Teralba Quarry
Environmental Monitoring Summary

December 2022

Environmental Protection Licence (EPL):	536
Licensee:	Metromix Pty Limited
Licensee Address:	PO Box 1295 Parramatta, NSW 2124
Premises:	Metromix Pty Limited Teralba Quarry Rhondda Road Teralba, NSW 2284
Licensee Website:	https://www.metromix.com.au/
Licensee Website - Monitoring Results:	https://www.metromix.com.au/resources/#quarry
EPA Public Register:	https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers
Prepared by:	R. W. Corkery & Co.
Sample Period:	December 2022
Date Last Data Received	13 January 2022
Date of Report	16 January 2022

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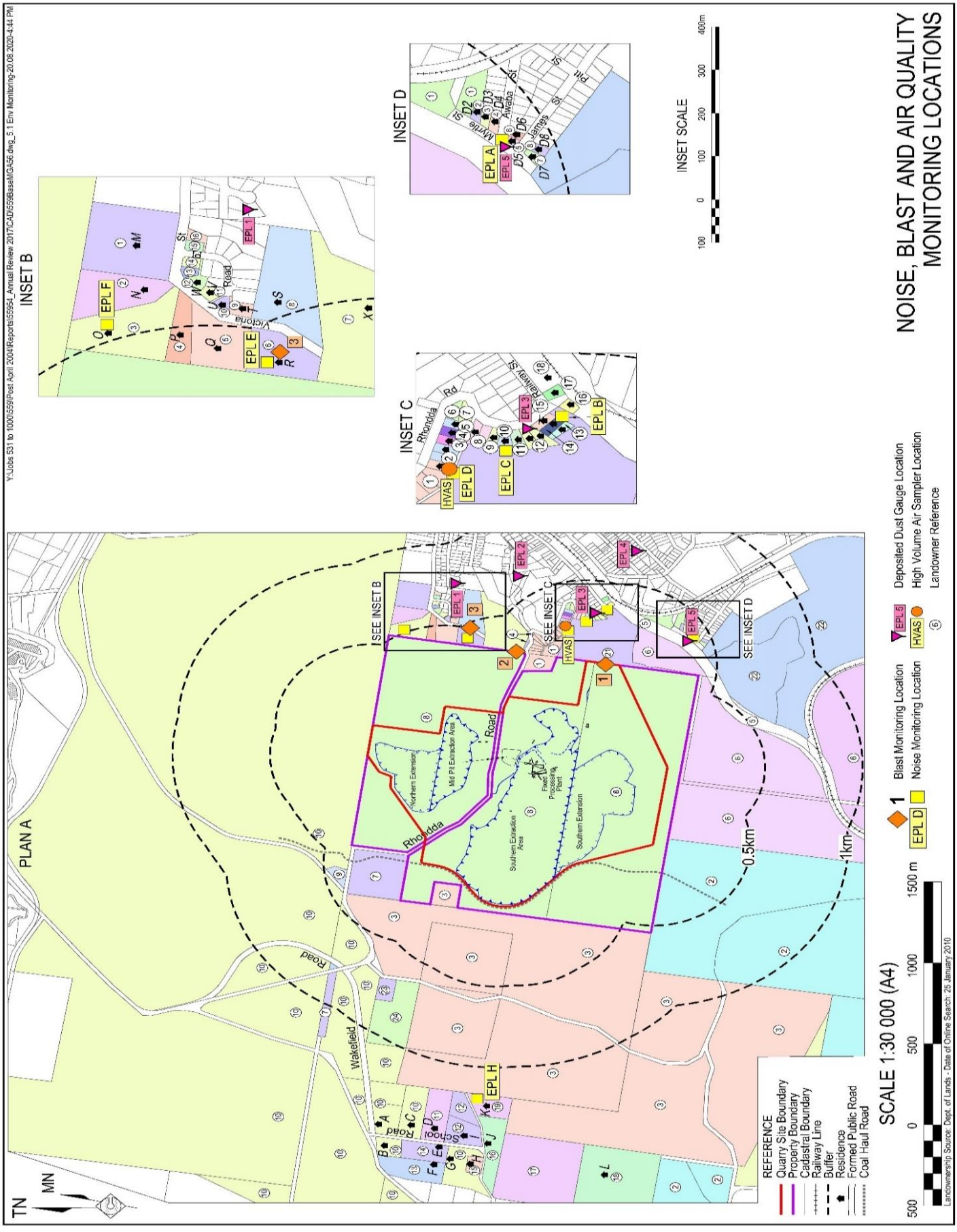

NOISE, BLAST AND AIR QUALITY MONITORING LOCATIONS
PLAN A
INSET B
INSET C
INSET D
INSET SCALE
SEE INSET B
SEE INSET C
SEE INSET D
Rhondda Road
Wakefield Road
School Road
Victoria St
Railway St
Rhondda Rd
Myrtle St
Awaba St
James St
Pitt St
EPL 1
EPL 2
EPL 3
EPL 4
EPL 5
EPL A
EPL B
EPL C
EPL D
EPL E
EPL F
EPL H
HVAS
0.5km
1km
TN
MN
REFERENCE
Quarry Site Boundary
Property Boundary
Cadastral Boundary
Railway Line
Buffer
Residence
Formed Public Road
Coal Haul Road
Blast Monitoring Location
Noise Monitoring Location
Deposited Dust Gauge Location
High Volume Air Sampler Location
Landowner Reference
SCALE 1:30 000 (A4)
500 0 500 1000 1500 m
Landownership Source: Dept. of Lands - Date of Online Search: 25 January 2010

Deposited Dust

Sample Period Start:	1/12/2022
Sample Period End:	3/01/2023
Sample Frequency:	30 ± 2 days
Sample Collected By:	Metromix - JJ
'Date Results Received by Lab:	3/01/2023
Date Results Received by Metromix:	12/01/2023

EPA Identification No.	Location	Criteria (g/m^2/month)	Insoluble Solids (g/m^2/month)	Ash Fraction (g/m^2/month)	% Ash Fraction
1	Hillside Crescent	4.0	0.4	0.2	50
8	Rodgers Street	4.0	0.5	0.4	80
9	Rhondda Road	4.0	0.4	0.2	50
11	Myrtle Street	4.0	0.8	0.4	50
23	York Street	4.0	0.8	0.4	50

Comments

Sample exposure period was 33 days which is outside the typical exposure period of 30+/- 2 days as per AS3580.10.1. This was due to weekend and public holiday timing impacting staff availablity and laboratory operating hours. No exceedances of the approved criteria were detected during the sample period.

Deposited Dust - Year to Date

	Rhondda Road			Myrtle Street			Hillside Crescent			Rodgers Street			York Street		
	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash	Total Insoluble Solids	Ash Fraction	% Ash
Units	**g/m^2/month**	**g/m^2/month**		**g/m^2/month**	**g/m^2/month**		**g/m^2/month**	**g/m^2/month**		**g/m^2/month**	**g/m^2/month**		**g/m^2/month**	**g/m^2/month**	
EPA Approved Level	**4.0**			**4.0**			**4.0**			**4.0**			**4.0**		
January	0.3	0.2	67	1.8	1.0	56	0.4	0.3	75	0.4	0.2	50	0.7	0.5	71
February	0.8	0.4	50	4.9	3.6	73	0.9	0.3	33	0.8	0.3	38	1.2	0.5	42
March	0.6	0.2	67	5.3	4.1	77	0.5	0.1	20	0.3	0.1	33	0.3	0.2	67
April	10.5	9.1	87	1.7	1.0	59	0.4	0.1	25	0.3	0.1	33	1.1	0.6	55
May	1.5	1.2	80	1.1	0.5	45	0.2	0.1	50	0.2	0.2	100	0.5	0.3	60
June	0.8	0.6	75	0.7	0.5	71	0.1	0.1	100	0.3	0.2	67	0.7	0.4	57
July	0.5	0.2	40	2.5	0.6	24	0.3	0.1	33	0.3	0.1	33	0.5	0.2	40
August	1.2	0.8	67	1.8	0.9	50	0.3	0.3	100	0.2	0.2	100	1.3	0.6	46
September	0.7	0.4	57	1.1	0.5	45	0.8	0.2	25	0.4	0.2	50	0.6	0.4	67
October	0.7	0.2	29	0.5	0.3	60	0.5	0.2	40	1.8	0.7	39	0.4	0.3	75
November	1.1	0.3	27	0.6	0.5	83	0.7	0.3	43	0.6	0.3	50	1.4	0.9	64
December	0.4	0.2	50	0.8	0.4	50	0.4	0.2	50	0.5	0.4	80	0.8	0.4	50
Annual Average	**1.6**	1.2	58	**1.9**	1.2	58	**0.5**	0.2	49	**0.5**	0.3	56	**0.8**	0.4	58
Annual Maximum	**10.5**	9.1	87	**5.3**	4.1	83	**0.9**	0.3	100	**1.8**	0.7	100	**1.4**	0.9	75
Annual Minimum	**0.3**	0.2	27	**0.5**	0.3	24	**0.1**	0.1	20	**0.2**	0.1	33	**0.3**	0.2	40

Particulate Matter (PM_{10})

Sample Location: EPA 3 - Rodgers Street
Sample Frequency: 6 days

Date Sample Taken (24-hr)	Collected by	Date Results Received	PM_{10} $\mu g/m^3$	Monthly Average Criteria ($\mu g/m^3$)	Annual Average Criteria ($\mu g/m^{3)}$
6/12/2022	CBased - MB	30/12/2022	19.4	50	
12/12/2022	CBased - LK	30/12/2022	14.4	50	
18/12/2022	CBased - TD	30/12/2022	8	50	
24/12/2022	CBased - MB	5/01/2022	7.7	50	
30/12/2022	CBased - TD	11/01/2022	12.4	50	
Monthly Average			12.4		25/30*

*Project Approval (PA 10_0183) outlines the annual average PM_{10} criteria to be 30µg/m^3. However, EPL 536 Condition R4.5a) requires that the air quality monitoring data is assessed against the Air Impact Assessment Criteria outlined in EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*. The most up to date version of this guideline was published in 2017 and outlines the annual average PM_{10} criteria to be 25µg/m^3. Metromix has considered both criteria for its review of particulate matter monitoring.

Comments

All PM_{10} results remained below the approved criteria for the sample period.

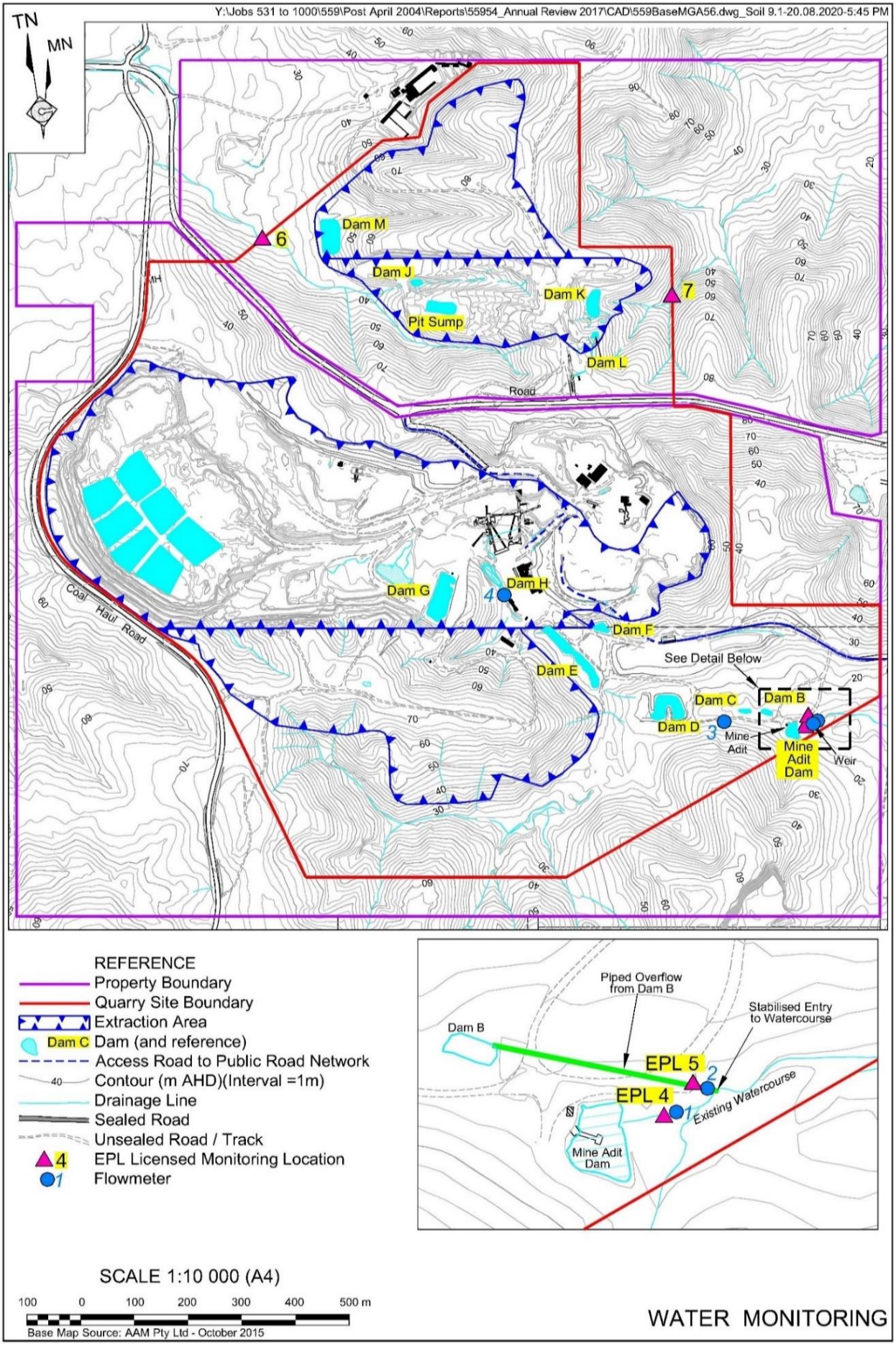
Particulate Matter (PM_{10}) - Year to Date

Date	PM_{10} ($\mu g/m^3$)	Monthly Average ($\mu g/m^3$)	Year to Date Average ($\mu g/m^3$)	24-Hr Criteria ($\mu g/m^3$)	Comments
4/01/2022	9.3		9.3	50	
10/01/2022	14.5		11.9	50	
16/01/2022	15.4		13.1	50	
22/01/2022	8.0		11.8	50	
28/01/2022	11.4	11.7	11.7	50	
3/02/2022	16.1		12.5	50	
9/02/2022	13.1		12.5	50	
15/02/2022	21.2		13.6	50	
21/02/2022	15.4		13.8	50	
27/02/2022	7.7	14.7	13.2	50	
5/03/2022	11.2		13.0	50	
11/03/2022	14.0		13.1	50	
17/03/2022	13.1		13.1	50	
23/03/2022	14.8		13.2	50	
29/03/2022	8.0	12.2	12.9	50	
4/04/2022	9.8		12.7	50	
10/04/2022	11.2		12.6	50	
16/04/2022	8.6		12.4	50	
22/04/2022	4.6		12.0	50	
28/04/2022	5.0	7.8	11.6	50	
4/05/2022	7.7		11.4	50	
10/05/2022	3.7		11.1	50	
16/05/2022	6.3		10.9	50	
22/05/2022	4.4		10.6	50	
28/05/2022	6.0	5.6	10.4	50	
3/06/2022	10.0		10.4	50	
9/06/2022	3.1		10.1	50	
15/06/2022	8.4		10.1	50	
21/06/2022	13.1		10.2	50	
27/06/2022	11.3	9.2	10.2	50	
3/07/2022	8.8		10.2	50	
9/07/2022	2.9		9.9	50	
15/07/2022	5.6		9.8	50	
21/07/2022	6.9		9.7	50	
27/07/2022	7.4	6.3	9.7	50	
2/08/2022	5.6		9.5	50	
8/08/2022	7.8		9.5	50	
14/08/2022	2.2		9.3	50	
20/08/2022	7.1		9.2	50	
26/08/2022	6.2	5.8	9.2	50	
1/09/2022	11.4		9.2	50	
7/09/2022	5.8		9.1	50	
13/09/2022	4.5		9.0	50	
19/09/2022	6.9		9.0	50	
25/09/2022	7.5	7.2	9.0	50	
1/10/2022	7.9		8.9	50	
7/10/2022	5.6		8.9	50	
13/10/2022	9.1		8.9	50	
19/10/2022	13.5		9.0	50	
25/10/2022	10.9		9.0	50	
31/10/2022	10.2	9.4	9.0	50	
6/11/2022	9.1		9.0	50	

12/11/2022	10.4		9.1	50	
18/11/2022	10.0		9.1	50	
24/11/2022	13.4		9.1	50	
30/11/2022	23.0	13.2	9.4	50	
6/12/2022	19.4		9.6	50	
12/12/2022	14.4		9.7	50	
18/12/2022	8.0		9.6	50	
24/12/2022	7.7		9.6	50	
30/12/2022	12.4	12.4	9.6	50	

Minimum	2.2
Maximum	23.0
Average	9.6
Standard Deviation	4.4
24-hr Criteria	50
Number of Exceedences	0
Annual Average Criteria	25/30*
Annual Average Criteria Exceeded	No

*See explanation on previous page.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TN
MN
Dam M
Dam J
Dam K
Pit Sump
Dam L
Road
Dam G
Dam H
Dam F
Dam E
Coal Haul Road
See Detail Below
Dam C
Dam B
Dam D
Mine Adit
Mine Adit Dam
Weir
REFERENCE
Property Boundary
Quarry Site Boundary
Extraction Area
Dam C Dam (and reference)
Access Road to Public Road Network
Contour (m AHD)(Interval =1m)
Drainage Line
Sealed Road
Unsealed Road / Track
EPL Licensed Monitoring Location
Flowmeter
Piped Overflow from Dam B
Stabilised Entry to Watercourse
EPL 5
EPL 4
Existing Watercourse
SCALE 1:10 000 (A4)
100 0 100 200 300 400 500 m
Base Map Source: AAM Pty Ltd - October 2015
WATER MONITORING

Water

Water Monitoring

EPL Point 4 - Monthly Monitoring

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
1/12/2022	8.30am	Metromix - JJ	8/12/2022		7.28	1770	11	<5	-

EPL Point 5 - Monitoring Daily During Discharge

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
No discharge occurred at this location and therefore no monitoring was required									

EPL Point 6 - Monthly Monitoring

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
No discharge occurred at this location and therefore no monitoring was required									

EPL Point 7 - Monthly Monitoring

Date	Time	Sampled By	Date Results Received		pH	EC	TSS	Oil & Grease	Comments
				Units	pH Units	µS/cm	mg/L	mg/L	
				EPL Criterion*	6.5-8.5	NA	<50	10	
				ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	
No discharge occurred at this location and therefore no monitoring was required									

Flow Meter Records

EPA Identifier	Location	Description	Sample Period	Daily Average Flow	Monthly Total Flow ML
4	Adit Dam	Adit Dam to Creek (off site)	1/12/2022 to 3/01/2023	1.55	51.2
5	Dam B	Discharge from Dam B (from Quarry)	1/12/2022 to 3/01/2023	0.00	0
4	Adit Dam	Water pumped from Adit Dam to Dam G (processing use)	1/12/2022 to 3/01/2023	2.47	81.5

Comments

All water monitoring results remained within the approved criteria levels during the monitoring period.

Water - Year to Date

EPL Point 4 : Monthly Monitoring

	pH	EC	TSS	Oil & Grease	Comments
Units	pH Units	µS/cm	mg/L	mg/L	-
EPL Criterion*	6.5-8.5	NA	<50	10	-
ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	<5	-
January	7.13	1830	<5	<5	-
February	7.10	2010	6	<5	-
March	6.96	1360	6	<5	-
April	7.27	1550	23	<5	-
May	7.68	1750	<5	<5	-
June	7.12	1710	7	<5	-
July	7.16	1620	12	<5	-
August	7.15	1530	10	<5	-
September	7.33	1740	16	<5	-
October	7.31	1560	27	<5	-
November	6.96	1700	16	<5	-
December	7.28	1770	11	<5	-

EPL Point 5 : Monitoring During Discharge

	pH	EC	TSS	Oil & Grease	Comments
Units	pH Units	µS/cm	mg/L	mg/L	-
EPL Criterion*	6.5-8.5	NA	<50	10	-
ANZECC Water Quality Limits	6.5-8.5	125-2200	<50	-	-
8 March	6.78	664	10	<5	-
4 April	6.88	758	<5	<5	-
2 May	7.10	746	<5	<5	-
1 June	6.85	774	<5	<5	-
4 July	7.00	638	<5	<5	-
1 August	6.79	587	<5	<5	-
5 September	7.86	649	<5	<5	-
10 October	6.92	539	22	6	-
1 November	7.53	776	<5	<5	-

Flow Meter Records

EPA Identifier	Location		Date	Monthly
4	Adit Dam	Water pumped from Adit Dam to Dam G (processing use)	4/01/2022 - 1/02/2022	100.8
			1/02/2022 - 1/03/2022	107.5
			1/03/2022 - 1/04/2022	86.5
			1/04/2022 - 2/05/2022	67.4
			2/05/2022 - 1/06/2022	100.2
			1/06/2022 - 5/07/2022	98.5
			5/07/2022 - 1/08/2022	185.1
			1/08/2022 - 1/09/2022	12.8
			1/09/2022 - 4/10/2022	94.9
			4/10/2022 - 1/11/2022	136.6
			1/11/2022 - 1/12/2022	89.3
			1/12/2022 - 3/01/2023	81.5

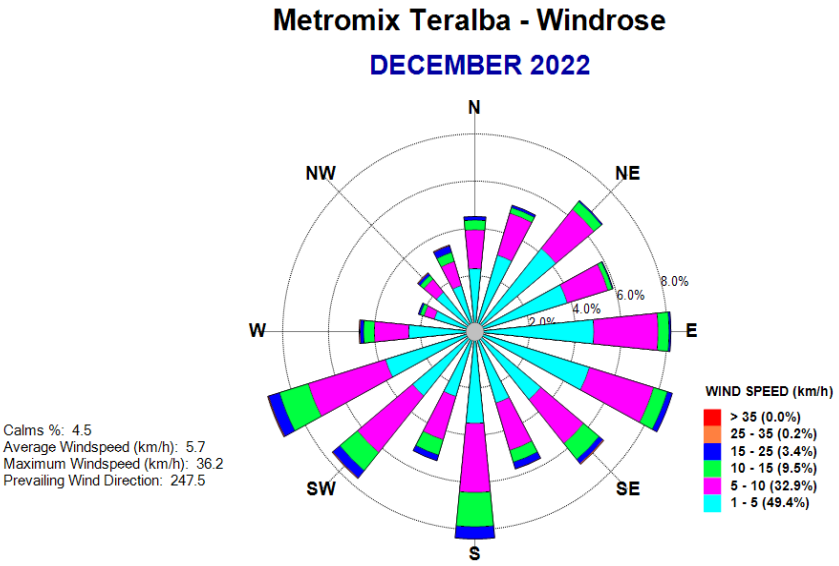
EPA Identified Point	Location	Description	Date	Monthly Total (ML)
5	Dam B	Discharge from Dam B (from Quarry)	4/01/2022 - 1/02/2022	2.1
			1/02/2022 - 1/03/2022	0.0
			1/03/2022 - 1/04/2022	2.5
			1/04/2022 - 2/05/2022	13.4
			2/05/2022 - 1/06/2022	1.6
			1/06/2022 - 5/07/2022	0.2
			5/07/2022 - 1/08/2022	34.1
			1/08/2022 - 1/09/2022	1.9
			1/09/2022 - 4/10/2022	0.8
			4/10/2022 - 1/11/2022	1.3
			1/11/2022 - 1/12/2022	0.0
			1/12/2022 - 3/01/2023	0.0

EPA Identified Point	Location	Description	Date	Monthly Total (ML)
4	Adit Dam	Adit Dam to Creek (off site)	4/01/2022 - 1/02/2022	36.9
			1/02/2022 - 1/03/2022	39.8
			1/03/2022 - 1/04/2022	64.1
			1/04/2022 - 2/05/2022	169.1
			2/05/2022 - 1/06/2022	47.8
			1/06/2022 - 5/07/2022	51.4
			5/07/2022 - 1/08/2022	321.6
			1/08/2022 - 1/09/2022	84.5
			1/09/2022 - 4/10/2022	59.0
			4/10/2022 - 1/11/2022	55.2
			1/11/2022 - 1/12/2022	47.3
			1/12/2022 - 3/01/2023	51.2

Meteorological Conditions

Monitoring Location: Mid-Pit Entrance
Monitoring Frequency: Continuous

Windrose



Monthly Summary

Date	Mean Wind Direction (°)	Mean Wind Speed (km/h)	Daily Rainfall (mm)	Mean Sigma Theta	Max Temperature (°C) at 2m	Min Temperature (°C) at 2m
01/12/22	136	4.2	0.2	34.6	20.8	14.6
02/12/22	141	5.9	5.6	42.5	23.0	14.8
03/12/22	151	4.2	1.4	37.6	24.0	13.6
04/12/22	135	3.7	0.0	29.6	24.8	14.4
05/12/22	155	5.5	0.0	31.4	33.4	15.0
06/12/22	161	5.8	0.0	39.7	24.0	18.0
07/12/22	225	7.1	0.0	34.0	26.4	15.2
08/12/22	204	6.8	0.0	43.4	25.0	14.2
09/12/22	167	4.8	0.0	41.1	22.0	12.2
10/12/22	142	3.7	0.0	37.2	21.0	14.0
11/12/22	156	4.9	0.0	30.9	32.6	14.2
12/12/22	211	10.8	9.4	25.4	30.2	18.2
13/12/22	197	5.7	0.0	36.8	29.2	12.6
14/12/22	247	9.4	0.0	21.5	25.6	15.0
15/12/22	192	7.3	0.0	36.6	23.8	12.6
16/12/22	189	7.6	3.4	38.5	20.8	10.2
17/12/22	194	8.6	3.8	35.2	20.4	13.2
18/12/22	205	7.7	14.8	31.1	18.4	12.8
19/12/22	192	8.0	1.0	36.5	21.0	12.8
20/12/22	198	6.5	0.0	35.3	22.2	12.2
21/12/22	158	4.9	0.0	32.6	22.8	12.8
22/12/22	138	3.5	1.0	30.9	26.8	12.4
23/12/22	211	3.8	3.4	31.4	29.5	16.4
24/12/22	153	4.4	0.8	31.7	30.6	17.8
25/12/22	150	4.2	0.2	34.7	28.8	19.2
26/12/22	139	4.1	0.0	34.1	32.6	18.2
27/12/22	112	4.8	0.0	31.9	29.2	17.8
28/12/22	89	5.4	0.0	29.5	31.0	17.4
29/12/22	143	5.3	0.0	38.7	26.8	18.2
30/12/22	114	4.9	1.0	32.1	27.8	20.0
31/12/22	113	4.3	0.0	33.5	27.6	19.0

Meteorological Conditions - Year to Date

Monitored Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Total Rainfall (mm)	98.2	131.2	353.4	166.2	111.6	16.8	383.6	45.2	122.8	166.4	63.8	46.0	1705.2
Average Minimum Temperature (°C) at 2m	16.8	18.2	17.7	15.1	12.1	5.6	9.1	6.6	8.8	7.6	9.2	15.1	11.8
Average Maximum Temperature (°C) at 2m	33.0	27.8	25.2	23.6	20.3	20.2	16.6	22.8	23.8	28.8	34.0	25.9	25.2
Average Minimum Temperature (°C) at 10m	17.1	18.5	18.1	15.7	12.8	6.2	9.7	6.9	9.6	8.3	9.7	15.6	12.4
Average Maximum Temperature (°C) at 10m	31.9	26.7	24.4	23.0	19.8	19.9	16.3	22.3	23.0	28.2	33.4	24.8	24.5
Average Sigma Theta	34.6	34.8	33.5	30.5	31.1	33.8	30.8	30.0	31.9	30.8	32.8	34.2	32.4
Average Solar Radiation (W/m^2)	207.9	181.7	129.8	123.0	93.6	97.7	85.4	116.6	138.3	155.8	240.4	227.8	149.8
Average Relative Humidity (%)	75.0	73.0	80.0	76.2	75.0	62.9	73.0	66.0	71.0	71.0	61.0	65.0	70.8

Blasting

Monitoring Frequency: Each Blast
Blast Monitoring Completed By: Orica (Blast 1 to 12)
MAXAM (Blast 13 onwards)

Shot #	Day	Month	Time	Location	Location 1		Location 2		Location 3		Comments
					Overpressue	Vibration	Overpressue	Vibration	Overpressue	Vibration	
					dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	
1	19	January	13:39:30	Stage 1C	104.7	0.60	100.8	0.06	NM	NM	Nil Trigger on monitor at bottom wheel wash
2A & 2B	1	February	15:55:00	Stage 2A	103.9	0.70	101.4	0.06	NM	NM	
3	14	February	14:31:01	Stage 1C	NT	NT	109.8	0.18	NM	NM	
4	28	February	15:54:47	Stage 2A	NT	NT	NT	NT	NM	NM	Nil trigger on any blast monitors
5	3	March	14:27:00	Stage 1C	106.0	0.08	NT	NT	NM	NM	
6	23	March	15:05:00	Stage 2A	102.2	1.01	NT	NT	NM	NM	
7	12	April	14:35:53	Stage 2B1	107.6	0.16	NT	NT	NM	NM	
8	27	April	15:48:12	Stage 2A	104.2	0.94	NT	NT	NM	NM	
9	9	May	14:39:03	Stage 1C	NT	NT	99.2	0.30	NM	NM	
10	6	June	14:52:32	Stage 1C	NT	NT	91.6	NT	NM	NM	
11	22	June	13:42:18	Stage 1C	NT	NT	103.2	0.28	NM	NM	
12	15	July	14:00:00	Stage 1C	NT	NT	NT	NT	NM	NM	Nil trigger on any blast monitors
13	29	July	12:04:28	Stage 1C	102.7	0.08	NT	NT	NM	NM	
14	18	August	1:20:00	Stage 2B-2	NT	NT	NT	NT	NM	NM	Nil trigger on any blast monitors
15	31	August	12:31:00	Stage 1C	NT	NT	NT	NT	NM	NM	Nil trigger on any blast monitors
16A/B	15	September	1:17:00	Stage 1C	NT	NT	NT	NT	NM	NM	Nil trigger on any blast monitors
17	21	September	12:23:00	Stage 2B3	NT	NT	NT	NT	NM	NM	Nil trigger on any blast monitors
18	5	October	12:49:56	Stage 1C	NT	NT	NT	NT	NM	NM	The trigger parameters for the blast monitors were reduced to 100dBL and 0.13mm/s to assist in obtaining a reading. An additional monitor was placed halfway between Blast monitor 1 (McEwen St) and the blast. This monitor recorded 103.6dBL overpressure and 0.43mm/s vibration. None of the mandatory blast monitors triggered.

19	10	October	13:00:42	Stage 2B1	NT	NT	NT	NT	NM	NM	The trigger parameters for the blast monitors were reduced to 100dBL and 0.13mm/s to assist in obtaining a reading. An additional monitor was placed halfway between Blast monitor 1 (McEwen St) and the blast. This monitor recorded 107.1dBL overpressure and 0.23mm/s vibration. None of the mandatory blast monitors triggered.
20	18	October	14:33:12	Stage 2B1	97.5	0.34	94.0	0.18	NM	NM	The trigger parameters for the blast monitors were reduced to 100dBL and 0.13mm/s to assist in obtaining a reading. An additional monitor was placed halfway between Blast monitor 1 (McEwen St) and the blast. This monitor recorded 101.9dBL overpressure and 0.72mm/s vibration. None of the mandatory blast monitors triggered.
21	28	October	10:41:13	Stage 2A	103.5	0.33	NT	NT	NM	NM	The trigger parameters for the blast monitors were reduced to 100dBL and 0.13mm/s to assist in obtaining a reading. An additional monitor was placed halfway between Blast monitor 1 (McEwen St) and the blast. This monitor recorded 107.9dBL overpressure and 0.78mm/s vibration. None of the mandatory blast monitors triggered.
22	3	November	14:57:36	Stage 2A	106.1	0.42	103.2	0.26	NM	NM	
23	16	November	15:13:00	Stage 2A	111.8	0.31	110.6	0.28	NM	NM	
24	8	December	1:04:00	Stage 2B-1	100.8	0.33	NT	NT	NM	NM	
25	21	December	11:57:00	Stage 2B-2	101.8	0.32	106.5	0.18	NM	NM	

NT Not Triggered
NM Not Monitored

Blasting Criteria

Parameter	Units of Measure	Limit	
		95% of blasts per year	100% of blasts
Airblast Overpressure (Linear Peak)	decibels (dBL)	115	120
Ground Vibration (Peak Particle Velocity)	millimeters per second	5	10

Comments

Two blasting events occurred during the monitoring period. All blast monitoring results were within the approved criteria.

Waste Management

Waste Removal Summary

Month	January	February	March	April	May	June	July	August	September	October	November	December
December 2022	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
General Waste Bin (10m^3)												
General Waste Bin (4.5m^3)												
General Waste Bin (6m3)		1		1								
General Waste Bin (20m^3)	1	1	1	1	1		1	1		1	1	
Paper & Cardboard Bin (3m^3)	1	1	2	1	1	2	1	1	2	1		1
Shredded Paper Bin (240L)	2		1						3			
Co Mingled Recycling (2 x 240 L)	4	4	4	4	4	4	4	4	4	4	4	4
Tonner Cartridges												
Waste Oil (L)	2100					3000						
Scrap Steel (t)												
Timber (m^3)												
Engine Coolant (L)												
Oil Filters (240L bin)		3										
Batteries											18	
Oily Rags (240L bin)												
Aerosols (120L bin)												
Tyres												
Other												
Oily Water (L)							7.3					
Grease Waste (L)												