

Mt Shamrock Environmental Management Plan - 3 Monthly Progress Update

April 2019 - June 2019



Prepared by Matt Dodd for Mt Shamrock Quarry Environmental Review Committee

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

- Operational hours unchanged

1.0 LRMP Update

All actions have been completed during the reporting period. Spraying has continued throughout the site for Thistles, Blackberries & general weeds by backpack.



- Timber waste in graveyard area cleaned up and sorted for recycling
- Weed spraying in netgain and rehabilitation areas
- Watering of plantations in rehab area
- Fence repairs around property
- Tidy-up around buffer properties
- Netgain area maintenance
- Tree replanting in southern extraction

2.0 Non-Compliance and Complaints

Non Compliances to EMP Requirements were registered during this monitoring period

Non-conformances:

- 2 x minor water conductivity exceedances due to surface water run off. Reported to the EPA; not concerned and no further actions required.
- Exceeding landfill target by 140kgs per month

Complaints:

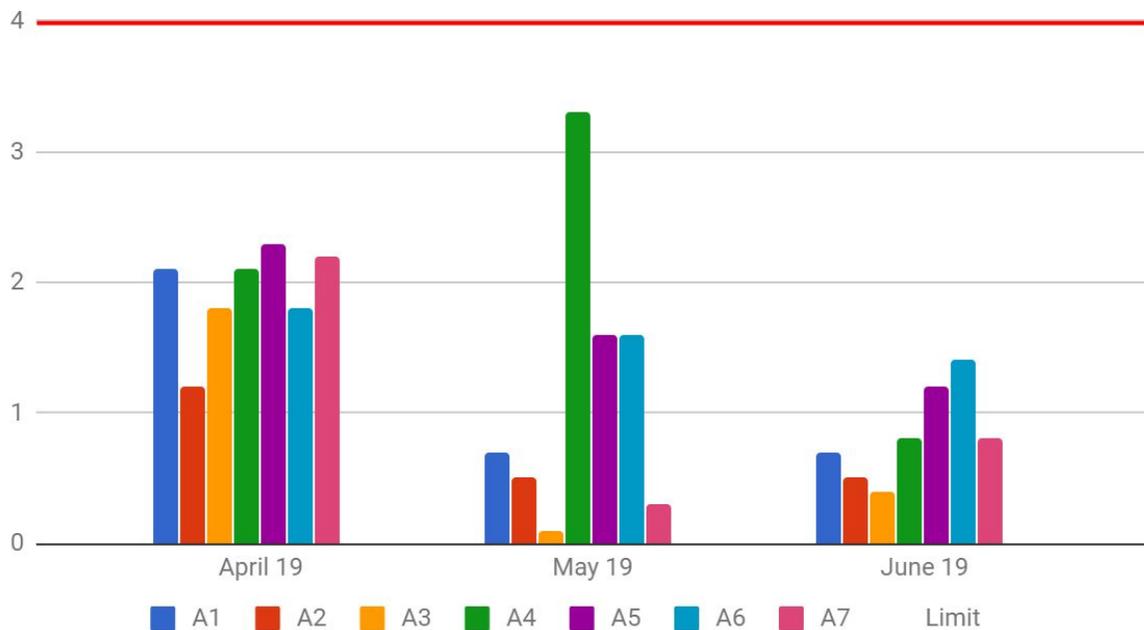
- Nil

2.1 Air Quality – Dust

DEPOSITIONAL results have indicated the dust emissions tabulated below

Limit 4.0g/m²/mth

Dust Deposition Q2 2019 (Limit 4.0/m²/mth)



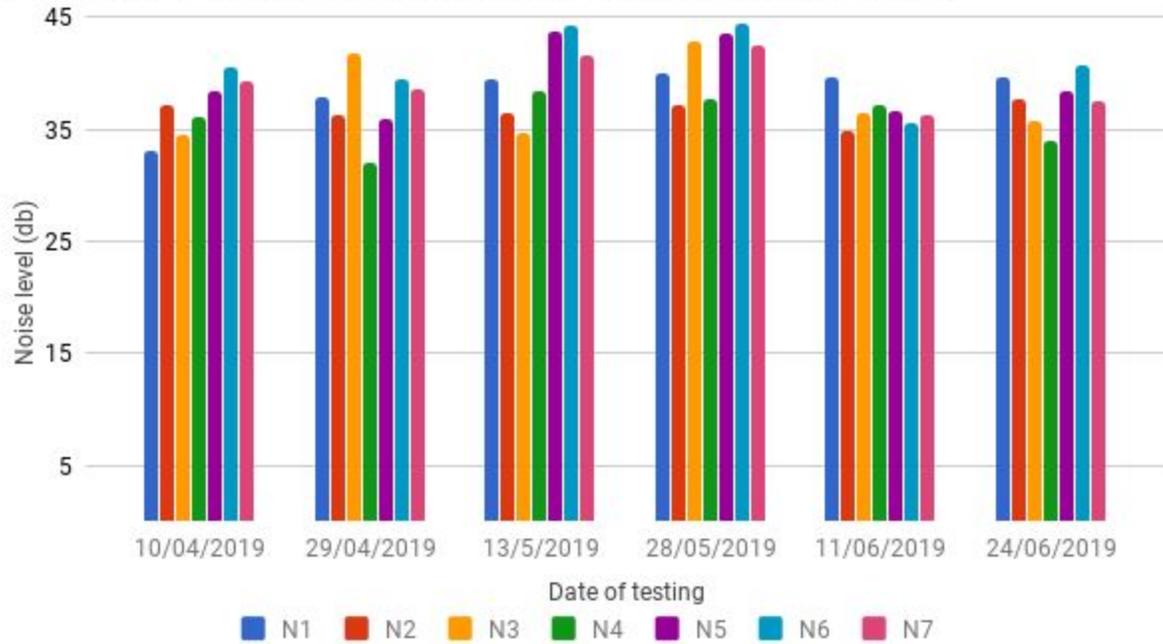
2.2 Noise

Average noise levels for the 2nd quarter are shown below.

Limit is 45dB under normal operating conditions

Graph showing Noise monitoring results by Sensitive Location

Fortnightly Noise testing results Q2 2019 (Limit 45dB)



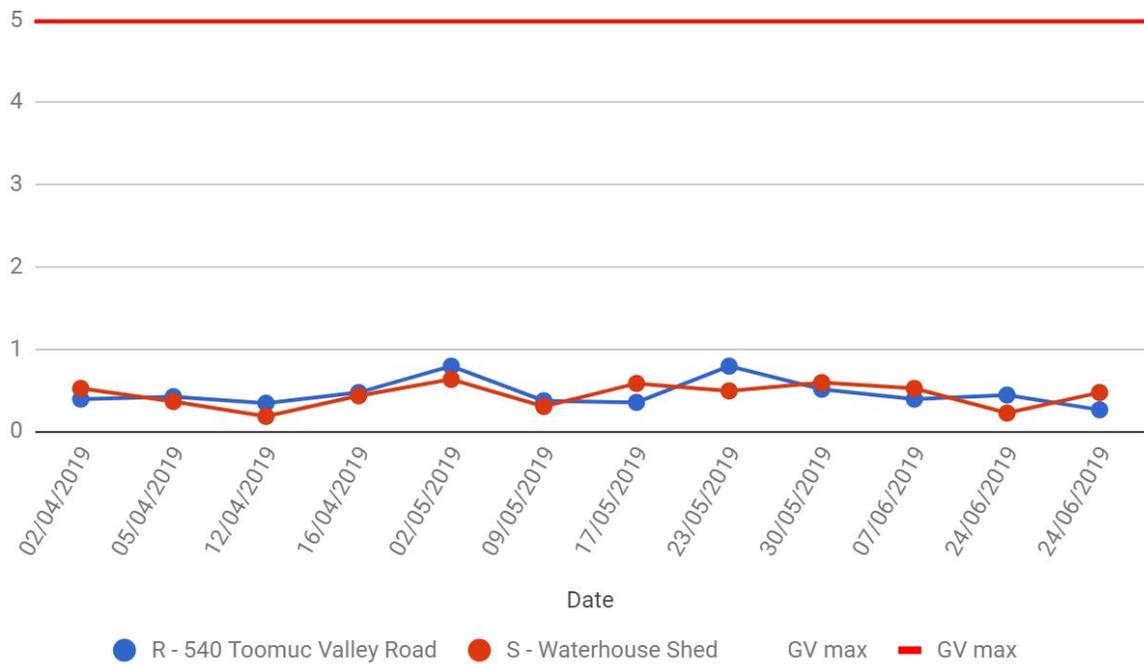
2.3 Blasting

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

Ground Vibration

Limit is 5mm/s for 95% of blasts in a 12 month period.

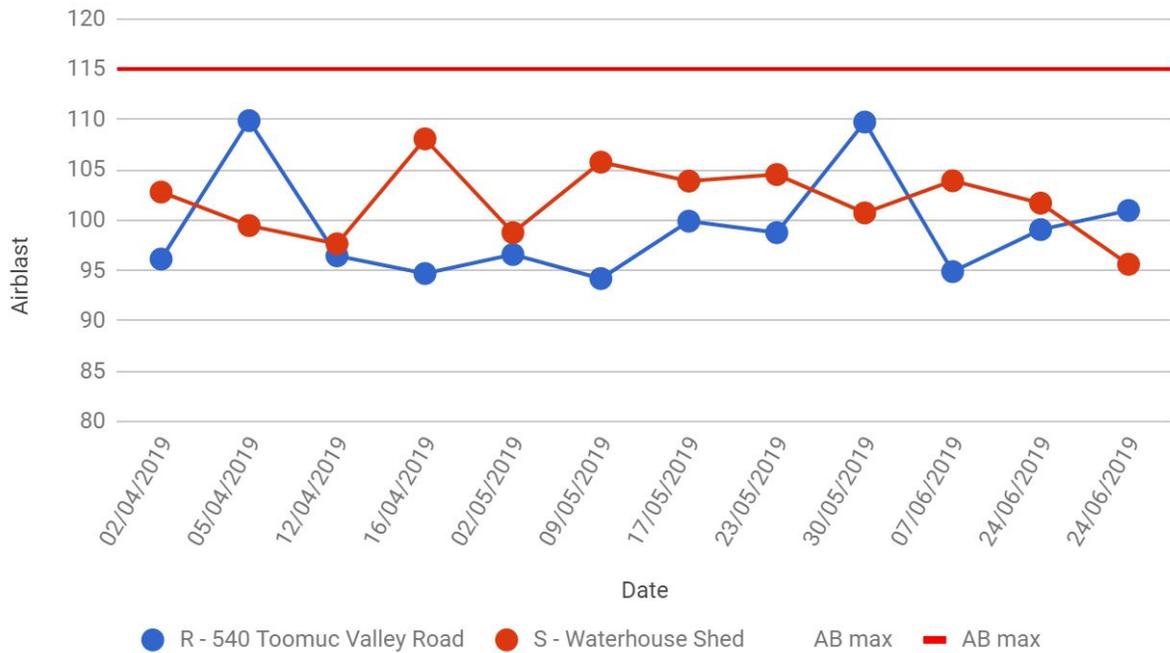
Ground vibration for Q2 2019 (Limit 5 mm/s)



Air Blast

Limit is 115 dBL for 95% of blasts in a 12 month period.

Air blast limit results for Q2 2019 (Limit 115 dBL)

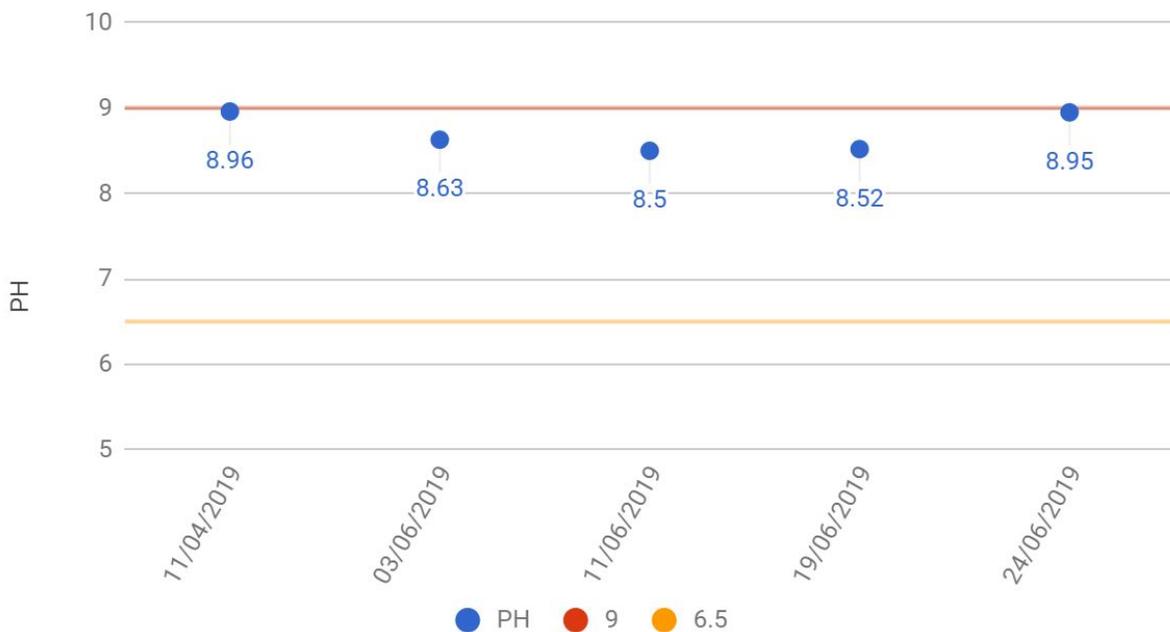


2.4 Surface Water, Drainage and Groundwater

Graphs showing the Q2 water results

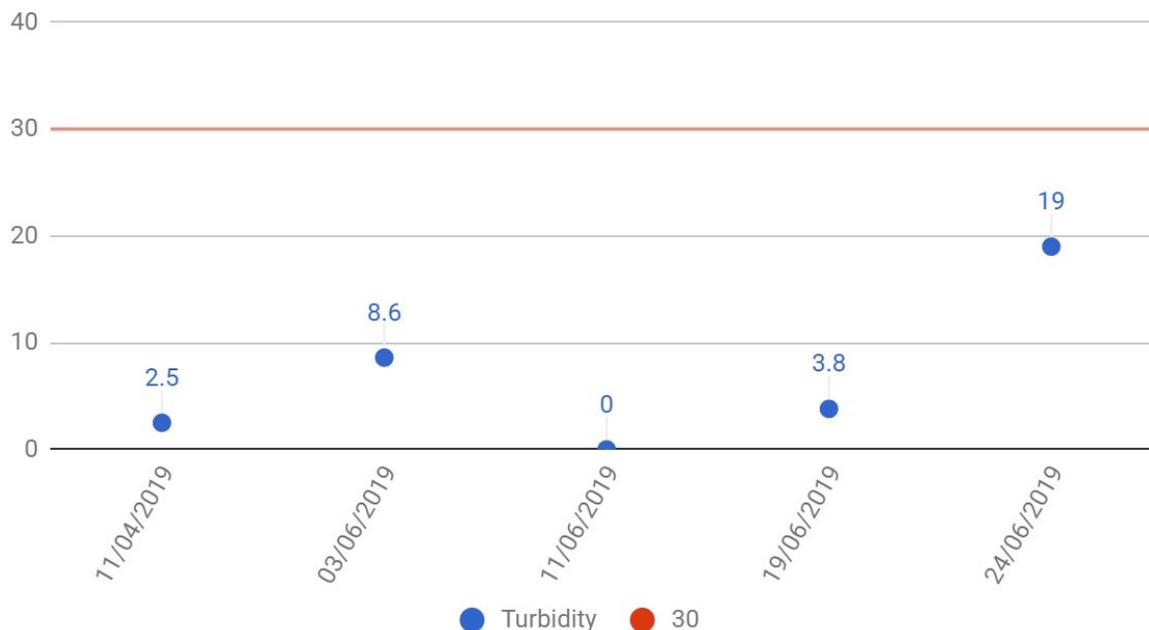
pH – A measure of the Acidity or Alkalinity of the water limit 6.5 to 9.0

pH Q2 2019



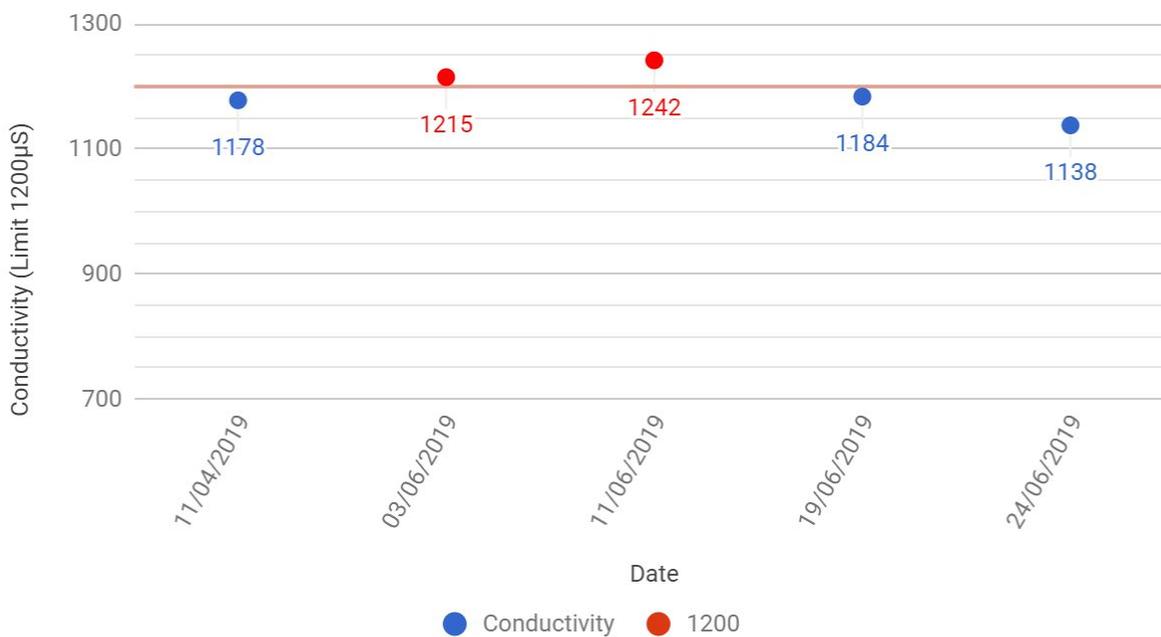
Turbidity – Clarity of water Maximum 30NTU

Turbidity Q2 2019



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

Conductivity Q2 2019



Note: Two samples reported above the maximum limit. The sample from the 3rd of June’s conductivity was measured at Donnazons dam as 1167 µS. Heavy rainfall was recorded on this

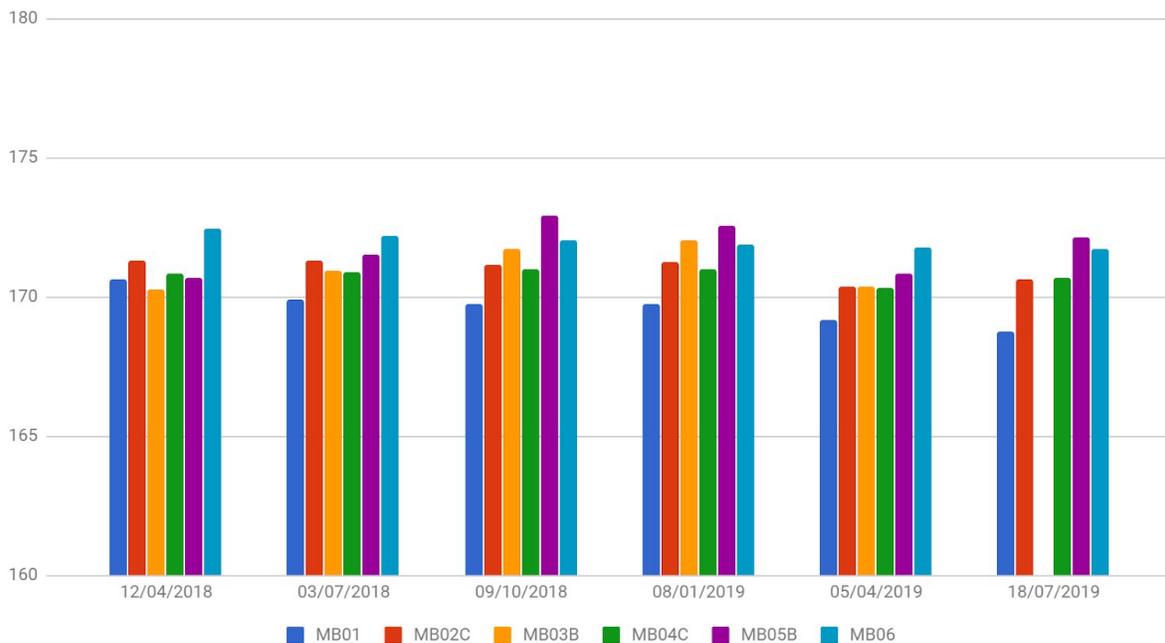
day, which is believed to have caused this exceedence. On the 11th of June no sample was taken from Donnazons dam to compare, however the site was not actively discharging any water with the likely cause being surface / ground water infiltration into the discharge channel. Nonetheless both of these exceedences have been reported to the EPA (Reference numbers: 6000192652 & 6000192650). No further actions recommended by the EPA.

No discharge from site from April. Measurement results from due diligence testing of Donnazons dam.

Bore Water Measurements –

Table showing 2018 - 2019 water table levels in relation to sea level

RWL of ground monitoring bores 2018-2019



WASTE

Quarry Waste Generation

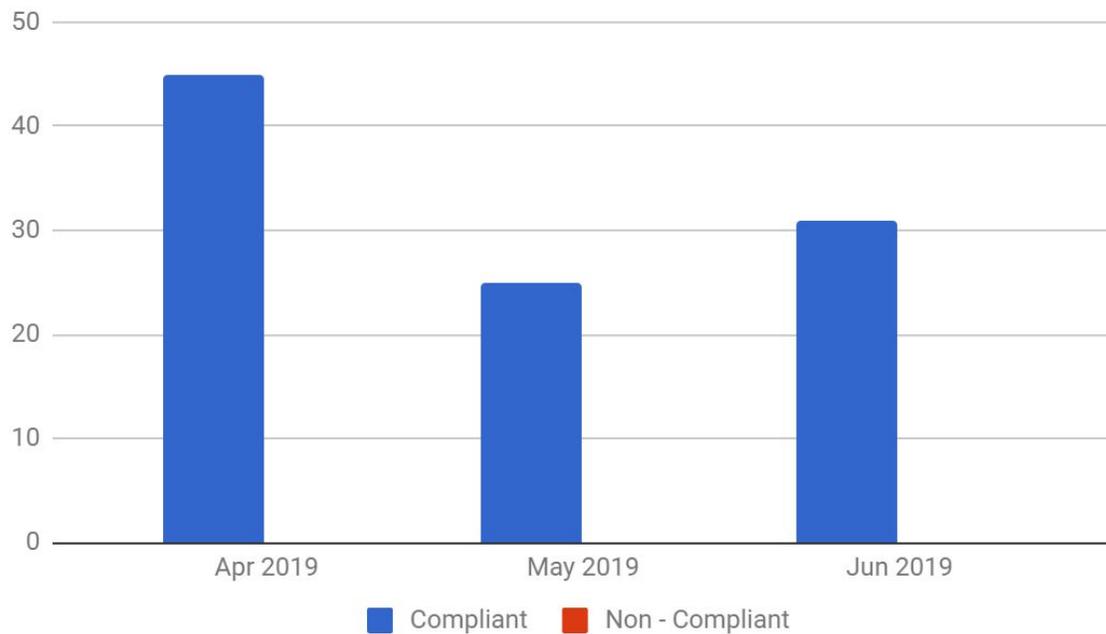
Categories	Rolling 12 Month Tonnes	Av / month
Landfill	8.88	0.74
Category	YTD	
Steel	55.95	T
Recycled Oil	7,202	L
Prescribed	1,025	L
Interceptor waste	9,000	L

TARPING

Evaluation of trucks leaving the site concluded that there is minimal material being tracked on to public roadways, representative sampling identified all loads for the Quarter were correctly loaded.

Graph showing Tarping visual checks

Tarping compliance Q2 2019



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

Ground Vibration – 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

HOLCIM, MOUNT SHAMROCK QUARRY PAKENHAM
Figure 1: Environmental Monitoring Locations



LEGEND:

- ▲ A = Air monitoring location (▲ signifies high volume compliance monitoring station at A2, A5, A6)
(Note: Background PM₁₀ monitoring also at address to be determined)
- N = Noise Monitoring location
- V = Blast Vibration and Noise Overpressure location
- W = Surface Water Sampling Point
- MB = Groundwater monitoring bores
- S = Weather Station

New bore locations

AECOM does not warrant the accuracy or completeness of information displayed in this map and any person using it does so at their own risk. AECOM shall bear no responsibility or liability for any errors, omissions, or inaccuracies in the information.



PROJECT ID: 6541326
 CREATED BY: DJB
 LAST MODIFIED: 16 SEP 2017
 www.aecom.com

DATUM: GDA 1984, PROJECTION: MGA ZONE 55
 0 50 100 150
 metres
 1:5,000 when printed at A4

Legend

- Monitoring Bore Location
- Monitoring Bore (Decommissioned)

NOTE:
* Location not surveyed - approximate only.

GROUNDWATER MONITORING LOCATIONS

Holcim (Australia) Pty Ltd	Figure 2
Groundwater Review	
Mt Shamrock Road, Pakenham	

EMP audit action list 2019

EMP ref.	Rating	Non-conformance	Recommendation	Status
2.1.3	MNC	Not known whether target met for housekeeping non-conformances.	Site needs to start scoring NCs for each inspection to accurately measure this metric.	Complete
2.1.3	MNC	The LRMP is not being periodically reviewed as required.	LRMP to be reviewed before the next stage of rehab works commences, and outcomes documented and presented to ERC for comment and agreement.	

description **MNC** 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.