

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.
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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

6 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!

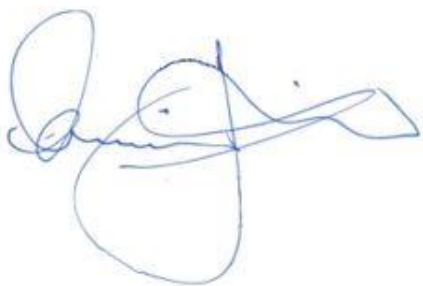
8 Next Meeting Date and Time

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:

A handwritten signature in blue ink, appearing to read 'Michael J Silver', with a large, stylized loop at the end.

**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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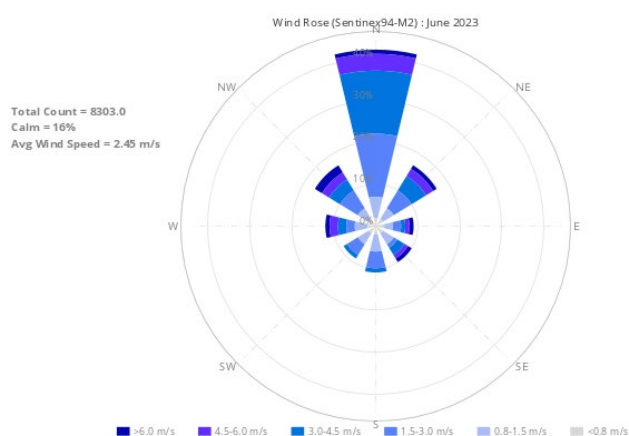
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1.0 METEOROLOGY

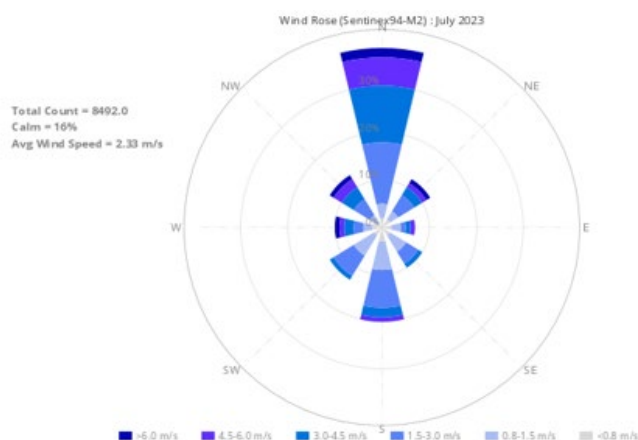
1.1 WEATHER STATION

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.

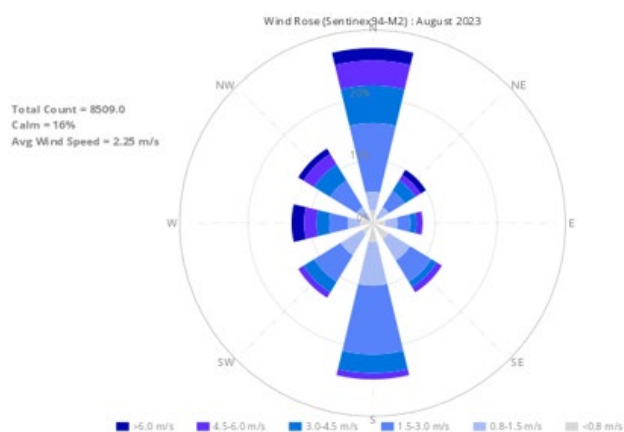
Month	Rainfall (mm)		
	Onsite	Historical Average	2023 Total
June 2023	43.8	61.9	281.8
July 2023	22.2	42.0	304.0
August 2023	21.6	38.3	325.6
September 2023	17.6	48.4	343.2



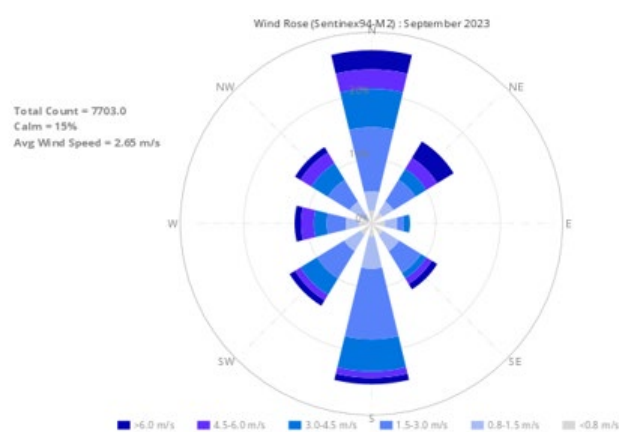
JUNE 2023



JULY 2023



AUGUST 2023



SEPTEMBER 2023

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 (µg/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.

MONITORING LOCATION	24Hr Maximum (µg/m ³)	JUN 2023 (µg/m ³)	JUL 2023 (µg/m ³)	AUG 2023 (µg/m ³)	SEP 2023 (µg/m ³)	2023 AVG (µg/m ³)	CRITERIA (µg/m ³)	
							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**.

2.2.1 Monitoring Data Results

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

MONITORING LOCATION	JUN 2023 (g/m ² /month)	JUL 2023 (g/m ² /month)	AUG 2023 (g/m ² /month)	SEP 2023 (g/m ² /month)	2023 AVERAGE (g/m ² /month)	Annual Criteria (g/m ² /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.

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} 15min	Criteria dB(A) L_{eq} 15min	Evening/Night dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min
A	"Rosehill" R5	Inaudible	35	Inaudible	35
B	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	Inaudible	40
C	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
H	"Kyooma" R98	Inaudible	35	Inaudible	35
I	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) 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

25th Tuesday, July 2023

Location		Day dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min	Evening/Night dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min
A	"Rosehill" R5	Inaudible	35	24	35
B	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	21	40
C	Central Quipolly (R10*, R11*)	Inaudible	40	25	40
D	"Hazeldene" R24	Inaudible	37	22	37
E	"Railway Cottage" R12	Inaudible	38	23	38
F	"Talavera" R96	Inaudible	38	Inaudible	37
H	"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	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) 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

28th-29th Monday-Tuesday, August 2023

Location		Day dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min	Evening/Night dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min
A	"Rosehill" R5	Inaudible	35	Inaudible	35
B	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	26	40
C	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
H	"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	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) 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

26th & 27th Tuesday-Wednesday, September 2023

Location		Day dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min	Evening/Night dB(A) L_{eq} 15min	Criteria dB(A) L_{eq} 15min
A	"Rosehill" R5	Inaudible	35	Inaudible#	35
B	West Quipolly (R7*, R8, R9* & R22*)	Inaudible	40	Inaudible#	40
C	Central Quipolly (R10*, R11*)	26	40	Inaudible#	40
D	"Hazeldene" R24	26#	37	Inaudible#	37
E	"Railway Cottage" R12	Inaudible#	38	Inaudible	38
F	"Talavera" R96	32#	38	Inaudible	37
H	"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	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) 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

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 115dB(L) (and up to 120dB(L) 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.

JUNE 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		0.11	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
Annual Average		0.10	99.6	0.81	100.5	0.50	100.8	0.29	99.3
Criteria		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%

JULY 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		0.11	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
Annual Average		0.10	99.0	0.81	100.2	0.49	100.5	0.28	99.2
Criteria		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%	1.43%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.94%

AUGUST 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		0.07	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
Annual Average		0.10	98.5	0.78	99.8	0.48	100.0	0.26	98.7
Criteria		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%	1.52%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.56%

SEPTEMBER 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		0.07	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 Average		0.10	98.1	0.79	99.3	0.46	99.5	0.26	98.1
Criteria		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%	1.67%
	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 95th 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**.

5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

Site		July-23	
		mbgl	%
Werrie Basalt near WCC	MW1	55.31	0%
	MW2	30.14	12%
	MW3	15.06	-1%
	MW4B	12.93	0%
	MW5	8.02	-3%
	MW6	13.23	1%
	MW27*	48.26	-2%
	MW36A	16.95	-5%
	MW36B	16.94	-5%
Werrie Basalt	MW8*	13.17	-9%
	MW10	8.56	-1%
	MW14	12.90	-6%
	MW17B*	9.06	-3%
	MW19A*	Pump over bore	
	MW20*	Pump over bore	
	MW38A	9.33	-7%
	MW38B*	9.02	-3%
	MW38C*	Pump over bore	
	MW38E*	7.18	-2%
	MW41	4.89	-7%
	MW43	4.52	-4%
# ¹	MW24A*	11.95	2%
	MW29*	11.07	-8%
Quipolly Alluvium	MW12*	7.36	-7%
	MW13*	4.77	-1%
	MW13B*	3.70	-1%
	MW13D*	4.35	2%
	MW15*	No Access	
	MW16*	4.29	-4%
	MW17A*	3.30	-7%
	MW18A*	3.09	-25%
	MW21A*	5.39	-11%
	MW22A*	4.02	-2%
	MW22B*	4.27	-5%
	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%

Site		September-23	
		mbgl	%
Werrie Basalt near WCC	MW1	55.66	-1%
	MW2	27.51	10%
	MW3	15.13	0%
	MW4B	12.90	0%
	MW5	8.23	-3%
	MW6	13.19	0%
	MW27*	49.56	-3%
	MW36A	17.64	-4%
	MW36B	17.63	-4%
Werrie Basalt	MW8*	13.95	-6%
	MW10	8.49	1%
	MW14	13.48	-4%
	MW17B*	9.27	-2%
	MW19A*	Pump over bore	
	MW20*	16.42	2%
	MW38A	9.83	-5%
	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%
	MW29*	10.83	2%
Quipolly Alluvium	MW12*	7.82	-6%
	MW13*	4.81	-1%
	MW13B*	3.74	-1%
	MW13D*	4.41	-1%
	MW15*	4.29	37%
	MW16*	4.43	-3%
	MW17A*	3.51	-6%
	MW18A*	3.42	-10%
	MW21A*	5.93	-9%
	MW22A*	4.32	-7%
	MW22B*	4.63	-8%
	MW23A*	4.10	-8%
	MW23B*	4.36	-8%
	MW26B*	4.59	-10%
	MW28A*	10.30	-9%
	MW32*	Pump over bore	
	MW40	5.13	-5%
	MW42	4.57	-3%
# ²	MW34*	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.

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	pH	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	pH	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.

#	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.

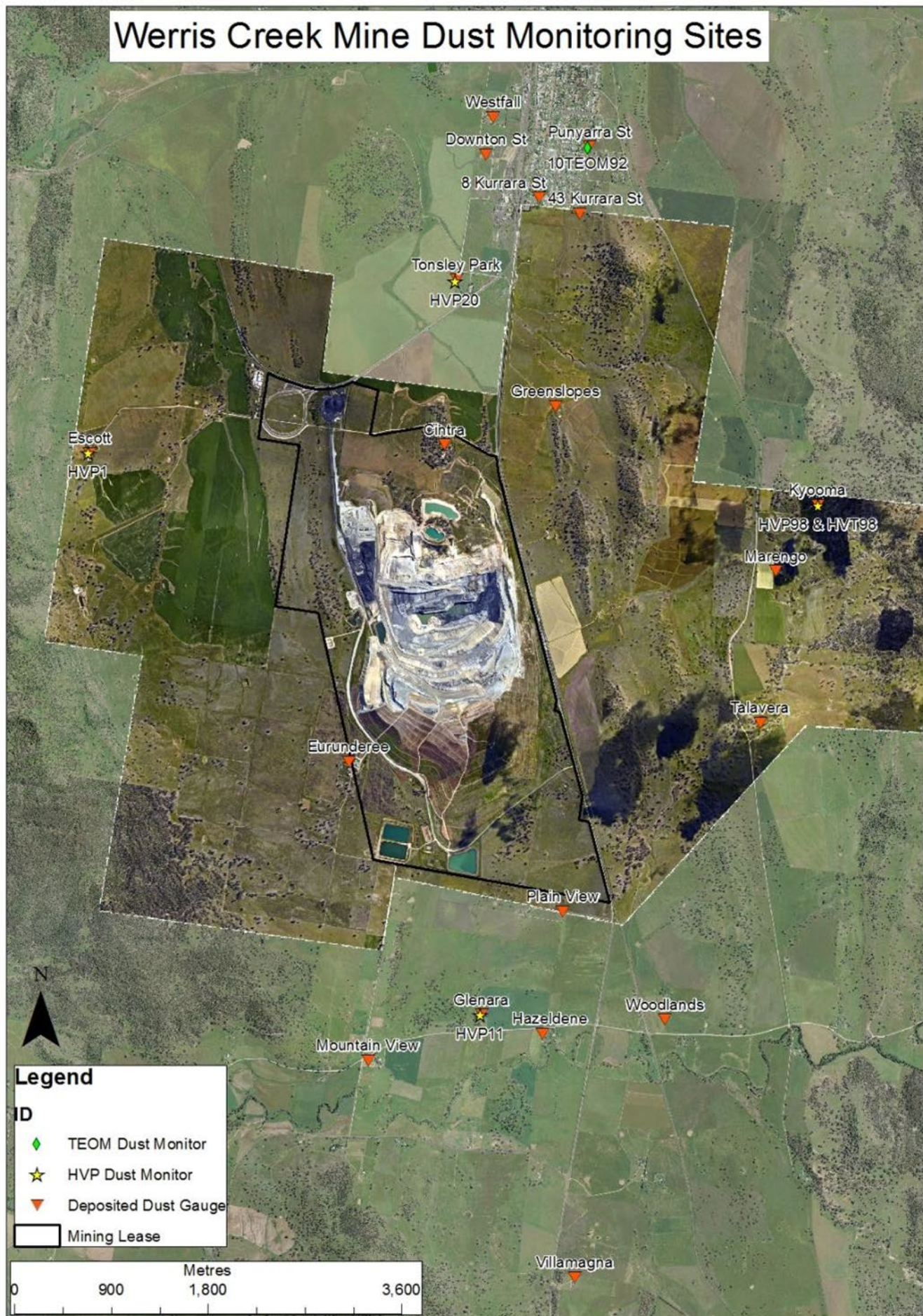


Figure 1 – WCC Dust Monitoring Locations



Figure 2– WCC Noise Monitoring Locations

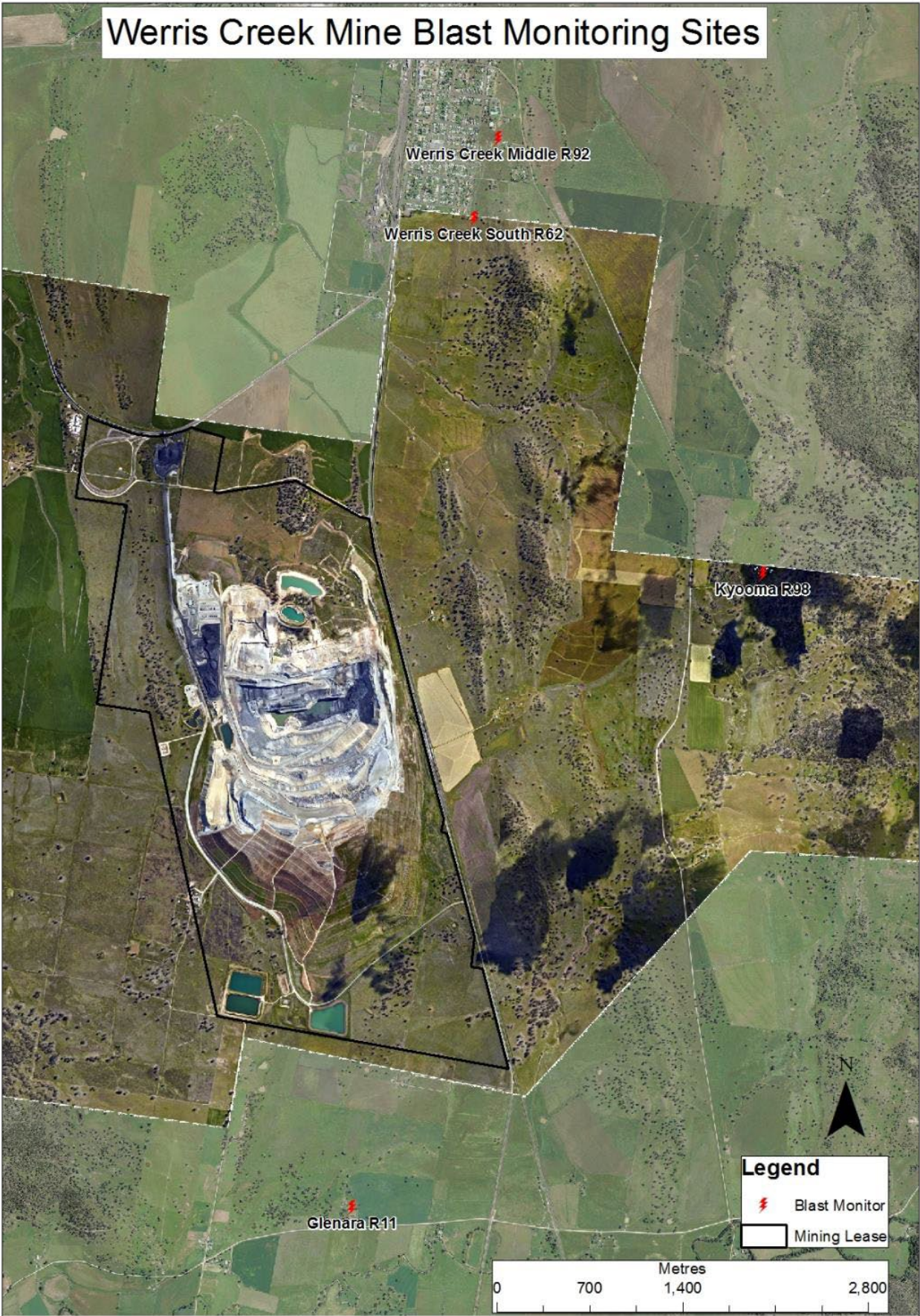


Figure 3 – WCC Blast Monitoring Locations



Figure 4 – WCC Groundwater Monitoring Locations



Figure 5 – WCC Surface Water Monitoring Locations