WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE 61ST Meeting of the Committee held at the Werris Creek Bowling Club on Wednesday, 8 March 2023 at 9:30AM

Meeting opened at 9:35AM.

Record of attendance

Michael Silver OAM Independent Chairperson Jane Bradford OAM Independent Minute Taker

Megan Martin Werris Creek Coal - Environmental Superintendent

James O'Brien Community Representative
Lindsay Bridge Community Representative
Noel Taylor Community Representative
Mike Lomax Community Representative

Note: Murray O'Keefe Whitehaven Coal – Operations Manager arrived as meeting closed.

Apologies

Harry Mills Whitehaven Coal - Environmental Officer

Jacki Scott Whitehaven Coal - Manager Community Partnerships and

Investment

Darren Swain Whitehaven Coal - General Manager Community Engagement

Non-Attendance

Liverpool Shire Council Representative

Col Stewart OAM Community Representative

2 Acknowledgement of Country

The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and recognised their continuing connection to the land, water and culture, paying respects to their Elders past, present and emerging.

3 Declaration of Pecuniary or Other Interests -

The Chair advised that his meeting expenses are borne by the proponent. Other members - Nil

- **4 Minutes of the previous 60th meeting held on 9 November 2022** were approved on 30 November 2022.
- 5 Matters Arising Nil
- 6 Environmental Monitoring Report from October 2022 to January 2023

Megan Martin went through the Report with the following comments:

- **1.1 Weather Station** Well above average annual rainfall 951.6mm for 2022 currently 62.2mm since January 2023.
- **2.0 Air Quality Excellent** rain has kept dust levels down.
- **2.2.1 Monitoring Data Results "Cintra"** one slightly over 4.00 quick return to normal levels.

2.3 Air Quality Complaints - Nil

- **3.1 Operational Noise** stayed within range over the period
- **4.0 Blast complaints** 24 blasts all compliant. As the mining moves closer to the township we are making smaller blasts.
- **5.2 Surface Water** last discharge was 18.11.2022.
- **5.2.1 Monitoring Data Results** non-compliant discharge was discussed in the previous report. All monitoring results from this quarter were compliant.

7 General Business

- Life of Mine indicated Quarter 3 of FY23-24 (1st Quarter of CY24)
- Public Auction of properties and / or lease in due course
- Land holders surrounding or owned to be notified
- Note Whitehaven will still have liabilities
- Extensive damage to fencing 2kl repairs pre-winter further work due in spring. In the past the farmer provides the fencing and the mine pays for the actual fencing will require two quotes
- Mine is not involved with the inland rail or any over pass project

7.1 Whitehaven Coal Sponsorship and Donations Process

 Megan Martin confirmed that the current round opened in January 2023 and is still open.

Next meeting Wednesday, 12 July 2023 at 9:30am **Venue** - Werris Creek Bowling Club. A site visit may be considered as part of this meeting.

Meeting closed at 10:25AM

Meeting minutes approved:

Michael J. Silver OAM Independent Chairperson

19 April 2023



WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

October 2022 - January 2023

This Environmental Monitoring Report covers the period 1st October 2022 to 31st January 2023 for the Werris Creek Coal Mine Community Consultative Committee.

The report includes environmental monitoring results from the on-site Weather Station, Air Quality, Noise, Blasting, Surface Water, Groundwater and Discharge Water Quality together with any community complaints received and general details on site environmental matters.

Note: Elevated monitoring results above the relevant monitoring criteria are highlighted in yellow.

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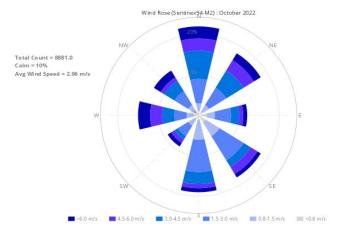
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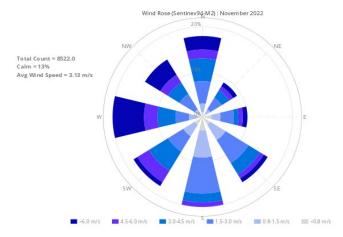
1.0 METEOROLOGY

1.1 WEATHER STATION

Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. The monthly rainfall total for October-November 2022 was above the historical average and below during December 2022-January 2023. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the north in October 2022, west in November 2022, south-east in December 2023 and south in January 2023.

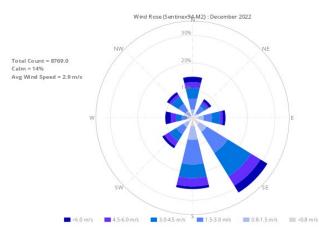
Month	Rainfall (mm)								
Wionth	Onsite	Historical Average	2022 Total	2023 Total					
October 2022	158.4	64.3	803.2						
November 2022	109.6	90.1	912.8						
December 2022	38.8	84.6	951.6						
January 2023	62.2	65.0		62.2					

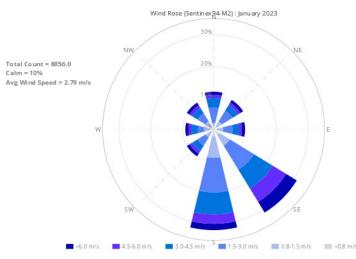




OCTOBER 2022

NOVEMBER 2022





DECEMBER 2022

JANUARY 2023

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2.0 AIR QUALITY

2.1 HVAS (PM₁₀) and TEOM (PM₁₀ & PM_{2.5})

WCC operates five High Volume Air Samplers (HVAS), four sites measuring particulate matter less than 10 microns (PM $_{10}$) and one site measuring total suspended particulate (TSP) matter. HVAS sampling is scheduled every 6 days for a 24-hour run period in accordance with Environment Protection Authority (EPA) guidelines. Results are reported in micro grams per cubic metre (μ g/m 3) of air sampled. In addition, WCC operates a Tapered Element Oscillating Microbalance (TEOM) monitor in Werris Creek measuring real time PM $_{10}$ and PM $_{2.5}$ (particulate matter less than 2.5 microns) dust levels. Dust monitoring locations are identified in **Figure 1**.

2.1.1 Monitoring Data Results

The average results for the last four months are provided in the table below.

								CRITERIA	(μg/m³)
MONITORING LOCATION	24Hr Maximum (μg/m³)	laximum 2022 2022	NOV 2022 (μg/m³)	DEC 2022 (μg/m³)	2022 AVG (μg/m³)	JAN 2023 (μg/m³)	2023 AVG (μg/m³)	Annual	24hr
PM _{2.5} – TEOM92 "Werris Creek"	16.1	3.5	3.0	6.3	4.2	5.0	5.0	-	-
PM ₁₀ – TEOM92 "Werris Creek"	24.5	7.8	10.6	13.0	8.3	10.8	10.8	30	50
PM ₁₀ – HVP20 "Tonsley Park"	15.5	6.9	7.7	8.1	8.1	11.7	11.7	30	50
PM ₁₀ - HVP1 "Escott"	12.3	4.6	6.0	6.8	4.8	8.4	8.4	30	50
PM ₁₀ – HVP11 "Glenara"	20.4	6.5	11.1	8.9	10.0	10.8	10.8	30	50
PM ₁₀ – HVP98 "Kyooma"	16.1	3.9	4.7	6.7	3.8	6.9	6.9	30	50
TSP – HVT98 "Kyooma"	35.3	11.4	15.6	15.4	11.6	15.5	15.5	90	-

Yellow Bold – Elevated dust level.

2.1.2 Discussion - Compliance / Non Compliance

All TSP, PM₁₀ and PM_{2.5} dust results were within criteria during the period.

2.2 WERRIS CREEK MINE DEPOSITED DUST

Deposited dust monitoring measures particulate matter greater than 30 microns in size that readily settles out of the air related to visual impact. Dust deposition is monitored at 18 locations around WCC. Sampling is scheduled monthly in accordance with EPA guidelines and results are reported as grams per square metre per month (g/m².month). Dust monitoring locations are identified in **Figure 1**.

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2.2.1 Monitoring Data Results

The results for the last four months are provided in the table below.

MONITORING LOCATION	OCT 2022 (g/m²/month)	NOV 2022 (g/m²/month)	DEC 2022 (g/m²/month)	2022 AVERAGE (g/m2/month)	JAN 2023 (g/m²/month)	2023 AVERAGE (g/m2/month)	Annual Criteria (g/m²/month)
DG1 "Escott"	2.5	0.7	2.1	1.1	1.2	1.2	4.0
DG2 "Cintra"	7.9*	17.6*	10.7*	5.1	11.8*	-	4.0
DG3 "Eurunderee"	1.5	0.6	0.7	0.9	1.3	1.3	4.0
DG5 "Railway View"	2.2	3.1	3.0	2.3	2.0	2.0	4.0
DG9 "Marengo"	1.8	1.0	0.6	1.2	0.8	0.8	4.0
DG11 "Glenara"	2.0	0.7	3.5	1.1	1.9	1.9	4.0
DG14 "Greenslopes"	1.7	2.1	1.0	0.9	2.1	2.1	4.0
DG15 "Plain View"	1.0	0.9	3.1	1.4	1.2	1.2	4.0
DG17 "Woodlands"	1.4	3.1	1.4	2.1	1.2	1.2	4.0
DG20 "Tonsley Park"	1.3	1.5	0.6	1.6	2.8	2.8	4.0
DG22 "Mountain View"	1.1	2.1	0.8	1.1	0.9	0.9	4.0
DG24 "Hazeldene"	2.2	1.2	0.4	2.0	1.6	1.6	4.0
DG34 8 Kurrara St	1.2	0.9	0.7	0.8	0.9	0.9	4.0
DG62 Werris Creek South	3.0	1.5	NS	1.2	1.2	1.2	4.0
DG92 Werris Creek Centre	1.1	0.6	0.6	0.5	0.9	0.9	4.0
DG98 "Kyooma"	1.2	0.8	NS	1.0	1.2	1.2	4.0
DG101 "Westfall"	3.4	0.8	2.3	1.8	2.6	2.6	4.0
DG103 West Street	1.6	0.7	1.4	1.9	2.3	2.3	4.0

^{* -} sample contaminated with excessive organic matter (>50%) from non-mining source (i.e., bird droppings and insects); # - indicates sample is contaminated from a Non-Werris Creek Coal dust source; Yellow Bold — Elevated dust level; NS - No Sample; Site damage — stand and bottle vandalised

2.2.2 Discussion - Compliance / Non-Compliance

All monthly dust deposition gauge results were below the annual criteria of 4.0 g/m²/month throughout the period. with the exception of:

• DG2 (Cintra) has exhibited some high dust levels throughout the reporting period. Some samples have been deemed contaminated by visual field inspections and the presence of insects, vegetation and bird droppings in some samples. The dust is, however, consistent with the activities of the nearby mining immediately adjacent to the dust gauge – DG2 is located within the Mining Lease Boundary.

2.3 AIR QUALITY COMPLAINTS

There were no dust complaints recorded during the period.

3.0 NOISE

3.1 OPERATIONAL NOISE

Monthly attended noise monitoring is undertaken representative of the following 16 properties from 13 monitoring points below. Attended noise monitoring was undertaken twice for either 60 minutes at privately owned properties or 15 minutes at properties with private agreements; representative of the day period and the evening/night period.

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3.1.1 Monitoring Data Results

The WCC operation's noise level (not ambient noise) results for the last four months are outlined in the tables below. Noise monitoring locations are identified in **Figure 2**.

26th Wednesday, October 2022

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night	Criteria dB(A) L _{eq}
	Location	15min	15min	dB(A) L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	25	40
С	Central Quipolly(R10*,R11*)	Inaudible	40	Inaudible	40
D	"Hazeldene" R24	Inaudible#	37	Inaudible	37
Ε	"Railway Cottage" R12	Inaudible#	38	Inaudible	38
F	"Talavera" R96	23#	38	32#	37
Н	"Kyooma" R98	24#	35	35#	35
1	Kurrara St, WC R57	Inaudible	35	29#	35
J	Coronation Ave, WC	Inaudible#	35	24#	35
K	Alco Park (R21*)	Inaudible#	40	26#	40
L	West St, WC (R103)	Inaudible#	35	26#	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

10th Thursday, November 2022

LO 111	Thursday, November 2022										
	Location	Day dB(A) L _{eq 15min}	Criteria dB(A) L _{eq}	Evening/Night	Criteria dB(A) L _{eq}						
		, , , , , ,	15min	dB(A) L _{eq 15min}	15min						
Α	"Rosehill" R5	Inaudible#	35	Inaudible	35						
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	27	40						
С	Central Quipolly(R10*,R11*)	Inaudible	40	Inaudible	40						
D	"Hazeldene" R24	Inaudible	37	22	37						
Е	"Railway Cottage" R12	Inaudible	38	Inaudible	38						
F	"Talavera" R96	22#	38	Inaudible	37						
Н	"Kyooma" R98	Inaudible	35	Inaudible	35						
I	Kurrara St, WC R57	Inaudible	35	Inaudible	35						
J	Coronation Ave, WC	Inaudible	35	Inaudible	35						
K	Alco Park (R21*)	Inaudible	40	32	40						
L	West St, WC (R103)	Inaudible	35	Inaudible	35						

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

19th and 20th Monday-Tuesday, December 2022

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night dB(A)	Criteria dB(A) L _{eq}
	Location	15min	15min	L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible#	35	Inaudible#	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible#	40	Inaudible#	40
С	Central Quipolly(R10*,R11*)	Inaudible#	40	Inaudible#	40
D	"Hazeldene" R24	Inaudible#	37	Inaudible#	37
Ε	"Railway Cottage" R12	Inaudible#	38	Inaudible#	38
F	"Talavera" R96	Inaudible	38	Inaudible#	37
Н	"Kyooma" R98	Inaudible	35	Inaudible#	35
_	Kurrara St, WC R57	Inaudible#	35	Inaudible#	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible#	35
K	Alco Park (R21*)	Inaudible#	40	Inaudible#	40
L	West St, WC (R103)	Inaudible#	35	Inaudible#	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

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17th Tuesday, January 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night dB(A)	Criteria dB(A) L _{eq}
	Location	15min	15min	Leq 15min	15min
Α	"Rosehill" R5	Inaudible	35	27	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	Inaudible	40
С	Central Quipolly (R10*,R11*)	Inaudible	40	Inaudible#	40
D	"Hazeldene" R24	Inaudible	37	Inaudible#	37
Е	"Railway Cottage" R12	Inaudible	38	Inaudible	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible	35	Inaudible	35
1	Kurrara St, WC R57	Inaudible	35	22#	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible#	35
K	Alco Park (R21*)	26	40	27#	40
L	West St, WC (R103)	Inaudible	35	24#	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

3.1.2 Discussion - Compliance / Non-Compliance

Noise from Werris Creek Coal Mine was inaudible at a high percentage of the monitoring sites during the quarter. Throughout the period, Werris Creek Coal Mine adjusted mining operations and shut down equipment at various times to reduce noise generation potential in response to noise levels measured at the real time noise monitors.

3.2 Noise complaints

There were no noise complaints recorded during the period.

4.0 BLASTING

During the reporting period there was a total of 24 blasts fired by WCC with monitoring of each blast undertaken at "Glenara", "Kyooma", "Werris Creek South" and "Werris Creek Mid". Compliance limits for blasting overpressure is 115dBL (and up to 120dBL for only 5% of blasts) and vibration is 5mm/s (and up to 10mm/s for only 5% of blasts). Blast monitoring locations are identified in **Figure 3**.

4.1 BLAST MONITORING

4.1.1 Monitoring Data Results

The summary tables of blasting results over the last four months are provided below.

Octobo	October 2022		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		k Mid R92
October 2022		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly	Average	0.08	101.1	0.57	99.9	0.41	100.3	0.27	94.6
Monthly N	/laximum	0.15	110.6	1.21	105.3	0.90	110.7	0.52	102.7
Annual A	Average	0.11	100.9	0.73	101.5	0.47	101.9	0.31	96.6
Crite	eria	5	115	5	115	5	115	5	115
% >115dB(L)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

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NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

Novemb	November 2022		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		k Mid R92
November 2022		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly Average		0.12	97.8	0.85	100.3	0.59	102.6	0.37	100.2
Monthly Maximum		0.18	101.4	1.14	105.4	0.91	107.6	0.55	106.4
Annual A	Annual Average		100.7	0.74	101.4	0.48	101.9	0.32	96.9
Crite	eria	5	115	5	115	5	115	5	115
% >115dB(L)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Dosomb	December 2022		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		k Mid R92
Decemb			dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly Average		0.13	99.7	0.99	99.9	0.72	102.2	0.38	100.1
Monthly Maximum		0.27	111.5	1.34	102.5	1.14	103.2	0.50	101.6
Annual A	Average	0.11	100.6	0.76	101.3	0.50	102.0	0.32	97.2
Crite	eria	5	115	5	115	5	115	5	115
% >115dB(L)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

January	January 2023		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		Mid R92
			dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly	Average	0.10	97.4	0.85	99.2	0.52	101.2	0.32	98.5
Monthly Maximum		0.13	100.8	1.04	106.9	0.73	110.0	0.37	107.1
Annual A	Annual Average		97.4	0.85	99.2	0.52	101.2	0.32	98.5
Crite	eria	5	115	5	115	5	115	5	115
% >115dB(L)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Yellow – overpressure >115dB(L) or Werris Creek vibration >5.0mm/s.

4.1.2 Discussion - Compliance / Non-Compliance

All blasts over the period complied with maximum licence limits (120dB(L) and 10mm/s) as well as the 95th percentile limits (115dB(L) and 5mm/s).

4.2 BLAST COMPLAINTS

There was one blast complaints (15/07/2022) during the period regarding vibration.

5.0 WATER

The groundwater monitoring program monitors groundwater levels bi-monthly and groundwater quality six monthly. Surface water monitoring is undertaken quarterly.

5.1 GROUND WATER

Groundwater monitoring is undertaken to identify if there are any impacts on groundwater quality and water levels as a result of the mining operations. WCC monitors approximately 38 groundwater wells/bores and piezometers in the key aquifers surrounding WCC including Werrie Basalt (next to WCC and further afield) and Quipolly Creek Alluvium. Groundwater level surveys were completed between 8-25 November 2022 and 6-30 January 2023. Groundwater monitoring locations are identified in **Figure 4**.

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5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

9::		November	·-22
	Site	mbgl	%
	MW1	Dry	
Ω	MW2	32.86	3%
r ×	MW3	15.56	7%
nea	MW4B	14.77	5%
salt	MW5	7.70	15%
Bas	MW6	14.37	9%
rrie	MW27*	46.32	12%
Werrie Basalt near WCC	MW36A	16.83	11%
	MW36B	16.82	11%
	MW8*	No access	
	MW10	8.70	6%
	MW14	13.12	13%
	MW17B*	7.83	13%
Werrie Basalt	MW19A*	Pump over bore	
Ba	MW20*	17.39	8%
rrie	MW38A	8.97	15%
We	MW38B*	8.54	5%
	MW38C*	Pump over bore	
	MW38E*	7.03	4%
	MW41	3.53	28%
	MW43	3.58	16%
# ¹	MW24A*	10.72	11%
π	MW29*	8.89	10%
	MW12*	5.98	11%
	MW13*	4.43	-4%
	MW13B*	3.14	-6%
	MW13D*	3.98	5%
	MW15*	No Access	
	MW16*	3.21	29%
Quipolly Alluvium	MW17A*	2.17	43%
luvi	MW18A*	2.07	43%
\ \ \	MW21A*	3.56	43%
	MW22A*	2.97	35%
Zuip	MW22B*	3.03	34%
	MW23A*	3.06	16%
	MW23B*	3.37	11%
	MW26B*	3.15	39%
	MW28A*	4.59	43%
	MW32*	Pump over bore	
	MW40	3.57	28%
	MW42	3.55	16%
#²	MW34*	8.83	1%

		January-23				
	Site	mbgl	%			
	MW1	Dry				
\C	MW2	33.50	-2%			
Werrie Basalt near WCC	MW3	15.07	3%			
nes	MW4B	13.66	8%			
salt	MW5	7.60	1%			
Ва	MW6	13.97	3%			
rrie	MW27*	48.44	-4%			
We	MW36A	15.39	9%			
	MW36B	15.38	9%			
	MW8*	10.92	-1%			
	MW10	8.64	1%			
	MW14	11.67	12%			
	MW17B*	8.02	-2%			
sal	MW19A*	Pump over bore				
Werrie Basalt	MW20*	16.72	4%			
rrie	MW38A	8.55	5%			
We	MW38B*	8.59	-1%			
	MW38C*	Pump over bore				
	MW38E*	7.01	0%			
	MW41	4.02	-12%			
	MW43	4.06	-12%			
#1	MW24A*	11.03	-3%			
π	MW29*	9.28	-4%			
	MW12*	6.06	-1%			
	MW13*	4.65	-5%			
	MW13B*	3.44	-9%			
	MW13D*	4.19	-5%			
	MW15*	No Access				
	MW16*	3.73	-14%			
ium	MW17A*	2.74	-21%			
luvi	MW18A*	2.05	1%			
Α	MW21A*	3.65	-2%			
l loc	MW22A*	3.55	-16%			
Quipolly Alluvium	MW22B*	3.64	-17%			
	MW23A*	3.58	-15%			
	MW23B*	No access				
	MW26B*	3.09	2%			
	MW28A*	5.12	-10%			
	MW32*	Pump over bore				
	MW40	3.98	-10%			
	MW42	4.00	-11%			
#²	MW34*	8.79	0%			

mbgl – meters below ground level is the distance in meters from top of bore to groundwater surface; Orange – Change decrease; Green – change increase or no change; * - Indicates bore is used for water extraction unrelated to WCC (i.e. stock and domestic or irrigation). #¹ – Werrie Basalt in the Black Soil Gully valley to east of Werris Creek Mine. #² - Werris Creek Alluvium.

5.1.2 Discussion - Compliance / Non-Compliance

Measured groundwater levels in the Werrie Basalt and Quipolly Alluvium aquifer indicate an overall increase in water levels in November 2022 and a decrease change in January 2023.

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5.2 SURFACE WATER

Surface water monitoring is undertaken in local creeks offsite as well as from discharge point dirty water dams to monitor for potential water quality issues. Quarterly surface water monitoring was undertaken 23rd - 24th November 2022. Surface water monitoring locations are identified in **Figure 5**.

5.2.1 Monitoring Data Results

Summary of surface water quality monitoring results has been provided below.

23rd & 24th November 2022

Site	рН	EC	TSS	O&G	Change from Previous Quarter or General Comments							
	ONSITE											
SB2	Insigni	ficant wate	er for samp	ole	Previously low level, only puddles now							
SB9	7.42	270	27	<5	Previously low water level							
SB10	SB10 Insignificant water for sample			ole	Previously water in dam, very low level now							
SB18	8.41	349	<5	<5	Previously low water level now							
					OFFSITE							
QCU	7.92	492	<5	<5	Remained flowing							
QCD	7.95	607	16	<5	Remained flowing							
WCU	8.27	881	<5	<5	Remained flowing							
WCD	8.34	976	<5	<5	Remained flowing							

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; TSS – Total Suspended Solids is a measure of suspended sediment in water (i.e. similar to turbidity); O&G – Oil and Grease measures amount of hydrocarbons (oils and fuels) in water. NA – No Access

5.2.2 Discussion - Compliance / Non-Compliance

Quarterly surface water monitoring was undertaken on 23rd - 24th November 2022. All water quality results were within long-term averages and the Site Water Management Plan trigger values.

5.3 SURFACE WATER DISCHARGES

5.3.1 Monitoring Data Results

There were three uncontrolled discharge events between October and November 2022 following above average rainfall during these months. Eight controlled discharge events also occurred this period.

Sampling conducted within the Quipolly and Werris Creek system during the discharge events was in accordance with licence conditions.

Sample Date	Dam	рН	EC	TSS	O&G	Compliance	Туре	5 Day Rain (mm)
18/10/2022	SB12 (EPA10) -dam	7.9	350	19	<5	Yes	Controlled	N/A
18/10/2022	SB12 (EPA10) -pipe	7.7	360	15	<5	Yes	Controlled	N/A
18/10/2022	SB16 (EPA12) - dam	8.1	410	24	<5	Yes	Controlled	N/A
18/10/2022	SB16 (EPA12) - pipe	8.1	390	18	<5	Yes	Controlled	N/A
18/10/2022	SB13 (EPA14)	7.4	200	34	<5	Yes	Controlled	N/A
18/10/2022	QCU (EPA25)	7.7	370	8	<5	N/A	Controlled	N/A
18/10/2022	WCU (WPA23)	8.2	700	16	<5	N/A	Controlled	N/A
18/10/2022	WCD (WPA24)	8.3	840	17	<5	N/A	Controlled	N/A
26/10/2022	SB12 (EPA10) - dam	8.0	370	19	<5	Yes	Controlled	N/A
26/10/2022	SB12 (EPA10) - pipe	8.0	350	18	<5	Yes	Controlled	N/A
26/10/2022	SB1 (EPA10) - dam	7.8	570	23	<5	Yes	Controlled	N/A
26/10/2022	SB1 (EPA10) - pipe	8.0	550	19	<5	Yes	Controlled	N/A
26/10/2022	SB16 (EPA12) - dam	8.0	470	18	<5	Yes	Controlled	N/A
26/10/2022	SB16 (EPA12) - pipe	7.6	490	25	<5	Yes	Controlled	N/A
26/10/2022	QCU (EPA25)	7.8	290	8	<5	N/A	Controlled	N/A
28/10/2022	SB10 (EPA14) - dam	7.2	200	13	<5	Yes	Controlled	N/A
28/10/2022	SB10 (EPA14) - pipe	7.4	210	25	<5	Yes	Controlled	N/A
28/10/2022	WCU (WPA23)	8.1	390	14	<5	N/A	Controlled	N/A
28/10/2022	WCD (WPA24)	8.0	340	63	<5	N/A	Controlled	N/A
29/10/2022	SB10 (EPA14) - dam	6.9	140	19	<5	Yes	Controlled	N/A
29/10/2022	SB10 (EPA14) - pipe	6.8	130	23	<5	Yes	Controlled	N/A

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	teria	6.5 - 8.5	N/A	50	10	13/13	33.16131164	14/1
18/11/2022	SB11 (EPA12) - pipe QCU (EPA25)	7.5 7.7	330 280	49 13	<5 <5	Yes N/A	Controlled Controlled	N/A N/A
18/11/2022	SB11 (EPA12) - dam	7.6	320	72	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled Wet weather -	57.6
18/11/2022	SB16 (EPA12) - pipe	7.3	350	53	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	57.6
18/11/2022	SB16 (EPA12) - dam	7.3	350	45	<5	Yes	Wet weather - Controlled	N/A
14/11/2022	WCD (WPA24)	8.0	180	1106	7	N/A	Wet weather - Uncontrolled	N/A
14/11/2022	WCU (WPA23)	8.0	180	295	<5	N/A	Wet weather - Uncontrolled	N/A
14/11/2022	QCU (EPA25)	7.3	130	66	<5	N/A	Wet weather - Uncontrolled	N/A
14/11/2022	SB13 (EPA14)	7.4	80	138	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	57.6
14/11/2022	SB10 (EPA14)	7.3	80	28	<5	Yes	Wet weather - Uncontrolled	N/A
14/11/2022	SB2 (EPA10)	7.3	100	32	<5	Yes	Wet weather - Uncontrolled	N/A
03/11/2022	QCU (EPA25)	7.6	240	35.5	<5	N/A	Wet weather - Controlled	N/A
03/11/2022	SB11 (EPA12) - pipe	7.3	250	226	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	67.6
03/11/2022	SB11 (EPA12) - dam	7.4	250	241	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	67.6
03/11/2022	SB16 (EPA12) - pipe	7.4	220	181	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	67.6
03/11/2022	SB16 (EPA12) - dam	7.4	230	410	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	67.6
02/11/2022	QCU (EPA25)	7.8	210	100	<5	N/A	Wet weather - Uncontrolled	N/A
02/11/2022	SB1 (EPA10)	7.7	210	526	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	67.6
02/11/2022	SB12 (EPA10)	7.7	250	416	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Controlled	67.6
01/11/2022	WCD (WPA24)	8.1	130	1390	<5	N/A	Wet weather - Uncontrolled	N/A
01/11/2022	WCU (WPA23)	7.8	120	701	<5	N/A	Wet weather - Uncontrolled	N/A
01/11/2022	QCU (EPA25)	6.8	90	36	<5	N/A	Wet weather - Uncontrolled	N/A
01/11/2022	SB10 (EPA14)	7.1	80	190	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Uncontrolled	67.6
01/11/2022	SB2 (EPA10)	7.7	370	278	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - Uncontrolled	67.6
29/10/2022 29/10/2022	WCU (WPA23) WCD (WPA24)	8.2 8.1	560 550	9 22	<5 <5	N/A N/A	Controlled Controlled	N/A N/A

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; TSS – Total Suspended Solids is a measure of suspended sediment in water (i.e. similar to turbidity); O&G – Oil and Grease measures amount of hydrocarbons (oils and fuels) in water; **Bold** – indicates results outside criteria due to 5 day rain trigger >39.2mm

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5.3.2 Discussion - Compliance / Non-Compliance

Sampling results were in compliance with WCC's Environmental Protection License.

5.4 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

There were no complaints received during the reporting period.

7.0 GENERAL

Please feel free to ask any questions in relation to the information contained within this document during Item 7 of the meeting agenda.

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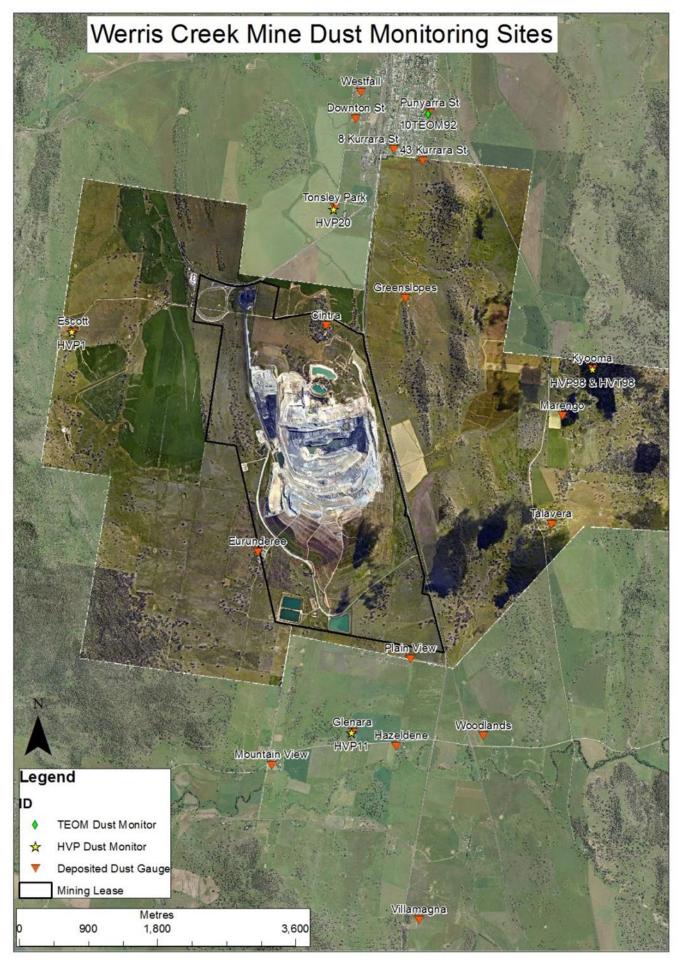


Figure 1 – WCC Dust Monitoring Locations

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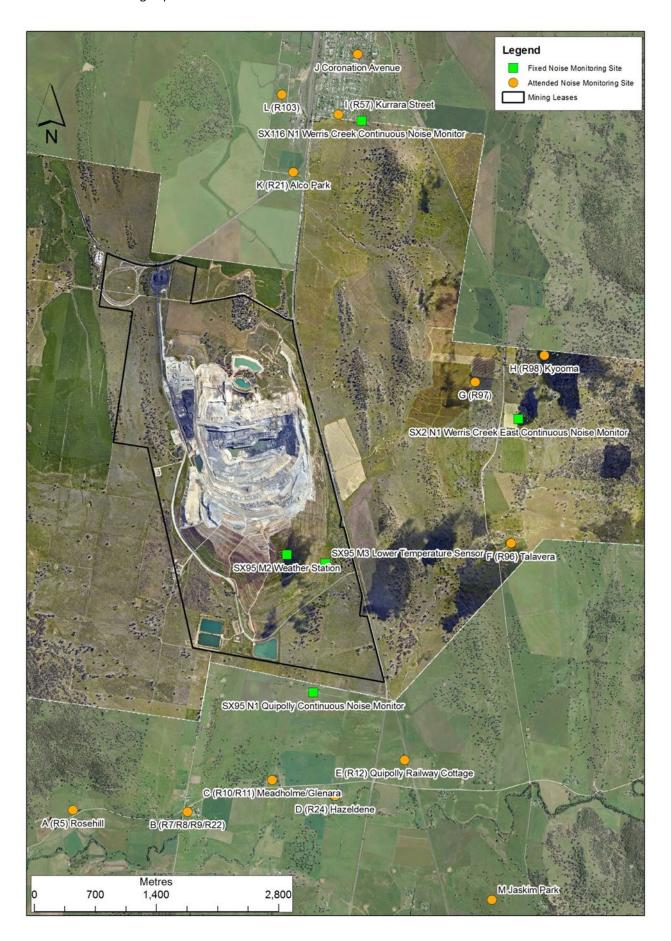


Figure 2– WCC Noise Monitoring Locations

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Figure 3 – WCC Blast Monitoring Locations

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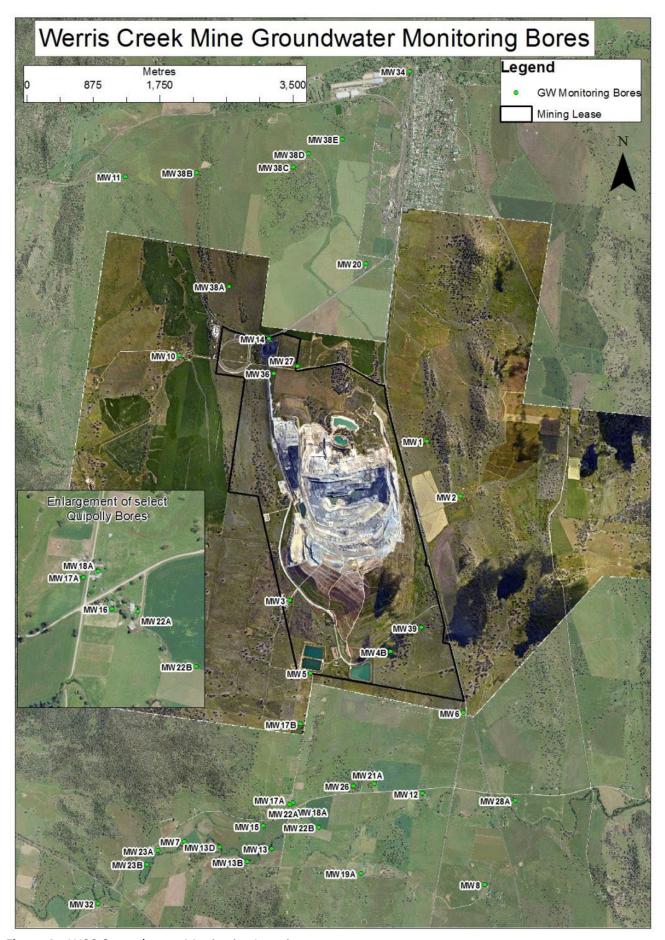


Figure 4 – WCC Groundwater Monitoring Locations

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Figure 5 – WCC Surface Water Monitoring Locations

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WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE

62nd Meeting of the Committee held at the Werris Creek Bowling Club on Wednesday, 12 July 2023 at 9:30AM

Meeting opened at 9:40AM

Record of Attendance

Michael Smith OAM Independent Chairperson Jane Bradford OAM Independent Minute Taker

Murray O'Keefe Whitehaven Coal – Operations Manager

Megan Martin Werris Creek Coal – Environmental Superintendent Andrew Raal Werris Creek Coal - Close the Mine Superintendent

Harry Mills Whitehaven Coal – Environmental Officer

Mike Lomax Community Representative
Noel Taylor Community Representative
Lindsay Bridge Community Representative

Nathan Skelly Director of Infrastructure & Environmental Services -

Liverpool Shire Council

APOLOGIES

Jacki Scott Whitehaven Coal – Manager Community Partnerships &

Investment

Darren Swain Whitehaven Coal – General Manager Community

Engagement

Col Stewart OAM Community Representative

Non-Attendance

James O'Brien

2 Acknowledgement of Country

The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and recognised their continuing connection to the land, water and culture, paying respects to their Elders past, present and emerging.

3 Declaration of Pecuniary or Other Interests

The Chair advised that his meeting expenses are borne by the proponent. Other members – Nil

- **4 Minutes of the previous 61st meeting held on the 8 March 2023** were approved on the 19 April 2023 and distributed to the Committee members on 12 April 2023.
- 5 Matters Arising Nil

6 Quarterly Environmental Monitoring Report – February to May 2023

Harry Mills went through the Report with the following comments:

- **1.1 Weather Station** Above normal rainfalls this year and winds were average.
- **2.0 Air Quality** Thanks to the wet weather air quality was good for this period with no complaints received.
- **3.2 Noise Complaints** No complaints received this quarter.
- **4.2 Blast complaints** one received mild vibration on 23.03.2023.

5.2 Surface Water – Lower rainfall has meant that there has been no need to discharge from site.

6.0 Complaints Summary – two received

11.03.2023 Light Environment Advisor called the complainant back to inform that the site had received the complaint and has reviewed lighting plant locations, aspects and direction.

23.03.2023 Blast Environment Advisor advised complainant that the blast was within compliance limits.

7.0 General Business

- **7.1** Murray O'Keefe, Operations Manager Werris Creek provided an update on the mine closure planning.
- Werris Creek is still on track to mine the last coal from the pit in late January 2024
- This should see the last coal processed and loaded on a train in March 2024
- The first of the four (4) excavators and its associated trucks run by the mine parked up at the end of June. They have since been demobilised off site and is moving (via a rebuild) to WHC's Vickery project north of Gunnedah
- The second excavator and associated truck fleet will park up at the end of October 2023. Again, this equipment will be demobilised from Werris Creek and head to the Vickery project
- The third excavator will park with the last ROM coal in January 2024 its future is presently undecided
- The fourth excavator is likely to remain at Werris Creek as part of the rehabilitation works.

The workforce at Werris Creek is presently around 140 persons in total, down from approximately 170 prior to the first excavator parking up.

- Around 50 workers will move on from Werris Creek with each excavator parking up
- When the last train is loaded another group of approximately 20 workers will depart Werris Creek
- The remaining -20 workers will become part of the longer-term rehabilitation project continuing for a couple of years.

The workers at Werris Creek have been offered continuing employment at another Whitehaven Coal (WHC) site. This includes an offer of relocation assistance if desired OR the offer of company supplied accommodation local to their next role when they are on shift. This second option allows the worker and their family to continue to reside at their current address.

- At this stage -75% of workers have elected to take up relocation with WHC to another operation. The remaining 25% will seek redundancy
- Of the workers seeking to continue with WHC at another operation, the
 vast majority have indicated they are not going to relocate with their family

 they will continue to live locally to Werris Creek (Quirindi, Willow Tree or
 Tamworth etc) and stay in company accommodation whilst on shift.

7.2 Reportable cracks on wall road discovered on 22.02.2023

Werris Creek has been safely working around a known geological hazard since December 2021. On 22.02.2023 some additional cracking was observed near this hazard and a detailed monitoring (slope stability radar) and inspection (statutory mining officials) program was instigated.

Early on Sunday 26.02.2023 this minor cracking was observed to be growing noticeably larger. This was a trigger to remove all personnel from the mine (only maintenance personnel, as this was Saturday night / Sunday morning) and not send day shift operators to work near the hazard area.

At around 08.30am the high wall "failed" resulting in a slip and associated cracking across a mine road. See the below photo:



The above pictured road was the main access in and out of the mine. Over the subsequent weeks the mine worked through a detailed risk-based approach to building a new access road into the active mining areas as well as commencing the task of remediating the failed slope.

As at the time of the CCC meeting, full access and normal operations have resumed. The failed slope area is presently safe and stable, with ongoing 24/7 monitoring in place to ensure any further movement is captured and able to be treated. Photo below is the wall at 12.07.2023.



8 Next Meeting Date and Time Wednesday, 8 November 2023 at 9:30AM Venue - Board Room, Werris Creek Coal Mine – a site visit may be considered as part of this meeting.

Date: 22 August 2023

9 Meeting closed at 11:00AM

Meeting Minutes Approved:

Michael J Silver OAM Independent Chairperson



WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

February - May 2023

This Environmental Monitoring Report covers the period 1st February to 31st May 2023 for the Werris Creek Coal Mine Community Consultative Committee.

The report includes environmental monitoring results from the on-site Weather Station, Air Quality, Noise, Blasting, Surface Water, Groundwater and Discharge Water Quality together with any community complaints received and general details on site environmental matters.

Note: Elevated monitoring results above the relevant monitoring criteria are highlighted in yellow.

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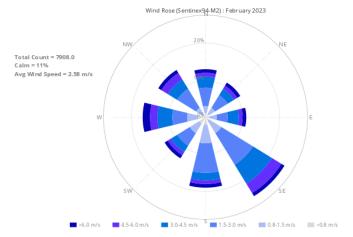
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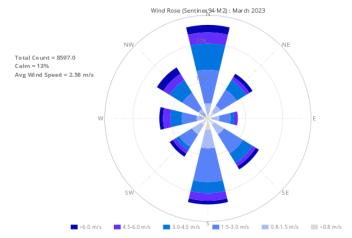
1.0 METEOROLOGY

1.1 WEATHER STATION

Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. The monthly rainfall total for February and May 2023 was below the historical average and above during March-April 2023. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the south-east in February 2023, from the north in both March and May 2023 and from the south in April 2023.

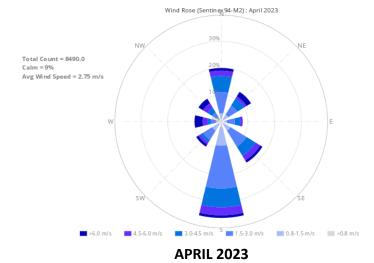
Month	Rainfall (mm)						
	Onsite	Historical Average	2023 Total				
February 2023	50.4	68.1	112.6				
March 2023	84.2	67.1	196.8				
April 2023	40.0	30.9	236.8				
May 2023	1.2	37.0	238.0				

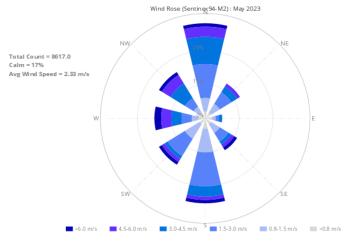




FEBRUARY 2023







MAY 2023

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2.0 AIR QUALITY

2.1 HVAS (PM₁₀) and TEOM (PM₁₀ & PM_{2.5})

WCC operates five High Volume Air Samplers (HVAS), four sites measuring particulate matter less than 10 microns (PM₁₀) and one site measuring total suspended particulate (TSP) matter. HVAS sampling is scheduled every 6 days for a 24-hour run period in accordance with Environment Protection Authority (EPA) guidelines. Results are reported in micro grams per cubic metre (μ g/m³) of air sampled. In addition, WCC operates a Tapered Element Oscillating Microbalance (TEOM) monitor in Werris Creek measuring real time PM₁₀ and PM_{2.5} (particulate matter less than 2.5 microns) dust levels. Dust monitoring locations are identified in **Figure 1**.

2.1.1 Monitoring Data Results

The average results for the last four months are provided in the table below.

	2411			4.55			CRITERIA	(μg/m³)
MONITORING LOCATION	24Hr Maximum (μg/m³)	FEB 2023 (μg/m³)	MAR 2023 (μg/m³)	APR 2023 (μg/m³)	MAY 2023 (μg/m³)	2023 AVG (μg/m³)	Annual	24hr
PM _{2.5} – TEOM92 "Werris Creek"	11.5	6.2	6.4	-0.4	5.5	4.5	-	-
PM ₁₀ – TEOM92 "Werris Creek"	27.2	12.2	13.4	3.5	11.6	10.3	30	50
PM ₁₀ – HVP20 "Tonsley Park"	48.5	10.7	11.8	8.2	22.2	12.9	30	50
PM ₁₀ - HVP1 "Escott"	20.2	8.1	8.7	4.7	8.7	7.7	30	50
PM ₁₀ – HVP11 "Glenara"	39.9	10.0	10.2	10.2	23.5	12.9	30	50
PM ₁₀ – HVP98 "Kyooma"	14.8	6.3	9.0	4.0	6.2	6.5	30	50
TSP – HVT98 "Kyooma"	46.6	15.1	22.2	9.5	17.4	15.9	90	-

Yellow Bold – Elevated dust level.

2.1.2 Discussion - Compliance / Non-Compliance

All TSP, PM₁₀ and PM_{2.5} dust results were within criteria during the period.

2.2 WERRIS CREEK MINE DEPOSITED DUST

Deposited dust monitoring measures particulate matter greater than 30 microns in size that readily settles out of the air related to visual impact. Dust deposition is monitored at 18 locations around WCC. Sampling is scheduled monthly in accordance with EPA guidelines and results are reported as grams per square metre per month (g/m^2 .month). Dust monitoring locations are identified in **Figure 1**.

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2.2.1 Monitoring Data Results

The results for the last four months are provided in the table below.

MONITORING LOCATION	FEB 2023 (g/m²/month)	MAR 2023 (g/m²/month)	APR 2023 (g/m²/month)	MAY 2023 (g/m2/month)	2023 AVERAGE (g/m2/month)	Annual Criteria (g/m²/month)
DG1 "Escott"	0.6	0.6	0.6	0.1	0.6	4.0
DG2 "Cintra"	6.5	5.2	4.3	3.3	4.8	4.0
DG3 "Eurunderee"	1.1	1.0	0.9	0.5	1.0	4.0
DG5 "Railway View"	1.2	2.5	1.4	1.1	1.6	4.0
DG9 "Marengo"	0.4	0.5	0.5	0.2	0.5	4.0
DG11 "Glenara"	0.2	0.7	0.5	0.7	0.8	4.0
DG14 "Greenslopes"	0.7	0.2	0.2	0.9	0.8	4.0
DG15 "Plain View"	0.7	0.5	0.4	1.0	0.8	4.0
DG17 "Woodlands"	2.1	1.7	2.0	1.9	1.8	4.0
DG20 "Tonsley Park"	1.8	1.8	0.8	0.6	1.6	4.0
DG22 "Mountain View"	1.1	0.7	0.3	0.2	0.6	4.0
DG24 "Hazeldene"	2.4	1.8	0.8	1.0	1.5	4.0
DG34 8 Kurrara St	0.6	0.4	0.1	0.3	0.5	4.0
DG62 Werris Creek South	1.8	0.3	0.9	1.7	1.2	4.0
DG92 Werris Creek Centre	0.7	0.3	0.2	1.6	0.7	4.0
DG98 "Kyooma"	0.8	0.1	0.5	0.3	0.6	4.0
DG101 "Westfall"	1.6	2.5	2.5	1.2	2.1	4.0
DG103 West Street	1.7	1.9	1.4	1.1	1.7	4.0

^{* -} sample contaminated with excessive organic matter (>50%) from non-mining source (i.e., bird droppings and insects); # - indicates sample is contaminated from a Non-Werris Creek Coal dust source; Yellow Bold — Elevated dust level; NS - No Sample; Site damage — stand and bottle vandalised

2.2.2 Discussion - Compliance / Non-Compliance

All monthly dust deposition gauge results were below the annual criteria of 4.0 g/m²/month throughout the period with the exception of:

DG2 (Cintra) exhibited high dust levels in February through April 2023. The dust is consistent with the
activities of the nearby mining activity immediately adjacent to the dust gauge – DG2 is located within the
Mining Lease Boundary.

2.3 AIR QUALITY COMPLAINTS

There were no dust complaints recorded during the period.

3.0 NOISE

3.1 OPERATIONAL NOISE

Monthly attended noise monitoring is undertaken representative of the following 16 properties from 13 monitoring points below. Attended noise monitoring was undertaken twice for either 60 minutes at privately owned properties or 15 minutes at properties with private agreements; representative of the day period and the evening/night period.

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3.1.1 Monitoring Data Results

The WCC operation's noise level (not ambient noise) results for the last four months are outlined in the tables below. Noise monitoring locations are identified in **Figure 2**.

23rd Thursday, February 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night	Criteria dB(A) L _{eq}
	Location	15min	15min	dB(A) L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible#	35	Inaudible#	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible#	40	25#	40
С	Central Quipolly(R10*,R11*)	Inaudible#	40	24#	40
D	"Hazeldene" R24	25#	37	30#	37
Е	"Railway Cottage" R12	Inaudible	38	Inaudible#	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible#	35	Inaudible	35
_	Kurrara St, WC R57	Inaudible#	35	Inaudible#	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible#	35
K	Alco Park (R21*)	Inaudible	40	Inaudible#	40
L	West St, WC (R103)	Inaudible#	35	Inaudible#	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

27th and 28th Monday-Tuesday, March 2023

	Location	Day dB(A) L _{eq 15min}	Criteria dB(A) L _{eq}	Evening/Night	Criteria dB(A) L _{eq}
			15min	dB(A) L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	Inaudible	40
С	Central Quipolly(R10*,R11*)	Inaudible	40	Inaudible	40
D	"Hazeldene" R24	Inaudible	37	Inaudible	37
Ε	"Railway Cottage" R12	Inaudible	38	Inaudible	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible#	35	Inaudible	35
- 1	Kurrara St, WC R57	Inaudible#	35	Inaudible	35
J	Coronation Ave, WC	Inaudible	35	Inaudible#	35
K	Alco Park (R21*)	Inaudible	40	23	40
L	West St, WC (R103)	Inaudible	35	Inaudible	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

18th Tuesday, April 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night dB(A)	Criteria dB(A) L _{eq}
	Location	15min	15min	L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	Inaudible	40
С	Central Quipolly(R10*,R11*)	Inaudible	40	Inaudible	40
D	"Hazeldene" R24	Inaudible	37	Inaudible	37
Ε	"Railway Cottage" R12	Inaudible#	38	Inaudible	38
F	"Talavera" R96	Inaudible#	38	Inaudible	37
Н	"Kyooma" R98	Inaudible	35	Inaudible	35
- 1	Kurrara St, WC R57	Inaudible#	35	Inaudible	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible	35
K	Alco Park (R21*)	Inaudible	40	26	40
L	West St, WC (R103)	Inaudible	35	28	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) L_{eq 15min} while R9 is 37 dB(A) L_{eq 15min}

NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

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18th Thursday, May 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night dB(A)	Criteria dB(A) L _{eq}
	Location	15min	15min	L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	Inaudible	40
С	Central Quipolly (R10*,R11*)	Inaudible	40	Inaudible	40
D	"Hazeldene" R24	Inaudible	37	Inaudible	37
Е	"Railway Cottage" R12	Inaudible	38	Inaudible	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible	35	Inaudible	35
I	Kurrara St, WC R57	Inaudible	35	Inaudible	35
J	Coronation Ave, WC	Inaudible	35	Inaudible	35
K	Alco Park (R21*)	Inaudible	40	31	40
L	West St, WC (R103)	Inaudible	35	32	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

3.1.2 Discussion - Compliance / Non-Compliance

Noise from Werris Creek Coal Mine was inaudible at a high percentage of the monitoring sites during the quarter. Throughout the period, Werris Creek Coal Mine adjusted mining operations and shut down equipment at various times to reduce noise generation potential in response to noise levels measured at the real time noise monitors.

3.2 Noise complaints

There were no noise complaints recorded during the period.

4.0 BLASTING

During the reporting period there was a total of 21 blasts fired by WCC with monitoring of each blast undertaken at "Glenara", "Kyooma", "Werris Creek South" and "Werris Creek Mid". Compliance limits for blasting overpressure is 115dBL (and up to 120dBL for only 5% of blasts) and vibration is 5mm/s (and up to 10mm/s for only 5% of blasts). Blast monitoring locations are identified in **Figure 3**.

4.1 BLAST MONITORING

4.1.1 Monitoring Data Results

The summary tables of blasting results over the last four months are provided below.

FEBRUARY 2023		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
FEBRU	ART 2025	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Month	Monthly Average		99.0	0.94	100.3	0.74	100.2	0.39	98.0
Monthly Maximum		0.19	106.3	1.57	109.7	1.49	106.8	0.97	107.3
Annua	l Average	0.11	98.2	0.90	99.7	0.63	100.7	0.36	98.3
Cr	iteria	5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

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NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

MADA	MARCH 2023		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		k Mid R92
IVIAR			dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Month	ly Average	0.08	101.0	0.68	99.5	0.50	99.9	0.29	99.4
Monthly Maximum		0.10	108.8	1.12	111.4	1.09	106.7	0.47	110.3
Annua	Annual Average		99.1	0.82	99.6	0.59	100.4	0.33	98.6
Cr	iteria	5	115	5	115	5	115	5	115
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

ADDII 2022		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
APK	APRIL 2023		dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Month	Monthly Average		102.6	0.72	102.3	0.41	101.4	0.19	101.4
Monthly	Monthly Maximum		111.6	1.41	106.3	0.72	106.4	0.31	106.0
Annua	l Average	0.10	100.0	0.80	100.3	0.54	100.7	0.30	99.3
Cr	iteria	5	115	5	115	5	115	5	115
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

MAY	MAY 2023		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	
Monthly	Average	0.13	99.4	0.79	100.5	0.48	101.5	0.29	98.4	
Monthly Maximum		0.26	105.0	1.70	103.8	0.68	109.7	0.51	106.3	
Annual Average		0.10	99.9	0.80	100.3	0.53	100.8	0.30	99.1	
Crit	eria	5	115	5	115	5	115	5	115	
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

Yellow – overpressure >115dB(L) or Werris Creek vibration >5.0mm/s.

4.1.2 Discussion - Compliance / Non-Compliance

All blasts over the period complied with maximum licence limits (120dB(L) and 10mm/s) as well as the 95th percentile limits (115dB(L) and 5mm/s).

4.2 BLAST COMPLAINTS

There was one blast complaint (23/03/2023) during the reporting period regarding vibration.

5.0 WATER

The groundwater monitoring program monitors groundwater levels bi-monthly and groundwater quality six monthly. Surface water monitoring is undertaken quarterly.

5.1 GROUND WATER

Groundwater monitoring is undertaken to identify if there are any impacts on groundwater quality and water levels as a result of the mining operations. WCC monitors approximately 38 groundwater wells/bores and piezometers in the key aquifers surrounding WCC including Werrie Basalt (next to WCC and further afield) and Quipolly Creek Alluvium. Groundwater level surveys were completed between 2-14 March 2023 and 5-12 May 2023. Groundwater monitoring locations are identified in **Figure 4**.

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5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

6:4-		March-23			
	Site	mbgl	%		
	MW1	Dry			
Werrie Basalt near WCC	MW2	33.96	-1%		
r V	MW3	14.93	1%		
nes	MW4B	13.20	3%		
salt	MW5	7.60	0%		
Bas	MW6	13.59	3%		
rrie	MW27*	47.43	2%		
Ne Ne	MW36A	15.10	2%		
	MW36B	15.07	2%		
	MW8*	11.15	-2%		
	MW10	8.82	-2%		
	MW14	11.35	3%		
	MW17B*	8.30	-3%		
salt	MW19A*	Pump over bore			
Ba	MW20*	Pump over bore			
Werrie Basalt	MW38A	8.45	1%		
×	MW38B*	8.72	-1%		
	MW38C*	Pump over bore			
	MW38E*	7.05	-1%		
	MW41	4.32	-7%		
	MW43	4.24	-4%		
# ¹	MW24A*	11.43	-3%		
#*	MW29*	9.85	-6%		
	MW12*	6.38	-5%		
	MW13*	4.71	-1%		
	MW13B*	3.56	-3%		
	MW13D*	4.35	-4%		
	MW15*	No Access			
	MW16*	4.00	-7%		
E	MW17A*	2.88	-5%		
Quipolly Alluvium	MW18A*	2.30	-11%		
¥	MW21A*	4.28	-15%		
o lo	MW22A*	3.84	-8%		
uip	MW22B*	3.96	-8%		
0	MW23A*	3.67	-2%		
	MW23B*	3.96	-15%		
	MW26B*	3.38	-9%		
	MW28A*	6.52	-21%		
	MW32*	Pump over bore			
	MW40	4.28	-7%		
	MW42	4.18	-4%		
#²	MW34*	8.96	-2%		

		May-23	}
	Site		
		mbgl	%
	MW1	55.48	13%
Werrie Basalt near WCC	MW2	33.65	1%
\ \ \	MW3	14.98	0%
nes	MW4B	12.97	2%
salt	MW5	7.80	-3%
Bas	MW6	13.38	2%
rie	MW27*	47.43	0%
Wei	MW36A	16.07	-6%
	MW36B	16.06	-6%
	MW8*	11.92	-6%
	MW10	8.51	4%
	MW14	12.16	-7%
	MW17B*	8.76	-5%
salt	MW19A*	Pump over bore	
Ва	MW20*	Pump over bore	
rrie	MW38A	8.64	-2%
Werrie Basalt	MW38B*	8.75	0%
	MW38C*	Pump over bore	
	MW38E*	7.07	0%
	MW41	4.57	-5%
	MW43	4.35	-3%
# ¹	MW24A*	12.13	-6%
#*	MW29*	10.22	-4%
	MW12*	6.88	-7%
	MW13*	4.74	-1%
	MW13B*	3.65	-2%
	MW13D*	4.44	-2%
	MW15*	No Access	
	MW16*	4.13	-3%
E	MW17A*	3.08	-6%
luvi	MW18A*	2.32	-1%
Ā	MW21A*	4.81	-11%
Quipolly Alluvium	MW22A*	3.93	-2%
 	MW22B*	4.04	-2%
	MW23A*	3.63	1%
	MW23B*	3.95	0%
	MW26B*	3.74	-10%
	MW28A*	7.85	-17%
	MW32*	Pump over bore	
	MW40	4.55	-6%
	MW42	4.28	-2%
#²	MW34*	9.17	-2%

mbgl – meters below ground level is the distance in meters from top of bore to groundwater surface; Orange – Change decrease; Green – change increase or no change; * - Indicates bore is used for water extraction unrelated to WCC (i.e. stock and domestic or irrigation). #1 – Werrie Basalt in the Black Soil Gully valley to east of Werris Creek Mine. #2 - Werris Creek Alluvium.

5.1.2 Discussion - Compliance / Non-Compliance

Measured groundwater levels in the Werrie Basalt and Quipolly Alluvium aquifer indicate an overall decrease in water levels in March and May 2023.

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5.2 SURFACE WATER

Surface water monitoring is undertaken in local creeks offsite as well as from discharge point dirty water dams to monitor for potential water quality issues. Quarterly surface water monitoring was undertaken 22-23 February 2023 and 10-11 May 2023. Surface water monitoring locations are identified in **Figure 5**.

5.2.1 Monitoring Data Results

Summary of surface water quality monitoring results has been provided below.

22nd & 23rd February 2023

Site	рН	EC	TSS	O&G	Change from Previous Quarter or General Comments					
	ONSITE									
SB2	Dry	Dry	Dry	Dry	Dry, previously muddy					
SB9	7.41	399	58	<5	Low water level remained					
SB10	Dry	Dry	Dry	Dry	Muddy now, previously low water level					
SB18	Dry	Dry	Dry	Dry	Dry now, previously low water level					
					OFFSITE					
QCU	8.07	726	<5	<5	Remained flowing					
QCD	8.05	789	9	<5	Remained flowing					
WCU	8.49	1040	6	<5	Remained flowing					
WCD	8.48	1120	24	<5	Remained flowing					

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; TSS – Total Suspended Solids is a measure of suspended sediment in water (i.e. similar to turbidity); O&G – Oil and Grease measures amount of hydrocarbons (oils and fuels) in water. NA – No Access

10th & 11th May 2023

<u> </u>	11ay 2023				
Site	рН	EC	TSS	O&G	Change from Previous Quarter or General Comments
			•	•	ONSITE
SB2	Dry	Dry	Dry	Dry	Remained dry
SB9	Dry	Dry	Dry	Dry	Remained dry
SB10	Dry	Dry	Dry	Dry	Low water level in dam remains
SB18	Dry	Dry	Dry	Dry	Remained dry
					OFFSITE
QCU	8.01	710	<5	<5	Remained flowing
QCD	8.15	808	<5	<5	Remained flowing
WCU	8.39	1160	6	<5	Remained flowing
WCD	8.31	1330	32	<5	Remained flowing

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; TSS – Total Suspended Solids is a measure of suspended sediment in water (i.e. similar to turbidity); O&G – Oil and Grease measures amount of hydrocarbons (oils and fuels) in water. NA – No Access

5.2.2 Discussion - Compliance / Non-Compliance

Quarterly surface water monitoring was undertaken 22-23 February 2023 and 10-11 May 2023. All water quality results were within long-term averages and the Site Water Management Plan trigger values.

5.3 SURFACE WATER DISCHARGES

5.3.1 Monitoring Data Results

There were no discharge events between February and May 2023.

5.3.2 Discussion - Compliance / Non-Compliance

No discharge events during reporting period.

5.4 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

There were two complaints received during the reporting period which are summarised below.

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#	Date	Issue	Complaint	Investigation	Action Taken
643	11/03/2023	Lighting	Complainant advised that light was shining towards their property from direction of mine.	EO advised operations manager of lighting complaint and enacted a review of lighting plant locations, aspects, and direction.	EO called complainant back to inform that the site had received the complaint and will review lighting plant locations, aspects and direction.
644	23/03/2023	Blast	Complainant wished to advise the mine that the vibration from the blast could be felt at their premises. Noted house shook.	EO confirmed blast was within compliance limits.	EO advised complainant that the blast was within compliance limits.

7.0 GENERAL

Please feel free to ask any questions in relation to the information contained within this document during Item 7 of the meeting agenda.

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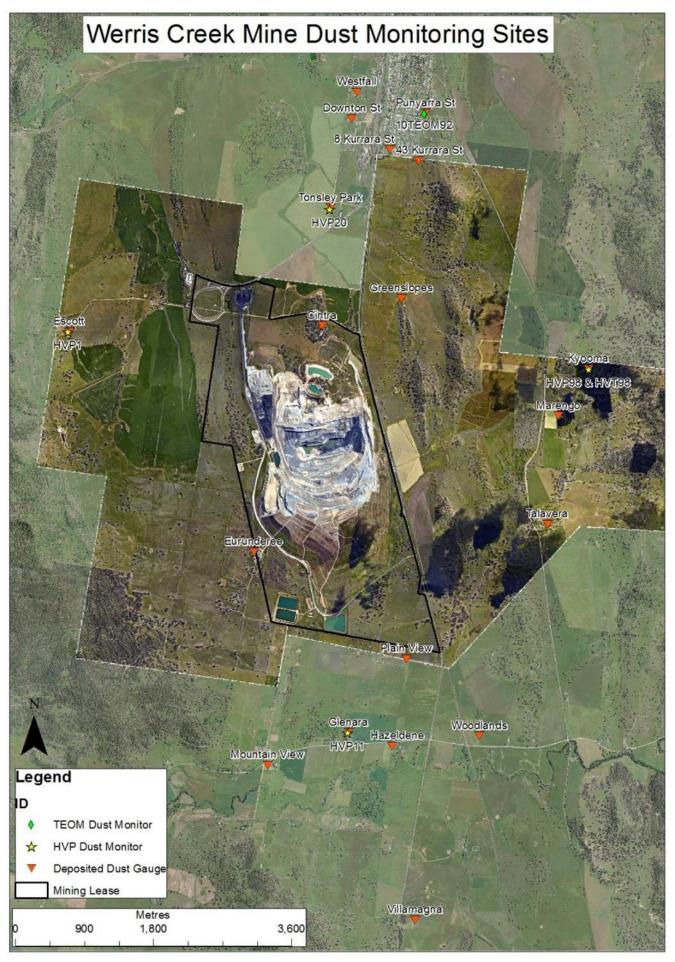


Figure 1 – WCC Dust Monitoring Locations

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Figure 2– WCC Noise Monitoring Locations

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Figure 3 – WCC Blast Monitoring Locations

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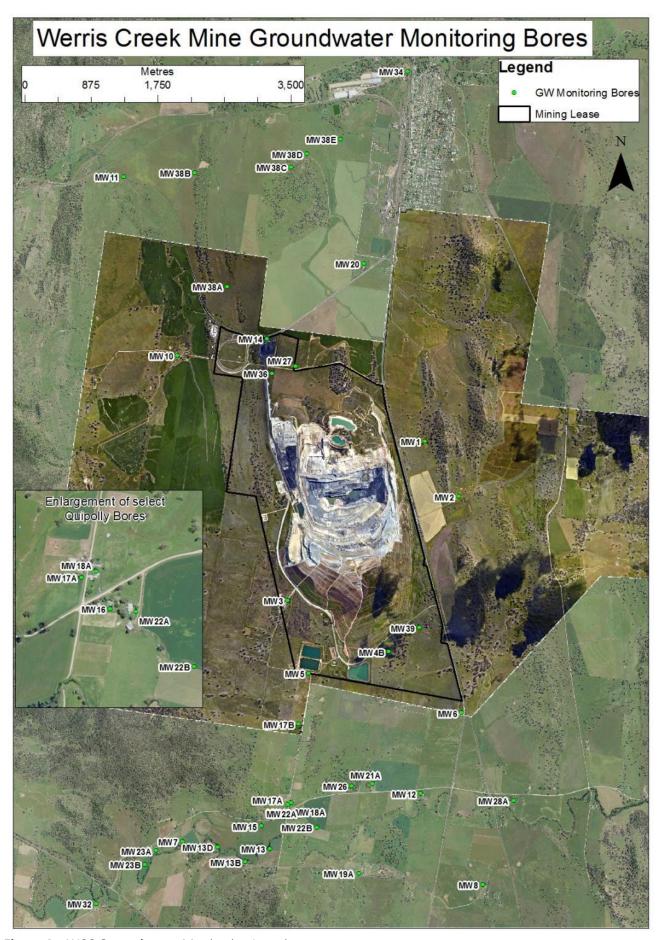


Figure 4 – WCC Groundwater Monitoring Locations

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Figure 5 – WCC Surface Water Monitoring Locations

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WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE

63rd Meeting of the Committee held at the Werris Creek Bowling Club on Wednesday, 8 November 2023 at 9:30AM

Meeting opened at 9:20AM

Record of Attendance

Michael Smith OAM Independent Chairperson Jane Bradford OAM Independent Minute Taker

Murray O'Keefe Whitehaven Coal – Operations Manager

Andrew Raal Werris Creek Coal – Superintendent Close Mines

Daryl Robinson Whitehaven Coal – Environment & Mine Rehabilitation Manager

Olivia Hulbert Whitehaven Coal – Environmental Advisor

Mike Lomax Community Representative Noel Taylor Community Representative James O'Brien Community Representative

Apologies

Jacki Scott Whitehaven Coal – Manager Community Partnerships & Investment Darren Swain Whitehaven Coal – General Manager Community Engagement

Non-Attendance

Nathan Skelly Director of Infrastructure & Environmental Services – Liverpool Plains

Shire Council

Lindsay Bridge Community Representative

Col Stewart OAM The Chair advised that Mr Stewart had resigned from the Committee. Mr

Silver expressed his appreciation for Col's long involvement with the

Committee and extended best wishes to him in retirement.

2 Acknowledgement of Country

The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and recognised their continuing connection to the land, water and culture, paying respects to their Elders past, present and emerging.

3 Declaration of Pecuniary or Other Interests

The Chair advised that his meeting expenses are borne by the proponent. Other members – Nil

- **4 Minutes of the previous 62nd meeting held on the 12 July 2023** were approved on 22 August 2023.
- 5 Matters Arising Nil
- **Quarterly Environmental Monitoring Report June to September 2023**Andrew Raal went through the Report with the following comments:
- **1.1 Weather Station** Below normal rainfalls to date under half compared to this time last year and high winds normal for the change of season.

- **2.2 Werris Creek Mine deposited dust** "Cintra" averaged "4" which is within the 12-month average.
- **4.0** Blasting Total of 15 blasts all within required levels.
- **5.1.2** Surface Water Flood last year this year dry so decline in levels.
- **5.2.1 Monitoring data results** Dams mostly dry, using atomizers to stay low. Coal in F & G seams only must be kept dry for mining.
- **6.0 Complaints Summary** One received in mid-June action has been taken.

7.0 General Business

- **7.1 Closure of Mine** was to be January / February extended to February / March 2024.
- **7.2 Excavator** has been moved to other operation one cell cleared faster than anticipated slowed down in October hence extended closure date. Staff have been offered positions at the Vickery mine
- **7.3 Liverpool Plains Shire Council** has expressed interest in part of rail line, sheds etc other interested parties including agriculture maybe in 2027 2028 before further action can happen.
- **7.4 Current Mining Legislation** is changing approvals given in 2005 are being updated as the Department of Mining gains more experience and knowledge is being gained from mine closures.
- **7.5 Water levels** unable to forecast if water levels will return to pre-mining levels until some years after mine closure.

Note: James O'Brien thanked the Management team for attending these meetings – it has been appreciated by the Community Committee Members and by the people of Werris Creek and surrounds as the years have passed.

Note: Open Weekend at the end of October proved very successful and Whitehaven very pleased with the response from both locals and visitors with 500 plus people participating in the mine tours as well.

Note: Fire on Whitehaven land – no-one came from Whitehaven to either open the locked gate or cut fence or assist with extinguishing the fire.

Response – Werris Creek Mine not aware of the fire – comes under Whitehaven Biodiversity team who work out of Gunnedah and did not receive either a phone or email message – would always be prepared to assist – once advised of an issue.

The emergency or hot line number is **1800 942 836** - the message is converted to text and sent out to a number of people.

Note: Tree guards did not burn due to the fire moving too fast to catch and burn.

Note: Tree planting progressing well, and dead trees will be replaced!

8 Next Meeting Date and Time

Wednesday, 14 February 2024 at 9:30AM

Venue: Board Room at the Werris Creek Mine. A mine visit will be undertaken prior to the meeting.

9 Meeting closed at 11:00AM

Meeting Minutes Approved:

Michael J Silver OAM Independent Chairperson

Date: 4 December 2023



WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

June - September 2023

This Environmental Monitoring Report covers the period 1st June to 30th September 2023 for the Werris Creek Coal Mine Community Consultative Committee.

The report includes environmental monitoring results from the on-site Weather Station, Air Quality, Noise, Blasting, Surface Water, Groundwater and Discharge Water Quality together with any community complaints received and general details on site environmental matters.

Note: Elevated monitoring results above the relevant monitoring criteria are highlighted in yellow.

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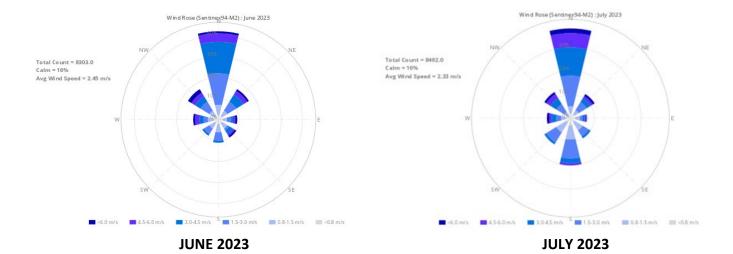
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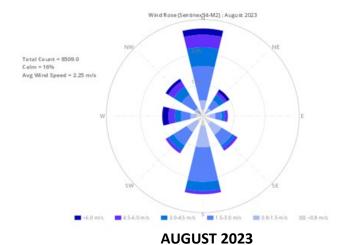
1.0 METEOROLOGY

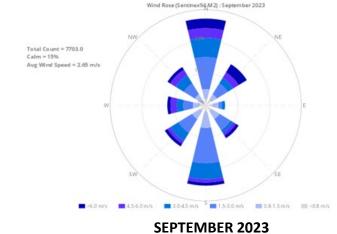
1.1 WEATHER STATION

Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. The monthly rainfall during the reporting period (June – September 2023) was below the historical average. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the north during the reporting period.

Month	Rainfall (mm)							
Worth	Onsite	Historical Average	2023 Total					
June 2023	43.8	61.9	281.8					
July 2023	22.2	42.0	304.0					
August 2023	21.6	38.3	325.6					
September 2023	17.6	48.4	343.2					







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2.0 AIR QUALITY

2.1 HVAS (PM₁₀) and TEOM (PM₁₀ & PM_{2.5})

WCC operates five High Volume Air Samplers (HVAS), four sites measuring particulate matter less than 10 microns (PM $_{10}$) and one site measuring total suspended particulate (TSP) matter. HVAS sampling is scheduled every 6 days for a 24-hour run period in accordance with Environment Protection Authority (EPA) guidelines. Results are reported in micro grams per cubic metre ($\mu g/m^3$) of air sampled. In addition, WCC operates a Tapered Element Oscillating Microbalance (TEOM) monitor in Werris Creek measuring real time PM $_{10}$ and PM $_{2.5}$ (particulate matter less than 2.5 microns) dust levels. Dust monitoring locations are identified in **Figure 1**.

2.1.1 Monitoring Data Results

The average results for the last four months are provided in the table below.

							CRITERIA	(μg/m³)
MONITORING LOCATION	24Hr Maximum (μg/m³)	JUN 2023 (μg/m³)	JUL 2023 (μg/m³)	AUG 2023 (μg/m³)	SEP 2023 (μg/m³)	2023 AVG (μg/m³)	Annual	24hr
PM _{2.5} – TEOM92 "Werris Creek"	12.6	6.2	3.6	3.5	3.2	4.3	-	-
PM ₁₀ – TEOM92 "Werris Creek"	18.4	9.4	7.9	9.5	9.6	9.8	30	50
PM ₁₀ – HVP20 "Tonsley Park"	25.2	12.5	8.1	12.6	15.9	12.6	30	50
PM ₁₀ - HVP1 "Escott"	13.8	4.2	3.2	4.1	8.7	6.5	30	50
PM ₁₀ – HVP11 "Glenara"	28.1	7.7	6.6	13.2	14.2	11.8	30	50
PM ₁₀ – HVP98 "Kyooma"	12.1	3.3	3.2	3.6	8.6	5.7	30	50
TSP – HVT98 "Kyooma"	25.3	7.1	7.0	9.4	18.0	13.4	90	-

Yellow Bold – Elevated dust level.

2.1.2 Discussion - Compliance / Non-Compliance

All TSP, PM₁₀ and PM_{2.5} dust results were within criteria during the period.

2.2 WERRIS CREEK MINE DEPOSITED DUST

Deposited dust monitoring measures particulate matter greater than 30 microns in size that readily settles out of the air related to visual impact. Dust deposition is monitored at 18 locations around WCC. Sampling is scheduled monthly in accordance with EPA guidelines and results are reported as grams per square metre per month (g/m².month). Dust monitoring locations are identified in **Figure 1**.

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2.2.1 Monitoring Data Results

The results for the last four months are provided in the table below.

MONITORING LOCATION	JUN 2023 (g/m²/month)	JUL 2023 (g/m²/month)	AUG 2023 (g/m²/month)	SEP 2023 (g/m2/month)	2023 AVERAGE (g/m2/month)	Annual Criteria (g/m²/month)
DG1 "Escott"	0.5	0.4	0.4	0.5	0.5	4.0
DG2 "Cintra"	11.5*	5.1	7.0	2.3	4.8	4.0
DG3 "Eurunderee"	1.4	1.1	1.0	0.8	1.0	4.0
DG5 "Railway View"	2.0	0.9	1.6	0.7	1.5	4.0
DG9 "Marengo"	1.1	0.2	0.3	0.2	0.5	4.0
DG11 "Glenara"	2.6	0.4	0.4	0.3	0.9	4.0
DG14 "Greenslopes"	1.3	0.5	0.5	0.2	0.7	4.0
DG15 "Plain View"	1.4	0.7	0.7	0.4	0.8	4.0
DG17 "Woodlands"	2.1	5.1*	2.9	2.0	2.0	4.0
DG20 "Tonsley Park"	0.1	0.8	1.5	0.3	1.2	4.0
DG22 "Mountain View"	0.3	0.5	1.4	0.2	0.6	4.0
DG24 "Hazeldene"	0.6	1.2	0.7	0.8	1.2	4.0
DG34 8 Kurrara St	0.5	0.4	0.7	0.3	0.5	4.0
DG62 Werris Creek South	0.2	0.3	0.3	0.3	0.8	4.0
DG92 Werris Creek Centre	0.2	0.3	0.4	0.8	0.6	4.0
DG98 "Kyooma"	0.0	0.2	0.2	0.2	0.4	4.0
DG101 "Westfall"	1.1	0.8	1.1	1.1	1.6	4.0
DG103 West Street	2.4	1.2	0.8	0.5	1.5	4.0

^{* -} sample contaminated with excessive organic matter (>50%) from non-mining source (i.e., bird droppings and insects); # - indicates sample is contaminated from a Non-Werris Creek Coal dust source; Yellow Bold — Elevated dust level; NS - No Sample; Site damage — stand and bottle vandalised

2.2.2 Discussion - Compliance / Non-Compliance

All monthly dust deposition gauge results were below the annual criteria of 4.0 g/m²/month throughout the period with the exception of:

• DG2 (Cintra) exhibited high dust levels in July and August 2023. The dust is consistent with the activities of the nearby mining activity immediately adjacent to the dust gauge – DG2 is located within the Mining Lease Boundary.

2.3 AIR QUALITY COMPLAINTS

There were no dust complaints recorded during the period.

3.0 NOISE

3.1 OPERATIONAL NOISE

Monthly attended noise monitoring is undertaken representative of the following 16 properties from 13 monitoring points below. Attended noise monitoring was undertaken twice for either 60 minutes at privately owned properties or 15 minutes at properties with private agreements; representative of the day period and the evening/night period.

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3.1.1 Monitoring Data Results

The WCC operation's noise level (not ambient noise) results for the last four months are outlined in the tables below. Noise monitoring locations are identified in **Figure 2**.

15th Thursday, June 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night	Criteria dB(A) L _{eq}
	Location	15min	15min	dB(A) L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	Inaudible	40
С	Central Quipolly (R10*, R11*)	Inaudible	40	Inaudible	40
D	"Hazeldene" R24	Inaudible	37	Inaudible	37
E	"Railway Cottage" R12	Inaudible	38	Inaudible	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible	35	Inaudible	35
- 1	Kurrara St, WC R57	Inaudible	35	30	35
J	Coronation Ave, WC	Inaudible	35	Inaudible	35
K	Alco Park (R21*)	Inaudible	40	30	40
L	West St, WC (R103)	Inaudible	35	25	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

25th Tuesday, July 2023

	Location	Day dB(A) L _{eq 15min}	Criteria dB(A) L _{eq}	Evening/Night dB(A) L _{eq 15min}	Criteria dB(A) L _{eq}
Α	"Rosehill" R5	Inaudible	35	24	35
В	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	21	40
С	Central Quipolly (R10*, R11*)	Inaudible	40	25	40
D	"Hazeldene" R24	Inaudible	37	22	37
Е	"Railway Cottage" R12	Inaudible	38	23	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible	35	Inaudible	35
ı	Kurrara St, WC R57	Inaudible	35	Inaudible	35
J	Coronation Ave, WC	Inaudible	35	Inaudible	35
K	Alco Park (R21*)	Inaudible	40	25	40
L	West St, WC (R103)	Inaudible	35	Inaudible	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

28th-29th Monday-Tuesday, August 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night dB(A)	Criteria dB(A) L _{eq}
	Location	15min	15min	L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	26	40
С	Central Quipolly (R10*, R11*)	Inaudible	40	Inaudible	40
D	"Hazeldene" R24	Inaudible	37	Inaudible	37
Е	"Railway Cottage" R12	Inaudible	38	Inaudible#	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
Н	"Kyooma" R98	Inaudible	35	Inaudible#	35
1	Kurrara St, WC R57	Inaudible	35	Inaudible	35
J	Coronation Ave, WC	Inaudible	35	Inaudible	35
K	Alco Park (R21*)	Inaudible	40	23	40
L	West St, WC (R103)	Inaudible	35	Inaudible#	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

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NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

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26th & 27th Tuesday-Wednesday, September 2023

	Location	Day dB(A) L _{eq}	Criteria dB(A) L _{eq}	Evening/Night dB(A)	Criteria dB(A) L _{eq}
	Location	15min	15min	L _{eq 15min}	15min
Α	"Rosehill" R5	Inaudible	35	Inaudible#	35
В	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	Inaudible#	40
С	Central Quipolly (R10*, R11*)	26	40	Inaudible#	40
D	"Hazeldene" R24	26#	37	Inaudible#	37
Е	"Railway Cottage" R12	Inaudible#	38	Inaudible	38
F	"Talavera" R96	32#	38	Inaudible	37
Н	"Kyooma" R98	Inaudible#	35	Inaudible#	35
	Kurrara St, WC R57	Inaudible#	35	Inaudible#	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible#	35
K	Alco Park (R21*)	Inaudible#	40	Inaudible#	40
L	West St, WC (R103)	Inaudible#	35	Inaudible#	35

WC – Werris Creek; * - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

3.1.2 Discussion - Compliance / Non-Compliance

Noise from Werris Creek Coal Mine was inaudible at a high percentage of the monitoring sites during the quarter. Throughout the period, Werris Creek Coal Mine adjusted mining operations and shut down equipment at various times to reduce noise generation potential in response to noise levels measured at the real time noise monitors.

3.2 Noise complaints

There was one noise complaint recorded during the period.

4.0 BLASTING

During the reporting period there was a total of 15 blasts fired by WCC with monitoring of each blast undertaken at "Glenara", "Kyooma", "Werris Creek South" and "Werris Creek Mid". Compliance limits for blasting overpressure is 115dBL (and up to 120dBL for only 5% of blasts) and vibration is 5mm/s (and up to 10mm/s for only 5% of blasts). Blast monitoring locations are identified in **Figure 3**.

4.1 BLAST MONITORING

4.1.1 Monitoring Data Results

The summary tables of blasting results over the last four months are provided below.

ILINI	E 2022	"Glenara" R11		"Kyoon	"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
JOIN	JUNE 2023		dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	
Month	y Average	0.11	98.0	0.86	101.0	0.36	100.4	0.23	100.4	
Monthly	Maximum	0.16	105.6	1.38	109.9	0.63	109.1	0.33	115.5	
Annua	l Average	0.10	99.6	0.81	100.5	0.50	100.8	0.29	99.3	
Cr	iteria	5	115	5	115	5	115	5	115	
% >115dB(L) or 5mm/s	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.35%	
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.23%	

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NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

	v 2022	"Glen	ara" R11	"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
JUL	JULY 2023		dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthl	Monthly Average		95.9	0.83	98.6	0.41	98.5	0.22	98.2
Monthly Maximum		0.14	96.8	0.97	101.2	0.44	100.7	0.25	99.9
Annua	Annual Average		99.0	0.81	100.2	0.49	100.5	0.28	99.2
Cr	iteria	5	115	5	115	5	115	5	115
% >11EdP(I)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.43%
>115dB(L) or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.94%

ALICI	AUGUST 2023		ara" R11	"Kyoon	"Kyooma" R98		Werris Creek South R62		k Mid R92
AUGU			dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly Average		0.07	94.4	0.59	96.8	0.38	96.9	0.17	95.6
Monthly	/ Maximum	0.10	102.5	0.90	100.9	0.57	98.3	0.25	97.2
Annua	l Average	0.10	98.5	0.78	99.8	0.48	100.0	0.26	98.7
Cr	iteria	5	115	5	115	5	115	5	115
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.52%
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.56%

SEPTEMBER 2023		"Glena	ra" R11	"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly	Average	0.07	94.8	0.87	95.6	0.35	95.3	0.26	93.4
Monthly Maximum		0.07	94.8	0.87	95.6	0.35	95.3	0.26	93.4
Annual	Annual Average		98.1	0.79	99.3	0.46	99.5	0.26	98.1
Crit	eria	5	115	5	115	5	115	5	115
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.67%
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%

Yellow – overpressure >115dB(L) or Werris Creek vibration >5.0mm/s.

4.1.2 Discussion - Compliance / Non-Compliance

All blasts over the period complied with maximum licence limits (120dB(L) and 10mm/s) as well as the 95^{th} percentile limits (115dB(L) and 5mm/s). One blast on 5/6/2023 recorded an overpressure of 115.5 dB which is allowed for in the 5% limits.

4.2 BLAST COMPLAINTS

There were no blast complaints during the reporting period regarding vibration.

5.0 WATER

The groundwater monitoring program monitors groundwater levels bi-monthly and groundwater quality six monthly. Surface water monitoring is undertaken quarterly.

5.1 GROUND WATER

Groundwater monitoring is undertaken to identify if there are any impacts on groundwater quality and water levels as a result of the mining operations. WCC monitors approximately 38 groundwater wells/bores and piezometers in the key aquifers surrounding WCC including Werrie Basalt (next to WCC and further afield) and Quipolly Creek Alluvium. Groundwater level surveys were completed between 3-18 July 2023 and 1-21 September 2023. Groundwater monitoring locations are identified in **Figure 4**.

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5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

		July-23		
	Site	mbgl	%	
	MW1	55.31	0%	
Werrie Basalt near WCC	MW2		12%	
\ \	MW3		-1%	
nea	MW4B	12.93	0%	
salt	MW5	8.02	-3%	
Bas	MW6	13.23	1%	
тiе	MW27*	48.26	-2%	
Ner	MW36A	16.95	-5%	
	MW36B	16.94	-5%	
	MW8*	13.17	-9%	
	MW1 5 MW2 3 MW3 1 MW4B 1 MW5 MW6 1 MW27* 4 MW36A 1 MW36B 1 MW10 MW14 1 MW17B* MW19A* Pump MW38A MW38B* MW38C* Pump MW38E* MW41 MW43 MW24A* 1 MW24A* 1 MW13* MW15* NO MW16* MW15* MW15* MW18* MW15* MW1	8.56	-1%	
	MW14	12.90	-6%	
	MW17B*	9.06	-3%	
Werrie Basalt	MW19A*	Pump over bore		
Ba	MW20*			
rrie	MW38A	9.33	-7%	
We	MW38B*	9.02	-3%	
		Pump over bore		
	MW38E*		-2%	
	MW41		-7%	
			-4%	
111			2%	
# ¹			-8%	
			-7%	
	MW13*	4.77	-1%	
		MW2 30.14 MW3 15.06 MW4B 12.93 MW5 8.02 MW6 13.23 MW27* 48.26 MW36A 16.95 MW36B 16.94 MW8* 13.17 MW10 8.56 MW14 12.90 MW17B* 9.06 MW19A* Pump over bore MW38A 9.33 MW38B* 9.02 MW38E* 7.18 MW41 4.89 MW43 4.52 MW24A* 11.95 MW12* 7.36 MW13* 4.77 MW13B* 3.70 MW15* No Access MW16* 4.29 MW17A* 3.30 MW21A* 5.39 MW22A* 4.02 MW23B* 4.02 MW23B* 4.02 MW23B* 4.02 MW23B* 4.02 MW23B*	-1%	
	MW13D*	4.35	2%	
	MW15*	No Access		
	MW16*	4.29	-4%	
드	MW17A*	3.30	-7%	
lly Alluvium	MW18A*	3.09	-25%	
₹	MW21A*	5.39	-11%	
olly	MW22A*	4.02	-2%	
Quipol	MW22B*		-5%	
G	MW23A*	3.76	-3%	
	MW23B*	4.02	-2%	
	MW26B*	4.15	-10%	
	MW28A*	9.40	-16%	
	MW32*	Pump over bore		
	MW40	4.88	-7%	
	MW42	4.45	-4%	
#2	MW34*	9.32	-2%	

		September-23		
	Site	mbgl	%	
Werrie Basalt near WCC	MW1	55.66	-1%	
	MW2	27.51	10%	
<u> </u>		15.13	0%	
nea	MW4B	12.90	0%	
salt	MW5	8.23	-3%	
Bas	MW6	13.19	0%	
тiе	MW27*	49.56	-3%	
Wei	MW36A	17.64	-4%	
	MW36B	17.63	-4%	
	MW8*	13.95	-6%	
	MW10	8.49	1%	
	MW14	13.48	-4%	
_	MW17B*	9.27	-2%	
Werrie Basalt	MW19A*	Pump over bore		
Ba	MW20*	16.42	2%	
rrie	MW38A	9.83	-5%	
We	MW38B*	9.15	-1%	
	MW38C*	Pump over bore		
	MW38E*	7.29	-2%	
	MW41	5.12	-4%	
	MW43	4.64	-3%	
#1	MW24A*	12.20	-2%	
π	MW29*	10.83	2%	
	MW12*	7.82	-6%	
	MW3 15.1 MW4B 12.9 MW5 8.23 MW6 13.1 MW27* 49.5 MW36A 17.6 MW36B 17.6 MW36B 17.6 MW10 8.49 MW10 8.49 MW17B* 9.27 MW19A* Pump ove MW20* 16.4 MW38A 9.83 MW38B* 9.19 MW38C* Pump ove MW38E* 7.29 MW41 5.12 MW43 4.64 MW24A* 12.2 MW29* 10.8 MW12* 7.86 MW13* 4.86 MW13B* 3.74 MW13B* 3.74 MW13D* 4.44 MW15* 4.29 MW15* 4.29 MW16* 4.45 MW17A* 3.56 MW17A* 3.56 MW17A* 3.56 MW18A* 3.46 MW22A* 4.36 MW22B* 4.66 MW22A* 4.36 MW22B* 4.66 MW23B* 4.66 MW24B* 4.66 MW25B* 4.66 MW25B* 4.66 MW25B* 4.66 MW25B* 4.66 MW26B* 4.66 MW26B* 4.66 MW26B* 4.66 MW26B* 4.66 MW26B* 4.66 MW26B* 4.66 MW	4.81	-1%	
		MW10 8.49 MW14 13.48 MW17B* 9.27 MW19A* Pump over bore MW20* 16.42 MW38A 9.83 MW38B* 9.15 MW38C* Pump over bore MW38E* 7.29 MW41 5.12 MW43 4.64 MW29* 10.83 MW12* 7.82 MW13* 4.81 MW13B* 3.74 MW13B* 4.41 MW15* 4.29 MW16* 4.43 MW17A* 3.51 MW18A* 3.42 MW21A* 5.93 MW22B* 4.63 MW23B* 4.36	-1%	
			-1%	
			37%	
			-3%	
m			-6%	
luvi			-10%	
ly Alluvium			-9%	
Quipoll			-7%	
Quij			-8%	
			-8%	
			-8%	
		4.59	-10%	
		10.30	-9%	
		Pump over bore		
		5.13	-5%	
		4.57	-3%	
# ²	M W34*	9.43	-1%	

mbgl – meters below ground level is the distance in meters from top of bore to groundwater surface; Orange – Change decrease; Green – change increase or no change; * - Indicates bore is used for water extraction unrelated to WCC (i.e. stock and domestic or irrigation). #¹ – Werrie Basalt in the Black Soil Gully valley to east of Werris Creek Mine. #² - Werris Creek Alluvium.

5.1.2 Discussion - Compliance / Non-Compliance

Measured groundwater levels in the Werrie Basalt and Quipolly Alluvium aquifer indicate an overall decrease in water levels in July and September 2023.

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5.2 SURFACE WATER

Surface water monitoring is undertaken in local creeks offsite as well as from discharge point dirty water dams to monitor for potential water quality issues. Quarterly surface water monitoring was undertaken 7-8 August 2023. Surface water monitoring locations are identified in **Figure 5**.

5.2.1 Monitoring Data Results

Summary of surface water quality monitoring results has been provided below.

7th & 8th August 2022

Site	рН	EC	TSS	O&G	Change from Previous Quarter or General Comments	
ONSITE						
SB2	Dry	Dry	Dry	Dry	Remained dry	
SB9	Dry	Dry	Dry	Dry	Remained dry	
SB10	Dry	Dry	Dry	Dry	Low water previously, now dry	
SB18	Dry	Dry	Dry	Dry	Remained dry	
OFFSITE						
QCU	7.64	534	<5	<5	Remained flowing	
QCD	8.02	793	<5	<5	Remained flowing	
WCU	8.41	1120	<5	<5	Remained flowing	
WCD	8.35	1360	17	<5	Remained flowing	

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; TSS – Total Suspended Solids is a measure of suspended sediment in water (i.e. similar to turbidity); O&G – Oil and Grease measures amount of hydrocarbons (oils and fuels) in water. NA – No Access

5.2.2 Discussion - Compliance / Non-Compliance

Quarterly surface water monitoring was undertaken 7-8 August 2023. All water quality results were within long-term averages and the Site Water Management Plan trigger values.

5.3 SURFACE WATER DISCHARGES

5.3.1 Monitoring Data Results

There were six irrigation events that occurred during the reporting period (June and September 2023). Discharge amounts and water quality results are summarised in the table below.

Site	EPA ID	DISCHARGE (ML)	DATE SAMPLED	рН	EC	O&G
VWD3	34	5.25	9/08/2023	7.84	1692	<5
VWD3	34	7.40	17/08/2023	7.59	1678	<5
VWD3	34	5.84	25/08/2023	8.21	1679	<5
VWD3	34	8.13	4/09/2023	8.2	1842	<5
VWD3	34	13.37	14/09/2023	8.08	1821	<5
VWD4	35	7.81	27/09/2023	7.91	1780	<5

5.3.2 Discussion - Compliance / Non-Compliance

No surface water discharge events, other than irrigation, occurred during the reporting period.

5.4 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

There was one complaint received during the reporting period which is summarised below.

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#	Date	Issue	Complaint	Investigation	Action Taken
645	22/6/23	Noise	Complainant advised that grinding/vibration noise has been disturbing their sleep for the past few nights.	ES confirmed that mining operations are being undertaken at deeper levels of the pit and cannot be moved deeper or further away. The night shift supervisor conducted an in-person assessment close to the complainant's location during the night of 22 June.	ES called the complainant and also made contact via email to confirm that the night shift mining supervisor would watch noise levels closely via the real time monitoring system and also via in-person assessments in town.

7.0 GENERAL

Please feel free to ask any questions in relation to the information contained within this document during Item 7 of the meeting agenda.

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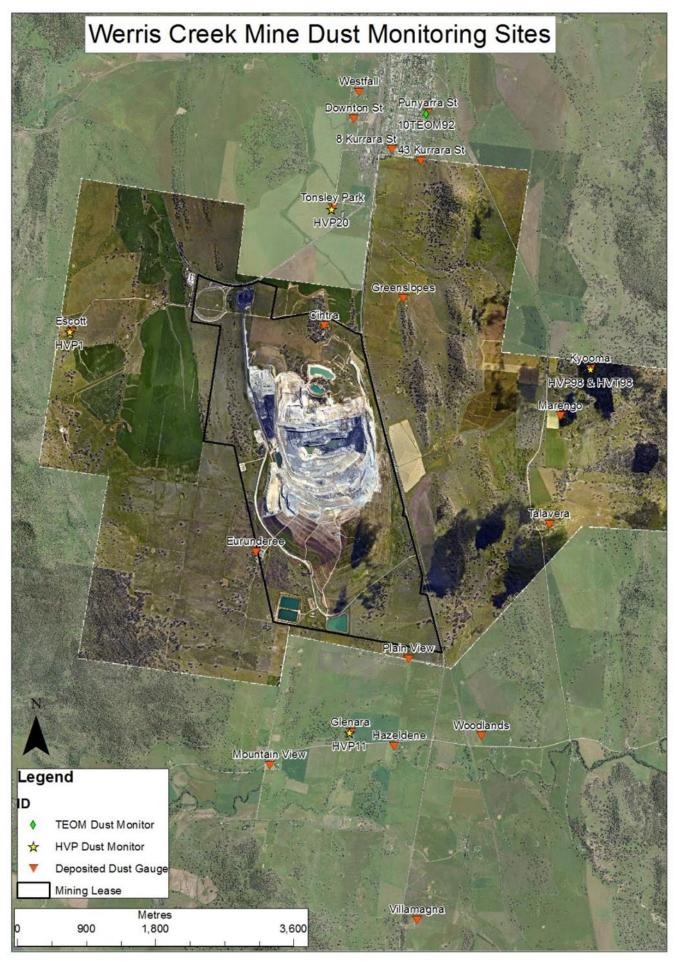


Figure 1 – WCC Dust Monitoring Locations

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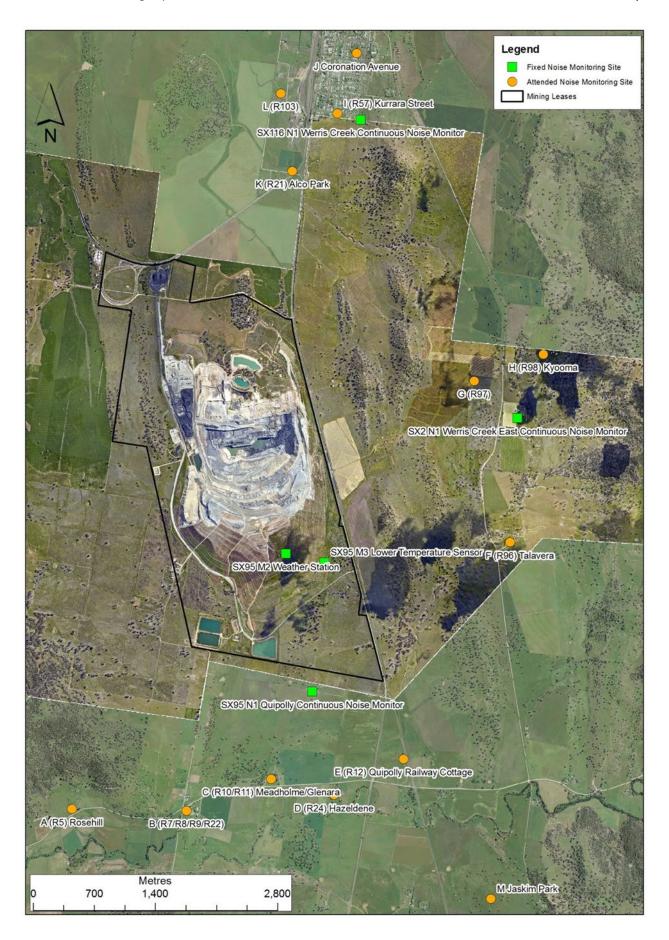


Figure 2– WCC Noise Monitoring Locations

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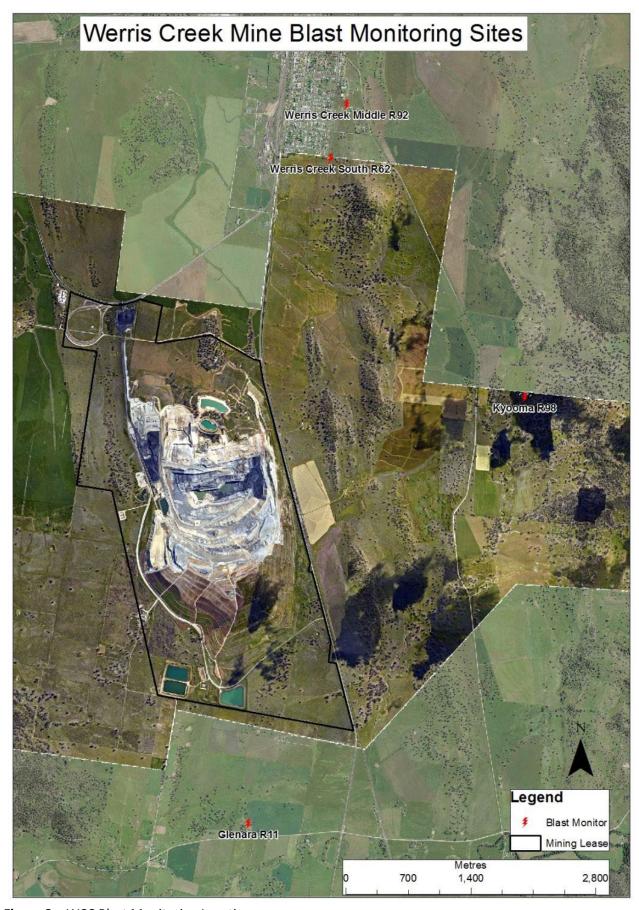


Figure 3 – WCC Blast Monitoring Locations

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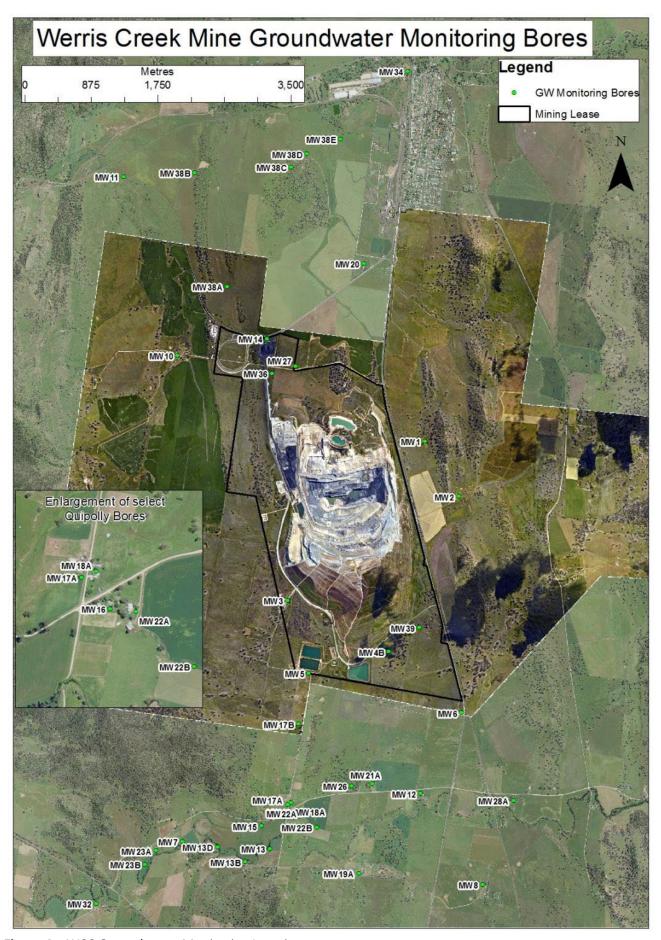


Figure 4 – WCC Groundwater Monitoring Locations

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Figure 5 – WCC Surface Water Monitoring Locations

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