

**Hanson Lysterfield Quarry  
Community Reference Group**

**MINUTES OF MEETING**

<b>Meeting No.:</b>	<b>39</b>	<b>Status of Minutes:</b>	<b>APPROVED</b>
<b>Date:</b>	7 June 2023	<b>Time:</b>	6:00pm
<b>Location:</b>	Online via Microsoft Teams		

<b>Chairman:</b>	Brian Oates (BO)
<b>Present:</b>	
<b>Members:</b>	Alan Birchall (AB) Virginia Bright (VB) Trevor Harley (TH) Shane Logan (SL) Clifford Matthews (CM) Monica Varcoe (MV)
<b>Presenters/ Observers:</b>	Heidi Becker (HB), EPA Marc Chat (MC) , ERR Paul Dickie (PD), Knox City Council Rob Francis, Hanson (RFs) Garrett Hall (GH), WSP Golder Nick James (NJ), Hanson Lyndel Hunter, LHSC, CRG Secretariat (LH)

<b>Item</b>	
<b>1</b>	<p><b>Welcome</b></p> <p><b>Acknowledgement of Country</b></p> <p>The Lysterfield CRG acknowledges that this meeting is being held on the traditional lands of the Bunurong and Wurundjeri people of the Kulin nation, and pay our respect to their Elders both past, present and emerging.</p> <p><i>Apologies received from:</i></p> <p>Clayton Collins Johanna Selleck</p> <p><i>Absent:</i></p> <p>Wendy Belli Tony Costanzo Richard Farragher John Farrer Sally Orr Susan Pearce Pablo Perez-Reigosa</p>

2	<p><b>Minutes of previous meeting</b></p> <p>Meeting 38 Minutes were approved by CM, seconded TH, for online publication.</p> <p><b>Action Tracker</b> from Meeting 38, 5 April 2023</p> <p><b>Issue:</b> <i>Hanson to provide a map of blasts staged over the past three months.</i></p> <p>NJ will present during Item 5.a. Operational Report.</p>
3	<p><b>Communication and Consultation</b></p> <p><u>Community Complaints:</u></p> <p><i>Nick James, Hanson</i></p> <p>NJ advised that Hanson had not received any community complaints</p> <p>MC advised ERR had not received any community complaints.</p>
4	<p><b>Presentation: Project Updates</b></p> <p><i>Garrett Hall, WSP</i></p> <p><i>Rob Francis, Hanson</i></p> <p><i>(Refer to ATTACHMENT A)</i></p> <p>GH advised that there had been no movement since the last meeting when members were advised that Hanson would be resubmitting its application to ERR for a Work Plan Variation responding to the risks identified by VCAT. The next step is to conduct a Regulators’ Site Meeting, however a date has yet to be set. To inform the attendees of that meeting, a Summary Report has been prepared which defines Hanson’s understanding of the risks, and how to better manage groundwater and diversity. What Hanson is proposing hasn’t changed as is it hoped that the regulatory agencies that approved the original submission will continue to do so. Hanson anticipates that the site meeting will be conducted prior to the next CRG meeting in early September.</p> <p>CM queried whether he could attend the meeting. GH advised that typically the site meeting was conducted by ERR and attendees were representatives of regulatory agencies relevant to the project. This is ERR policy. However, GH is happy to report outcome at next CRG meeting.</p> <p>RFs reported that there had been no further movement relevant to the Overburden Earthworks Application.</p>
5	<p><b>5.a Operational Report</b></p> <p><i>Nick James, Hanson</i></p> <p><i>(refer to ATTACHMENT B)</i></p> <p>NJ reported that rainfall has been above average for the past few months, helping to keep dust low.</p> <p>All dust gauge readings were low. There was nothing to note in May 2023, and a south-east wind was prevalent throughout April 2023. This is evidenced in the Park Boundary gauge.</p> <p>TH noted that the Weather Station was at 3g/m2/month in April 2023. NJ advised that EPA guidelines allow up to 4g/m2/month, so the reading is below the guideline.</p> <p>NJ presented blast data for all blasts in 2023.</p> <p>NJ advised that post blast data of shot number 2312 on 5 May 2023 had identified an exceedance of the Air Blast limit at Battersby Way. The reading was 121.19 dBL and the regulated Air Blast limit is 120.0 dB. Hanson reported the exceedance to ERR, and requested independent investigations be undertaken by the blasting contractor Orica and consulting engineers Terrock Pty Ltd. NJ also contacted a CRG member who resides in the area to query their experience at the time. The resident reported that the blast was louder than usual, but was over quickly and there had been no comment</p>

or discussion amongst neighbours. Terrock personnel also happened to be located at Battersby Way at the time of the blast and reported the noise emission to be “very loud”.

NJ advised that the Battersby Way reading was inordinately high considering the significant separation distance of 1.83km. In terms of real air pressure, the reading of 22.9Pa was 6.5 times greater than the next highest reading at Somerset Court (3.53Pa).

The investigation confirmed that the readings were from the blast by vibration and pressure arrival times. An unusual ‘beat’ waveform was noted. NJ provided images demonstrating the difference of the waveform recorded on 5 May 2023 compared to that recorded at the same location on 13 April 2023. The monitoring equipment was checked for performance and calibration with no issues identified. A review of the video found no signs of poor blasting practices, no gas emissions and no rocks thrown, and the airblast model estimated 111.8dBL, consistent with recent blasts. The correlation between the timing of the control row delays in blasting and peaks of the Wavetrace.

The investigation concluded that the primary cause of the 121.2 dBL airblast reading at Battersby Way was the development of a 1 Hz beat from the detonation of 65ms control row holes that was likely reinforced by constructive interference from higher and harmonic frequencies from 17ms delays.

Significantly elevated airblast from beat waves and reinforcing frequencies is thought to be a rare occurrence and has not been previously noted by Terrock from blast monitoring records or has required investigation. The event may be somewhat unique and potentially a ‘one-off’, as evidence suggests a combination of factors including firing directions between holes and wind speed and direction at blast time.

TH commented that he thought the past two blasts seemed huge, however he was surprised to note that were 3.06mm/s and 3.14mm/s as they felt stronger. TH also stated that it was his expectation that blasts would be moving away.

In response to this statement and the Action Tracker item requesting Hanson provide a map of blast locations over the past three months, NJ provided an image demonstrating the locations.

NJ advised that there had been four blasts in two months. TH advised that he would prefer smaller blasts more often.

NJ reported that two representatives each of both ERR and EPA conducted a joint site visit earlier in the month. They inspected the workshop, the bulk fuel storage area known as the Lube Bay, the Montague Street and Park dust monitoring locations, the eastern and southern boundaries of the site and the viewing platform.

NJ advised that, following CRG recommendation, the tree protectors are being removed from the rehabilitation area and that 1400 plants comprising trees and shrubs were planted on the southern end of the eastern face rehabilitation area in May and June.

NJ also provided images of a pet project he has been working on over the past 12 months near the quarry office. Locally sourced plants native to the area have been planted, and signage identifying the plants is educating staff and building quarry team awareness.

NJ advised that local projects supplied Hanson products from Lysterfield Quarry included the North East Link the Webb Street Level Crossing removal and the State Basketball Centre and Hockey field upgrades at Wantirna.

#### 5.b. Questions and Answers

TH stated that in past CRG meeting NJ has suggested that blasts would be moving away from the top of the hill. The blast that was an exceedance was a long one. TH requested that Hanson provide the map of the blast locations to be updated with the date and number of the blast. RFs advised that this

	<p>can be done and presented to the next meeting. NJ advised that, due to the higher air blast readings, Hanson had changed the blast pattern to lower and longer. This creates the perception of a bigger blast.</p> <p>AB queried the outcome of the tree that had been cut down. NJ advised that arborists had inspected the site and provided a report. However, where the tree stands now is where it will stay. The arborists will return in 12 to 24 months to reassess.</p> <p>TH queried whether the branches will be removed. He stated that he did not want branches near his fence line as it encouraged snakes. NJ advised that he would follow up on this issue as there are a number of permit conditions relevant to leaving flora on site. Meanwhile, NJ will ensure flora along TH's fence line will be removed.</p>
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<b>Meeting Closed:</b>	6.40pm
<b>Next Meeting:</b>	<b>Meeting 40      6 September 2023</b>

#### ACTION TRACKER

Item	Issue	Action	By
4	Hanson to provide outcome of Site Meeting when conducted	GH / RFs	06.09.23
5.a.	Hanson to provide blast map with blast numbers and dates identified	NJ	06.09.23
5.b.	Hanson to provide arborists report	NJ	06.09.23
5.b.	Hanson to review permit conditions relevant to leaving flora on site	NJ	06.09.23



# Project Update

## Lysterfield Quarry Community Reference Group

7<sup>th</sup> June 2023

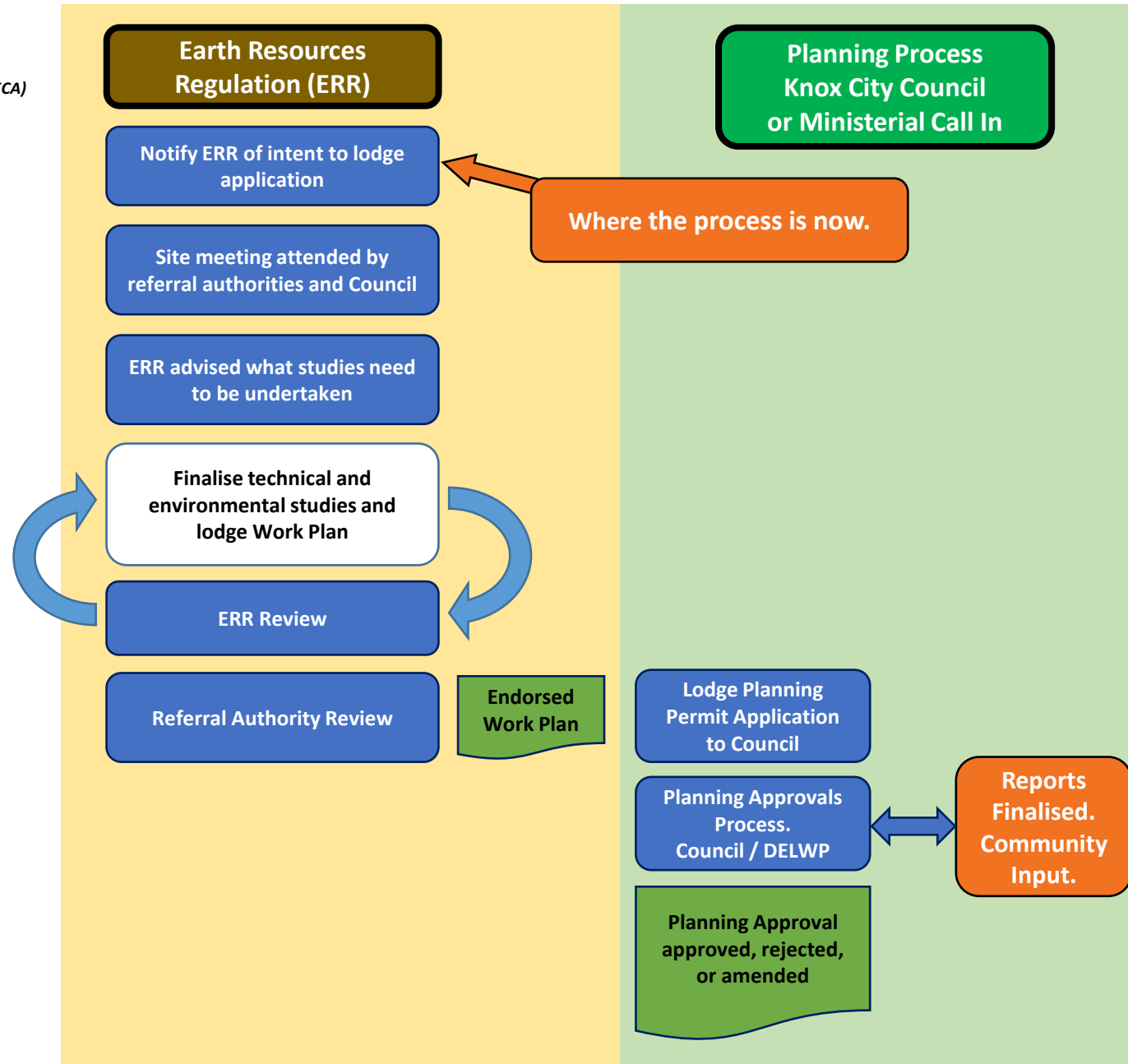
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# Current Quarry Application Projects

1. Quarry Extension
2. Overburden Placement

# 1. Quarry Extension Re-application Process

**Earth Resources Regulation (ERR)**  
Victorian Government  
Dept of Energy, Environment and Climate Action (DEECA)



## 2. Overburden Earthworks Application

- ✓ Lodge Planning Permit
- ✓ Permit Public Display
- ✓ Community Submissions
- ✓ DELWP referrals
- ✓ Council assessment
- ✓ Permit issued with strict conditions
- ✓ Hanson to submit required documentation to meet conditions
- Council Assessment
  - Additional detail required
- Council Re-assessment
- Equestrian Facilities Relocation Plan
  - Facilities to remain during early construction
- Vegetation Offsets purchased by Hanson
- Fill and machinery availability
- Commencement of Prefilling

*Current Phase in Process*

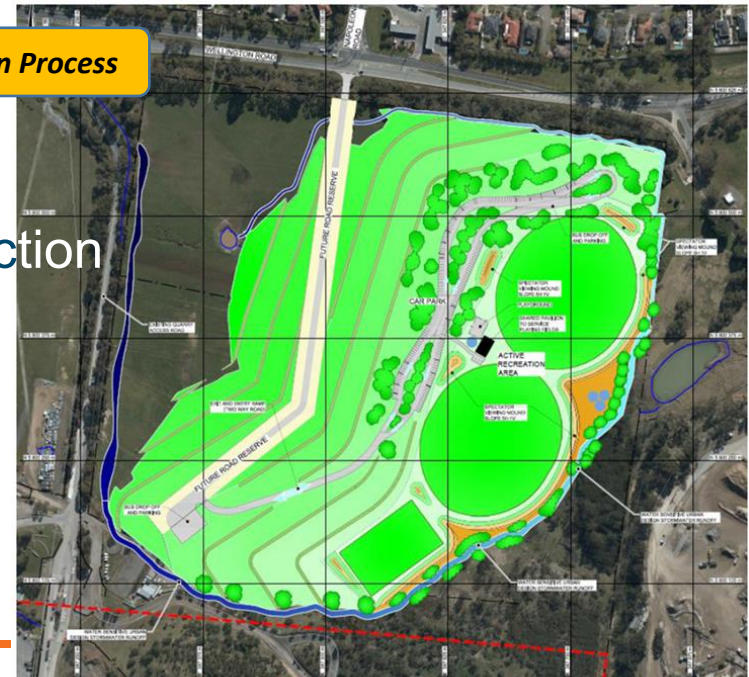


Plate 3: Potential Future Land Use



# Questions?

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**Rob Francis**

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# Operational Report

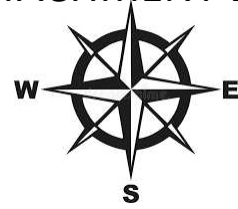
## Lysterfield Quarry

7<sup>th</sup> June 2023



# Dust Deposition Gauges Report

ATTACHMENT B



Dust Deposition Gauge near Montague Crt

Dust Deposition Gauge "Boral"

Dust Deposition Gauge "Guides Camp"

Dust Deposition Gauge "Weather Station"

Dust Deposition Gauge "Park"

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1985

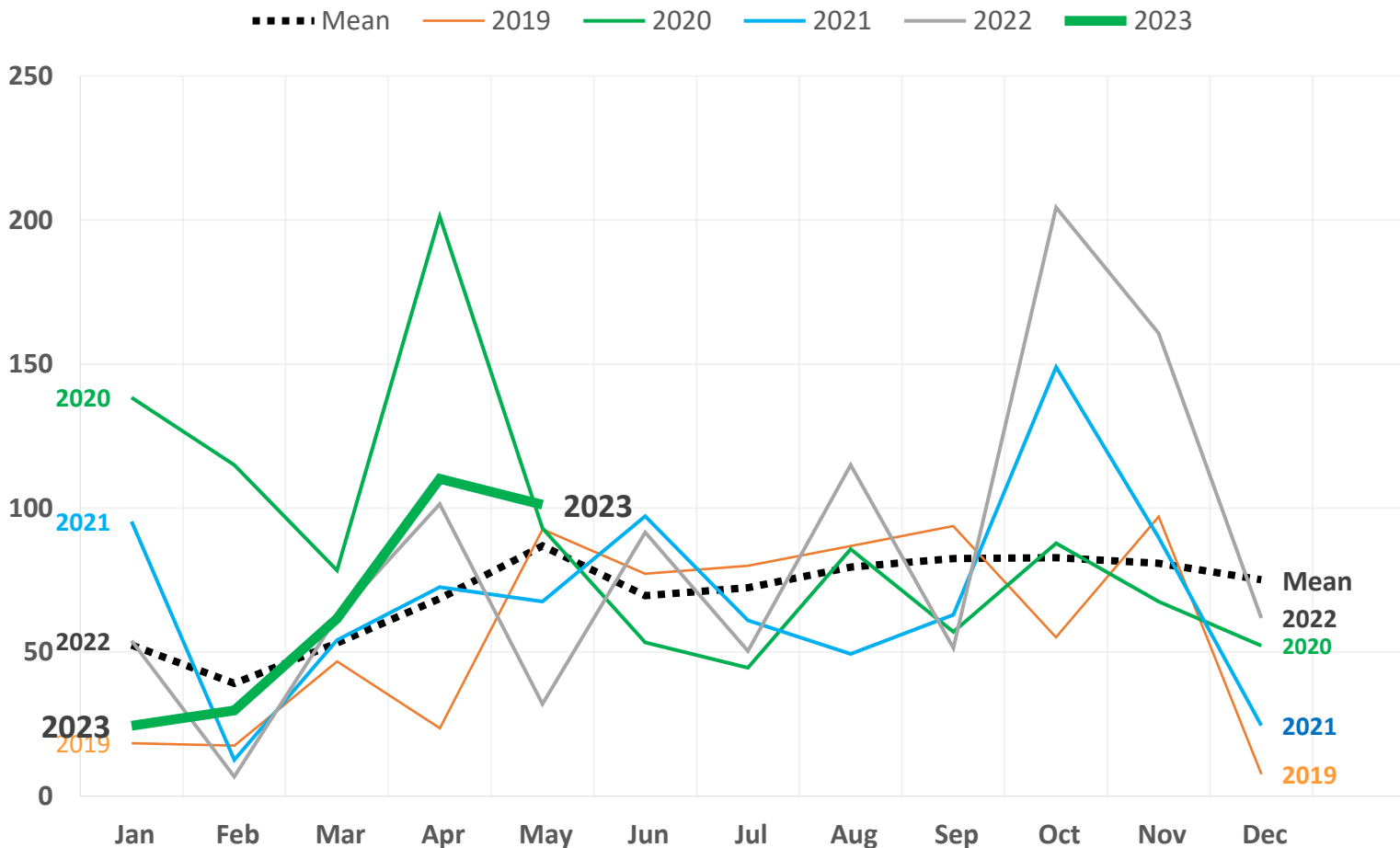
Imagery Date: 12/1/2018



## Rainfall Data

[http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p\\_nccObsCode=136&p\\_display\\_type=dailyDataFile&p\\_startYear=&p\\_c=&p\\_stn\\_num=086104](http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=136&p_display_type=dailyDataFile&p_startYear=&p_c=&p_stn_num=086104)

### TOTAL VS MEAN RAINFALL SCORESBY

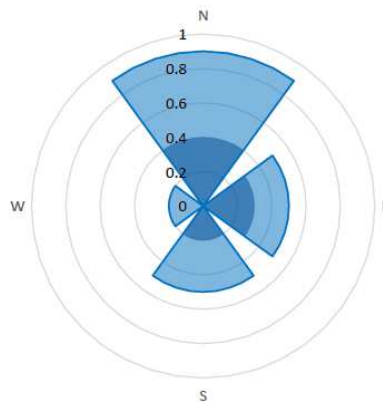


Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	53.8	52.0	53.4	69.0	86.2	69.9	72.1	80.0	81.5	85.0	82.1	74.2
Median	52.5	38.3	46.9	66.8	82.1	66.4	69.6	83.1	77.8	78.1	75.0	71.3

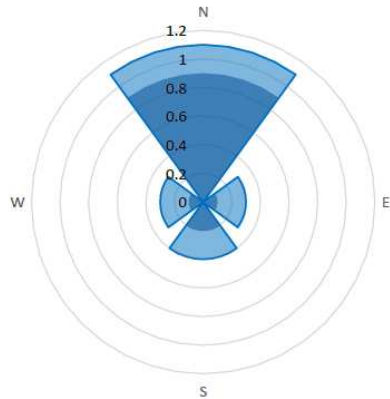


May 2023

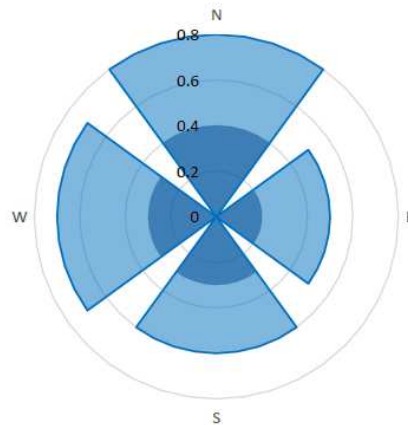
Montague Cres →



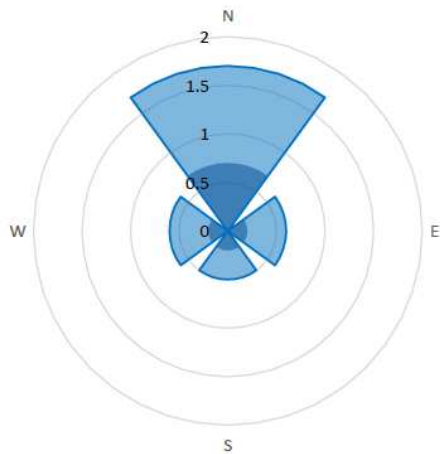
← Guides Camp



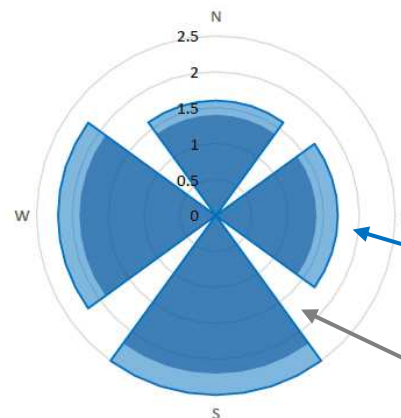
Boral Boundary →



← Weather Station



Park Boundary →



Comments.

Date range 06/04/2023 – 08/05/2023

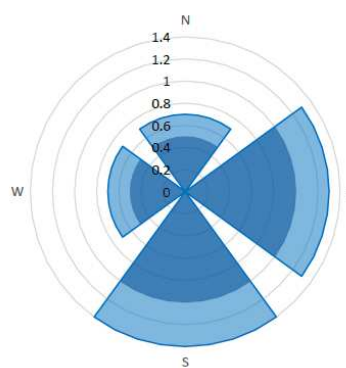
Adopted EPA Vic Guideline. 4g/m<sup>2</sup>/month

All gauges low.

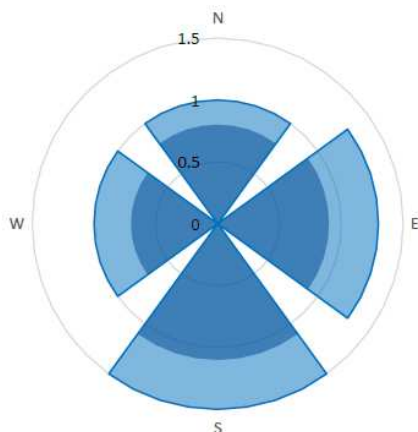
■ Ash (g/m<sup>2</sup>/month)■ Insoluble Solids (g/m<sup>2</sup>/month)

April 2023

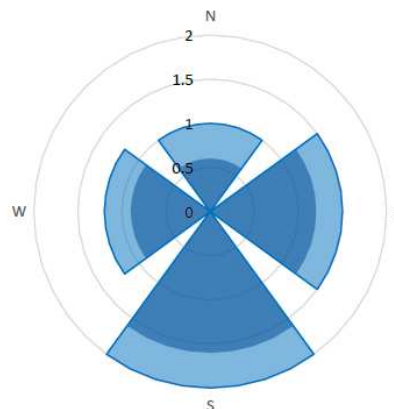
Montague Cres →



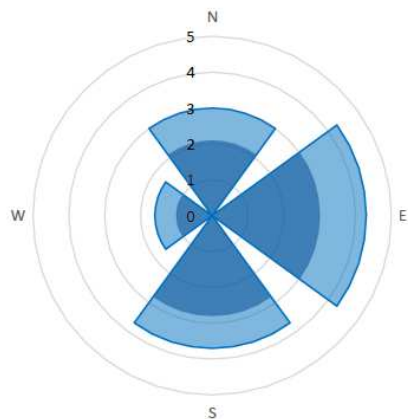
← Guides Camp



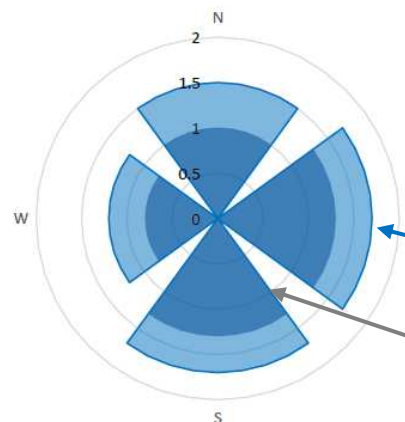
Boral Boundary →



← Weather Station



Park Boundary →



Comments.

Date range 09/03/2023 – 06/04/2023

Adopted EPA Vic Guideline. 4g/m<sup>2</sup>/month

All gauges low.

■ Ash (g/m<sup>2</sup>/month)■ Insoluble Solids (g/m<sup>2</sup>/month)



# Blast Monitor Locations



# Blast monitoring results 2023

SHOT no.	Estimated Tonnes	Date	Sandford Close		Quarry Gate Slab		Battersby Way		Reservoir Crescent		Somerset Court		Weather Conditions
			VIBRATION mm/s	AIR BLAST dbL	VIBRATION mm/s	AIR BLAST dbL	VIBRATION mm/s	AIR BLAST dbL	VIBRATION mm/s	AIR BLAST dbL	VIBRATION mm/s	AIR BLAST dbL	
Limits			10.00	120.00	10.00	120.00	10.00	120.00	10.00	120.00	10.00	120.00	
2301	34,317	23-Jan-23	1.06	101.69	0.64	107.03	0.23	99.96	1.35	99.74	2.32	105.34	SUNNY
2302	31,983	01-Feb-23	1.68	111.70	0.41	113.40	0.24	95.62	1.78	104.31	3.17	111.68	OVERCAST
2303	31,996	09-Feb-23	1.41	116.15	0.26	105.65	0.16	104.93	1.21	116.54	4.67	114.07	OVERCAST
2304	29,585	09-Feb-23	1.00	99.41	0.61	103.49	0.17	101.19	1.22	98.70	2.20	101.64	OVERCAST
2305	39,765	17-Feb-23	1.58	102.16	0.75	97.51	0.17	107.28	1.36	102.40	3.22	104.21	SUNNY, WINDY
2306	27,980	06-Mar-23	0.88	98.45	0.50	105.95	0.26	103.46	1.53	95.36	1.47	104.34	SUNNY
2307	40,147	08-Mar-23	0.91	94.70	0.48	94.80	0.18	101.01	1.04	93.44	2.13	96.70	SUNNY
2308	55,455	24-Mar-23	1.53	109.10	0.28	113.07	0.25	96.38	2.04	104.84	3.10	114.77	WINDY
2309	38,264	30-Mar-23	1.49	97.58	0.41	101.42	0.24	96.22	1.73	94.80	2.59	102.64	SUNNY
2310	25,000	13-Apr-23	1.30	100.52	0.63	96.93	0.18	96.30	1.73	98.57	1.60	99.23	SUNNY
2311	20,000	02-May-23	0.44	100.06	0.19	93.55	0.53	94.30	1.16	98.32	0.62	99.74	CLOUDY
*2312	42,000	05-May-23	0.80	100.01	0.42	96.54	0.18	*121.19	0.87	103.88	3.06	104.93	SUNNY
2313	21,000	30-May-23	1.38	104.99	0.67	101.38	0.29	113.30	1.67	103.42	3.14	103.88	CLOUDY

\*Exceedance of Air Blast limit at Battersby Way on 05-May-2023

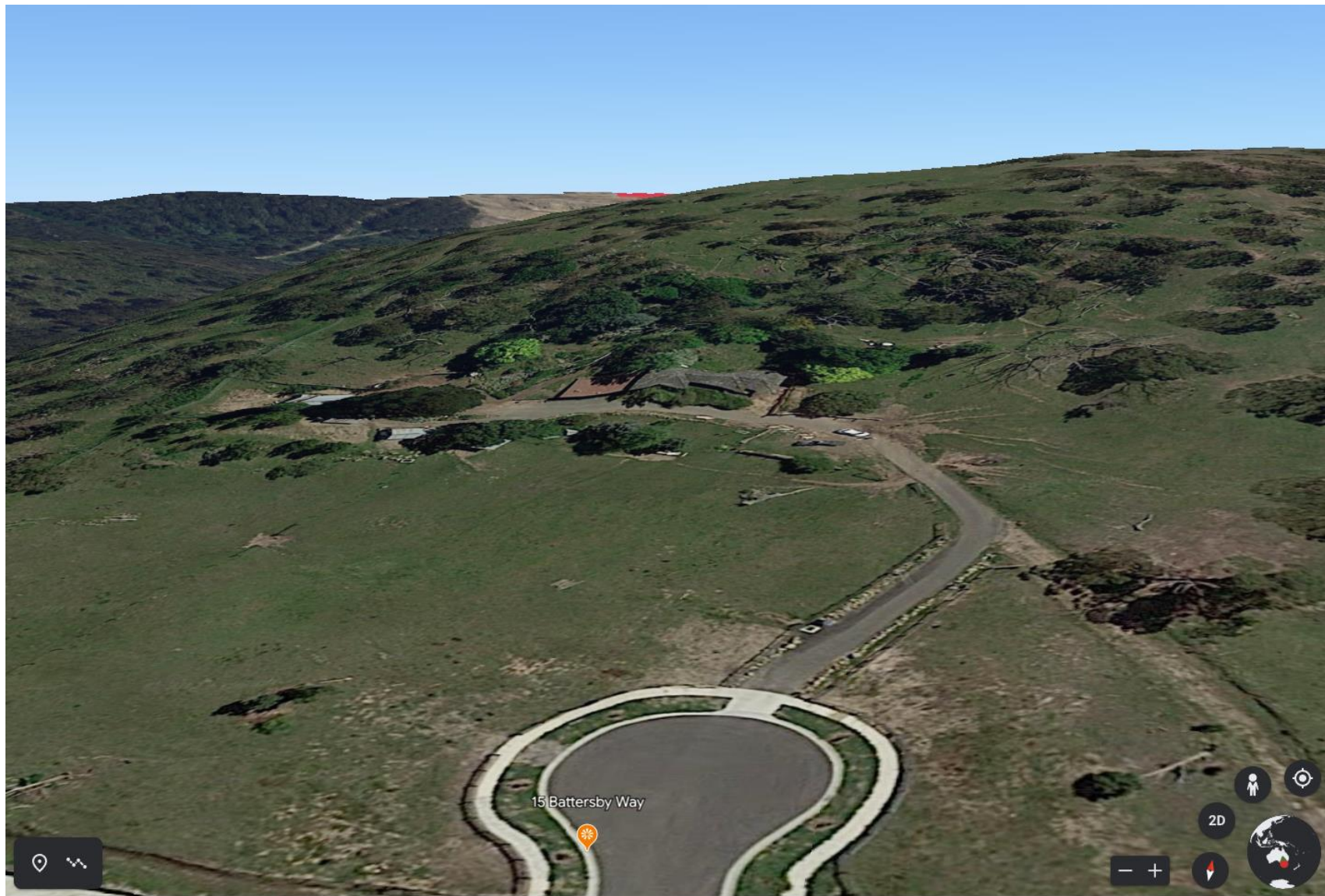


- Exceedance of Air Blast limit at Battersby Way on 05-May-2023
- Reported exceedance to ERR
- Independent investigations completed by Orica (blasting contractor) and Terrock

Monitoring Location	PPV (mm/s)	Peak Air Vibration (dBL)	Distance to Blast (m)	Monitor Serial No
15 Sandford Close	0.80	100.01	769	CJ6-C044
16 Somerset Court	3.06	104.93	566	CJ6-B003
9 Reservoir Crescent	0.87	103.88	925	CJ6-C042
15 Battersby Way	0.18	121.19*	1835	CJ6-A001
Quarry Gate (Wellington Rd)	0.42	96.54	1105	CJ6-C015



- The Battersby Way reading is inordinately high considering the significant separation distance of 1.83km.
- In terms of real air pressure, the reading (22.9 Pa) is 6.5 times greater than the next highest reading at Somerset Court (3.53 Pa).
- Terrock personnel located at Battersby Way at blast time reported the noise emission to be “very loud”.
- Reached out to a CRG member from that area who confirmed they were home and that the blast was louder than usual





# Investigation Findings

- Confirmed readings were from blast by vibration/pressure arrival times
- Noted unusual ‘beat’ waveform
- Checked monitoring equipment performance and calibration
- Review of video found no signs of poor blasting practices, no gas emissions or rock throws
- Airblast model estimated 111.8dBL, consistent with recent blasts
- Noted correlation between timing of control row delays and peaks of wavetrace

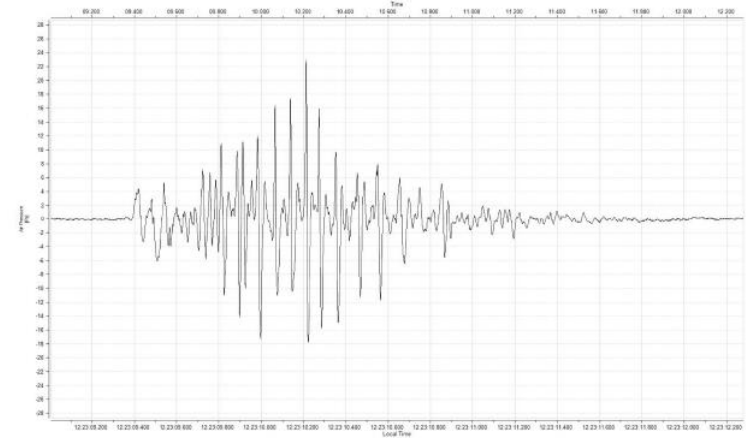


Figure 3a – High airblast event showing unusual “beat” waveform, Battersby Way, 4 May 2023

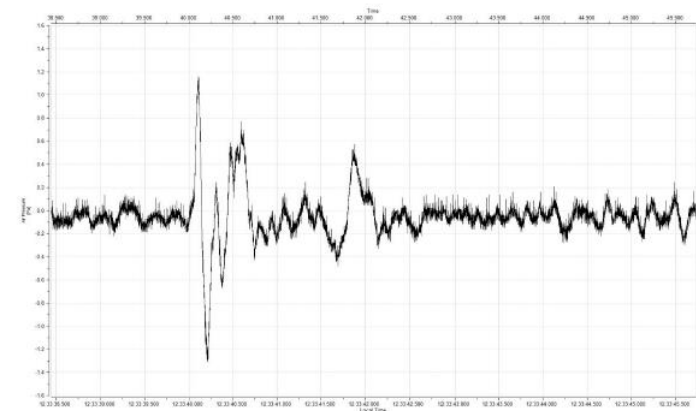


Figure 3b – Airblast signal showing normal/typical waveform at Battersby Way (13 April 2023)

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## Investigation Findings cont.

This investigation concludes that the primary cause of the 121.2 dBL airblast reading at Battersby Way was the development of a 1 Hz beat from the detonation of 65ms control row holes that was likely reinforced by constructive interference from higher and harmonic frequencies from 17ms delays.

Significantly elevated airblast from beat waves and reinforcing frequencies is thought to be a rare occurrence and has not been previously noted by Terrock from blast monitoring records or has required investigation. The event may be somewhat unique and potentially a “one-off” as evidence suggests a combination of factors including firing directions between holes and wind speed and direction at blast time.



## Action Tracker: Blast locations in 2023



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# ERR & EPA Joint Site Visit – June 2023

The following areas were inspected:

- Workshop
- Bulk Fuel storage area known as ‘Lube Bay’
- Montague Street and ‘Park’ dust monitoring locations
- Eastern and Southern Boundaries
- Viewing platform







# Eastern Face Rehabilitation

6<sup>th</sup> June 2023



- Tree protectors removed from rehab area
- 1400 plants (trees & shrubs) planted on southern end of Eastern Face in May/June

Eucalyptus radiata, Acacia mearnsii, A. suaveleons, A. verniciflua, Goodia lotifolia, Banksia marginata, Pultanea gunnii, Austral Indigo, Cassinia arcuata, Olearia argophylla, Coprosma quadrafida





# Rehab Planting – May/June 2023













# Vegetation signage at Quarry Office



- Building quarry team awareness & education
- Locally sourced plants



# Local Projects Supplied



- North East Link
- Webb St Level Crossing Removal
- Wantirna: State Basketball Centre & Hockey Field Upgrades



Vision: to create a leading facility for basketball in Australia and the continued growth of basketball and gymnastics at local and elite levels.

Photo: <https://bigbuild.vic.gov.au/projects/level-crossing-removal-project/projects/webb-street-narre-warren>

<https://youtu.be/iGdXqC51bQY>

# Questions?

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