# WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE

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

Meeting opened at 9:40AM

# **Record of Attendance**

Michael Smith OAM	Independent Chairperson						
Jane Bradford OAM	Independent Minute Taker						
Murray O'Keefe	Whitehaven Coal – Operations Manager						
Megan Martin	Werris Creek Coal – Environmental Superintendent						
Andrew Raal	Werris Creek Coal - Close the Mine Superintendent						
Harry Mills	Whitehaven Coal – Environmental Officer						
Mike Lomax	Community Representative						
Noel Taylor	Community Representative						
Lindsay Bridge	Community Representative						
Nathan Skelly	Director of Infrastructure & Environmental Services –						
APOLOGIES							
Jacki Scott	Whitehaven Coal – Manager Community Partnerships & Investment						
Darren Swain	Whitehaven Coal – General Manager Community Engagement						
Col Stewart OAM	Community Representative						

## Non-Attendance

James O'Brien

# 2 Acknowledgement of Country

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

#### **Declaration of Pecuniary or Other Interests** 3 The Chair advised that his meeting expenses are borne by the proponent. Other members – Nil

- Minutes of the previous 61<sup>st</sup> meeting held on the 8 March 2023 were approved 4 on the 19 April 2023 and distributed to the Committee members on 12 April 2023.
- Matters Arising Nil 5
- 6 Quarterly Environmental Monitoring Report – February to May 2023 Harry Mills went through the Report with the following comments: **1.1 Weather Station** – Above normal rainfalls this year and winds were average. 2.0 Air Quality – Thanks to the wet weather – air quality was good for this period with no complaints received. 3.2 Noise Complaints – No complaints received this quarter.

**4.2 Blast complaints** – one received – mild vibration on 23.03.2023.

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

# 6.0 Complaints Summary - two received

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

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

# 7.0 General Business

**7.1** Murray O'Keefe, Operations Manager – Werris Creek provided an update on the mine closure planning.

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

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

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

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

- At this stage -75% of workers have elected to take up relocation with WHC to another operation. The remaining 25% will seek redundancy
- Of the workers seeking to continue with WHC at another operation, the vast majority have indicated they are not going to relocate with their family they will continue to live locally to Werris Creek (Quirindi, Willow Tree or Tamworth etc) and stay in company accommodation whilst on shift.

# 7.2 Reportable cracks on wall road discovered on 22.02.2023

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

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

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



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

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



- 8 Next Meeting Date and Time Wednesday, 8 November 2023 at 9:30AM
  Venue - Board Room, Werris Creek Coal Mine – a site visit may be considered as part of this meeting.
- 9 Meeting closed at 11:00AM

Meeting Minutes Approved:

Michael J Silver OAM Independent Chairperson

Date: 22 August 2023



# WERRIS CREEK COAL PTY LTD

# QUARTERLY ENVIRONMENTAL MONITORING REPORT

# February - May 2023

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

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

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

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#### 1.0 METEOROLOGY

### 1.1 WEATHER STATION

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

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



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#### 2.0 **AIR QUALITY**

#### 2.1 HVAS (PM<sub>10</sub>) and TEOM (PM<sub>10</sub> & PM<sub>2.5</sub>)

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 ( $\mu$ g/m<sup>3</sup>) of air sampled. In addition, WCC operates a Tapered Element Oscillating Microbalance (TEOM) monitor in Werris Creek measuring real time PM<sub>10</sub> and PM<sub>2.5</sub> (particulate matter less than 2.5 microns) dust levels. Dust monitoring locations are identified in Figure 1.

#### 2.1.1 **Monitoring Data Results**

PM<sub>10</sub> – HVP98 "Kyooma"

TSP – HVT98 "Kyooma"

The average results for the last four months are provided in the table below.										
							<b>CRITERIA</b> (µg/m <sup>3</sup> )			
MONITORING LOCATION	24Hr Maximum (μg/m³)	FEB 2023 (μg/m³)	MAR 2023 (μg/m³)	<b>ΑΡ</b> <b>2023</b> (μg/m³)	<b>2023</b> (μg/m³)	<b>2023 AVG</b> (μg/m³)	Annual	24hr		
PM <sub>2.5</sub> - TEOM92 "Werris Creek"	11.5	6.2	6.4	-0.4	5.5	4.5	-	-		
PM <sub>10</sub> – TEOM92 "Werris Creek"	27.2	12.2	13.4	3.5	11.6	10.3	30	50		
PM <sub>10</sub> – HVP20 "Tonsley Park"	48.5	10.7	11.8	8.2	22.2	12.9	30	50		
PM <sub>10</sub> - HVP1 "Escott"	20.2	8.1	8.7	4.7	8.7	7.7	30	50		
PM <sub>10</sub> – HVP11 "Glenara"	39.9	10.0	10.2	10.2	23.5	12.9	30	50		

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. . .

Yellow Bold – Elevated dust level.

6.3

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#### **Discussion - Compliance / Non-Compliance** 2.1.2

All TSP, PM<sub>10</sub> and PM<sub>2.5</sub> dust results were within criteria during the period.

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#### 2.2 WERRIS CREEK MINE DEPOSITED DUST

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

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6.2

17.4

6.5

15.9

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#### 2.2.1 Monitoring Data Results

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

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

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

#### 2.2.2 Discussion - Compliance / Non-Compliance

All monthly dust deposition gauge results were below the annual criteria of 4.0 g/m<sup>2</sup>/month throughout the period with the exception of:

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

#### 2.3 AIR QUALITY COMPLAINTS

There were no dust complaints recorded during the period.

#### 3.0 NOISE

#### 3.1 OPERATIONAL NOISE

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

#### 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**.

#### 23<sup>rd</sup> Thursday, February 2023

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

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

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

#### 27<sup>th</sup> and 28<sup>th</sup> Monday-Tuesday, March 2023

	Location		Criteria dB(A) L <sub>eq</sub>	Evening/Night	Criteria dB(A) L <sub>eq</sub>
	Location	Day UD(A) Leq 15min	15min	dB(A) L <sub>eq 15min</sub>	15min
А	<b>"Rosehill"</b> R5	Inaudible	35	Inaudible	35
В	West Quipolly (R7*, R8*,R9* & R22*)	Inaudible	40	Inaudible	40
С	Central Quipolly(R10*,R11*)	Inaudible	40	Inaudible	40
D	<b>"Hazeldene"</b> R24	Inaudible	37	Inaudible	37
Е	"Railway Cottage" R12	Inaudible	38	Inaudible	38
F	<b>"Talavera"</b> R96	Inaudible	38	Inaudible	37
Н	<b>"Kyooma"</b> R98	Inaudible#	35	Inaudible	35
Ι	Kurrara St, WC R57	Inaudible#	35	Inaudible	35
J	Coronation Ave, WC	Inaudible	35	Inaudible#	35
К	Alco Park (R21*)	Inaudible	40	23	40
L	West St, WC (R103)	Inaudible	35	Inaudible	35
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WC – Werris Creek; \* - Private agreement in place with resident; Yellow Bold – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) Leq 15min while R9 is 37 dB(A) Leq 15min

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

#### 18<sup>th</sup> Tuesday, April 2023

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

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

#### 18<sup>th</sup> Thursday, May 2023

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

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

EEDDII	FEBRUARY 2023		ara" R11	"Kyoon	na" R98 Werris Cre		ek South R62	Werris Creek Mid R92	
FEDRUART 2025		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthl	y Average	0.12	99.0	0.94	100.3	0.74	100.2	0.39	98.0
Monthly	v Maximum	0.19	106.3	1.57	109.7	1.49	106.8	0.97	107.3
Annua	l Average	0.11	98.2	0.90	99.7	0.63	100.7	0.36	98.3
Cr	iteria	5	115	5	115	5	115	5	115
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

MAD	CH 2022	"Glen	ara" R11	"Kyoon	na" R98	Werris Cre	ek South R62	Werris Creek Mid R92	
MARCH 2023		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Month	ly Average	0.08	101.0	0.68	99.5	0.50	99.9	0.29	99.4
Monthly	y Maximum	0.10	108.8	1.12	111.4	1.09	106.7	0.47	110.3
Annua	Annual Average		99.1	0.82	99.6	0.59	100.4	0.33	98.6
Cr	iteria	5	115	5	115	5	115	5	115
%	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

	ADRII 2023		ara" R11	"Kyoon	"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
APRIL 2025		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	
Month	ly Average	0.10	102.6	0.72	102.3	0.41	101.4	0.19	101.4	
Monthly	/ Maximum	0.12	111.6	1.41	106.3	0.72	106.4	0.31	106.0	
Annua	l Average	0.10	100.0	0.80	100.3	0.54	100.7	0.30	99.3	
Cr	iteria	5	115	5	115	5	115	5	115	
% >115dB(L)	Rolling 12-mo Average	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
or 5mm/s	YTD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

MAY 2023		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
		mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)	mm/s	dB(L)
Monthly Average		0.13	99.4	0.79	100.5	0.48	101.5	0.29	98.4
Monthly Maximum		0.26	105.0	1.70	103.8	0.68	109.7	0.51	106.3
Annual Average		0.10	99.9	0.80	100.3	0.53	100.8	0.30	99.1
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 95<sup>th</sup> percentile limits (115dB(L) and 5mm/s).

## 4.2 BLAST COMPLAINTS

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

#### 5.0 WATER

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

#### 5.1 GROUND WATER

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

#### 5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

Site		March-2	3			May-23	
		mbgl	%		Site	mbgl	%
~	MW1	Dry			MW1	55.48	13%
20	MW2	33.96 -1%		) V	MW2	33.65	1%
ar V	MW3	14.93	1%	ar V	MW3	14.98	0%
nea	MW4B	13.20	3%	ues L	MW4B	12.97	2%
salt	MW5	7.60	0%	salt	MW5	7.80	-3%
Ba	MW6	13.59	3%	Bas	MW6	13.38	2%
rrie	MW27*	47.43	2%	rrie	MW27*	47.43	0%
Wei	MW36A	15.10	2%	We	MW36A	16.07	-6%
	MW36B	15.07	2%	_	MW36B	16.06	-6%
	MW8*	11.15	.15 -2%		MW8*	11.92	-6%
	MW10	8.82	-2%		MW10	8.51	4%
	MW14	11.35	3%		MW14	12.16	-7%
	MW17B*	8.30	-3%		MW17B*	8.76	-5%
salt	MW19A*	Pump over bore		sal	MW19A*	Pump over bore	
Ba	MW20*	Pump over bore		Ba	MW20*	Pump over bore	
errie	MW38A	8.45	1%	errie	MW38A	8.64	-2%
We	MW38B*	8.72	-1%	Me	MW38B*	8.75	0%
	MW38C*	Pump over bore			MW38C*	Pump over bore	
	MW38E*	7.05	-1%		MW38E*	7.07	0%
	MW41	4.32	-7%		MW41	4.57	-5%
	MW43	4.24	-4%		MW43	4.35	-3%
#1	MW24A*	11.43	-3%	#1	MW24A*	12.13	-6%
π	MW29*	9.85	-6%	"	MW29*	10.22	-4%
	MW12*	6.38	-5%		MW12*	6.88	-7%
	MW13*	4.71	-1%		MW13*	4.74	-1%
	MW13B*	3.56	-3%		MW13B*	3.65	-2%
	MW13D*	4.35	-4%		MW13D*	4.44	-2%
	MW15*	No Access			MW15*	No Access	
	MW16*	4.00	-7%		MW16*	4.13	-3%
m	MW17A*	2.88	-5%	L L L	MW17A*	3.08	-6%
luvi	MW18A*	2.30	-11%	luvi	MW18A*	2.32	-1%
AI	MW21A*	4.28	-15%	/ AI	MW21A*	4.81	-11%
lloc	MW22A*	3.84	-8%	lloc	MW22A*	3.93	-2%
Quip	MW22B*	3.96	-8%	Juip	MW22B*	4.04	-2%
-	MW23A*	3.67	-2%		MW23A*	3.63	1%
	MW23B*	3.96	-15%		MW23B*	3.95	0%
	MW26B*	3.38	-9%		MW26B*	3.74	-10%
	MW28A*	6.52	-21%		MW28A*	7.85	-17%
	MW32*	Pump over bore			MW32*	Pump over bore	
	MW40	4.28 -7%			MW40	4.55	-6%
	MW42	4.18	-4%		MW42	4.28	-2%
#²	MW34*	8.96	-2%	#²	MW34*	9.17	-2%

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

#### 5.1.2 Discussion - Compliance / Non-Compliance

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

### 5.2 SURFACE WATER

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

#### 5.2.1 Monitoring Data Results

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

#### 22<sup>nd</sup> & 23<sup>rd</sup> February 2023

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

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

#### 10<sup>th</sup> & 11<sup>th</sup> May 2023

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

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

#### 5.2.2 Discussion - Compliance / Non-Compliance

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

#### 5.3 SURFACE WATER DISCHARGES

#### 5.3.1 Monitoring Data Results

There were no discharge events between February and May 2023.

#### 5.3.2 Discussion - Compliance / Non-Compliance

No discharge events during reporting period.

#### 5.4 WATER COMPLAINTS

There were no water release complaints during the period.

#### 6.0 COMPLAINTS SUMMARY

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

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

# 7.0 GENERAL

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



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