

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE

64th Meeting of the Committee held at the Werris Creek Mine on Wednesday, 14 February at 9:30AM

Meeting opened at 10.50 AM – after the Tour of the Mine completed.

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

APOLOGIES

Jacki Scott	Whitehaven Coal – Manager Community Partnerships & Investment
Darren Swain	Whitehaven Coal – General Manager Community Engagement
Olivia Hulbert	Whitehaven Coal – Environmental Advisor

Very Late apologies

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

Non-Attendance

Nathan Skelly	Director of Infrastructure & Environmental Services – Liverpool Plains Shire Council
Lindsay Bridge	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 63rd meeting held on the 8 November 2023 were approved and finalised when the Independent Chairperson, Mike Silver signed the Minutes on 4 December last.

5 Matters Arising – Nil

6 Quarterly Environmental Monitoring Report – October to December 2023

Andrew Raal went through the Report with the following comments:

2.1 Air Quality – Smoke and Dust from the Pilliga Bushfire caused slight elevation for a few days. This was reported and accepted by the Department of Planning, Housing and Infrastructure (DPHI) as being due to an extraordinary event and not mine related.

2.2 Werris Creek Mine deposited dust – “Cintra” averaged “4” which is within the 12-month average.

4.0 Blasting – Total of fifteen blasts – all within required levels.

5.1.1 Monitoring Data Results – 2023 Monitoring will be in the Annual Report – this will be published on the Whitehaven Coal web page.

7.0 General Business

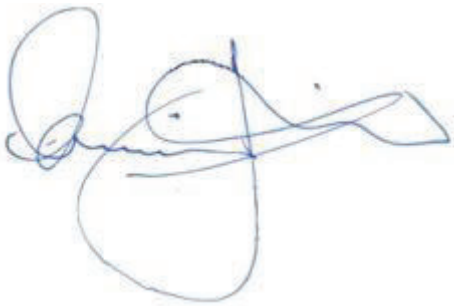
7.1 Closure of Mine extended to April 2024 with completion by 30 June 2024.

7.2 Reminder that the emergency or hot line number is **1800 942 836** - the message is converted to text and sent out to the relevant people.

8 Next Meeting Date and Time - after discussion to meet twice a year – July and February. Wednesday, 10 July 2024 at 9:30AM at the Werris Creek Coal Mine board room.

9 Meeting closed at 11:00AM

Meeting Minutes Approved:

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

Michael J Silver OAM
Independent Chairperson

Date: 26 March 2024



WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

October - December 2023

This Environmental Monitoring Report covers the period 1st October to 31st December 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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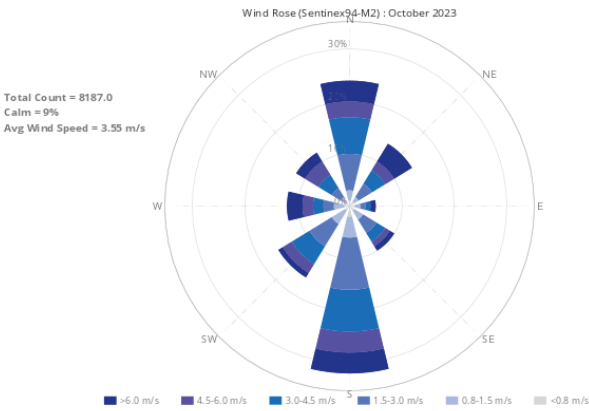
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1.0 METEOROLOGY

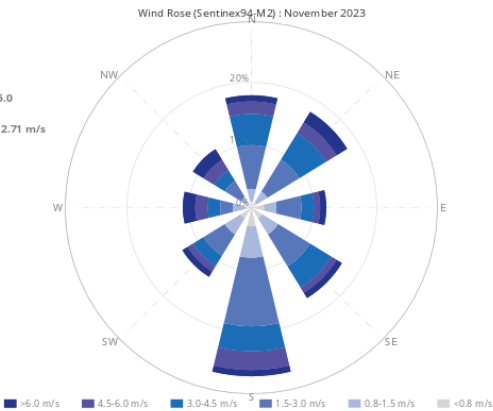
1.1 WEATHER STATION

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 three months. The monthly rainfall during the reporting period was below the historical average for October 2023 but above November-December 2023. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction during the reporting period was predominantly from the south during October-November 2023 and from the north in December 2023.

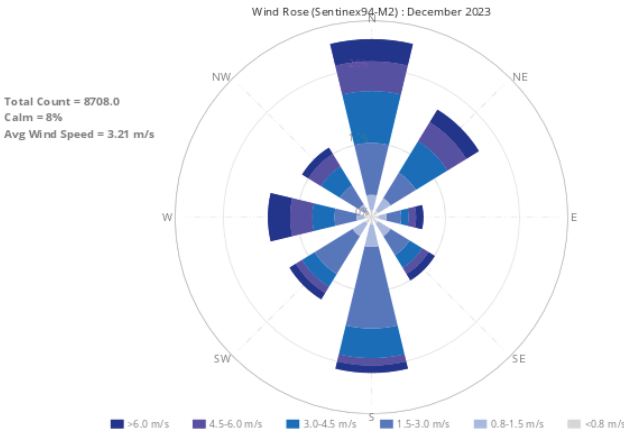
Month	Rainfall (mm)		
	Onsite	Historical Average	2023 Total
October 2023	37.8	64.3	381.0
November 2023	91.2	90.1	472.2
December 2023	108.0	84.6	580.2



OCTOBER 2023



NOVEMBER 2023



DECEMBER 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 three months are provided in the table below.

MONITORING LOCATION	24Hr Maximum (µg/m ³)	OCT 2023 (µg/m ³)	NOV 2023 (µg/m ³)	DEC 2023 (µg/m ³)	2023 AVG (µg/m ³)	CRITERIA (µg/m ³)	
						Annual	24hr
PM _{2.5} – TEOM92 “Werris Creek”	44.1	4.1	4.0	8.2	4.6	-	-
PM ₁₀ – TEOM92 “Werris Creek”	52.7	12.8	8.6	14.9	10.4	30	50
PM ₁₀ – HVP20 “Tonsley Park”	56.6	18.7	13.0	21.1	14.0	30	50
PM ₁₀ – HVP1 “Escott”	43.2	9.7	7.1	15.0	7.7	30	50
PM ₁₀ – HVP11 “Glenara”	52.1	12.2	12.0	18.9	12.6	30	50
PM ₁₀ – HVP98 “Kyooma”	34.5	11.7	8.0	14.7	7.2	30	50
TSP – HVT98 “Kyooma”	58.8	20.1	16.6	29.7	15.8	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 except for an elevated PM₁₀ 24hr average result of 52.7 ug/m³ that occurred on 9 December 2023 which was due to bush fires in the area. Incident was reported to the DPHI (Department of Planning, Housing and Infrastructure) and was accepted as an extraordinary event. Elevated PM₁₀ results were also recorded for the 19/12/2023 HVAS run for sites HVP20 Tonsley Park and HVP98 Glenara result of Pilliga bushfire events. The exceedances were reported to the DPHI and accepted as extraordinary events.

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 three months are provided in the table below.

MONITORING LOCATION	OCT 2023 (g/m ² /month)	NOV 2023 (g/m ² /month)	DEC 2023 (g/m ² /month)	2023 AVERAGE (g/m ² /month)	Annual Criteria (g/m ² /month)
DG1 "Escott"	3.6	1.1	1.0	0.9	4.0
DG2 "Cintra"	1.8	6.5*	3.3	4.3	4.0
DG3 "Eurunderee"	1.3	1.2	0.5	1.0	4.0
DG5 "Railway View"	0.7	1.5	2.1	1.5	4.0
DG9 "Marengo"	0.4	0.5	0.7	0.5	4.0
DG11 "Glenara"	0.9	0.6	0.4	0.8	4.0
DG14 "Greenslopes"	0.5	0.8	0.5	0.7	4.0
DG15 "Plain View"	0.5	0.7	0.4	0.7	4.0
DG17 "Woodlands"	3.1	2.9	2.3	2.2	4.0
DG20 "Tonsley Park"	0.7	1.0	1.2	1.1	4.0
DG22 "Mountain View"	0.8	0.7	0.2	0.6	4.0
DG24 "Hazeldene"	0.9	1.1	0.5	1.1	4.0
DG34 8 Kurrara St	0.4	0.5	0.4	0.5	4.0
DG62 Werris Creek South	0.3	0.4	0.3	0.7	4.0
DG92 Werris Creek Centre	2.1	0.5	0.5	0.7	4.0
DG98 "Kyooma"	0.2	0.4	1.5	0.5	4.0
DG101 "Westfall"	1.1	1.4	1.8	1.6	4.0
DG103 West Street	0.5	2.0	1.1	1.4	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

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.

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 three months are outlined in the tables below. Noise monitoring locations are identified in **Figure 2**.

17th and 18th Tuesday-Wednesday, October 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	24#	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*)	24	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

7th Tuesday, November 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	22#	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible#	35
K	Alco Park (R21*)	Inaudible	40	25#	40
L	West St, WC (R103)	Inaudible	35	23#	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

18th and 19th Monday-Tuesday, December 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	22#	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible#	35
K	Alco Park (R21*)	Inaudible	40	24#	40
L	West St, WC (R103)	Inaudible	35	22#	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 5 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 three months are provided below.

OCTOBER 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		0.04	106.2	0.49	104.0	0.19	99.4	0.10	92.3
Monthly Maximum		0.05	113.5	0.82	112.6	0.31	103.6	0.15	101.8
Annual Average		0.09	98.9	0.76	99.8	0.44	99.5	0.25	97.6
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%	1.82%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.33%

NOVEMBER 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		0.12	96.5	0.88	97.3	0.45	100.8	0.25	71.5
Monthly Maximum		0.12	96.5	0.88	97.3	0.45	100.8	0.25	71.5
Annual Average		0.09	98.7	0.77	99.5	0.44	99.6	0.25	95.6
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%	2.04%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.27%

DECEMBER 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		0.03	94.5	0.47	95.9	0.12	94.0	0.12	91.5
Monthly Maximum		0.03	94.5	0.47	95.9	0.12	94.0	0.12	91.5
Annual Average		0.09	98.3	0.75	99.2	0.41	99.1	0.24	95.3
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%	2.22%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.22%

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 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 27-29 November 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		November-23	
		mbgl	%
Werrie Basalt near WCC	MW1	56.37	-1%
	MW2	28.11	-2%
	MW3	15.25	-1%
	MW4B	12.91	0%
	MW5	8.48	-3%
	MW6	13.33	-1%
	MW27*	50.41	-2%
	MW36A	18.27	-3%
Werrie Basalt	MW36B	18.28	-4%
	MW8*	14.79	-6%
	MW10	8.56	-1%
	MW14	14.06	-4%
	MW17B*	9.95	-7%
	MW19A*	Pump over bore	
	MW20*	16.33	1%
	MW38A	10.50	-6%
	MW38B*	Mud	
	MW38C*	Pump over bore	
	MW38E*	7.66	-5%
	MW41	5.59	-8%
# ¹	MW43	4.91	-5%
	MW24A*	12.46	-2%
Quipolly Alluvium	MW29*	11.05	-2%
	MW12*	8.25	-5%
	MW13*	4.90	-2%
	MW13B*	3.75	0%
	MW13D*	4.48	-2%
	MW15*	4.47	-4%
	MW16*	4.60	-4%
	MW17A*	3.85	-9%
	MW18A*	3.80	-10%
	MW21A*	6.57	-10%
	MW22A*	4.63	-7%
	MW22B*	4.96	-7%
	MW23A*	3.75	9%
	MW23B*	No Access	
	MW26B*	5.07	-9%
	MW28A*	11.32	-9%
	MW32*	Pump over bore	
	MW40	5.57	-8%
	MW42	4.83	-5%
# ²	MW34*	9.84	-4%

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 November 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 9, 14 & 21 November 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.

9th, 14th & 21st November 2023

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	Remained muddy basin
SB18	Dry	Dry	Dry	Dry	Remained dry
OFFSITE					
QCU	7.84	477	20	<5	Flowing previously, now only a trickle
QCD	8.21	851	14	<5	Remained flowing
WCU	8.39	1010	10	<5	Remained flowing
WCD	8.4	1280	36	<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 9th, 14th & 21st November. 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 five irrigation events that occurred during the reporting period (October-December 2023). Discharge amounts and water quality results are summarised in the table below.

Site	EPA ID	DISCHARGE (ML)	DATE SAMPLED	pH	EC
VWD4	35	11.08	23/10/2023	7.27	1825
VWD4	35	10.66	30/10/2023	8.3	1839
VWD4	35	5.99	13/12/2023	8.03	1880
VWD4	35	0.79	19/12/2023	7.75	1866
VWD4	35	10.96	29/12/2023	8.27	1886

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 were not complaints received during the reporting.

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.

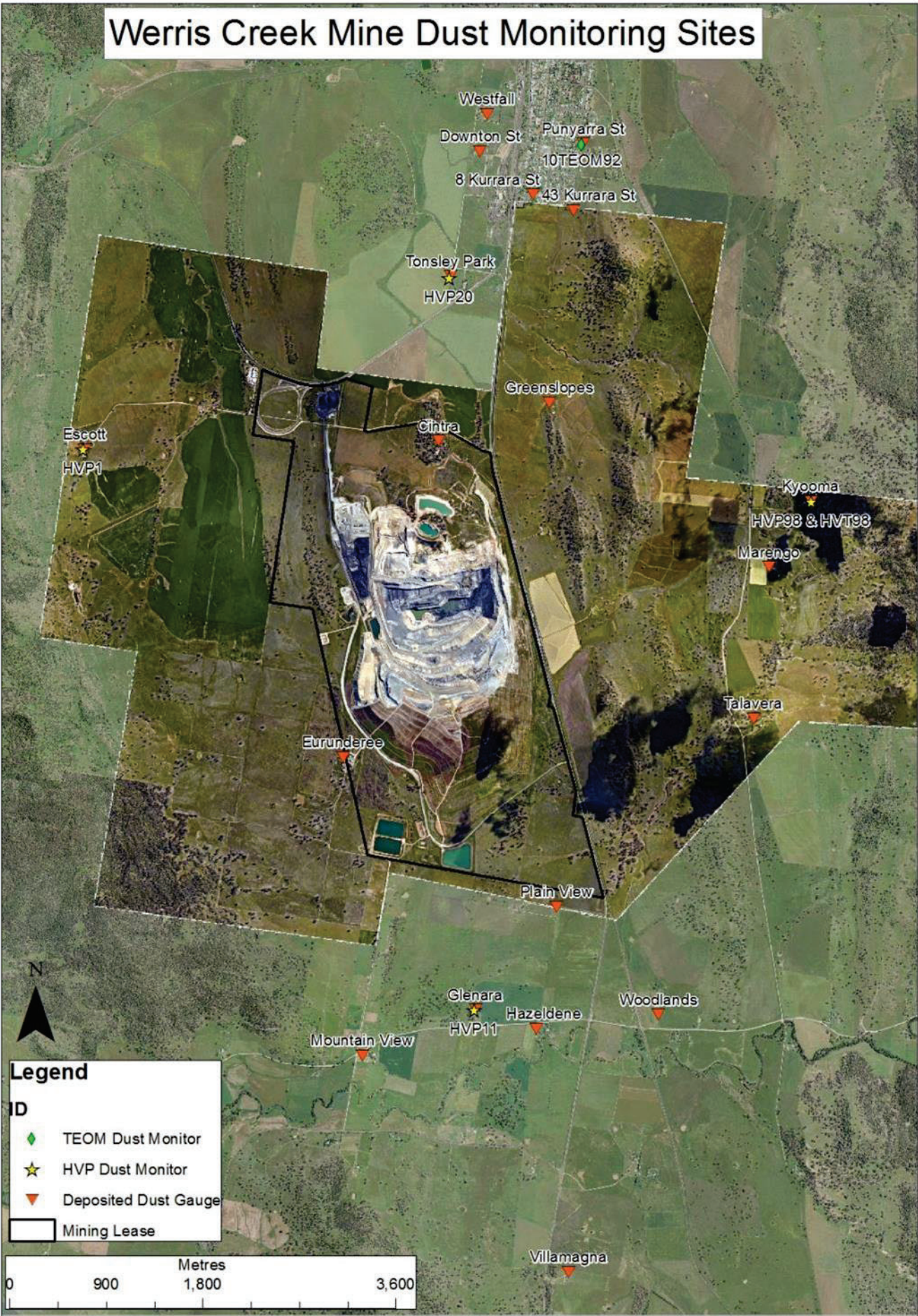


Figure 1 – WCC Dust Monitoring Locations

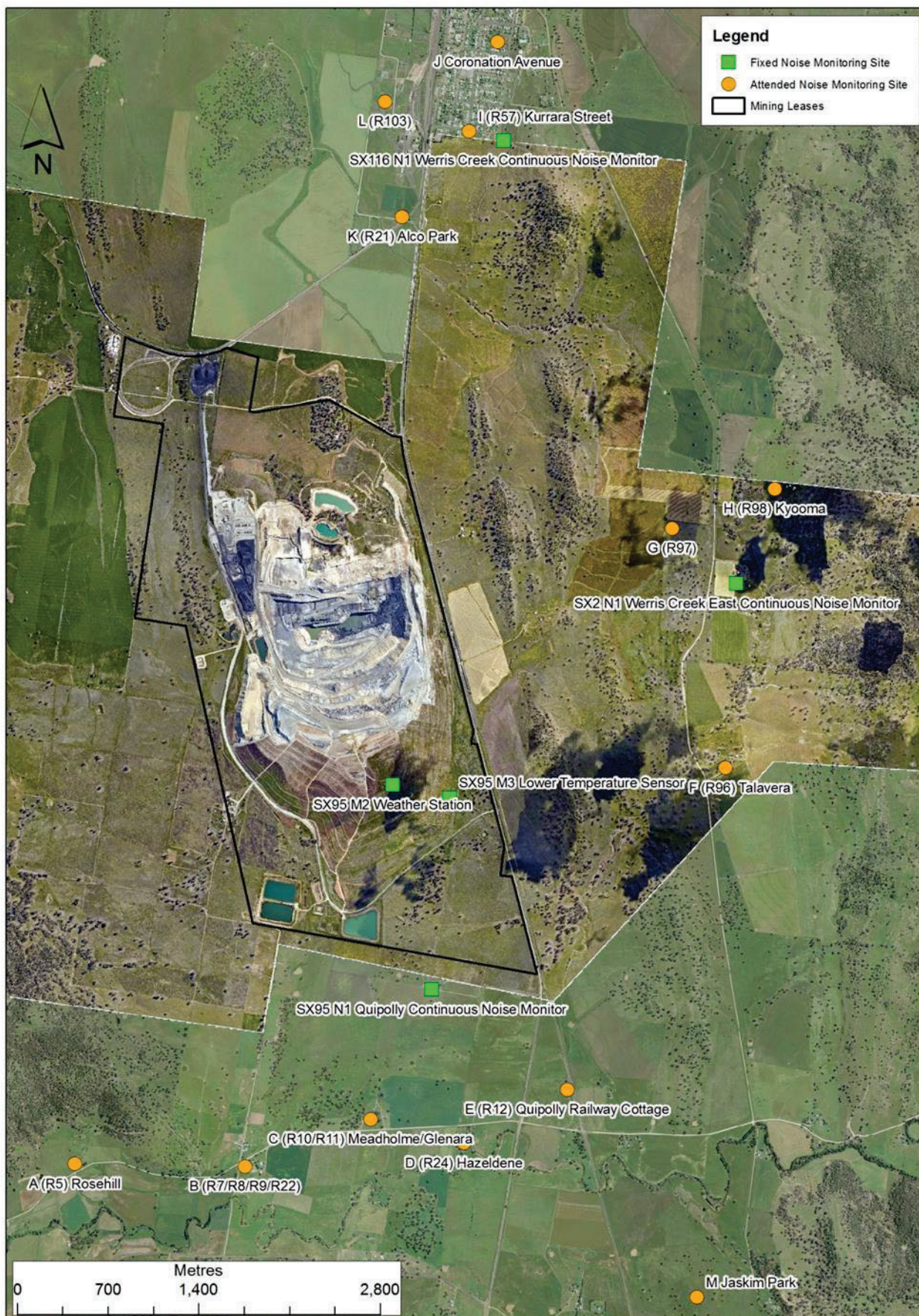


Figure 2– WCC Noise Monitoring Locations

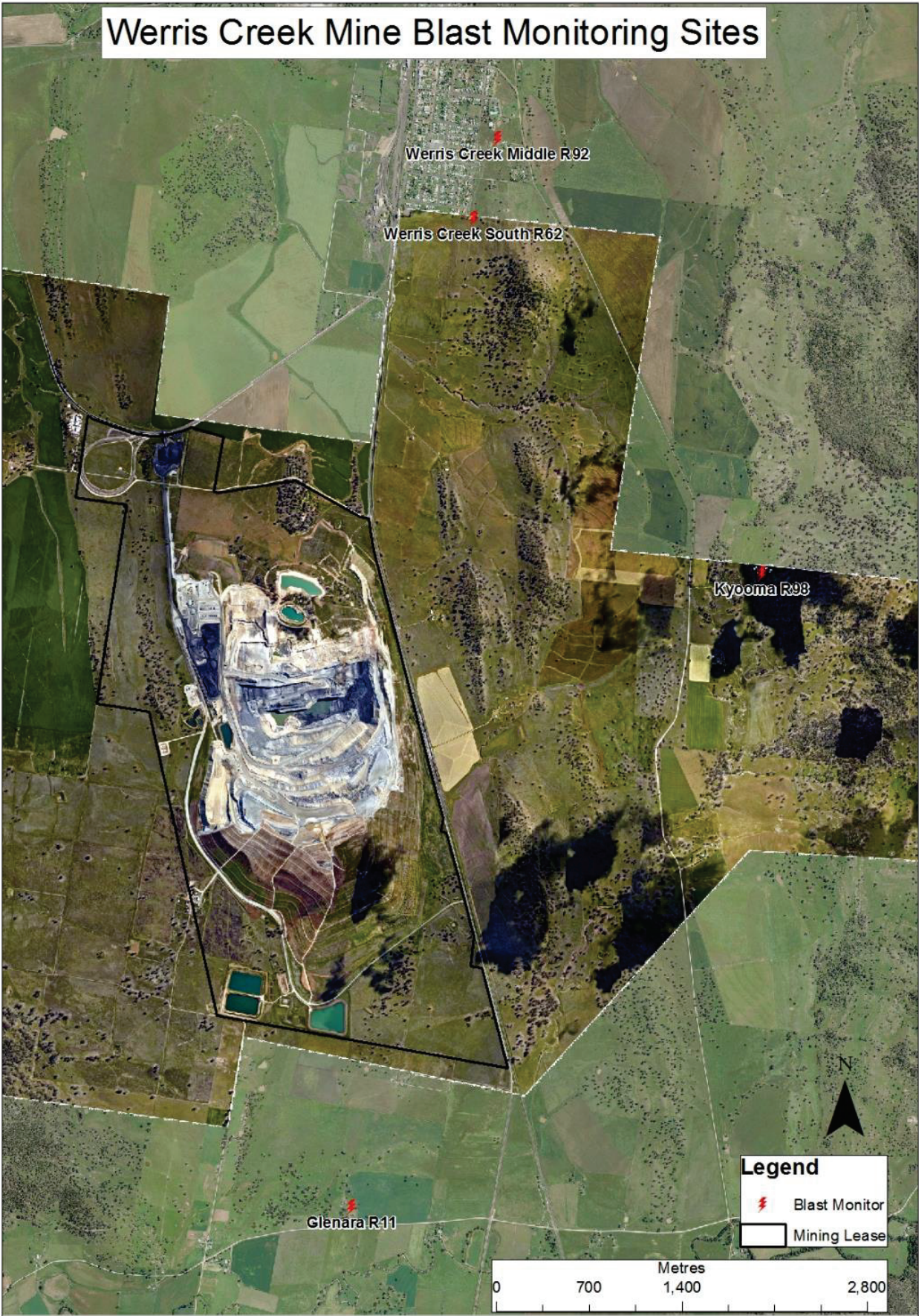


Figure 3 – WCC Blast Monitoring Locations



Figure 4 – WCC Groundwater Monitoring Locations



Figure 5 – WCC Surface Water Monitoring Locations

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE

65th Meeting of the Committee held at the Werris Creek Mine on Wednesday, 10th of July at 9:30AM

Meeting opened at 09.37 AM

Record of Attendance

Michael Silver OAM	(MS) Independent Chairperson
Cr Ken Cudmore	(KC) Liverpool Plains Shire Council
Noel Taylor	(NT) Community Representative
James O'Brien	(JOB) Community Representative
Murray O'Keefe	(MOK) Whitehaven Coal – Operations Manager
Andrew Raal	(AR) Werris Creek Coal – Superintendent Close Mines
Daryl Robinson	(DR) Whitehaven Coal – Environment & Mine Rehabilitation Manager
Olivia Hulbert	(OH) Whitehaven Coal – Environmental Advisor
Larissa Golby	(LG) Whitehaven Coal – Environmental Advisor – Graduate

APOLOGIES

Mike Lomax	(ML) Community Representative
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Non-Attendance

Nathan Skelly	Director of Infrastructure & Environmental Services – Liverpool Plains Shire Council
Lindsay Bridge	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 64th meeting held on the 14th of February 2024 were approved and finalised when the Independent Chairperson signed the minutes on 26 March 2024.

5 Matters Arising – Nil

6 Quarterly Environmental Monitoring Report – Jan to May 2024

Andrew Raal went through the Report with the following comments:

6.1 Air Quality – Daily monitoring ongoing.

6.2 Werris Creek Mine deposited dust – low levels reported.

6.3 Noise Monitoring – Attended noise monitoring was completed by external consultants for day/night/evening periods. Reports show that there were no non-compliances.

Further discussion -

MS asked whether the noise monitoring program will continue and AR commented due to the limited activities, night monitoring is set to be scaled back with approval from the EPA. DR commented that all monitoring programs across the site will be assessed by WHC in consultation with the EPA regarding their relevance as site is in closure. Should there be approval for any modifications, they will be communicated to the committee.

6.4 Groundwater monitoring – a slight decrease was seen over December 2023 due to the lack of rainfall.

Further discussion –

NT commented that he has seen a drop in his groundwater level since March. He stated that water is the biggest issue. AR responded that this related to the minor seasonal drops that have been experienced across the board. The dry December period and the shallow water table can be impacted, the recharge increases the level, and this is due to rainfall, the increase in levels can be seen quite quickly across all bores.

NT questioned whether the groundwater would return post-mining, doubting groundwater levels will recover. AR advised that all studies are indicative but suggested there is no linkage between the mining and groundwater levels. He advised that the void level will rise as WHC is no longer pumping and it is set to rise above the groundwater level.

NT commented that pre-mining, over 60 years ago, farmers pumped from farm bores but now they are all dry. JOB mentioned that in 5 to 10 years we will see what levels will do. however, there will need be a correlation of the levels of the void and any rise in bore levels.

MOK advised that prior to mining all water models were completed and monitoring stations were established, Since the commencement of mining in 2005 there has been an increase in monitoring, and with this data and the operational data the waters model has been updated; the water levels or the influence on water levels are not related to external sources. He indicated that there is no disagreement between WCC and the regulating bodies on this matter. MOK added that there is no evidence of a linkage between increases in water at the mine and impacts externally. He further advised that monitoring will not cease now that WC is in closure.

NT stated that until mining commenced, we all had plenty of groundwater – the mine is responsible for losing our water.

DR commented that if the groundwater flow is influenced, this is not demonstrated in any indications. The monitoring network, both internal and external are set by the government, the data is showing a clear disconnect between the mine and the external impacts.

MOK stated that there is no water ingress into the mine other than by rain - water levels are stagnant and are only influenced by pumping and rainfall. The pit has no bearing on water levels external of the mine.

NT noted that at times WCC was pumping however there had been no rain in the area and questioned where the water was coming from. MOK responded that the water was coming from what was contained in the void; DR commented that the water from the void was being cycled, pumped from the void to Dam 8, filtering through the spoil and seeing it come back through into the void.

JOB enquired as to the level of the aquitard and when will it over-top? MOK responded that the pit fills to a point – the last 10% will take 600 years to reach overflow, due to the poor permeability underground layer below that limits the flow of groundwater.

KC asked about the height of the final level of the void level. MOK advised that the floor level of the lowest point of the final void is approximately 255m above sea level. The crest of the final

void is around 400m above sea level with the current modelled final water level approximately RL365.

MOK then proceeded to explain the formation of the void and the mining arrangements post 2020 (last excavation: Strip 23) and the reduced ingress of water into the void – noting that in the last four years mining has occurred ‘up dip’ (post Strip 18).

DR commented that the use/availability of water in the final void will be based on environmental regulations and the best long term economic outcome.

6.5 Surface water monitoring – No non-compliances to note. There was one controlled and one uncontrolled discharge. The uncontrolled discharge was due to a 40mm rainfall event. Water that was discharged had no contact with coal.

Further discussion –

KC questioned whether the water ended up in the creek and whether it was sampled or not, OH clarified that samples were taken at the discharge point and then it is monitored both up and downstream at the monitoring points.

NT asked whether the release happened to the north or the south. OH confirmed that there was one release to the north - WCC do not release water to the south. NT commented that his neighbour had contacted the EPA regarding dirty water that came from the mine. DR advised that he was happy to discuss the matter with NT’s neighbour.

MS asked if WHC were required to report the uncontrolled discharge. OH replied that the water discharge was within the regulatory parameters, therefore was not reported to the EPA.

JOB asked who analyses the water samples. DR answered that testing is undertaken by independent, certified laboratories. Water quality results are published on WHC web page monthly and in annual reports.

KC asked how many megalitres are held in the storage dams, and DR advised 600megalitres.

7.0 Other Agenda Items

7.1 Land use

JOB questioned what WHC’s intentions were regarding future land uses for the mine site - farmland or forest or biodiversity and if it was going to be locked up.

AR noted that biodiversity land is currently locked-up to support the native ecosystem - the mine site has a final approved land use of pasture and woodland. MOK said it will be whatever will achieve the best environmental and economic outcome including divesting to a future owner. JOB asked if the rail loop infrastructure was going to stay and if anyone wanted to use it. DR replied that there has been some interest. JOB asked if it could be sold - DR replied that the current approval requires the rail loops removal however as a valuable item of infrastructure the DPHI may vary this condition.

8.0 General Business

8.1 - Last train

MOK advised that the last train was to depart today. AR commented that due to disruptions to rail services by climate change protesters on the rail lines there have been substantial delays. MOK indicated that there is about 8,000t of coal remaining at the site.

NT asked whether coal was still being sold to the domestic market. MOK advised that retention of coal for local use ended in 2021.

8.2 Weed control

JOB on behalf of Mike Lomax questioned who was responsible for noxious weed control (viz. boxthorn) on adjoining properties leased to others by the mine. DR advised it was the responsibility of the leaseholder to control and manage noxious weeds on the leased land.

8.3 Bushfire contact

NT asked for the hotline number to call in case of a bushfire. He noted that gaining access to property subject to bushfires has been difficult at times.

DR indicated WHC does provide site support. If the 1800 number is used the call notifies everyone, a text message goes to relevant site personnel.

Reminder that the emergency or hot line number is 1800 942 836

8.4 Dust levels

JOB questioned why since the pits closed, the black haze that was visible when it was active, has now gone. Wasn't there enough dust control? DR responded that WCC was operating within its conditions, therefore the dust was managed to the regulatory standards.

8.5 Spon com

JOB asked about the potential for future 'spon com' (Spontaneous combustion) at the site.

AR noted that there has been a previous history with spon com in the old underground workings. Specialist consultant's advice has been sort, there is now considered no further risk of spon com.

8.6 Site infrastructure

NT asked if the buildings around site were going to be removed and if so, would they be placed on the open market

DR commented that if there was a beneficial reuse of the buildings they may remain however, this will require approval of DPHI

8.7 Management changes

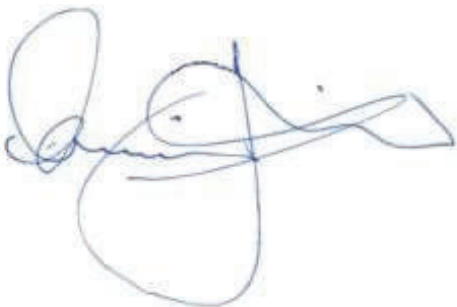
The CCC was advised of recent management changes - Murry O'Keefe is now Master of Engineering Management and Daryl Robinson is the Operations Manager.

9.0 Next Meeting Date and Time - after discussion to meet twice a year – July and February.

February 2025 at 9:30AM at the Werris Creek Coal Mine board room, exact date to be advised.

10.0 Meeting closed at 10:37AM

Meeting Minutes Approved:

A handwritten signature in blue ink, appearing to read 'Michael J Silver', with a large, stylized flourish extending to the right.

Michael J Silver OAM
Independent Chairperson

Date: 29 July 2024



WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

January – May 2024

This Environmental Monitoring Report covers the period 1st January to 31st May 2024 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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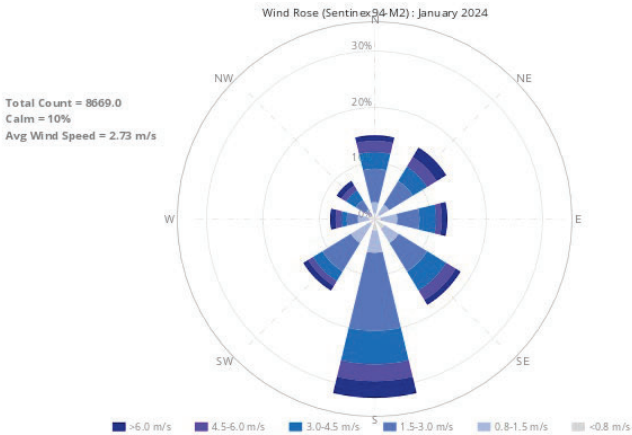
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1.0 METEOROLOGY

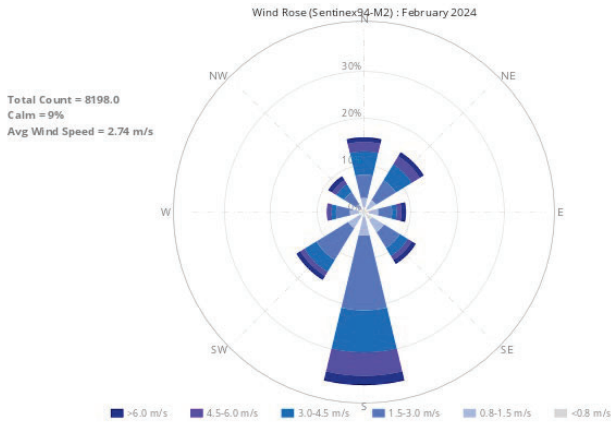
1.1 WEATHER STATION

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 three months. The monthly rainfall during the reporting period was above the historical average for January and April-May 2024 but below in February and March 2024. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction during the reporting period was predominantly from the south during January-April 2024 and from the south-east in May 2024.

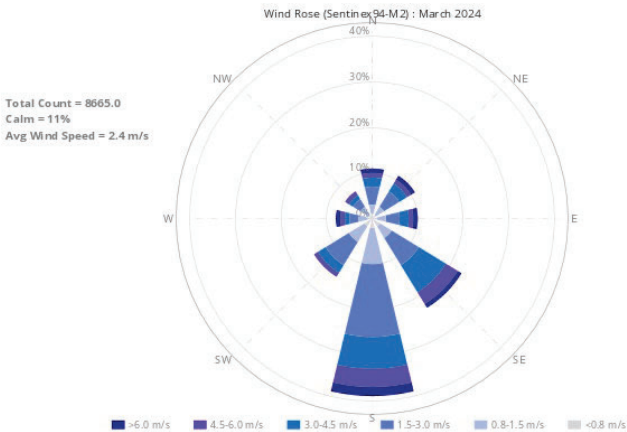
Month	Rainfall (mm)		
	Onsite	Historical Average	2024 Total
January 2024	106.8	67.2	106.8
February 2024	39	66.6	145.8
March 2024	26	64.9	171.8
April 2024	111	31.4	282.8
May 2024	57	35.1	339.8



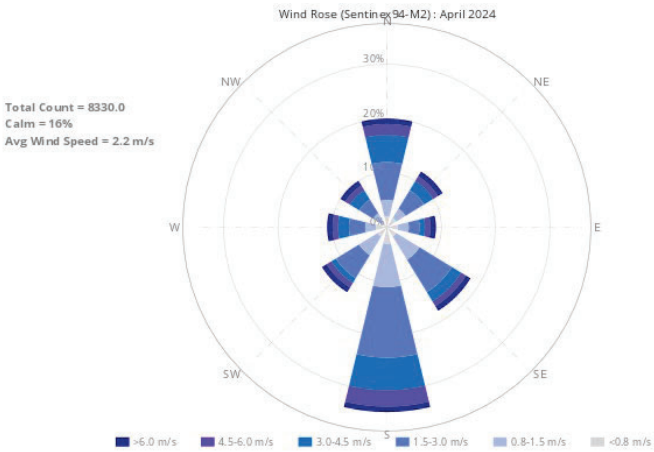
JANUARY 2024



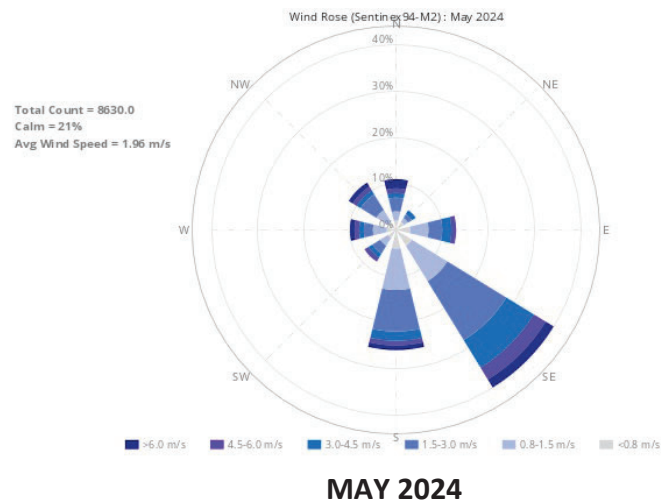
FEBRUARY 2024



MARCH 2024



APRIL 2024



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 five months are provided in the table below.

MONITORING LOCATION	24Hr Maximum (µg/m ³)	JAN 2024 (µg/m ³)	FEB 2024 (µg/m ³)	MAR 2024 (µg/m ³)	APR 2024 (µg/m ³)	MAY 2024 (µg/m ³)	2024 ANNUAL AVG (µg/m ³)	CRITERIA (µg/m ³)	
								Annual	24hr
PM _{2.5} – TEOM92 “Werris Creek”	22.3	5.2	10.9	5.0	4.3	2.9	5.7	-	-
PM ₁₀ – TEOM92 “Werris Creek”	30.1	9.9	15.2	11.4	9.0	8.0	10.7	30	50
PM ₁₀ – HVP20 “Tonsley Park”	22.4	8.6	15.2	11.8	6.9	7.2	9.9	30	50
PM ₁₀ - HVP1 “Escott”	28.1	6.6	12.4	7.7	5.0	7.2	7.8	30	50
PM ₁₀ – HVP11 “Glenara”	33.7	6.2	12.8	17.0	17.0	17.2	14.0	30	50
PM ₁₀ – HVP98 “Kyooma”	12.8	4.3	7.4	6.4	3.3	5.2	5.3	30	50
TSP – HVT98 “Kyooma”	30.4	10.8	18.5	13.2	9.1	9.9	12.3	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 five months are provided in the table below.

MONITORING LOCATION	JAN 2024 (g/m ² /month)	FEB 2024 (g/m ² /month)	MAR 2024 (g/m ² /month)	APR 2024 (g/m ² /month)	MAY 2024 (g/m ² /month)	2024 ANNUAL AVERAGE (g/m ² /month)	Annual Criteria (g/m ² /month)
DG1 "Escott"	0.7	1.2	1.5	0.9	0.2	0.9	4.0
DG2 "Cintra"	3.1	3.9	2.8	3.4*	0.9	2.7	4.0
DG3 "Eurunderee"	1.1	0.7	2.1	0.8	0.8	1.1	4.0
DG5 "Railway View"	1.0	1.4	3.8*	1.1	2.2	1.4	4.0
DG9 "Marengo"	0.8	0.5	0.9	0.3	0.6	0.6	4.0
DG11 "Glenara"	0.7	2.2	1.0	0.7	0.3	1.0	4.0
DG14 "Greenslopes"	1.1	0.8	0.5	0.3	0.1	0.6	4.0
DG15 "Plain View"	0.6	0.5	0.8	0.7	0.2	0.6	4.0
DG17 "Woodlands"	3.6	2.4	1.3	1.3	0.7	1.9	4.0
DG20 "Tonsley Park"	0.7	0.8	1.0	1.0	0.9	0.9	4.0
DG22 "Mountain View"	0.9	0.3	0.5	0.7	0.6	0.6	4.0
DG24 "Hazeldene"	1.2	0.5	1.2	0.7	2.1	1.1	4.0
DG34 8 Kurrara St	1.7	0.2	1.6	0.3	0.2	0.8	4.0
DG62 Werris Creek South	0.4	0.3	0.7	0.3	0.1	0.4	4.0
DG92 Werris Creek Centre	0.2	0.4	0.5	0.3	0.5	0.4	4.0
DG98 "Kyooma"	0.6	0.6	0.5	0.2	0.1	0.4	4.0
DG101 "Westfall"	3.7	1.4	1.2	1.0	0.6	1.6	4.0
DG103 West Street	2.5	1.4	0.8	0.8	2.4	1.6	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

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.

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 three months are outlined in the tables below. Noise monitoring locations are identified in **Figure 2**.

15th and 16th Monday-Tuesday, January 2024

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	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

26th and 27th Monday-Tuesday, February 2024

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	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

20th and 21st Wednesday-Thursday, March 2024

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	24	35
K	Alco Park (R21*)	Inaudible#	40	35	40
L	West St, WC (R103)	Inaudible#	35	27	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

15th and 16th Monday-Tuesday, April 2024

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	21	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	23	38
F	"Talavera" R96	Inaudible	38	30	37
H	"Kyooma" R98	24#	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

8th Wednesday, May 2024

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	Inaudible	35
J	Coronation Ave, WC	Inaudible	35	Inaudible	35
K	Alco Park (R21*)	28	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 4 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 for January and February 2024 are provided below. Last production blast was conducted in February 2024.

JANUARY 2024		“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	95.8	0.87	92.1	0.42	97.5	0.17	65.3
Monthly Maximum		0.13	95.8	0.87	92.1	0.42	97.5	0.17	65.3
Annual Average		0.13	95.8	0.87	92.1	0.42	97.5	0.17	65.3
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%	2.38%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

FEBRUARY 2024		“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		0.05	95.1	0.63	94.9	0.29	98.1	0.15	93.6
Monthly Maximum		0.06	96.9	0.75	95.1	0.32	100.9	0.17	95.2
Annual Average		0.09	95.5	0.75	93.5	0.36	97.8	0.16	79.5
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%	2.50%
	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 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 11-27 March 2024 and 8-31 May 2024. 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		March-24	
		mbgl	%
Werrie Basalt near WCC	MW1	57.48	-2%
	MW2	29.70	-5%
	MW3	15.73	-3%
	MW4B	13.10	-1%
	MW5	9.18	-8%
	MW6	13.62	-2%
	MW27*	50.26	0%
	MW36A	Not found	
	MW36B	18.55	-1%
Werrie Basalt	MW8*	15.83	-7%
	MW10	9.69	-12%
	MW14	14.42	-2%
	MW17B*	10.23	-3%
	MW19A*	8.34	77%
	MW20*	17.93	-9%
	MW38A	10.78	-3%
	MW38B*	9.21	-1%
	MW38C*	Pump over bore	
	MW38E*	7.83	-2%
	MW41	6.24	-10%
	MW43	5.37	-9%
# ¹	MW24A*	12.38	1%
	MW29*	11.40	-3%
Quipolly Alluvium	MW12*	9.23	-11%
	MW13*	5.19	-6%
	MW13B*	3.73	1%
	MW13D*	4.38	2%
	MW15*	No access	
	MW16*	5.23	-12%
	MW17A*	4.24	-9%
	MW18A*	4.13	-8%
	MW21A*	7.45	-12%
	MW22A*	5.28	-12%
	MW22B*	5.23	-5%
	MW23A*	3.77	-1%
	MW23B*	3.89	12%
	MW26B*	5.87	-14%
	MW28A*	12.11	-7%
	MW32*	3.90	16%
	MW40	6.26	-11%
	MW42	5.28	-9%
# ²	MW34*	Tap	

Site		May-24	
		mbgl	%
Werrie Basalt near WCC	MW1	58.02	-1%
	MW2	31.24	-5%
	MW3	15.91	-1%
	MW4B	13.12	0%
	MW5	9.36	-2%
	MW6	13.79	-1%
	MW27*	51.43	-2%
	MW36A	Not found	
	MW36B	18.93	-2%
Werrie Basalt	MW8*	16.29	-3%
	MW10	9.82	-1%
	MW14	14.71	-2%
	MW17B*	10.62	-4%
	MW19A*	8.47	-2%
	MW20*	17.62	2%
	MW38A	10.92	-1%
	MW38B*	9.30	-1%
	MW38C*	Pump over bore	
	MW38E*	7.91	-1%
	MW41	6.47	-4%
	MW43	5.55	-3%
# ¹	MW24A*	12.32	0%
	MW29*	11.53	-1%
Quipolly Alluvium	MW12*	9.51	-3%
	MW13*	5.33	-3%
	MW13B*	3.72	0%
	MW13D*	4.53	-3%
	MW15*	No access	
	MW16*	5.47	-4%
	MW17A*	4.59	-8%
	MW18A*	4.42	-7%
	MW21A*	7.72	-3%
	MW22A*	5.56	-5%
	MW22B*	5.85	-11%
	MW23A*	3.77	0%
	MW23B*	3.96	-2%
	MW26B*	6.30	-7%
	MW28A*	12.43	-3%
	MW32*	3.89	0%
	MW40	6.51	-4%
	MW42	5.35	-1%
# ²	MW34*	Pump over bore	

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 Werrie Creek Mine. #² - Werrie 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 January-May 2024.

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 27 February/1 March 2024 and 14-22 May 2024. 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.

27th February 2024

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	Remained muddy basin
SB18	Dry	Dry	Dry	Dry	Remained dry
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Previously trickle, now muddy puddles
QCD	8.28	869	18	<5	Previously flowing, now slightly flowing
WCU	8.36	1370	<5	<5	Previously flowing, now a slight trickle
WCD	8.52	1260	34	<5	Previously flowing, now a slight trickle

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

14th, 16th & 22nd May 2024

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	Remained muddy basin
SB18	Dry	Dry	Dry	Dry	Remained dry
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Remained dry
QCD	7.84	854	16	<5	Previously a slight flow, now flowing
WCU	8.16	1350	<5	<5	Previously trickle, now flowing
WCD	8.29	1310	16	<5	Previously trickle, now 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 27 February 2024 and 14-22 May 2024. 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 was one uncontrolled and one controlled discharge in January 2024 following above average rainfall during the month.

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

Sample Date	Dam	pH	EC	TSS	O&G	Compliance	Type	5 Day Rain (mm)
04/01/2024	SB9 (EPA12)	6.9	912	6	<5	Yes	Controlled	N/A
04/01/2024	QCD (EPA26)	8.1	874	6	<5	Yes	Controlled	N/A
22/01/2024	SB9 (EPA12)	7.3	829	<5	<5	Yes	Uncontrolled	N/A
Criteria		6.5 - 8.5	N/A	50	10			

There were five irrigation events that occurred during the reporting period (January-May 2024). Discharge amounts and water quality results are summarised in the table below.

Site	EPA ID	DISCHARGE (ML)	DATE SAMPLED	pH	EC
VWD4	35	5.90	15/01/2024	7.52	1688
VWD4	35	0.93	5/02/2024	7.8	1595
VWD4	35	1.43	15/2/2024	8.2	1825
VWD4	35	11.65	14/3/2024	8.01	1971
VWD4	35	6.14	26/03/2024	8.21	1711

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.

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.

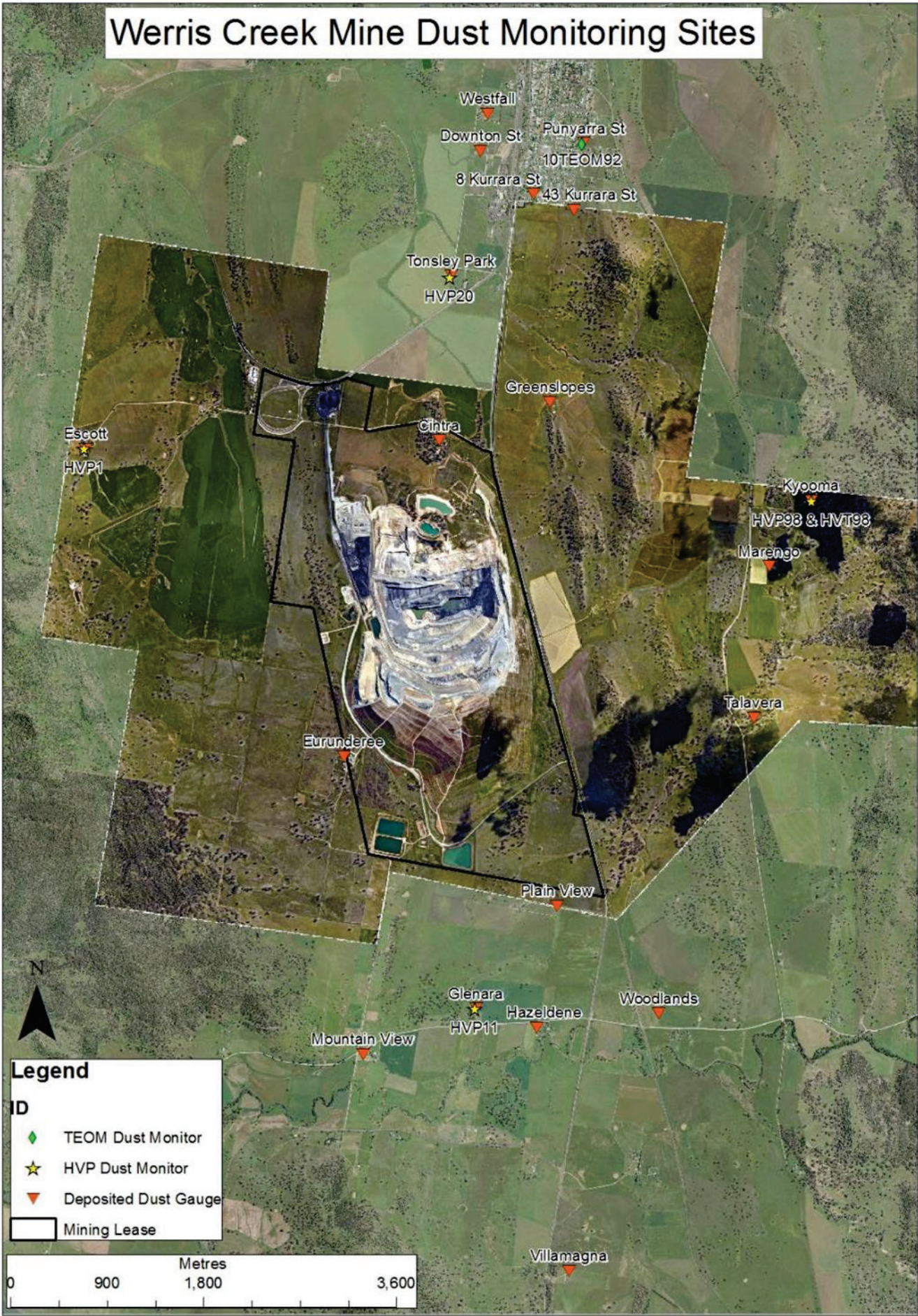


Figure 1 – WCC Dust Monitoring Locations



Figure 2– WCC Noise Monitoring Locations

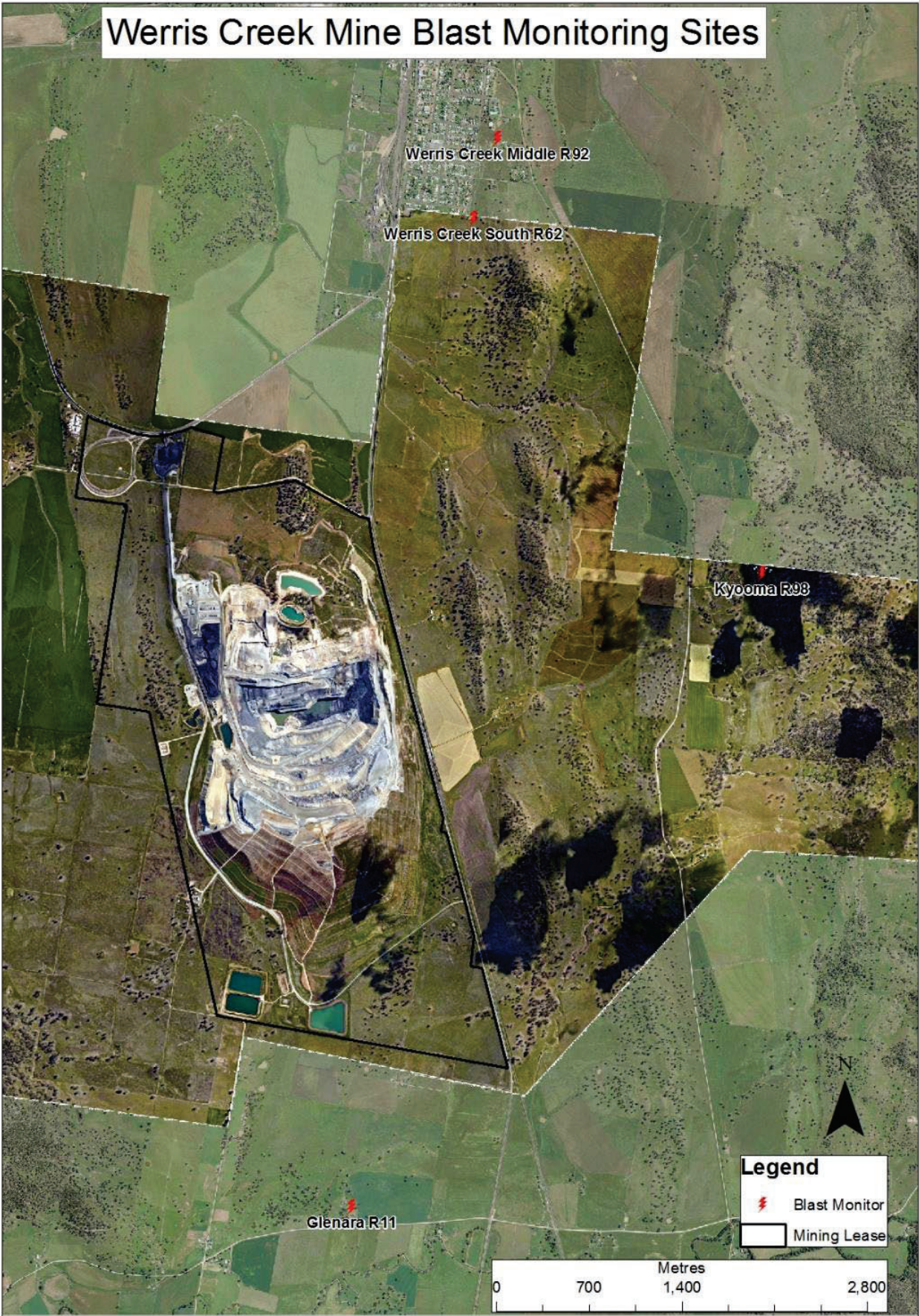


Figure 3 – WCC Blast Monitoring Locations



Figure 4 – WCC Groundwater Monitoring Locations



Figure 5 – WCC Surface Water Monitoring Locations