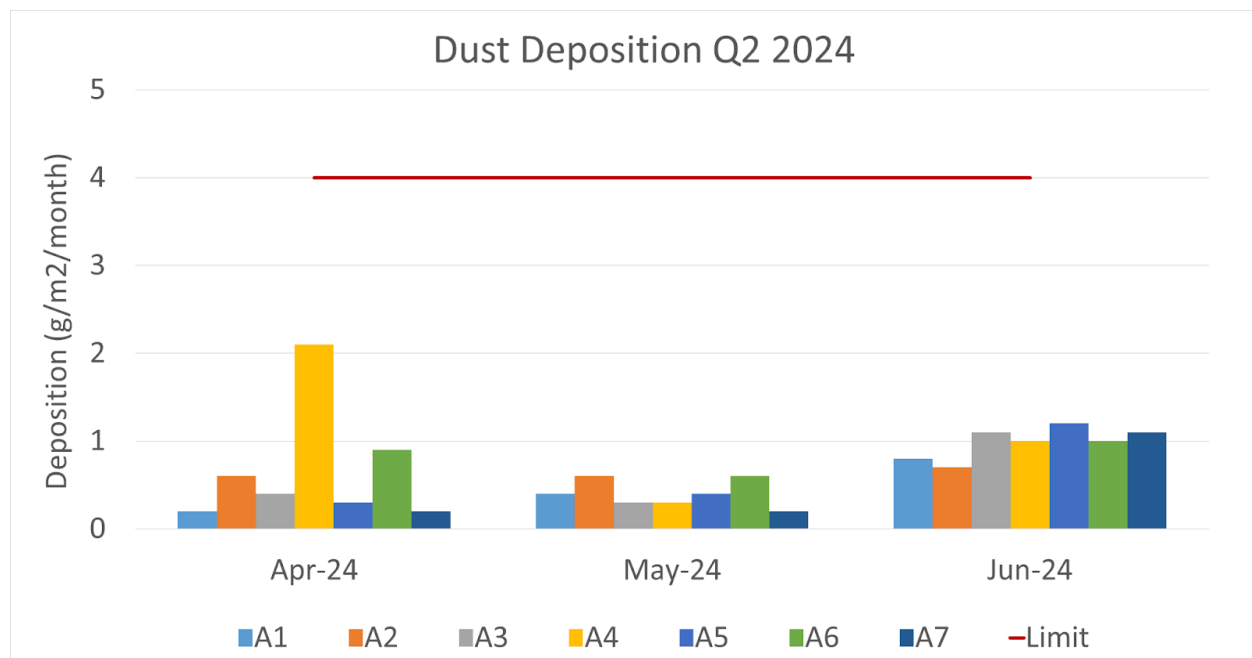


Figure 2 - Dust Deposition Q2 2024. (Limit 4.0g/m²/mth)

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

2.2 Noise

Average noise levels for the 2nd Quarter 2024 are shown below. No exceedances during the reporting period.

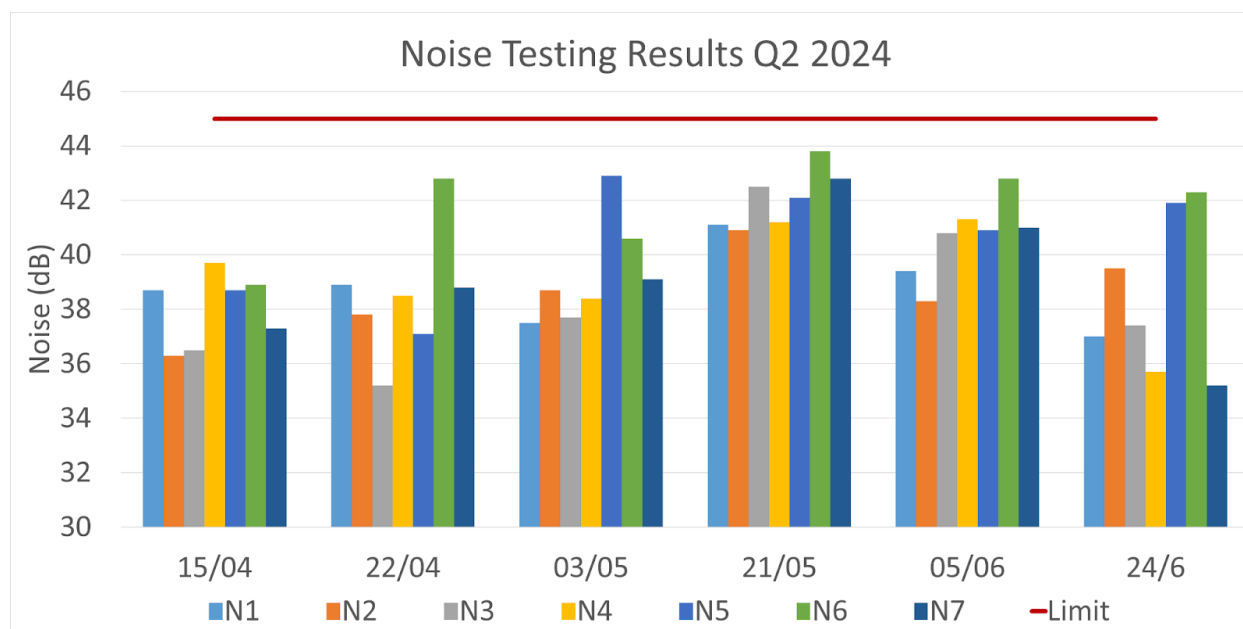


Figure 3 - Noise Testing Results Q2 2024. (Limit is 45dB under normal operating conditions)

2.3 Blasting

All blasting operations have been carried out in accordance with guidelines. No exceedances during the reporting period.

Ground Vibration

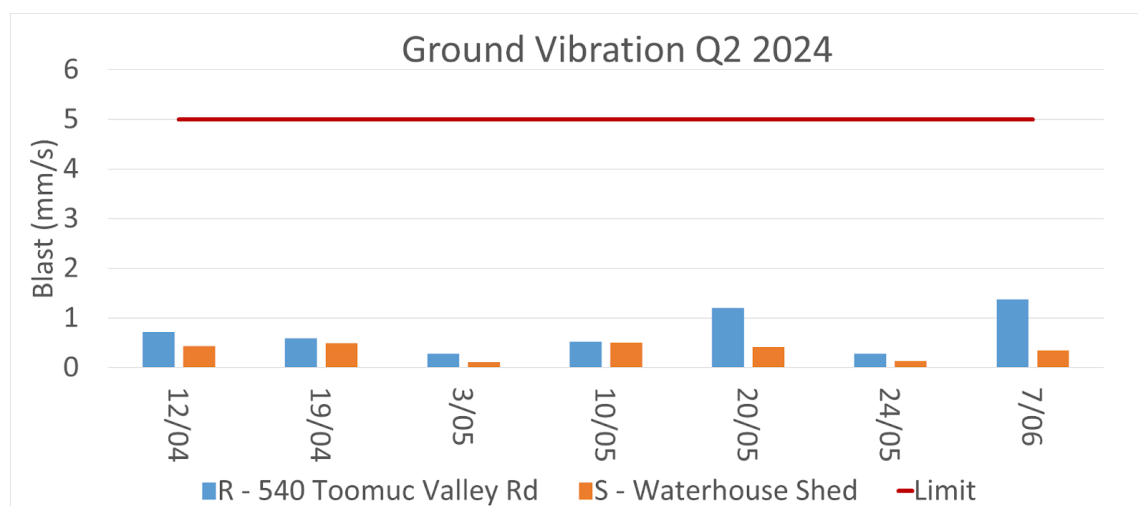


Figure 4 - Blasting; Ground Vibration Results Q2 2024 (Limit is 5mm/s for 95% of blasts in a 12 month period)

Air Blast

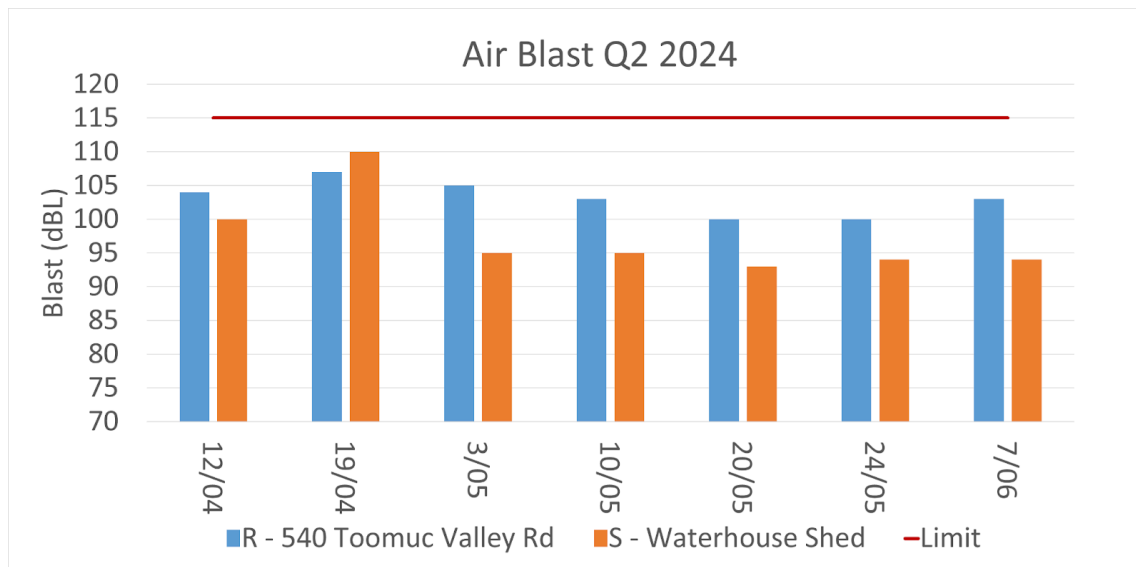


Figure 5 - Blasting; Air Blast Results Q2 2024 (Limit is 115 dBL for 95% of blasts in a 12 month period)

2.4 Surface Water, Drainage and Groundwater

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

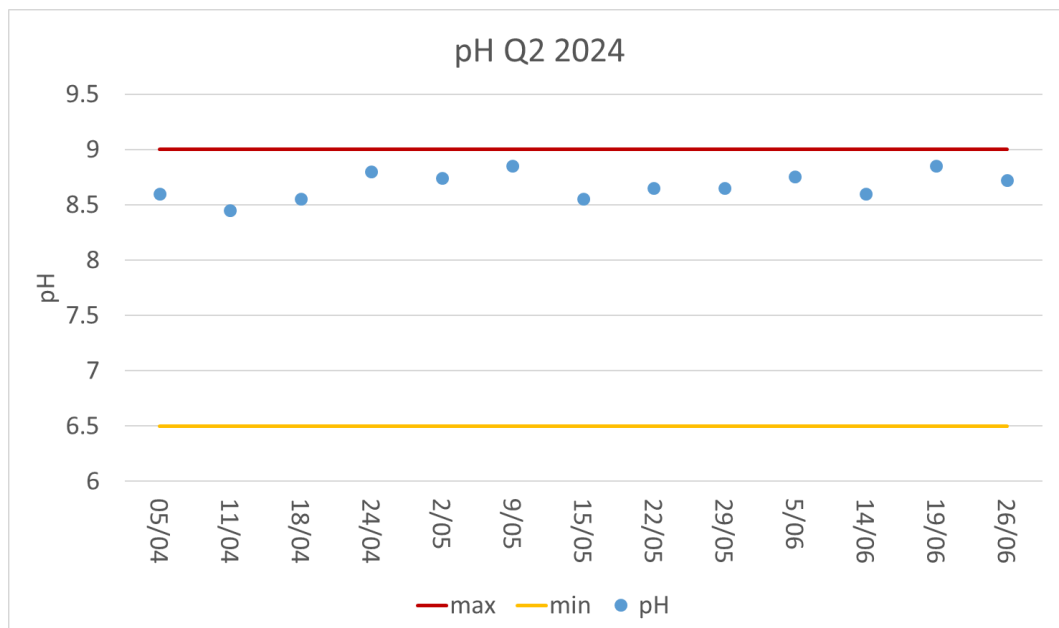


Figure 6 - Discharge Water pH results Q2 2024

Turbidity – Clarity of water Maximum 30NTU.

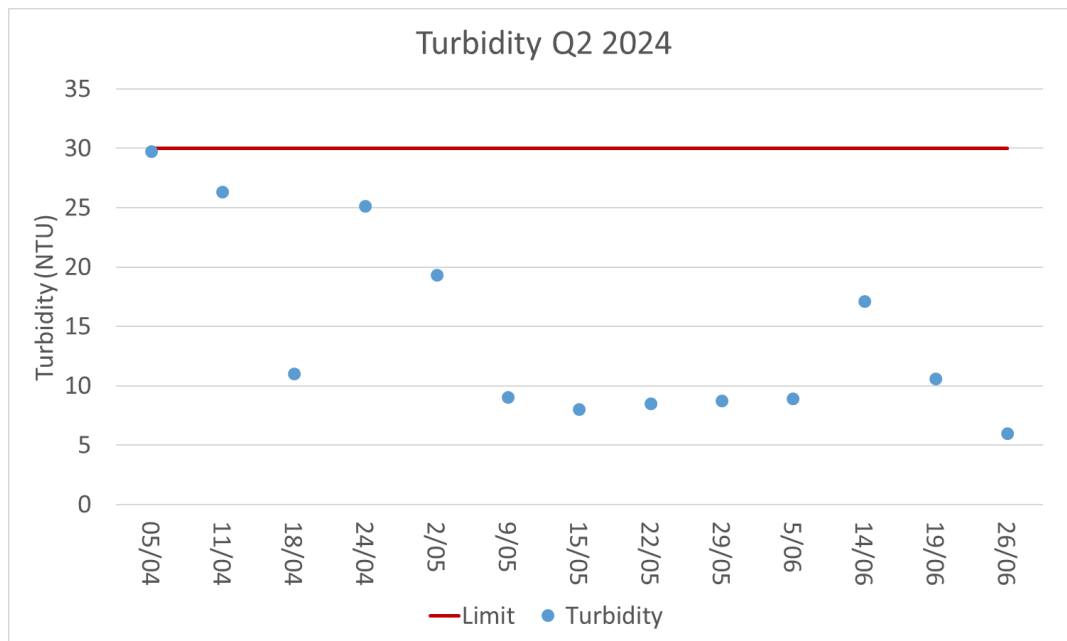


Figure 7 Discharge Water Turbidity results Q2 2024

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

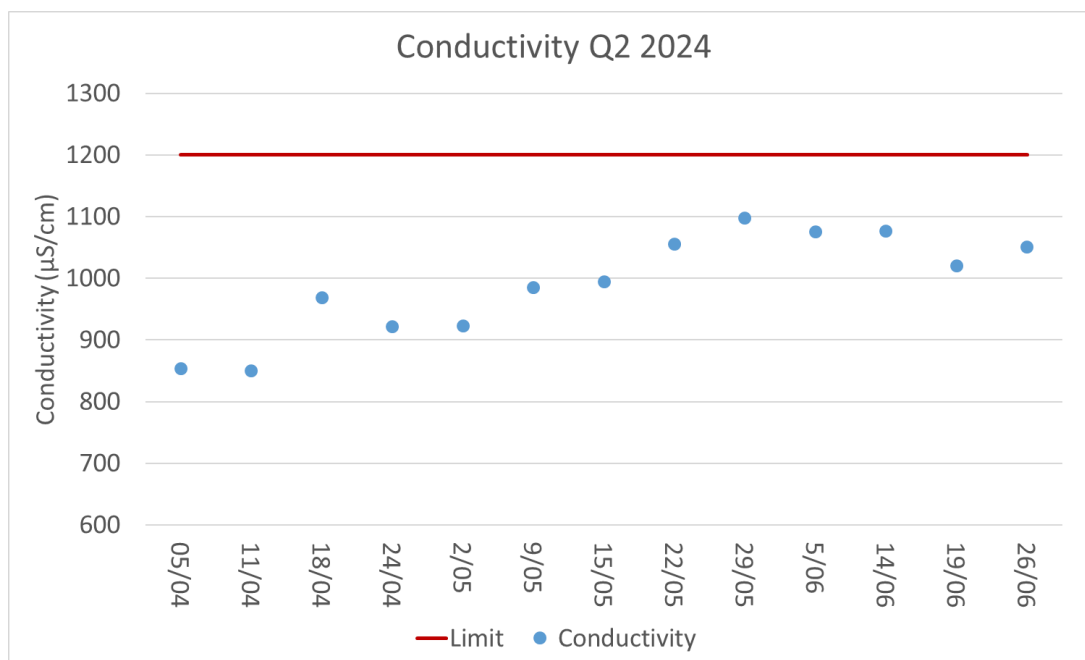


Figure 8 - Discharge Water Conductivity results Q2 2024

Bore Water Measurements

Rolling Ground Water Levels

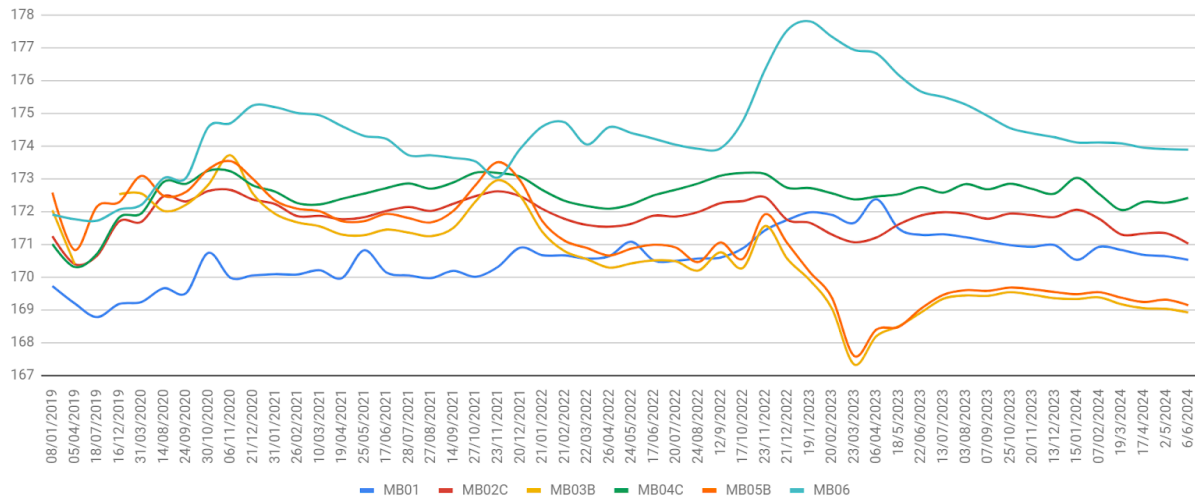


Figure 9 - Groundwater levels 2019 to present.

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)

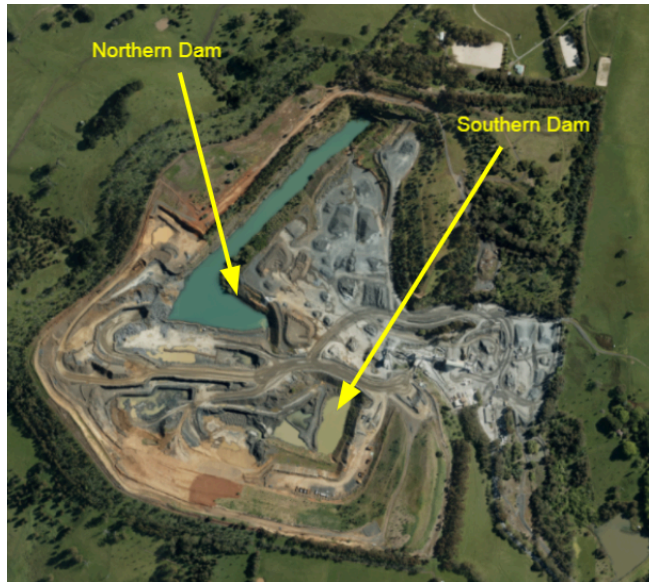


Figure 10 - In Pit Water Identification

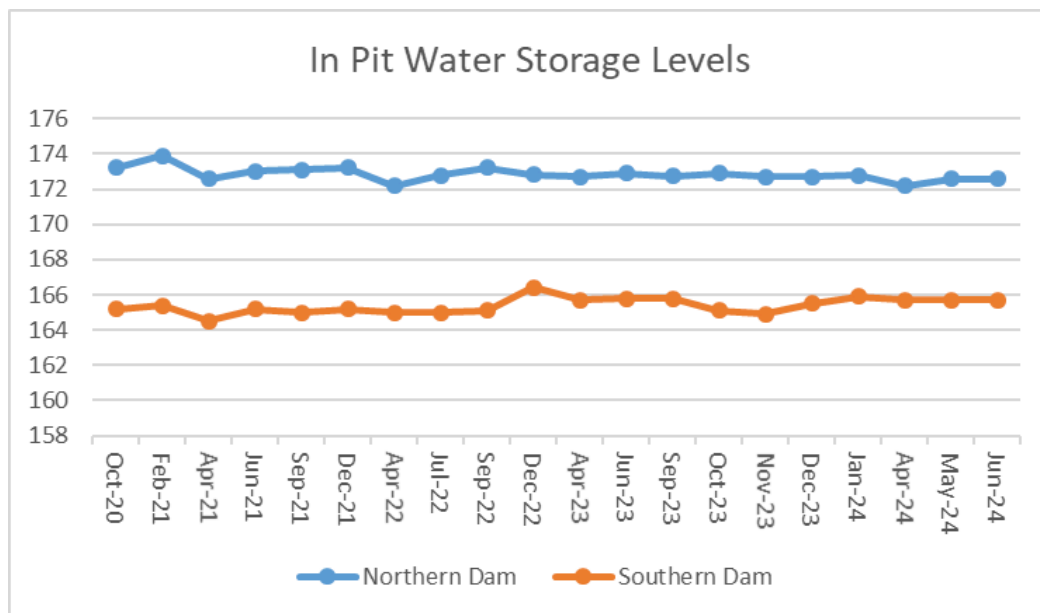


Figure 11 - In Pit Storage Levels October 2020 - Present

2.5 Waste

2024 Q2		
Categories	Rolling 12 Month Tonnes	Av / month
Landfill	5.48t	0.46t
Category	YTD	
Steel	7.0t	
Recycled Oil	5,800L	
Prescribed	0.29t	
Interceptor waste/ Hydrocarbon contaminated water	7,000L	
Other		
Waste Grease	0.33t	
Oil filter recycling	1000L IBC (QTY 1)	

Figure 12 - Quarry Waste Generation Summary of Q2 2024

2.6 Truck Tarping

Tarping compliance Q2 2024

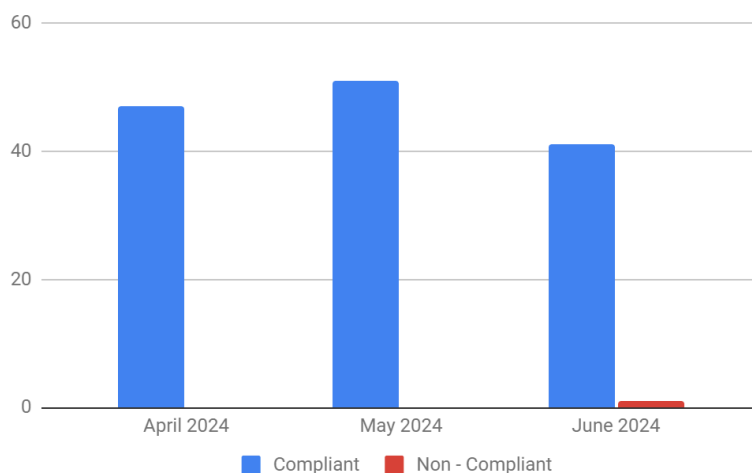


Figure 13 - Tarping visual checks of Q2 2024

June - Holcim truck 3812 observed during tarping audit with only truck tarped. Trailer had not been tarped.(iCare - HAZID 0855718)

Appendix 1 - 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)

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

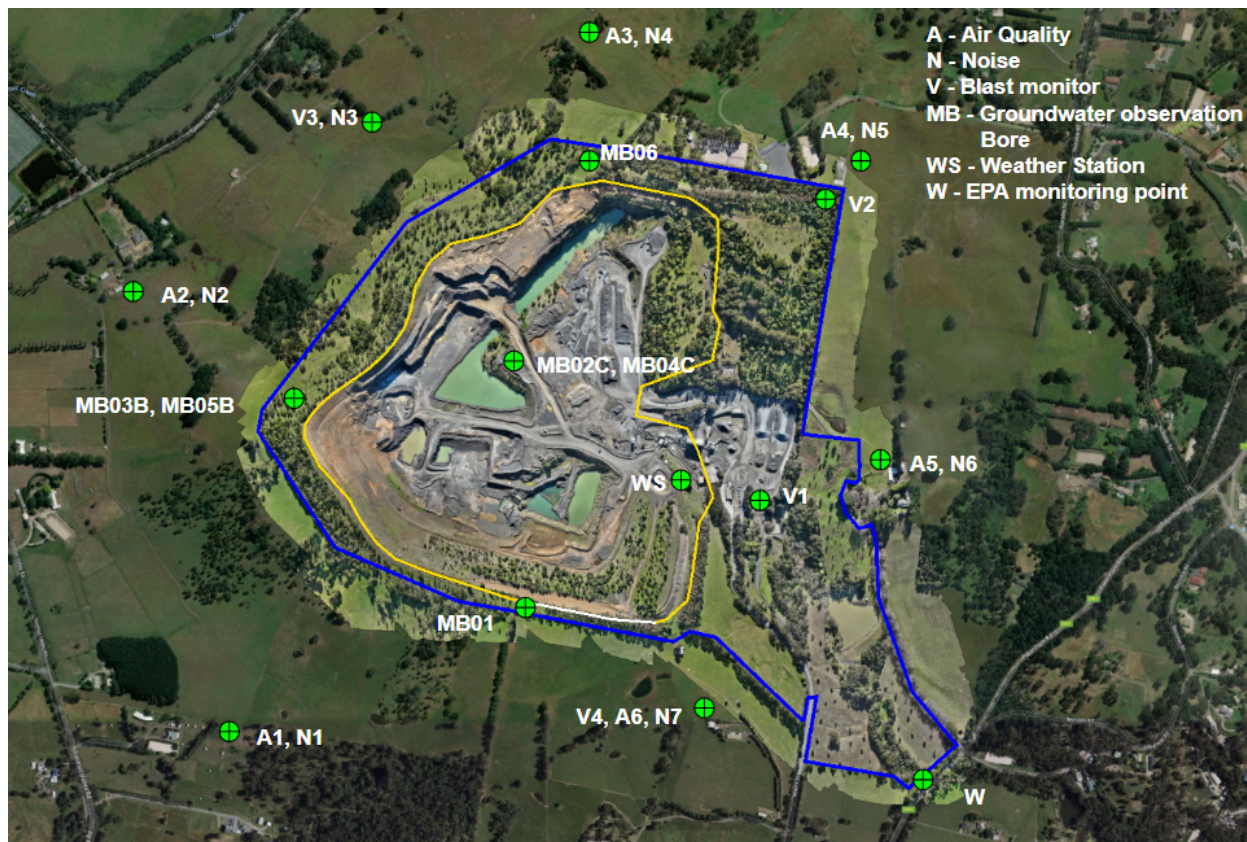
During discharge, water is monitored at the V Notch located at the bottom of the Donnazon property spillway. A solar powered flow meter logs flow data and the water is sampled manually by trained and certified employees. Water is tested for Turbidity, pH and conductivity. Water is monitored at Donnazzons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

Appendix 2 – Monitoring Locations



Appendix 3 - EMP Audit action list

EMP Audit Year - 2023

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 EP 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 - Agreed. To be actioned.

EMP Audit Year - 2023

EMP Reference - B-2.4.2

Rating - Minor non conformance

Non Conformance - Two (2) turbidity exceedances were recorded during the audit period, the highest being approx. 95 NTU (Licence Limit 30). Exceedances were associated with significant rainfall events. All were reported to EPA with explanation of likely cause. The site is considering opportunity to install a larger pump in Donnazan's dam to allow for larger recirculation of water up to quarry pit and allow for larger freeboard availability in Donnazan's dam to prepare for significant rain events

Recommendation#1 - Progress the feasibility investigation for the installing of the larger pump including an assessment on what impacts that would have on the integrity of Donnazan's Dam.

Status - Agreed. To be actioned.

Recommendation #2 - Undertake a Hydrological Assessment to better understand catchments volumes within the quarry and capacity needed to allow for capture and recycle of surface run-off in a significant rain event (i.e. 1:20 year event, 1:50 year event, 1:100 year event).

Status - Flow data from the v-notch discharge point (during turbidity exceedance events) will be used to investigate the feasibility of installing a larger pump at Donnazan's Dam, before proceeding to any Hydrological Assessment.

EMP Audit Year - 2023

EMP Reference - EPA License OL_G5 and OL_G7

Rating - Minor non conformance

Non Conformance - Under conditions OL_G5 and OL_G7 of EPA Operating licence OL000000544 the quarry is required to..(see Audit report)

Recommendation #1 - Given the current version of the EMP does not reflect current legislation and it is not clear that it describes how Holcim will continue to eliminate and minimise the risks so

far as reasonably practicable it is recommended that Holcim update the EMP to meet the current guidelines for the development of a RMMP.

Status - Complete. Refer to EPA Site Entry Report FAR-00016636. "Licence Conditions: OL_G5, OL_G7 and OL_DW2 - compliant."

Recommendation #2 - While it is acknowledged that the Pakenham quarry has prepared a quarry rehabilitation plan, it is recommended that Holcim confirm with the EPA if this rehabilitation plan meets the specific guidelines for development of a decommissioning plan and, if not, update the rehabilitation plan or develop a separate decommissioning plan that meets the current decommissioning guidelines.

Status - Complete. Refer to EPA Site Entry Report FAR-00016636. "Licence Conditions: OL_G5, OL_G7 and OL_DW2 - compliant."

EMP Audit Year - 2022

EMP Reference - B-2.4.2

Rating - Minor non conformance

Non Conformance - Three (3) turbidity exceedances were recorded during the audit period, the highest being approx. 80 NTU (Licence Limit 30).

Recommendation- Investigate and then implement effective measures to cease the discharge from the site of sediment and/or colloid- contaminated water that causes exceedance of Licence limits.

Status - The site is investigating feasibility of a larger pump in Donnazan's Dam to recirculate water back to the quarry pit to create increased freeboard in the dam and avoid sediment contaminated discharges

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