

# **Mt Shamrock Environmental Management Plan - 3 Monthly Progress Update October 20 - December 20**



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**

- Operating hours unchanged
- New water cart working well
- Installation of additional fixed dust suppression sprinklers around site on high traffic areas such as haul roads, aggregate stockpiles etc
- Replacement of an 25 year old rigid haul truck with a more fuel efficient unit
- Focus on fire prevention and readiness for bushfire season (housekeeping, emergency drill etc)
- 5 Yearly Donnazons Dam structural integrity inspection completed
- Site achieved a net reduction of 1.5% t/t GHG emissions (excluding renewable component)

## 1.0 LRMP Update

All actions have been completed during the reporting period. Summary of actions completed below



- Continued with stripping activities with material being placed in southern embankment
- Topsoil application along portion of the southern batter
- Installation of additional irrigation systems on southern rehab batters
- Fire prevention (slashing and fuel reduction) around site boundaries, netgain, and amongst phase A and B
- General biomass reduction through slashing / brush cutting around South East and Southern rehabilitation areas
- Spraying of broadleaf weeds, blackberry around western boundary, inside active quarry, and rehabilitation areas
- Infill planting Phase A and B a further 700 trees in south western corner
- Netgain - hand weeding / spraying of Blackberries, Thistles and Pampas grass, spraying of non native grasses

## **2.0 Non-Compliance and Complaints**

Non-conformances:

- Exceeded landfill target by 50kgs per month

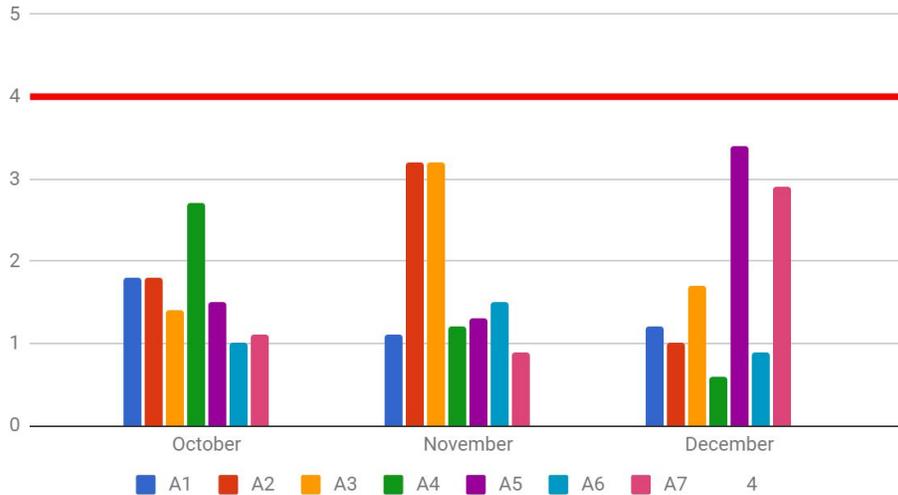
Complaints:

- Nil

## 2.1 Air Quality – Dust

DEPOSITIONAL results have indicated the dust emissions tabulated below

Dust Deposition Q4 2020 (Limit 4.0/m<sup>2</sup>/mth)



**Limit 4.0g/m<sup>2</sup>/mth**

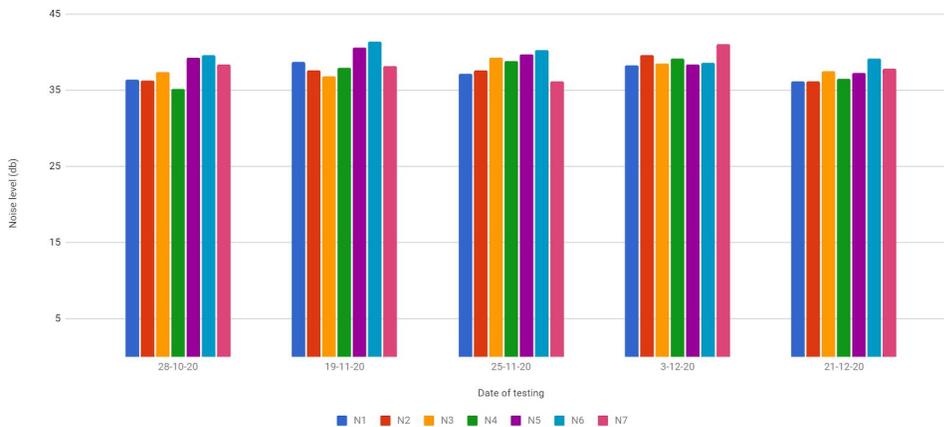
## 2.2 Noise

Average noise levels for the 1st quarter are shown below.

**Limit is 45dB under normal operating conditions**

**Graph showing Noise monitoring results by Sensitive Location**

Fortnightly Noise testing results Q4 2020 (Limit 45dB)



## 2.3 Blasting

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

### Ground Vibration

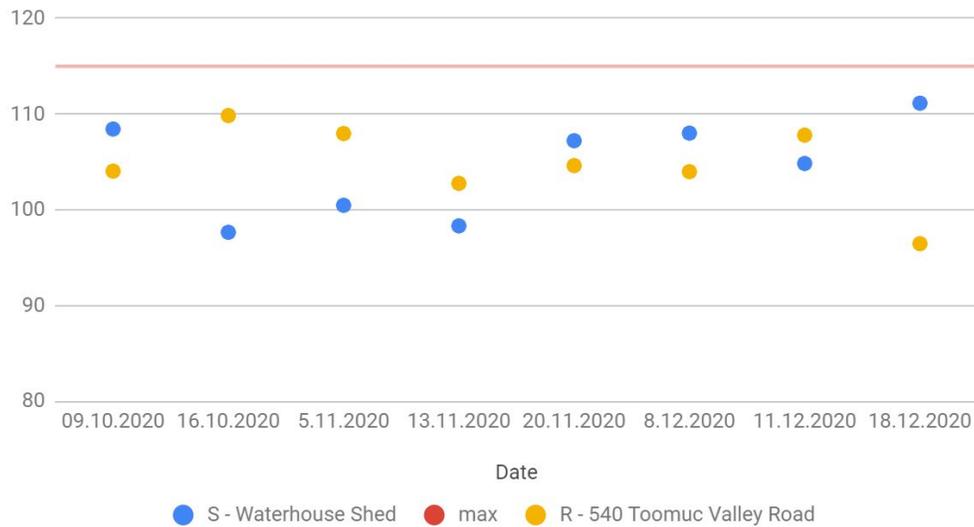
Q4 2020 - Ground vibration (mm/s)



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

### Air Blast

Q4 2020 Air Blast (dbL)



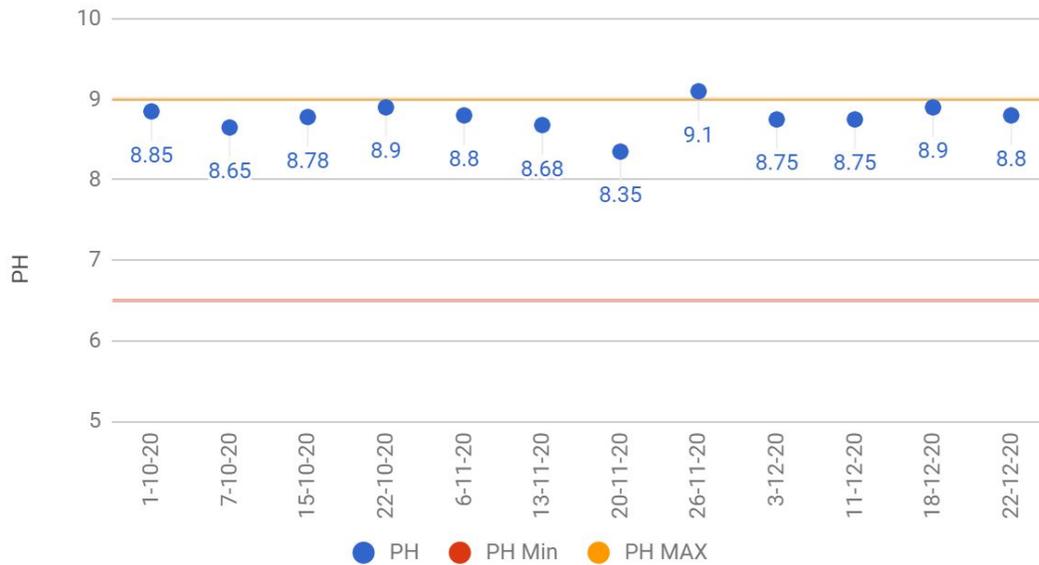
**Limit is 115 dbL for 95% of blasts in a 12 month period.**

## 2.4 Surface Water, Drainage and Groundwater

### Graphs showing the Q1 water results

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

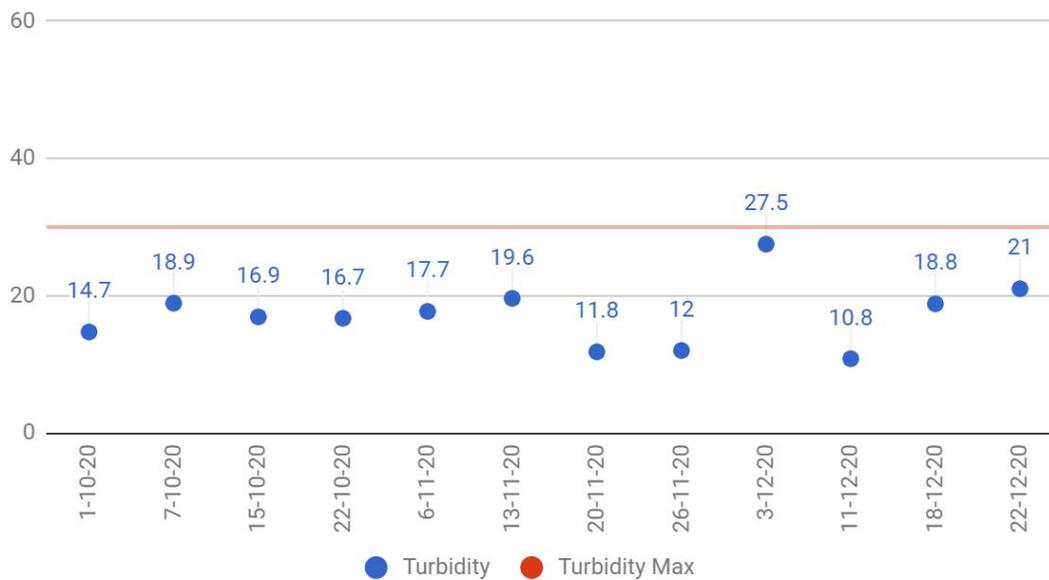
pH Q4 2020



Note 26/11/20 high PH, no discharge occurring this water was sampled at Donnazons Dam

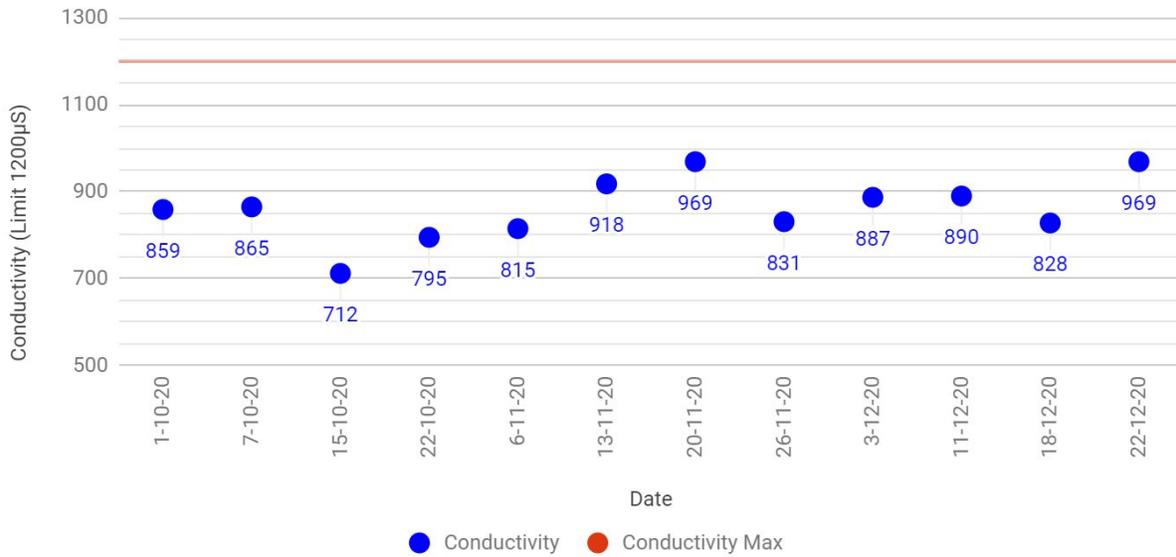
**Turbidity** – Clarity of water Maximum 30NTU

Turbidity Q4 2020



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

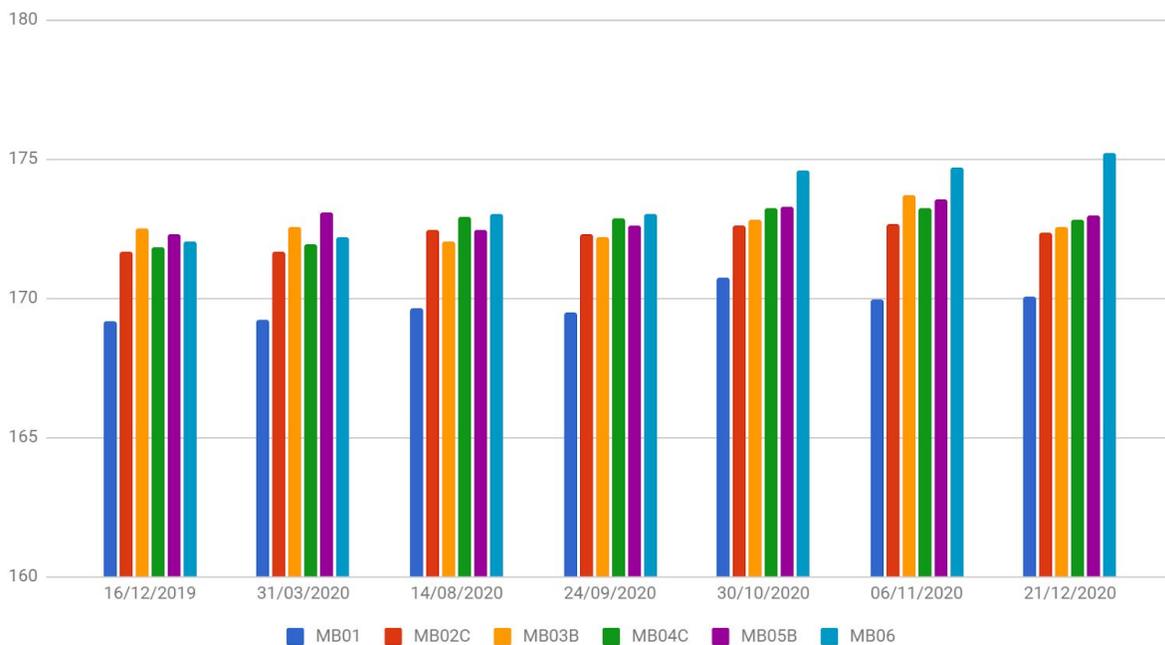
### Conductivity Q4 2020



### Bore Water Measurements –

Table showing 2019/2020 water table levels in relation to sea level

#### RWL of ground monitoring bores 2020



**Note: As part of the most recent discussions, one of the actions Holcim will action is to conduct additional GWL monitoring on a monthly basis, hence the number of monitoring events has increased.**

## WASTE

### Quarry Waste Generation

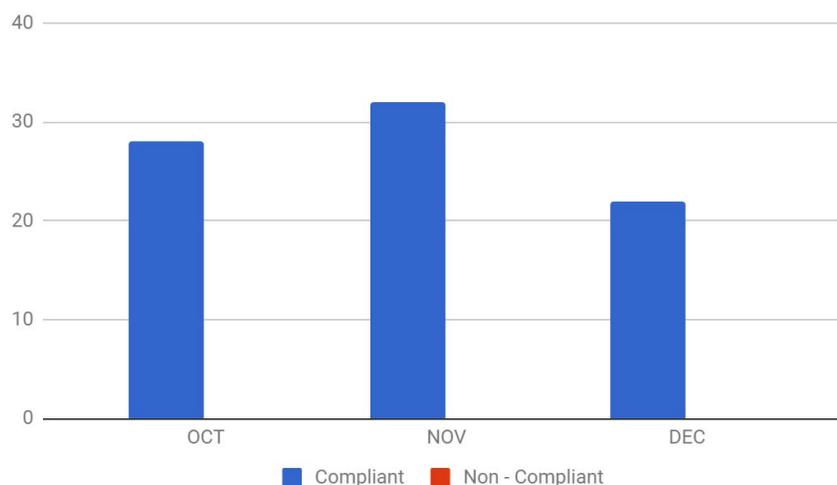
Categories	Rolling 12 Month Tonnes	Av / month
Landfill	7.76	0.65
Category	YTD	
Steel	22.77	T
Recycled Oil	4,900	L
Prescribed	1,025	L
Interceptor waste	22,500	L
Other		
Asbestos	200kgs	
Earth mover tyres	8	recycled
Conveyor belt	3.5 T	repurposed

### 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 Q4 2020



## **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/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** – 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 1200 $\mu$ S

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

## Appendix 2 – Monitoring Locations



### EMP audit action list 2019

EMP ref.	Rating	Non-conformance	Recommendation	Status
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.	Closed

### EMP Audit action list 2020

EMP Reference	Rating	Non Conformance	recommendation	Status
2.2.3 Noise	MNC	Rental water truck has a reverse beeper not a squarker	Replace reverse device with a squarker	Closed
2.6.2 GHG emissions	MNC	Holcim did not meet its energy reduction target of 3% (2% was achieved)	Investigate further measures to reduce energy usage per tonne of product delivered. These could include benchmarking the site against similar sites in Australia and overseas, and adopting	Open

			strategies used elsewhere	
2.12.3 Waste Management	MNC	Waste streams at maint / service area not being properly segregated	Develop further measures to ensure <ul style="list-style-type: none"> <li>- Co-mingling of recyclable and regulated waste in landfill skip ceases</li> <li>- Use of inappropriate or improperly labelled waste bins within workshop ceases, by removing bins from sites</li> <li>- Cardboard waste is compacted in the cardboard recycling skip</li> <li>- Make sure all chemicals are stored properly</li> </ul>	Open - WIP

description      **MNC**      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.