

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
59th Meeting of the Committee held at the Werris Creek Bowling Club on
Wednesday, 13 July 2022 at 9:30AM

Meeting opened at 9:40AM.

Record of attendance

Michael Silver OAM	Independent Chairperson
Jane Bradford OAM	Independent Minute Taker
Megan Martin	Werris Creek Coal - Environmental Superintendent
Harry Mills	Whitehaven Coal - Environmental Officer
Murray O'Keefe	Whitehaven Coal – Operations Manager
Huw Morgan	Whitehaven Coal – Group Manager Property and Water
Jacki Scott	Whitehaven Coal – Manager Community Partnerships and Investment
Lindsay Bridge	Community Representative
Noel Taylor	Community Representative
Col Stewart OAM	Community Representative

The Chair noted that Councillor Terry Cohen had been appointed by Liverpool Plains Shire as its representative to the Werris Creek Coal CCC. However, Cr Cohen was not in attendance. The Chair indicated he would contact Liverpool Plains Shire Council regarding Councillor Cohen's future attendance.

Apology

Darren Swain Whitehaven Coal – General Manager Community Engagement

Non-Attendance

Mike Lomax	Community Representative
James O'Brien	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 58th meeting held on 9 March 2022 were approved on 3 April 2022

5 Matters Arising

Water Management – Huw Morgan, Group Manager Property and Water provided an overview on water management at the mine to the Committee.

- Mr Morgan advised that the residual rainfall mass trend was decreasing between 2015 and 2019. The drought broke in 2020 and the residual rain mass is now positive. An increase in ground water bore levels has resulted. Alluvial bores have also returned to higher levels.
- Noel Taylor advised that during the drought, particularly during 2018-19, locals had no water, but noted the mine was still pumping watering, despite bore levels dropping. Mr Taylor indicated that two short bores on his property – one at 22 feet deep and the other at 20 feet deep did run dry but have partially recovered, although the levels are only about 50% of what they were before mining started and the period of the drought. He advised that he has just de-commission the two bores and to re-start them will come at a cost. He added that he has been unable to irrigate since 2015 and is still unable to do so.
- In response, Mr Morgan commented that if the mine was impacting the bores, then they would not have recovered to the extent they have. He added that the data from 2020/21 is invaluable. Whitehaven Coal is happy to come and meet Mr Taylor and discuss the results in more detail.

6 Environmental Monitoring Report from 1 February to 31 May 2022

Megan Martin went through the Report with the following comment:

5.2 Seasonal normal – Basically no water complaints over the past quarter – too much rather than too little rain.

7 General Business

- Megan Martin confirmed that community planning was going ahead with the Forward Plan and the new Rehabilitation Management Plan should be available by end of August.
- Harry Mills confirmed that over 15,000 appropriate trees have now been planted plus native grasses. The wallabies have started to return to the top of the mound as have birds and other native animals. The past two and a half years of good seasons has made a remarkable difference to the landscape which is thriving. Now expanding rehabilitation areas as the mine is getting closer to closure. Murray O'Keefe added that the Resource Regulator is less about approval – more about compliance and will be checking the mine more closely as closure approaches in January 2024.

7.1 Life of Mine Up-date

- Murray O'Keefe confirmed that Werris Creek Coal is still aiming for January 2024 as the completion of active mining – no changes at this stage. He added that there are four strips left to mine – Strip 20 is almost completed with Strips 21 and 22 to be completed by June 2023, then challenging work to complete Strip 24 by January 2024. It is expected that last coal to be despatched by train will occur towards the end of March 2024. He advised that staff are already being trained for future roles. Mr O'Keefe indicated that it may be expected there will be more rail traffic throughout 2023.

Community Aspects - Staff

- Whitehaven Coal is keen to transfer as many trained staff as possible to other areas.
- Some staff may leave now or in the near future.
- Some staff wish to stay to the very end and make final decisions closer to that deadline.

7.2 WCC Lodgement of Modification to existing approval (MOD5)

Proceeding as anticipated at this stage

7.4 WHC Sponsorship and Donations Process

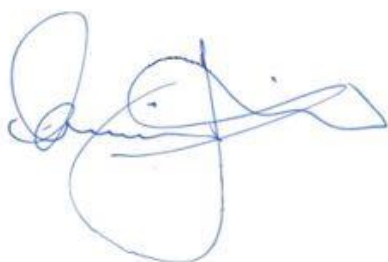
- Jacki Scott confirmed that advertisements would be going into the Quirindi and Gunnedah papers for Round 3 this week seeking applications for sponsorship.
- Noel Taylor questioned why sponsorship was granted to the Murrurundi Pony Club – suggesting this organisation is based in the Hunter Valley? *Response:* Whitehaven Coal employees have family members who are members of this pony club.

Dates for Applications

Application Rounds	Round 1	Round 2	Round 3	Round 4
Applications open	1 January	1 April	1 July	1 October
Applications close	31 January	30 April	31 July	31 October
Successful applicants contacted	1 March	1 June	1 September	1 December

Next meeting Wednesday, 9 November 2022 at 9:30am – Venue - Werris Creek Bowling Club.

Meeting closed at 10:50AM



Michael J Silver OAM
Independent Chairperson

9 August 2022



WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

February – May 2022

This Environmental Monitoring Report covers the period 1st February to 31st May 2022 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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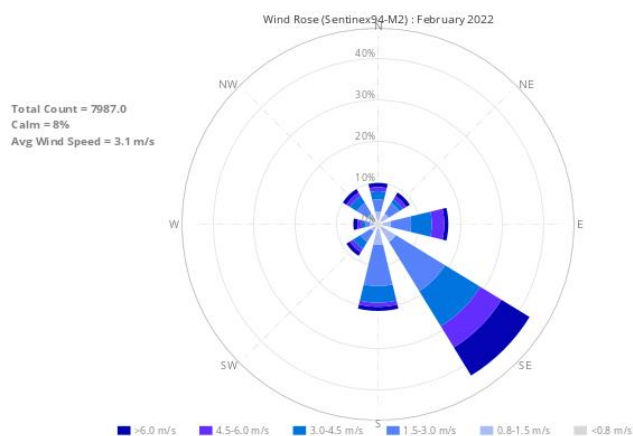
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1.0 METEOROLOGY

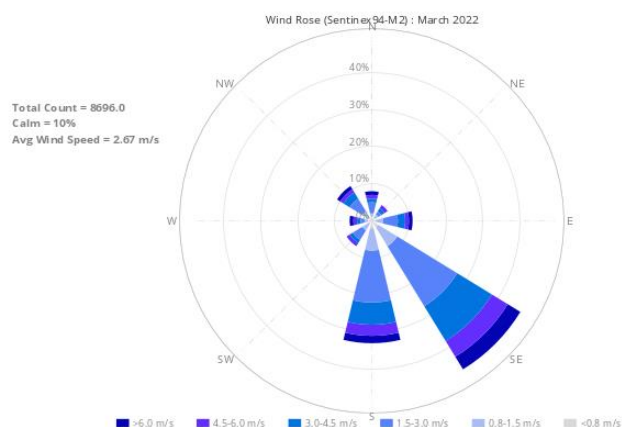
1.1 WEATHER STATION

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 in March & May 2022 was above the historical average and below during February & April 2022. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the south-east in February through May 2022 and from the south to south-east in May 2022.

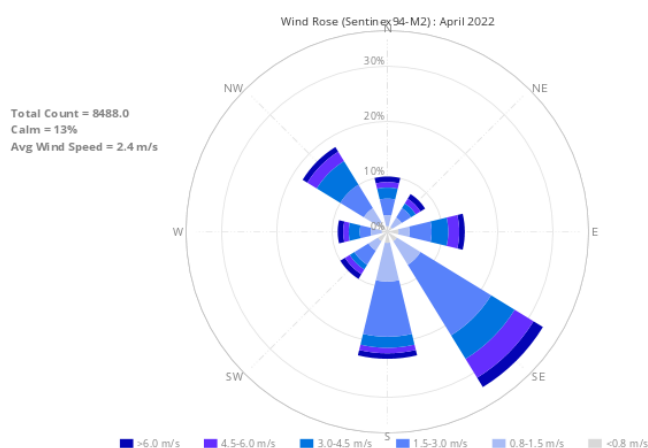
Month	Rainfall (mm)		
	Onsite	Historical Average	2022 Total
February 2022	52.4	69.2	112.8
March 2022	105.8	66.1	218.6
April 2022	21.8	30.9	240.4
May 2022	75.8	37.0	316.2



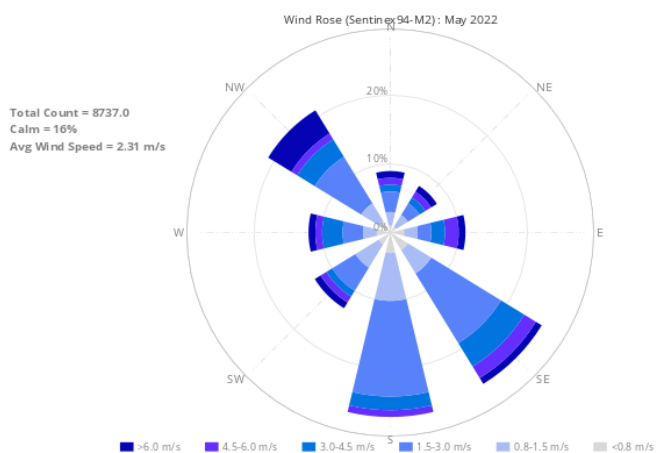
FEBRUARY 2022



MARCH 2022



APRIL 2022



MAY 2022

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)	FEB 2022 (µg/m ³)	MAR 2022 (µg/m ³)	APR 2022 (µg/m ³)	MAY 2022 (µg/m ³)	2022 AVG (µg/m ³)	CRITERIA (µg/m ³)	
							Annual	24hr
PM _{2.5} – TEOM92 “Werris Creek”	10.8	4.9	2.4	2.6	1.1	3.4	-	-
PM ₁₀ – TEOM92 “Werris Creek”	18.6	9.5	7.3	6.8	5.1	7.7	30	50
PM ₁₀ – HVP20 “Tonsley Park”	25.3	6.8	12.5	5.0	7.3	7.7	30	50
PM ₁₀ – HVP1 “Escott”	13.3	4.9	8.0	2.2	3.6	4.8	30	50
PM ₁₀ – HVP11 “Glenara”	30.8	8.1	10.3	11.5	7.7	9.2	30	50
PM ₁₀ – HVP98 “Kyooma”	13.2	4.4	6.9	1.8	3.8	4.3	30	50
TSP – HVT98 “Kyooma”	30.0	11.3	16.5	6.1	10.9	11.1	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	FEB 2022 (g/m ² /month)	MAR 2022 (g/m ² /month)	APR 2022 (g/m ² /month)	MAY 2022 (g/m ² /month)	2022 AVERAGE (g/m ² /month)	Annual Criteria (g/m ² /month)
DG1 "Escott"	1.8	1.1	0.6	1.0	1.2	4.0
DG2 "Cintra"	2.6	5.3	6.1*	3.5	3.8	4.0
DG3 "Eurunderee"	0.8	0.5	0.8	0.9	0.8	4.0
DG5 "Railway View"	2.1	1.2	0.7	1.6	1.6	4.0
DG9 "Marengo"	2.4	0.9	0.5	1.5	1.5	4.0
DG11 "Glenara"	0.6	0.1	0.3	1.0	0.8	4.0
DG14 "Greenslopes"	1.1	0.5	0.2	1.5	0.8	4.0
DG15 "Plain View"	0.7	0.9	5.2	1.3	1.8	4.0
DG17 "Woodlands"	1.3	4.8*	0.9	1.8	1.4	4.0
DG20 "Tonsley Park"	1.1	2.4	1.2	1.4	1.6	4.0
DG22 "Mountain View"	0.8	0.6	0.4	1.4	0.9	4.0
DG24 "Hazeldene"	4.1	0.7	1.6	1.7	2.1	4.0
DG34 8 Kurrara St	1.0	0.4	0.6	1.2	0.7	4.0
DG62 Werris Creek South	1.0	2.1	0.5	0.7	1.0	4.0
DG92 Werris Creek Centre	0.9	0.1	0.2	0.5	0.4	4.0
DG98 "Kyooma"	1.2	0.2	0.1	1.0	1.0	4.0
DG101 "Westfall"	1.4	1.0	0.4	1.6	1.2	4.0
DG103 West Street	2.2	0.4	0.9	2.9	1.8	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 - Not Sampled; 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:

- DG24 (Hazeldene) had an anomalous high result in Feb 2022. The rolling average remained below criteria. Deposited dust levels remained low at all other nearby gauges and average wind rose diagrams show wind blowing in an opposite direction. This evidence indicates a localised source of dust, unrelated to activities at Werris Creek Coal Mine.
- DG15 (Plainview) had an anomalous high result in April 2022. The rolling average remained below criteria. Deposited dust levels remained low at all other nearby gauges and average wind rose diagrams show wind blowing in an opposite direction. This evidence indicates a localised source of dust, unrelated to activities at Werris Creek Coal Mine.
- DG2 (Cintra) had an anomalous high result in March 2022. The rolling average remained below criteria.

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**.

24th Thursday, February 2022

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

24th Thursday, March 2022

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	22	40
C	Central Quipolly (R10*, R11*)	20#	40	23	40
D	"Hazeldene" R24	Inaudible#	37	Inaudible	37
E	"Railway Cottage" R12	Inaudible#	38	Inaudible	38
F	"Talavera" R96	21#	38	Inaudible	37
H	"Kyooma" R98	22#	35	Inaudible	35
I	Kurrara St, WC R57	Inaudible#	35	Inaudible	35
J	Coronation Ave, WC	Inaudible#	35	Inaudible	35
K	Alco Park (R21*)	22#	40	21	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 Thursday, April 2022

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*)	24	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

10th Tuesday, May 2022

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	23	40
L	West St, WC (R103)	Inaudible#	35	21	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 were no noise complaints recorded during the period.

4.0 BLASTING

During the reporting period there was a total of 22 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.

February 2022		"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	103.2	0.89	100.4	0.54	103.7	0.30	98.2
Monthly Maximum		0.14	113.3	1.20	107.9	0.76	109.4	0.41	103.5
Annual Average		0.15	103.1	1.07	100.3	0.58	103.1	0.42	98.0
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling 12- mo Average	0.00%	1.72%	0.00%	0.00%	0.00%	1.72%	0.00%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

March 2022		"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		0.08	94.1	0.68	99.3	0.36	102.3	0.26	96.4
Monthly Maximum		0.17	101.5	1.81	108.0	0.52	106.3	0.44	104.1
Annual Average		0.13	100.1	0.94	100.0	0.51	102.9	0.37	97.5
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling 12-mo Average	0.00%	1.67%	0.00%	0.00%	0.00%	1.67%	0.00%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

April 2022		"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		0.14	102.3	0.63	100.8	0.45	98.8	0.22	96.2
Monthly Maximum		0.18	103.7	0.70	103.0	0.60	102.4	0.30	101.6
Annual Average		0.13	100.6	0.86	100.2	0.49	101.8	0.33	97.1
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling 12-mo Average	0.00%	1.69%	0.00%	0.00%	0.00%	1.69%	0.00%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

May 2022		"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	103.1	0.73	103.4	0.47	103.1	0.36	94.4
Monthly Maximum		0.17	107.1	1.14	107.7	0.71	106.6	0.57	100.9
Annual Average		0.13	101.1	0.83	100.8	0.49	102.1	0.34	96.6
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%	0.00%
	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 period regarding blast vibration or overpressure.

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 8-24 March 2021 and also 9-12 May 2022. 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-22	
		mbgl	%
Werrie Basalt near WCC	MW1	Dry	
	MW2	33.18	14%
	MW3	17.60	4%
	MW4B	16.56	4%
	MW5	9.73	1%
	MW6	15.20	2%
	MW27*	52.05	1%
	MW36A	18.35	-6%
	MW36B	18.33	-6%
Werrie Basalt	MW8*	No access	
	MW10	8.78	-3%
	MW14	14.39	-6%
	MW17B*	13.78	-34%
	MW19A*	Pump over bore	
	MW20*	19.27	1%
	MW38A	9.81	-9%
	MW38B*	8.74	-2%
	MW38C*	20.70	3%
	MW38E*	No access	
	MW41	4.73	-3%
	MW43	4.35	-4%
# ¹	MW24A*	12.14	-1%
	MW29*	10.09	-4%
Quipolly Alluvium	MW12*	8.63	-20%
	MW13*	4.76	-6%
	MW13B*	3.20	-6%
	MW13D*	4.40	-10%
	MW15*	No Access	
	MW16*	3.96	-1%
	MW17A*	3.78	-20%
	MW18A*	3.35	-5%
	MW21A*	5.00	-7%
	MW22A*	4.22	-9%
	MW22B*	4.11	-8%
	MW23A*	4.02	-16%
	MW23B*	No access	
	MW26B*	4.18	0%
	MW28A*	6.67	-23%
	MW32*	Pump over bore	
	MW40	4.70	-3%
	MW42	4.26	-1%
# ²	MW34*	8.78	-1%

Site		May-22	
		mbgl	%
Werrie Basalt near WCC	MW1	Dry	
	MW2	33.46	-1%
	MW3	17.34	1%
	MW4B	16.18	2%
	MW5	9.62	1%
	MW6	14.92	2%
	MW27*	51.84	0%
	MW36A	18.86	-3%
	MW36B	18.84	-3%
Werrie Basalt	MW8*	No access	
	MW10	9.19	-4%
	MW14	14.74	-2%
	MW17B*	11.30	22%
	MW19A*	Pump over bore	
	MW20*	18.83	2%
	MW38A	10.42	-6%
	MW38B*	8.90	-2%
	MW38C*	20.67	0%
	MW38E*	10.65	-22%
	MW41	4.94	-4%
	MW43	4.45	-2%
# ¹	MW24A*	12.27	-1%
	MW29*	10.46	-4%
Quipolly Alluvium	MW12*	8.93	-3%
	MW13*	4.60	3%
	MW13B*	3.18	1%
	MW13D*	4.36	1%
	MW15*	No Access	
	MW16*	4.04	-2%
	MW17A*	3.60	5%
	MW18A*	3.42	-2%
	MW21A*	5.47	-9%
	MW22A*	4.22	0%
	MW22B*	4.28	-4%
	MW23A*	3.73	8%
	MW23B*	No access	
	MW26B*	4.55	-8%
	MW28A*	8.33	-20%
	MW32*	Pump over bore	
	MW40	4.91	-4%
	MW42	4.40	-3%
# ²	MW34*	8.91	-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 during March 2022 and May 2022, although some locations were noted as having a slight increase.

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 7th - 8th February 2022 and 25th - 26th May 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.

7th & 8th February 2022

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	8.3	376	51	<5	Previously dry (muddy)
SB9	DRY	DRY	DRY	DRY	Previously low now dry
SB10	7.84	254	37	<5	Remained low water level
SB18	7.78	217	105	<5	Remained low water level
OFFSITE					
QCU	7.43	870	14	<5	Remained flowing
QCD	7.67	866	5	<5	Remained flowing
WCU	7.95	1030	<5	<5	Remained flowing
WCD	8.05	1050	11	<5	Remained flowing

25th & 26th May 2022

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	Dry	Dry	Dry	Dry	Remained dry (muddy)
SB9	Dry	Dry	Dry	Dry	Remained dry
SB10	7.51	1100	<5	<5	Water remains in dam
SB18	Dry	Dry	Dry	Dry	Previously low now dry
OFFSITE					
QCU	7.88	672	7	<5	Remained flowing
QCD	8.06	871	12	<5	Remained flowing
WCU	8.28	1130	<5	<5	Remained flowing
WCD	8.34	1230	22	<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 February 7th - 8th and May 25th - 26th 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 no discharge events in February, March, April and May 2022, except for discharge used for irrigation purposes (Special Frequency 4) indicated in the table below.

Sample Date	Site	pH	EC (mg/L)	O&G (mg/L)
01/02/2022	VWD1 (EPA33)	8.3*	1645*	<5 ⁺
10/02/2022	VWD1 (EPA33)	8.2*	1626*	<5 ⁺
11/04/2022	VWD1 (EPA33)	7.87	1530	<5
04/05/2022	VWD1 (EPA33)	8.01	1560	<5
Criteria		9.0	2000	10

* - Field results; NR – no result (not tested)

⁺ - Oil and Grease measurements taken as part of quarterly water surface sampling (special frequency 3)

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; O&G – Oil and Grease measures the amount of hydrocarbons (oils and fuels) in water; **Bold** – indicates results outside criteria

5.3.2 Discussion - Compliance / Non-Compliance

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

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.

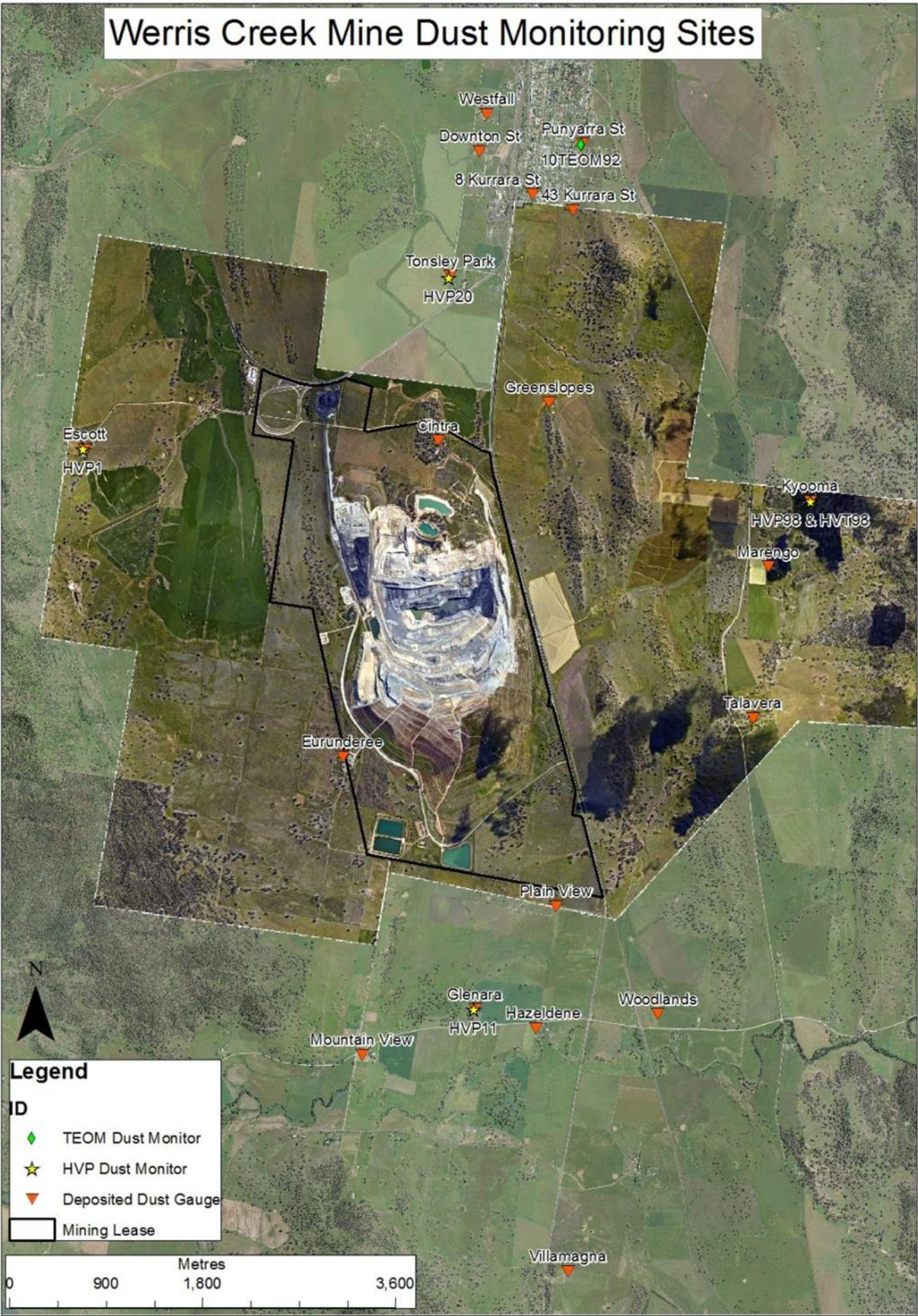


Figure 1 – WCC Dust Monitoring Locations



Figure 2– WCC Noise Monitoring Locations

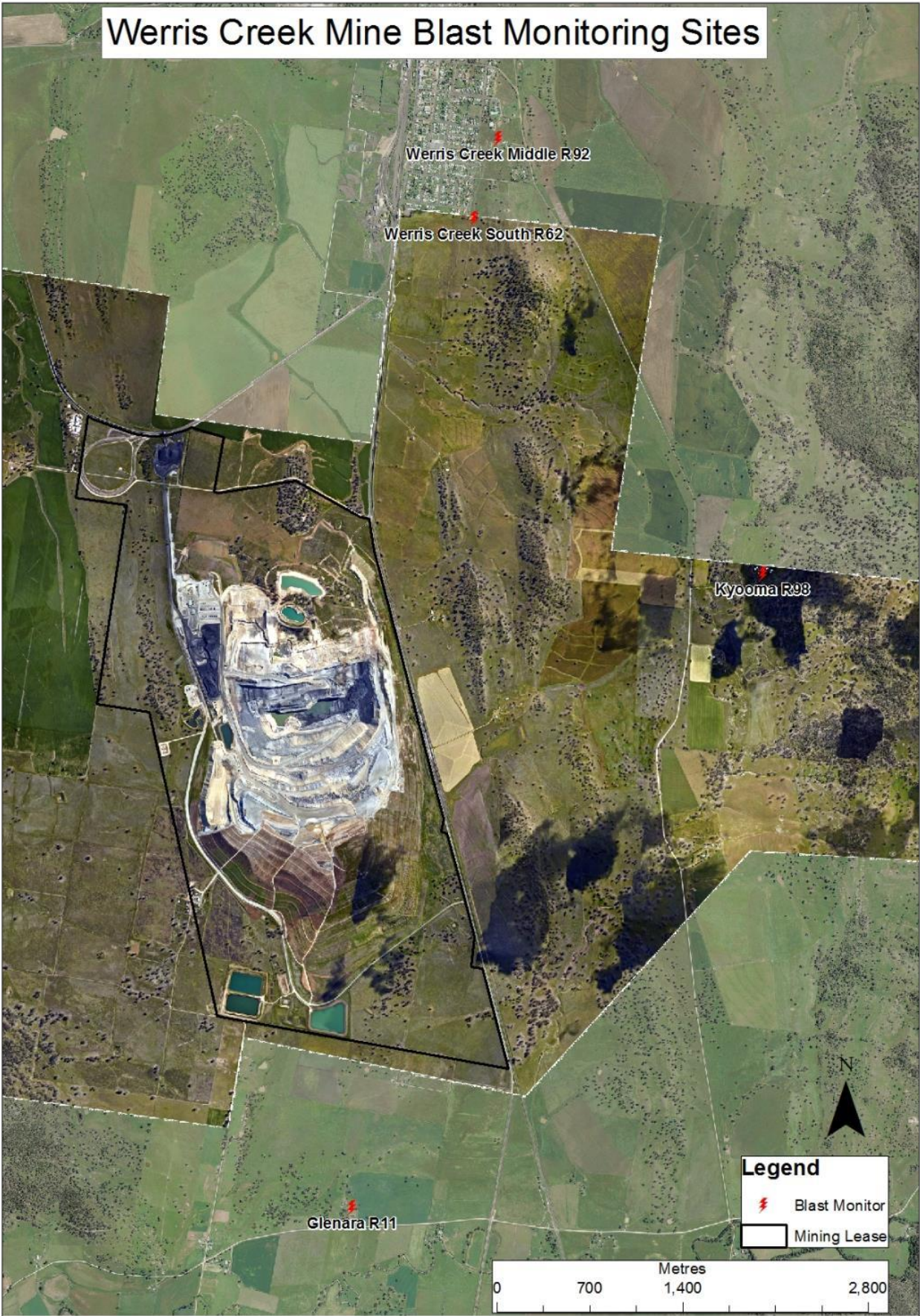


Figure 3 – WCC Blast Monitoring Locations

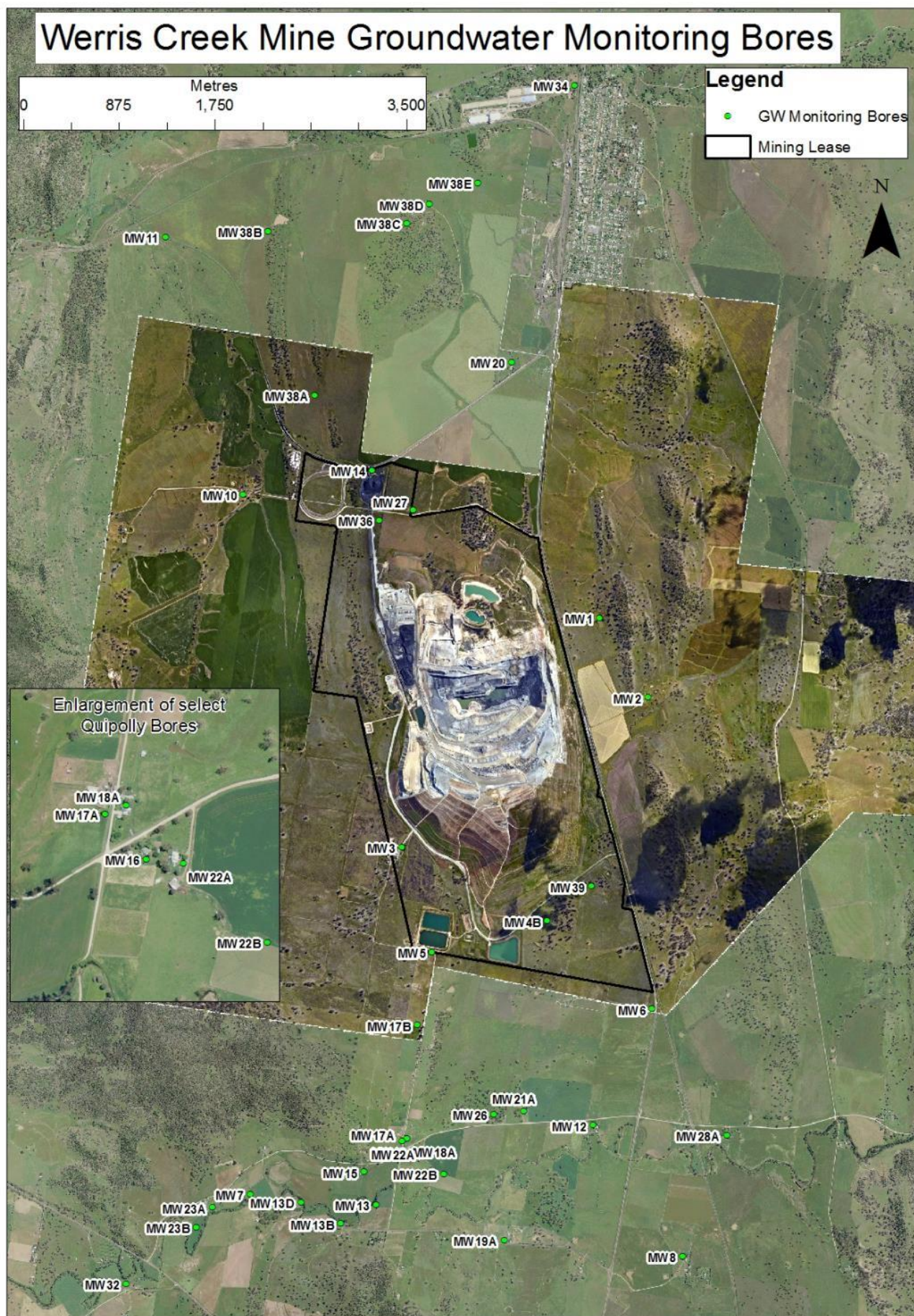


Figure 4 – WCC Groundwater Monitoring Locations



Figure 5 – WCC Surface Water Monitoring Locations