WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
50th Meeting of the Committee held at the Werris Creek Bowling & Tennis Club
Wednesday, 14 July 2021 at 9:30am

Record of attendance

Michael Silver OAM	Independent Chairperson
Matt Hollis	Werris Creek Coal – Environmental Superintendent
Lindsay Bridge	Community Representative
Noel Taylor	Community Representative
James O'Brien	Community Representative
Col Stewart OAM	Community Representative
Mike Lomax	Community Representative
Cr Ian Lobsey	Liverpool Plains Shire Council
Andrew Garrett	Whitehaven Coal – General Manager Community Engagement (by phone)

Apologies

Craig Sullivan	Werris Creek Coal – Operations Manager
Kelsy Sammons	Whitehaven Coal – Environmental Officer

The Chair advised that the regular Minute Secretary, Mrs Jane Bradford OAM was absent due to a bereavement in her family and that he would record the minutes for the meeting.

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 land, waters, and culture, paying respects to their Elders past, present and emerging.

3 Introduction of the Independent Chair

The Independent Chair, Michael Silver OAM advised of his appointment to the CCC by the NSW Department of Planning, Industry and Environment (DPIE) following the resignation of Mrs Gae Swain. Mr Silver complimented Mrs Swain on her contribution to the CCC over many years and look forward to working with the committee members. He noted that his CV had been circulated to members with the meeting agenda.

4 Declaration of Pecuniary or Other Interests

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

5 Chair's Minute

a) Code of Conduct

The Chair circulated the Code of Conduct declaration and request that all members execute the document and return to him, as the new Chair, prior to the conclusion of the meeting.

b) Declaration of Pecuniary and Non- Pecuniary Interests

The Chair circulated the Pecuniary and Non- Pecuniary Interests declaration and request that all members execute the document, as necessary, and return to him prior to the conclusion of the meeting.

c) Werris Creek Coal Community Consultative Committee Email Address

The Chair advised that the CCC would operate from a dedicated email address moving forward and all CCC correspondence should be forwarded through that email address. The email address is: werriscreekcoalccc@gmail.com

6 Minutes of the Previous Meeting

The meeting noted that the minutes of the previous meeting held on 10 March 2021 were approved on 16 March 2021.

7 Matters Arising

Nil

8 Environment Monitoring Report from 1 February 2021 – 31 May 2021

Matt Hollis provided commentary on each section of the above report which is attached to the minutes.

1. Meteorology – noted that nearly 1000mm of rain has been received during the last financial year – wettest year on record at Werris Creek Mine.
2. Air quality – no major issues. Deposited dust exceedances attributed to isolated localised dust issues from surrounding environment and unrelated to mine operations. It was highlighted that the train dust monitoring site was decommissioned in December 2020.
3. Noise – no complaints or issues for the period
4. Blasting – noted that there were two events in May that were slightly over the 95th percentile overpressure limit (115dBA). One blast was recorded at Werris Creek South (115.7db) on the 28th May, the other at "Glenara", Quipolly (115.3 db). There was limited explanation for the event recorded at "Glenara" other than prevailing wind direction and cloud cover potentially reinforcing the impact. This blast was located in the bottom of the open cut pit. In total seven blast complaints were received during the period, with five of these on 28 May 2021.
5. Water – measured ground water levels indicate a general increase in water levels surrounding the mine, with overall water quality being good. It was noted that all surface water discharges, both controlled and uncontrolled were compliant.
6. Complaints Summary – detailed that there were seven (7) complaints during the period, all related to vibration or overpressure from blasting. All blasting, however, was within compliance guidelines.

9 General Business

9.1 Burial of Off-road Truck Tyres

Matt Hollis explained community complaints had been made within the maules creek area in respect of disposal of large off-road truck tyres at the Maules Creek mine and how Whitehaven Coal proposes to manage tyre disposal at its operations moving forward. He indicated that it had been the practice in mining industry to bury large dump truck tyres in over-burden due to the size and weight of tyres and limited disposal or recycling alternatives. An application had been lodged with DPIE to modify the Werris Creek Coal consent to permit burial of tyres. He indicated that it is unlikely that tyres will be buried at the Werris Creek operation as alternate recycling options are still being examined and the life of mine status of Werris Creek Mine may not be able to accommodate compliant tyre burial with respect of burial depth.

The Chair detailed the process for the modification noting that it was not subject to public exhibition and would be determined by DPIE based on the relevant agency standards.

In response to a question on the number of tyres discarded at the Werris Creek Mine, Mr Hollis advised that it was better than the industry standard, primarily driven by operational discipline to extend the operational life of tyres beyond 6000 hours – on average Werris Creek Coal is achieving close to 6070 operational hours per tyre. Given each tyre has a value of more than $40-$50K this has a significant financial as well as environmental benefit over the operational life of the mine.

It was suggested by Lindsay Bridge that tyres have a role in bank stabilization – Mr Hollis indicated that burial of tyres for alternative uses (erosion control) was not permitted without approval and in general is discouraged in contemporary land management.

9.2 Life of Mine Update

Matt Hollis provided an overview of the anticipated life of the mine and the processes and actions to be followed over the next three to four years.

He detailed that work has started on closing out the out of pit dump, including top soiling and completion of rehabilitation.

A fifth modification to the project approval for the mine will be lodged in the next 6 -12 months to detail what the final void will look like and obtain approval for this work. He noted that there will be some changes to the final void design approved in the original development proposal for the mine, hence the need to seek a modification to the consent. Alternatives are being considered – that is whether it's a dry void or leave it deliberately wet to take surface runoff. He anticipated the modification will be lodged in early 2022.

Mr Hollis suggested that the mine has about three to four years of operational life, excluding required closure works. He indicated various negotiations will occur over this time with local stakeholders including Liverpool Plains Shire Council and others regarding future uses for the site and whether existing infrastructure, such as the rail loop can be taken over and used by another entity.

The issue of ground water at Quipolly was raised, whether levels will improve with the closure of the mine. Mr Hollis responded that whilst Quipolly dam is spilling you will see water levels rising In the Quipolly alluvium areas. From the mine perspective ground water will equalise, generated by rainfall into the mine void whilst the reduction in water extraction will assist further as coal is mined further up the syncline to the north. He indicated the deepest sections of the residual void will now start to be filled. He also commented that to maintain the quality of the water in the void it will require a level of extraction and turn over to reduce long term salinity levels which would otherwise destroy its value as a potential water source.

Mr Hollis confirmed that all coal seams A to G will be mined out.

When questioned regarding the implications on the Quipolly Dam relative to the ground water levels in the void at the mine, Mr Hollis advised there would be no impact. He noted that rainfall will fill the void with approximately 2.0mm of rainfall giving rise to 1 megalitre of accumulated water in the open cut void. He noted that the end of mining will see water accumulation in the remaining void with the opportunity to extract water – this will need to be within licencing requirements.

Mr Hollis also advised that as part of the closure process other land owned by the company may be offered for sale. This may include land that can be used as additional biodiversity offsets but would require a modification to the consent. Of note however – existing biodiversity offset land would be unlikely to be offered for public sale.

9.3 Motor Vehicle Accidents

Mr Hollis confirmed that there had been three motor vehicle incidents on public roads involving employees leaving work during the reporting period. He advised that a strong "to and from work" safety campaign was being conducted by the company. All incidents had been investigated.

9.4 Carbon Usage – Farmers and Miners

Lindsay Bridge outlined the potential agricultural benefits of farmers and miners working together through the utilization of carbon residue in agricultural land use practices. He advised he was highlighting these benefits and opportunities to politicians.

9.5 Sponsorship

Andrew Garrett report on recent community engagement and sponsorship activities. He advised that the following sponsorships had been provided:

$10,000 to the Silo Art Project
$1,000 to the Youth Bike Ride
$500 to the Spring Ridge Chicken and Prawn Night
$5,000 to the Quirindi Show
$1,000 to the Quirindi Public School P & C Horse Sports
$3,000 to the Quirindi High School Presentation Event

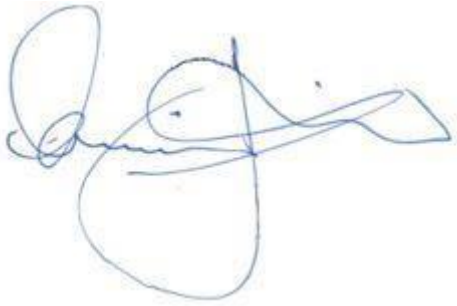
The allocations represent a total community sponsorship of $20,500 for the period.

Mr Garrett also advised that there would be a change to the Sponsorship/Donation program. He indicated that $50,000 would be allocated four times per year with mechanisms being examined to support local representatives being part of an identification and project prioritisation process. He advised that this process is expected to be in March 2022.

Next meeting

Wednesday, 10 November 2021 at 9:30am – Werris Creek Bowling and Tennis Club.

Meeting closed at 10:25 am



11 August 2021

Michael J. Silver OAM – Independent Chairperson Date

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

February - May 2021

This Environmental Monitoring Report covers the period 1st February to 31st May 2021 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**.

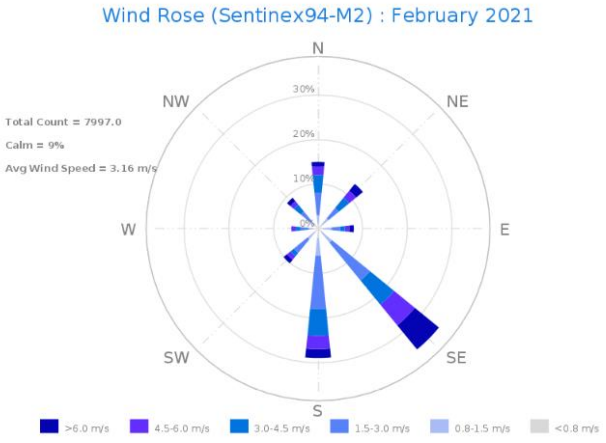
CONTENTS

1.0 METEOROLOGY

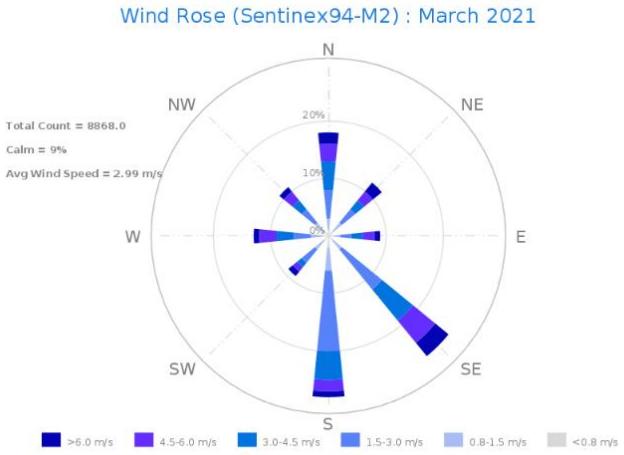
1.1 WEATHER STATION

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 February-March 2021 was above the historical average, but higher in April-May 2021. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the south to south-east in February through April 2021 and from the north-northwest In May 2021.

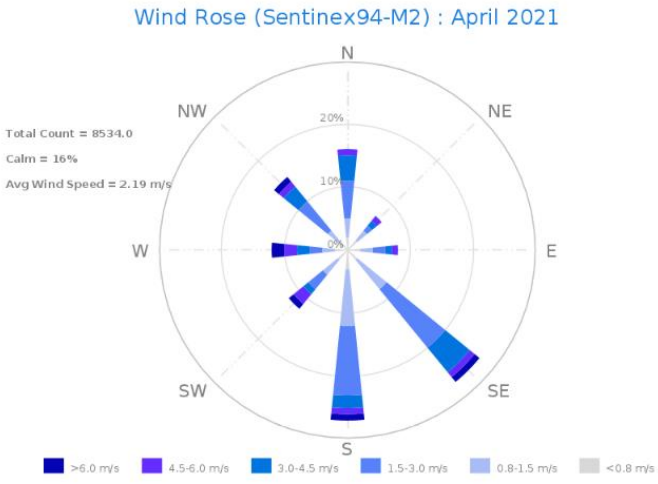
Month	Rainfall *(mm)*		
	Onsite	***Historical Average***	***2021 Total***
February 2021	100.2	70.2	140.4
March 2021	168.0	63.6	308.4
April 2021	27.0	31.4	335.4
May 2021	42.2	34.7	377.6



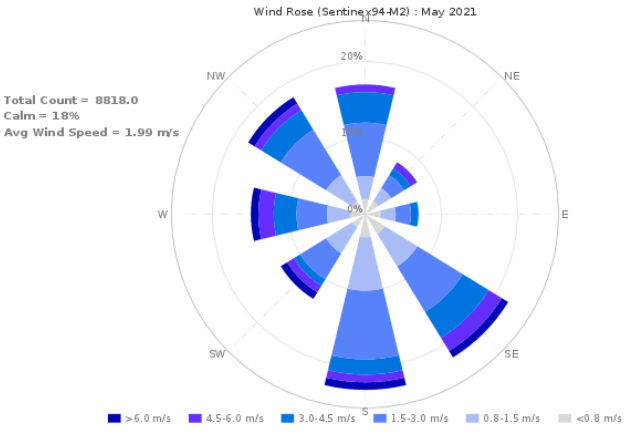
February 2021



March 2021



April 2021



May 2021

2.0 AIR QUALITY

2.1 HVAS (PM_{10}) and TEOM (PM_{10} & $PM_{2.5}$)

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

2.1.1 Monitoring Data Results

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

MONITORING LOCATION	24Hr Maximum *(µg/m³)*	FEB 2021 *(µg/m³)*	MAR 2021 *(µg/m³)*	APR 2021 *(µg/m³)*	MAY 2021 *(µg/m³)*	2021 AVG *(µg/m³)*	CRITERIA *(µg/m³)*	
							Annual	24hr
$PM_{2.5}$ – TEOM92 "Werris Creek"	11.8	5.7	3.6	3.9	5.7	4.7	-	-
PM_{10} – TEOM92 "Werris Creek"	24.4	10.1	8.1	10.5	10.1	9.6	30	50
PM_{10} – HVP20 "Tonsley Park"	39.4	9.5	9.1	20.8	17.9	14.1	30	50
PM_{10} - HVP1 "Escott"	23.4	6.7	6.2	12.6	4.2	8.0	30	50
PM_{10} – HVP11 "Glenara"	25.2	7.7	10.4	15.2	8.3	10.3	30	50
PM_{10} – HVP98 "Kyooma"	12.4	6.3	5.1	8.6	3.9	6.4	30	50
TSP – HVT98 "Kyooma"	29.2	16.5	12.9	20.2	9.9	15.1	90	-

Yellow Bold – Elevated dust level.

2.1.2 Discussion - Compliance / Non Compliance

All TSP, PM_{10} 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 20 locations around WCC. Sampling is scheduled monthly in accordance with EPA guidelines and results are reported as grams per square metre per month (g/m^2.month). Dust monitoring locations are identified in **Figure 1**.

2.2.1 Monitoring Data Results

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

MONITORING LOCATION	FEB 2021 *(g/m²/month)*	MAR 2021 *(g/m²/month)*	APR 2021 *(g/m²/month)*	MAY 2021 *(g/m²/month)*	2021 AVERAGE *(g/m2/month)*	Annual Criteria *(g/m²/month)*
DG1 "Escott"	1.1	0.75	1.0	0.2	0.8	4.0
DG2 "Cintra"	3.6	12.93	10.7*	5.8*	6.2	4.0
DG3 "Eurunderee"	1.4	2.12	0.9	1.2	1.3	4.0
DG5 "Railway View"	0.7	3.60	8.8	1.2	3.0	4.0
DG9 "Marengo"	1.0	1.73	0.3	0.4	0.9	4.0
DG11 "Glenara"	0.5	1.70	0.9	5.0*	0.9	4.0
DG14 "Greenslopes"	0.4	0.85	0.2	0.5	0.8	4.0
DG15 "Plain View"	0.9	0.81	0.4	0.4	0.7	4.0
DG17 "Woodlands"	0.4	2.72	0.6	0.8	1.2	4.0
DG20 "Tonsley Park"	0.8	1.26	1.6	1.7	1.3	4.0
DG22 "Mountain View"	1.0	2.95	1.0	0.5	1.4	4.0
DG24 "Hazeldene"	0.7	1.11	0.5	1.6	1.0	4.0
DG34 8 Kurrara St	0.5	47.32	0.4	0.2	9.8	4.0
DG62 Werris Creek South	0.3	1.49	0.3	0.2	0.6	4.0
DG92 Werris Creek Centre	0.4	0.65	0.3	0.4	0.4	4.0
DG98 "Kyooma"	0.8	0.84	0.4	0.2	0.6	4.0
DG101 "Westfall"	1.3	1.38	0.9	0.8	1.2	4.0
DG103 West Street	0.8	2.50	0.6	0.8	1.1	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; Broken- Dust bottle broken in transit

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) and DG34 (8 Kurrara St) had one anomalous high dust deposition measurement in March 2021, deposited dust levels remained low at nearby gauges, also indicating a localised source of dust, unrelated to activities at Werris Creek Coal Mine.
- DG5 (Railway View) also had an anomalous high result in April 2021, deposited dust levels remained low at nearby gauges, also indicating a localised source of dust, unrelated to activities at Werris Creek Coal Mine.

2.3 QUIRINDI TRAIN DUST DEPOSITION

2.3.1 Monitoring Data Results

Sites decommission in December 2020.

2.4 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 operations only noise level (not ambient noise) results for the last four months are outlined in the tables below. Noise monitoring locations are identified in **Figure 2**.

23rd Tuesday and 24th Wednesday, February 2021

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	23	35	Inaudible#	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	24	40	20#	40
C	**Central Quipolly** (R10*,R11*)	23	40	Inaudible#	40
D	**"Hazeldene"** R24	Inaudible	37	Inaudible#	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible	38	Inaudible#	38
H	**"Kyooma"** R98	22	38	Inaudible#	38
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

4th Thursday and 5th Friday, March 2021

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	22	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	38
H	**"Kyooma"** R98	Inaudible	38	Inaudible	38
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 Monday and 27th Tuesday, April 2021

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	22	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	38
H	**"Kyooma"** R98	Inaudible	38	Inaudible	38
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

19th Wednesday and 20th Thursday, May 2021

	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	21	35	Inaudible	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	35	40	33	40
C	**Central Quipolly** (R10*,R11*)	27	40	31	40
D	**"Hazeldene"** R24	22	37	23	37
E	**"Railway Cottage"** R12	26	38	23	38
F	**"Talavera"** R96	Inaudible	38	36	38
H	**"Kyooma"** R98	26	38	37	38
I	**Kurrara St, WC** R57	Inaudible	35	28	35
J	**Coronation Ave, WC**	Inaudible	35	Inaudible	35
K	**Alco Park** (R21*)	26	40	24	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 were no noise complaints recorded during the period.

4.0 BLASTING

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

4.1 BLAST MONITORING

4.1.1 Monitoring Data Results

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

FEB 2021		"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	97.1	0.72	96.1	0.52	98.6	0.33	97.0
Monthly Maximum		0.19	106.7	0.81	99.7	0.88	102.8	0.45	106.0
Annual Average		0.10	97.2	0.64	97.8	0.48	99.8	0.30	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%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

MAR 2021		"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	98.4	0.74	103.0	0.45	100.6	0.28	98.5
Monthly Maximum		0.24	102.5	0.98	114.7	0.60	104.1	0.35	103.0
Annual Average		0.11	97.6	0.67	99.5	0.47	100.0	0.29	98.2
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%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

APR 2021		"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	99.2	0.58	99.6	0.50	100.7	0.31	102.2
Monthly Maximum		0.17	100.4	0.72	105.6	0.67	105.1	0.41	107.4
Annual Average		0.11	98.0	0.65	99.5	0.48	100.2	0.30	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%	0.00%
	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

MAY 2021		"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		0.09	105.3	0.45	101.4	0.29	104.2	0.20	104.0
Monthly Maximum		0.14	115.3	0.53	110.3	0.40	115.9	0.31	110.9
Annual Average		0.11	99.5	0.61	99.9	0.44	101.0	0.28	100.2
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling 12-mo Average**	1.54%	0.00%	0.00%	0.00%	1.54%	0.00%	0.00%	0.00%
	YTD	4.00%	0.00%	0.00%	0.00%	4.00%	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 vibration limit of 10mm/s as well as the 95th percentile limit of 5mm/s. However, two blasts were above the 95th percentile overpressure limit of 115dB(L) at Glenara R11 (21 May 2021) and Werris Creek South R62 (28 May 2021).

4.2 BLAST COMPLAINTS

There were seven (7) 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 4 March to 7 April 2021 and also 10-21 May 2021. 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-21	
		mbgl	%
Werrie Basalt near WCC	MW1	Dry	
	MW2	52.90	2%
	MW3	20.54	0%
	MW4B	19.91	1%
	MW5	13.25	0%
	MW6	16.47	-1%
	MW27*	55.67	2%
	MW36A	16.26	-7%
	MW36B	16.25	-7%
Werrie Basalt	MW8*	16.36	-0.1%
	MW10	11.90	0%
	MW14	11.52	0%
	MW17B*	13.04	3%
	MW19A*	Pump over bore	
	MW20*	22.81	2%
	MW38A	8.50	8%
	MW38B*	9.29	-2%
	MW38C*	23.18	-2%
	MW38E*	10.19	0%
	MW41	8.94	-1%
	MW43	7.71	-3%
#1	MW24A*	14.42	4%
	MW29*	11.38	-5%
Quipolly Alluvium	MW12*	9.25	24%
	MW13*	5.29	30%
	MW13B*	3.57	36%
	MW13D*	4.82	8%
	MW15*	No access	
	MW16*	7.24	7%
	MW17A*	6.30	7%
	MW18A*	6.18	8%
	MW21A*	10.44	3%
	MW22A*	7.54	2%
	MW22B*	7.49	7%
	MW23A*	3.74	11%
	MW23B*	4.08	7%
	MW26B*	8.92	3%
	MW28A*	10.95	13%
	MW32*	Pump over bore	
	MW40	8.94	-1%
	MW42	7.62	-3%
#2	MW34*	10.19	-2%

	Site	May-21	
		mbgl	%
Werrie Basalt near WCC	MW1	Dry	
	MW2	52.38	1%
	MW3	20.29	1%
	MW4B	19.73	1%
	MW5	12.71	4%
	MW6	16.45	0%
	MW27*	55.03	1%
	MW36A	16.14	1%
	MW36B	16.14	1%
Werrie Basalt	MW8*	15.44	6%
	MW10	10.53	13%
	MW14	12.62	-9%
	MW17B*	12.96	1%
	MW19A*	Pump over bore	
	MW20*	22.35	2%
	MW38A	8.68	-2%
	MW38B*	9.14	2%
	MW38C*	22.43	3%
	MW38E*	No access	
	MW41	8.17	9%
	MW43	6.91	12%
#1	MW24A*	13.97	3%
	MW29*	10.62	7%
Quipolly Alluvium	MW12*	8.95	3%
	MW13*	6.30	-16%
	MW13B*	4.38	-18%
	MW13D*	4.81	0%
	MW15*	No access	
	MW16*	6.95	4%
	MW17A*	6.12	3%
	MW18A*	6.03	2%
	MW21A*	9.87	6%
	MW22A*	7.23	4%
	MW22B*	7.55	-1%
	MW23A*	3.84	-3%
	MW23B*	4.25	-4%
	MW26B*	8.62	3%
	MW28A*	9.60	14%
	MW32*	Pump over bore	
	MW40	8.19	9%
	MW42	6.83	12%
#2	MW34*	9.90	3%

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 a general increase in water levels during March and May 2021, although some locations were noted as having a significant decrease.

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 10th- 11th February 2021 and 4th and 6th May 2021. 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.

10th - 11th February 2021

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	7.17	513	45	<5	Water level remained low
SB9	Dry	Dry	Dry	Dry	Previously wet and now dry
SB10	Dry	Dry	Dry	Dry	Previously no access and dam is now empty (recently desilted)
SB18	6.53	318	200	<5	Previously dam was half full and now wet
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Remained dry
QCD	7.62	911	22	<5	Previously wet and now only pools
WCU	7.70	702	7	<5	Previously flowing and now only pools
WCD	8.25	1210	42	<5	Previously flowing and only pools

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

4th and 6th May 2021

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	7.90	376	9	<5	Remained wet
SB9	Dry	Dry	Dry	Dry	Remained dry (grassy basin)
SB10	Dry	Dry	Dry	Dry	Remained dry
SB18	Dry	Dry	Dry	Dry	Previously wet and now dry (muddy basin)
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Remained dry
QCD	7.94	955	9	<5	Previously only pools and now flowing (trickle)
WCU	8.35	1090	<5	<5	Previously only pools and now flowing
WCD	8.26	1200	<5	27	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 10th - 11th February 2021 and 4th and 6th May 2021. 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 discharge event during March 2021 following above average rainfall during the month. Two controlled discharges also occurred in March 2021.
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)*
19/03/2021	**SB3** (EPA10)	8.5	530	30	<5	Yes	Controlled	N/A
19/03/2021	**SB11** (EPA12)	7.6	560	10	<5	Yes	Controlled	N/A
19/03/2021	**SB10** (EPA14)	7.7	730	13	<5	Yes	Controlled	N/A
19/03/2021	**SB18** (EPA32)	8.1	660	24	<5	Yes	Controlled	N/A
19/03/2021	**WCU** (WPA23)	8.2	830	20	<5	Yes	Controlled	N/A
19/03/2021	**WCD** (WPA24)	8	720	103	<5	Yes	Controlled	N/A
24/03/2021	**SB10** (EPA14)	7.5	130	92	<5	Yes - TSS Ok because rainfall >39.2mm	Wet weather - uncontrolled	83.8
24/03/2021	**WCU** (WPA23)	8	200	78	<5	Yes	Wet weather - uncontrolled	83.8

24/03/2021	**WCD** (WPA24)	8.1	210	308	<5	Yes	Wet weather - uncontrolled	83.8
29/03/2021	**SB3** (EPA10)	8.2	320	12	<5	Yes	Controlled	N/A
29/03/2021	**SB11** (EPA12)	7.5	490	18	<5	Yes	Controlled	N/A
29/03/2021	**SB10** (EPA14)	7.8	270	9	<5	Yes	Controlled	N/A
29/03/2021	**SB18** (EPA32)	8.3	320	8	<5	Yes	Controlled	N/A
29/03/2021	**QCU** (EPA25)	8.6	330	12	<5	Yes	Controlled	N/A
29/03/2021	**QCD** (EPA26)	8	400	19	<5	Yes	Controlled	N/A
29/03/2021	**WCU** (WPA23)	8.2	560	3	<5	Yes	Controlled	N/A
29/03/2021	**WCD** (WPA24)	8.2	560	3	<5	Yes	Controlled	N/A
Criteria		6.5 - 8.5	N/A	50	10			

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

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 seven (7) complaints received during the period which are summarised below.

#	Date	Issue	Complaint	Investigation	Action Taken
625	12/02/2021	Blast	Complainant advised they wished to advise the mine that the vibration from the blast could be felt in Werris Creek.	EO confirmed blast was within compliance limits.	No further follow-up actions
626	26/03/2021	Blast	Complainant advised they felt the blast at their residence. Requested results via email.	EO confirmed blast was within compliance limits	EO advised blast was within compliance limits and emailed a copy of the results to the complainant.
627	28/05/2021	Blast	Complainant advised they felt the blast at their residence. Requested results via email.	EO confirmed blast was within compliance limits	EO advised blast was within compliance limits and emailed a copy of the results to the complainant.
628	28/05/2021	Blast	Complainant advised they wished to advise the mine that the vibration from the blast could be felt in Werris Creek	EO confirmed blast was within compliance limits	No further follow-up actions
629	28/05/2021	Blast	Complainant advised they wished to advise the mine that the vibration from the blast could be felt in Werris Creek	EO confirmed blast was within compliance limits	No further follow-up actions
630	28/05/2021	Blast	Complainant advised they wished to advise the mine that the vibration from the blast could be felt in Werris Creek	EO confirmed blast was within compliance limits	No further follow-up actions
631	4/06/2021	Blast	Complainant advised they wished to advise the mine that the vibration from the blast could be felt in Werris Creek	EO confirmed blast was within compliance limits	No further follow-up actions

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.

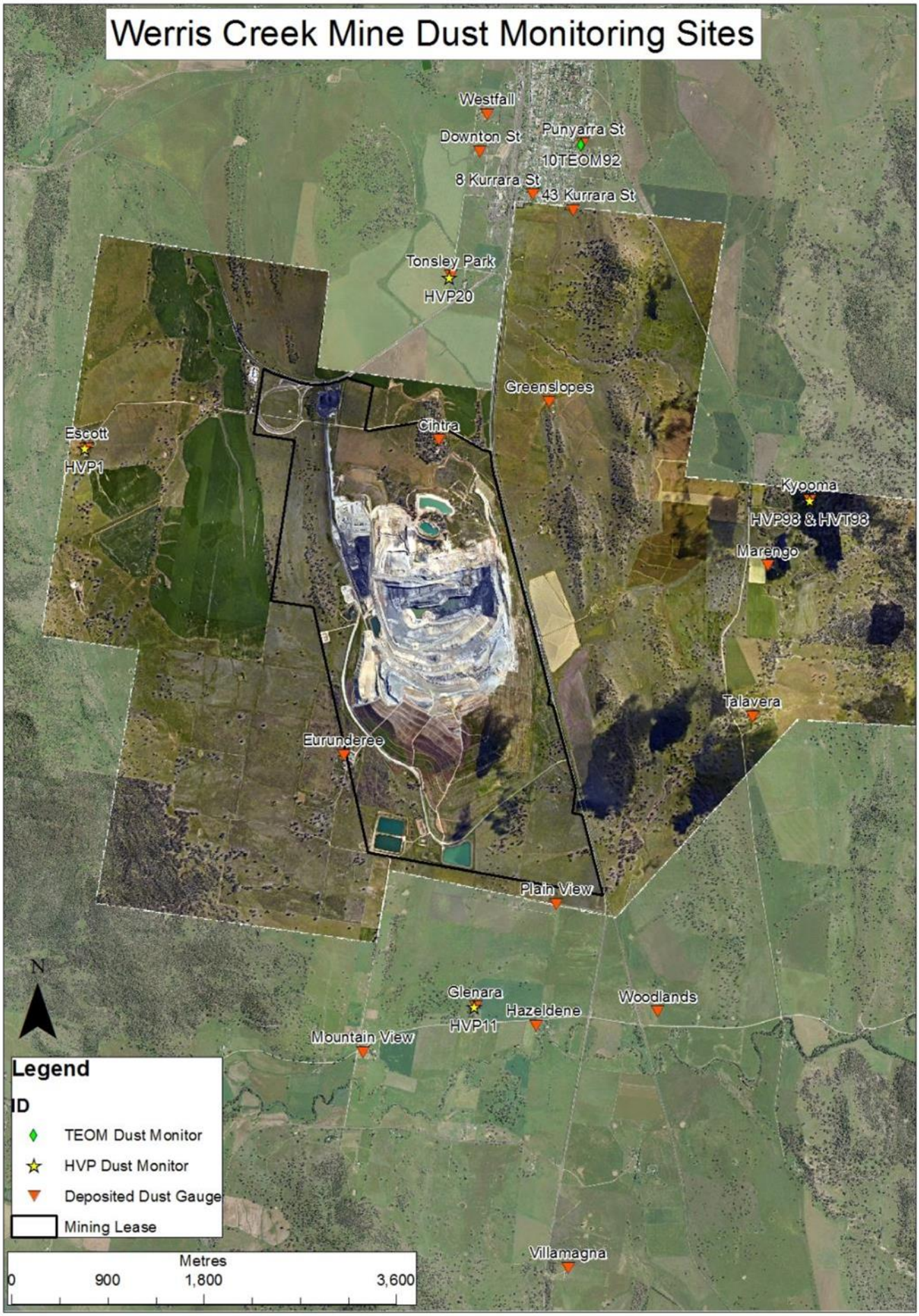


Figure 1 – WCC Dust Monitoring Locations

Figure 2– WCC Noise Monitoring Locations

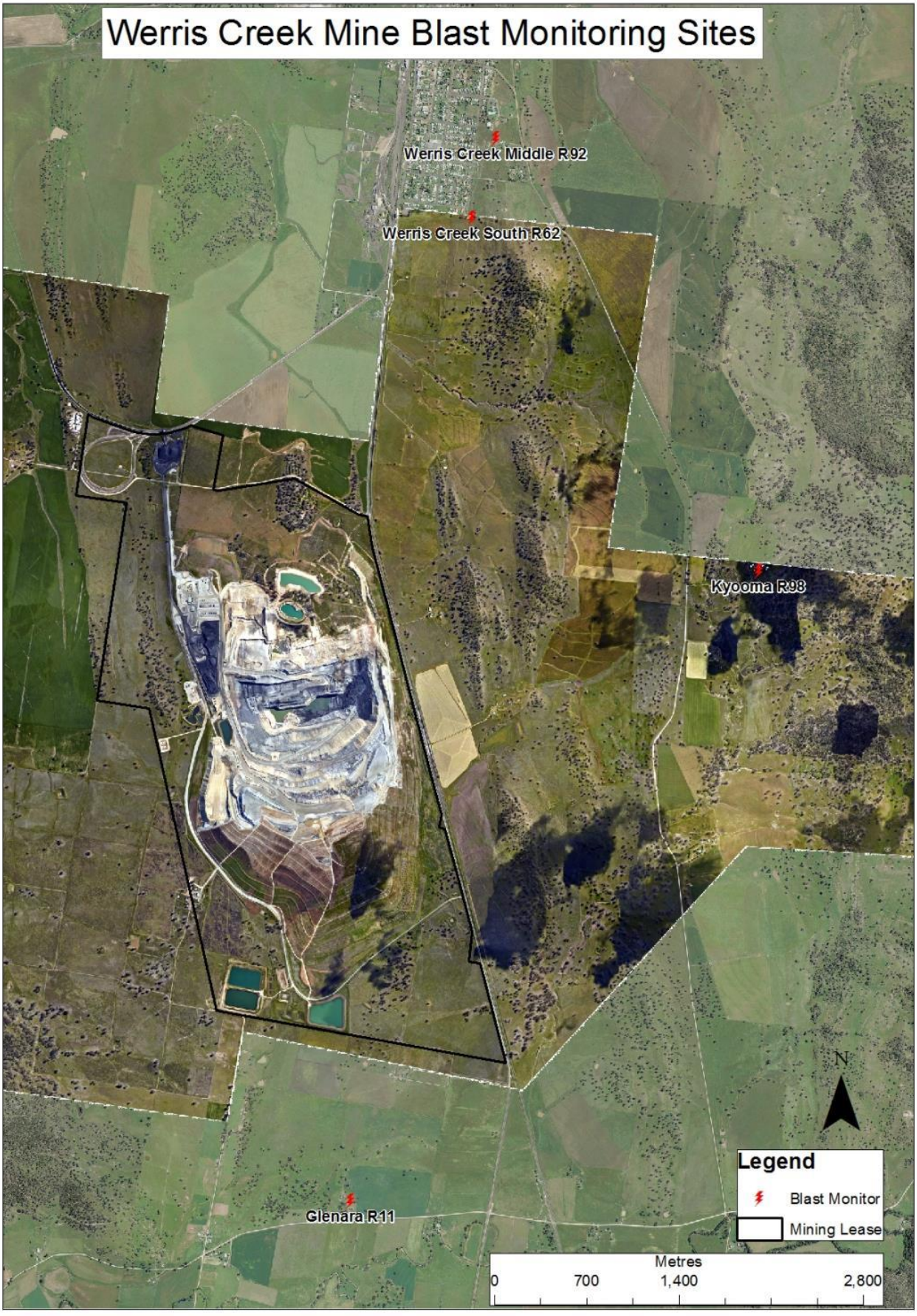


Figure 3 – WCC Blast Monitoring Locations

Figure 4 – WCC Groundwater Monitoring Locations

Figure 5 – WCC Surface Water Monitoring Locations