WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
52nd Meeting of the Committee held on site at the Werris Creek Coal Mine
Wednesday, 11 March 2020 at 9:30am

The normal four monthly meeting will begin at 9:30am - A site tour will be available today.

Meeting opened at 9:40am.

Record of attendance

Michael Silver OAM	Deputy Independent Chairperson
Jane Bradford OAM	Independent Minute Taker
Rod Hicks	Werris Creek Coal - Operations Manager
Lynden Cini	Whitehaven Coal - Group Superintendent - Environment
Matt Hollis	Werris Creek Coal - Environmental Superintendent
Andrew Garrett	Whitehaven Coal - General Manager Community Engagement
Donna Ausling	Director of Environment – Liverpool Shire Council
Virginia Black	Councillor – Liverpool Shire Council
Lindsay Bridge	Community Representative – Phone No 0431 319 302
Noel Taylor	Community Representative
James O'Brien	Community Representative
Mike Lomax	Community Representative

Apologies
Gae Swain – Independent Chairperson;
Moved Lindsay Bridge, **seconded** Noel Taylor, THAT the apologies be accepted. CARRIED

Absent
Col Stewart OAM – noted

2 Declaration of Pecuniary or Other Interests –
Donna Ausling – non-pecuniary interest - Family business may have performed powerline work for Whitehaven Coal

3 New Matters for Discussion under General Business today
a) Tabled – Email received from Mr Peter Wills requesting response on water management at Werris Creek Coal plus Whitehaven Coal's response (24.01.2020)
b) Letters between Peter Wills and Chairperson Gae Swain (05.12.2019)
d) Tabled Peter Wills letters to Chairperson Gae Swain (20.02.2020)
c) Letter from Lindsay Bridge (Emily Caldwell – daughter).

4 Minutes of the Previous Meeting
Moved Donna Ausling, **seconded** Noel Taylor, THAT the Minutes of the previous meeting be accepted as a true and accurate record. CARRIED

5 Matters Arising - Nil

6 Environment Monitoring Report from 1 October 2019 – to 31 January 2020
1.1 Meteorology – Weather Station – finally good rains for period recorded – now in "green" drought – vastly improved conditions
2.1.1 Air quality Exceedances through September to January – Related to regional Dust Storms prior to rainfalls

2.2.1 DG2 “Cintra” had elevated deposited dust levels. Property is owned by Whitehaven and the mine is slowly moving north towards “Cintra”. Expect deposited dust levels to rise over time

2.3.1 No issues

3.1 Noise levels – no issues for the period

4.1 Blasting – below prescribed limits

5.1 Ground Water – as normal. Expect some potential for groundwater level increases at some monitoring locations during next reporting period following recent rainfall.

5.2 Surface Water – January finally had surface water – eased dust issues within the wider region as well.

5.3.1 Worth noting 143mm of rain was recorded in January at the mine site with a single storm event delivering approximately 100mm in a 3 hour window.

6.0 There were 2 complaints recorded during October 2019. Both complaints related to blasting.

Moved James O’Brien, **seconded** Lindsay Bridge**, THAT** the Environmental Monitoring Report be accepted. CARRIED

7 General Business

7.1 General discussion on safety performance, it was agreed updates of site Total Recordable Injury Frequency Rate (TRIFR) trends against industry indicators at the four monthly meetings would be beneficial for committee members.

Rod Hicks confirmed current TRIFR for WCC is 0 recorded injuries. This rate is considered favourably against open cut industry standards. WCC Currently have 138 full time equivalent employees onsite excluding contractors.

7.2 Alleged explosion at the mine on 12 October last after 1:00pm – *WCC personnel to check and report back for these Minutes*

Werris Creek Coal have reviewed blasting records and can confirm that no blast was undertaken on the 12 October 2019 at the Werris Creek Mine.

7.3 Water – who owns the licence *and how much water is used each time the irrigator operates and how many irrigation events have occurred since it started?*

Werris Creek Coal holds Water Access Licences for the Werris Creak Coal Mine. The quantity of water used by the centre pivot varies, however, measured application is approximately 7.4ML (average) per operational event from 2017 – November 2019.

7.4 Email from Mr Peter Wills plus response from Whitehaven Coal discussed briefly.

Mike Silver (Deputy Independent Chair) reminded the meeting that the request to sit in on these Committee Meetings was discussed at the 46th CCC meeting on the 7th March 2018 and it was a unanimous agreement **THAT** no-one outside the Committee would be permitted to sit in on any future CCC meetings. There was no reason to further discuss this situation again.

7.5 Letters between Peter Wills and Chairman Gae Swain were of a personal nature and not connected to this Community Consultative Committee.

WCC would respond to the matters of relevance (to WCC) within the most recent letter from Mr Wills on the 21st January 2020 to the CCC Chair in due course but note that many of the issues have been dealt with in previous correspondence. A copy of the correspondence from Mr Wills on the 21st January was provided to all CCC members present at the meeting.

7.6 Letter from Lindsay Bridge – queried three explosions on 25 January last. WCC Response: The dates claimed of alleged explosion was after a significant storm event that deposited more than 100mm to the local area. The mine site was completely shut down due to damage from stormwater and lightning.

During the clean-up and recovery of the open cut pit, water being drained from behind a bench windrow was released onto the hot underground workings area creating a rising cloud of steam, water vapour and dry dusty material that was rapidly disturbed by the sudden movement of the released water over the area. There were no explosions at the Werris Creek Mine on this date.

Next meeting Wednesday, 8 July 2020 at 9:30am – same venue and to include a mine tour of Werris Creek Coal (weather permitting).

Meeting closed at 10:40AM

Multiple members undertook a mine site tour reviewing areas of interest.

Copy to all Committee Members
The Minutes will also be posted on the Whitehaven Coal Website

_____ _____

Michael Silver OAM 17 March 2020
Deputy Independent Chairperson

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

October, November, December 2019 and January 2020

This Environmental Monitoring Report covers the period 1st October 2019 to 31st January 2020 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

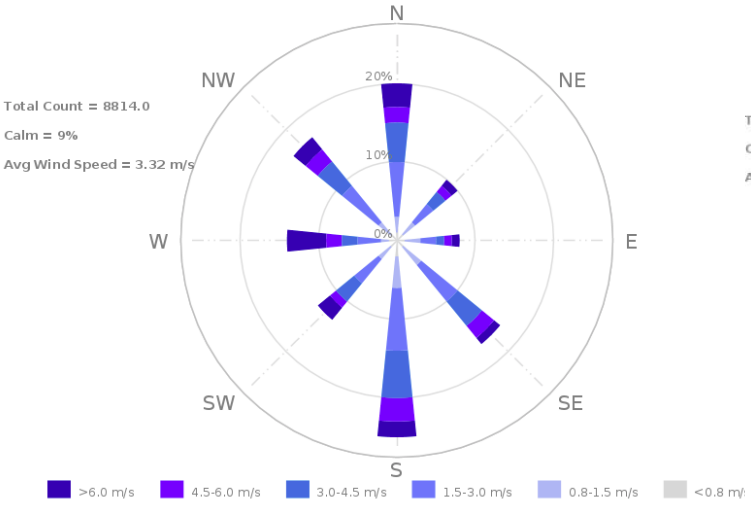
1.0 METEOROLOGY 3
1.1 WEATHER STATION 3
2.0 AIR QUALITY 3
2.1 HVAS (PM_{10}) and TEOM (PM_{10} & $PM_{2.5}$) 4
2.1.1 Monitoring Data Results 4
2.1.2 Discussion - Compliance / Non Compliance 4
2.2 WERRIS CREEK MINE DEPOSITED DUST 4
2.2.1 Monitoring Data Results 4
2.2.2 Discussion - Compliance / Non Compliance 5
2.3 QUIRINDI TRAIN DUST DEPOSITION 5
2.3.1 Monitoring Data Results 5
2.3.2 Discussion - Compliance / Non Compliance 5
2.4 AIR QUALITY COMPLAINTS 6
3.0 NOISE 6
3.1 OPERATIONAL NOISE 6
3.1.1 Monitoring Data Results 6
3.1.2 Discussion - Compliance / Non Compliance 7
3.2 Noise complaints 7
4.0 BLASTING 7
4.1 BLAST MONITORING 7
4.1.1 Monitoring Data Results 7
4.1.2 Discussion - Compliance / Non Compliance 8
4.2 BLAST COMPLAINTS 8
5.0 WATER 8
5.1 GROUND WATER 8
5.1.1 Monitoring Data Results 8
5.1.2 Discussion - Compliance / Non Compliance 9
5.2 SURFACE WATER 9
5.2.1 Monitoring Data Results 9
5.2.2 Discussion - Compliance / Non Compliance 10
5.3 SURFACE WATER DISCHARGES 10
5.3 WATER COMPLAINTS 10
6.0 COMPLAINTS SUMMARY 11
7.0 GENERAL 11

1.0 METEOROLOGY

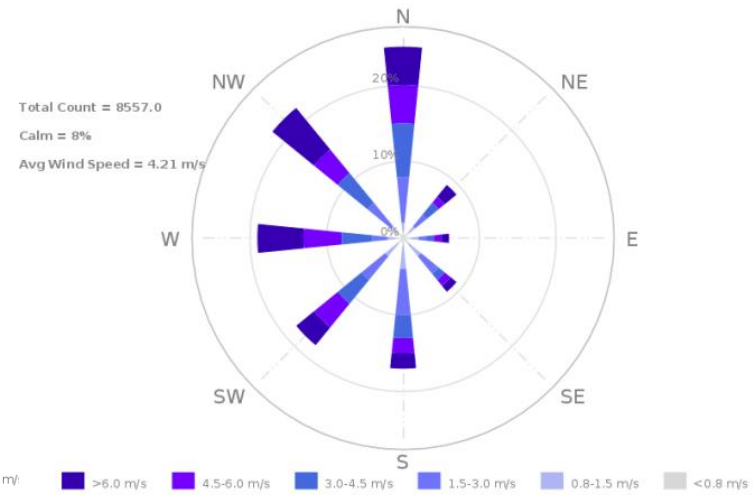
1.1 WEATHER STATION

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. Monthly rainfall totals in June, July, August and September 2019 were all lower than the historical average. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the S in October and December, N/ NW in November and N and S in January 2020.

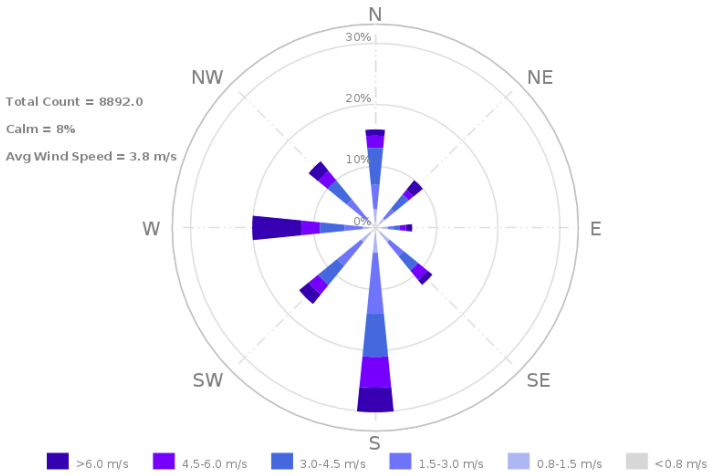
Month	Rainfall *(mm)*			
	Onsite	***Historical Average***	***2019 Total***	***2020 Total***
October 2019	8.2	49.2	210.2	
November 2019	46.0	83.3	256.2	
December 2019	4.0	86.3	260.2	
January 2020	143.4	67.1		143.4



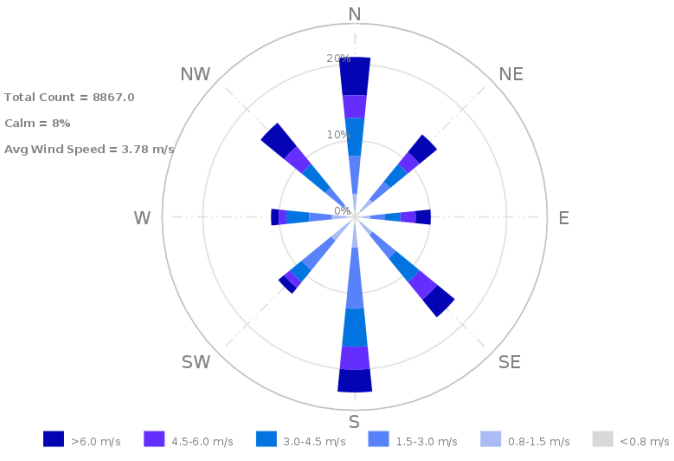
October 2019



November 2019



December 2019



January 2020

2.0 AIR QUALITY

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

WCC operates five High Volume Air Samplers (HVAS) measuring particulate matter less than 10 micron (PM_{10}) and total suspended particulate (TSP) matter at four sites. 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 ($\mu g/m^3$) 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 micron) dust levels. Dust monitoring locations are identified in **Figure 1**.

Monitor Location	Daily Maximum ($\mu g/m^3$)	Oct 2019 ($\mu g/m^3$)	Nov 2019 ($\mu g/m^3$)	Dec 2019 ($\mu g/m^3$)	2019 Average (g/m^2/month)	Jan 2020 ($\mu g/m^3$)	2020 Average (g/m^2/month)	Criteria ($\mu g/m^3$)	
								Annual	Daily
$PM_{2.5}$ – TEOM92 "Werris Creek"	153.7	13.2	30.8	48.5	11.8	21.2	21.2	8	25
PM_{10} – TEOM92 "Werris Creek"	329.7	34.4	63.2	71.6	27.0	44.7	44.7	30	50
PM_{10} – HVP20 "Tonsley Park"	130	39.4	58.3	77.1	33.0	57.7	57.7	30	50
PM_{10} - HVP1 "Escott"	83	37.1	34.8	45.2	22.0	33.4	33.4	30	50
PM_{10} – HVP11 "Glenara"	166	46.4	44.1	67.7	32.3	44.3	44.3	30	50
PM_{10} – HVP98 "Kyooma"	128	36.6	52.1	72.4	25.0	44.2	44.2	30	50
TSP – HVT98 "Kyooma"	223	73.4	106.0	119.8	51.0	97.2	97.2	90	-

2.1.1 Monitoring Data Results

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

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 with the exception of the following;

Date	Site
▪ 17, 23 October 2019, 22 and 28 November 2019 and 10, 16 (PM10 – HVP98 "Kyooma" only) and 22 December	▪ PM10 – HVP20 "Tonsley Park" ▪ PM_{10} – HVP98 "Kyooma" ▪ PM_{10} - HVP1 "Escott" ▪ PM_{10} – HVP11 "Glenara"
▪ 7, 8, 17, 24, 26, 26, 29 and 31 October 2019 ▪ 1, 7, 8, 12, 13, 17, 18, 19, 21, 22, 23, 26, 27, 28, 29 and 30 November ▪ 1, 2, 3, 7, 8, 9, 10, 11, 12, 17, 18, 19, 20, 21, 22, 23 and 24 December 2019	▪ PM_{10} – TEOM92 "Werris Creek"

All elevated results tabled above were reported to the Department, and on all occasions the results were attributed to high regional elevated dust levels and not associated with operations at WCC.

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.

Monitor Location	Oct 2019 (g/m^2/month)	Nov 2019 (g/m^2/month)	Dec 2019 (g/m^2/month)	2019 Average (g/m^2/month)	Jan 2020 (g/m^2/month)	2020 Average (g/m^2/month)	Annual Criteria (g/m^2/month)
DG1 "Escott"	1.6	1.6	5.2	1.3	0.9	0.9	4.0
DG2 "Cintra"	3.2	2.9	8.9	5.0	6.5	6.5	4.0
DG3 "Eurunderee"	3.6	1.7	4.3	2.5	3.3	3.3	4.0

Monitor Location	Oct 2019 (g/m²/month)	Nov 2019 (g/m²/month)	Dec 2019 (g/m²/month)	2019 Average (g/m²/month)	Jan 2020 (g/m²/month)	2020 Average (g/m²/month)	Annual Criteria (g/m²/month)
DG5 "Railway View"	2.8	2.7	5.6	2.7	2.3	2.3	4.0
DG9 "Marengo"	2.9	2.2	4.2	1.6	82.8	82.8	4.0
DG11 "Glenara"	2.3	2.4	3.7	1.7	3.0	3.0	4.0
DG14 "Greenslopes"	1.5	1.1	4.0	1.6	2.1	2.1	4.0
DG15 "Plain View"	1.6	1.3	3.0	1.3	2.3	2.3	4.0
DG17 "Woodlands"	2.3	1.8	6.9	1.7	2.8	2.8	4.0
DG20 "Tonsley Park"	2.0	1.2	3.5	2.0	2.1	2.1	4.0
DG22 "Mountain View"	2.9*	1.5	3.0	1.6	3.7	3.7	4.0
DG24 "Hazeldene"	2.9	1.9	3.8	2.4	18.4*	NA	4.0
DG34 8 Kurrara St	32.4	26.0	3.7	11.5	1.6	1.6	4.0
DG62 Werris Creek South	1.6	1.1	4.5	1.3	1.9	1.9	4.0
DG92 Werris Creek Centre	1.8	1.5	3.7	1.4	1.5	1.5	4.0
DG96 "Talavera"	NS	NS	NS	NS	NS	NA	NA
DG98 "Kyooma"	0.3	1.5	3.3	1.0	2.0	2.0	4.0
DG101 "Westfall"	2.5	6.4*	5.7	2.3	3.1	3.1	4.0
DG103 West Street	1.8	1.1	4.0	1.5	1.9	1.9	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) which had high results in December 2019 and January 2020 and a rolling 2019 average above criteria.

DG9 (Marengo) in January 2020 had one anomalous high dust deposition measurement. Deposited dust levels remained low at nearby gauges, indicating a localised source of dust, unrelated to activities at Werris Creek Coal Mine. DG34 (8 Kurrara St) had high dust levels in October and November 2019 and a rolling 2019 average above criteria. Consistently high dust levels at this gauge and low deposited dust levels at nearby gauges indicate a localised source of dust generation, unrelated to activities at Werris Creek Coal Mine.

2.3 QUIRINDI TRAIN DUST DEPOSITION

2.3.1 Monitoring Data Results

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

Monitor Location	Oct 2019		Nov 2019		Dec 2019		2019 Average (g/m²/month)	Jan 2020		2020 Average (g/m²/month)
	g/m²/month	% Coal	g/m²/month	% Coal	g/m²/month	% Coal		g/m²/month	% Coal	
DDW30	7.2	5%	2.7	NR	5.2	<10%	2.5	3.0	10%	3.0
DDW20	6.2	<5%	2.3	NR	3.7	<10%	2.3	2.6	10%	2.6
DDW13	3.2	<5%	2.4	NR	4.3	<10%	2.3	2.7	10%	2.7
Train Line										
DDE13	6.1	<5%	2.7	NR	4.4	30%	2.3	2.9	<10%	2.9
DDE20	8.5	5%	3.3	NR	4.3	20%	2.4	2.6	10%	2.6
DDE30	3.4	<5%	2.3	NR	1.3	<10%	2.2	1.6	<10%	1.6

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); NS – Not Sampled, bottle and funnel smashed. NR- change in service provider microscopic analysis not conducted as result <4

2.3.2 Discussion - Compliance / Non Compliance

Overall, the dust fallout levels adjacent to the train line are low, well below the impact assessment criteria nominated by the EPA of 4.0 g/m²/month and comparable to the levels monitored around Werris Creek Coal Mine. Coal contributions to the dust fraction remain generally low.

2.4 AIR QUALITY COMPLAINTS

There was 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 three months are outlined in the table below. Noise monitoring locations are identified in **Figure 2**.

23rd Wednesday and 24th Thursday October 2019

Location		Day dB(A) $L_{eq\ 15min}$	Criteria dB(A) $L_{eq\ 15min}$	Evening/Night dB(A) $L_{eq\ 15min}$	Criteria dB(A) $L_{eq\ 15min}$
A	**"Rosehill"** R5	Inaudible#	35	Inaudible#	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	Inaudible#	40	26#	40
C	**Central Quipolly**(R10*,R11*)	22#	40	22#	40
D	**"Hazeldene"** R24	Inaudible#	37	Inaudible	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible	38	25	37
H	**"Kyooma"** R98	Inaudible	38	30	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

28th Thursday and 29th Friday November 2019

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	24#	35	Inaudible#	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	Inaudible#	40	Inaudible#	40
C	**Central Quipolly**(R10*,R11*)	Inaudible#	40	22#	40
D	**"Hazeldene"** R24	Inaudible	37	Inaudible	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible#	38	25	37
H	**"Kyooma"** R98	21#	40	Inaudible#	40
I	**Kurrara St, WC** R57	Inaudible#	35	Inaudible	35
J	**Coronation Ave, WC**	Inaudible#	35	Inaudible	35
K	**Alco Park** (R21*)	Inaudible#	40	Inaudible#	40
L	**West St, WC** (R103)	Inaudible#	35	Inaudible#	35

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

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

20th Friday and 30th Monday December 2019

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	20	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	21#	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible#	38

F	**"Talavera"** R96	Inaudible	38	28#	37
H	**"Kyooma"** R98	20#	40	27	40
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

Tuesday 21st and Wednesday 22nd January 2020

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	20	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	26#	37
H	**"Kyooma"** R98	20#	40	22	40
I	**Kurrara St, WC** R57	Inaudible#	35	Inaudible#	35
J	**Coronation Ave, WC**	Inaudible#	35	Inaudible#	35
K	**Alco Park** (R21*)	Inaudible#	40	Inaudible	40
L	**West St, WC** (R103)	Inaudible	35	Inaudible#	35

WC – Werris Creek; * - Private agreement in place with resident; **Yellow Bold** – Elevated noise; # Adverse weather with wind >3m/s, temperature inversions >+12°C/100m or >2m/s and >0°C/100m; 1 – R22 criteria is 36 dB(A) $L_{eq\ 15min}$ while R9 is 37 dB(A) $L_{eq\ 15min}$
NM- Denotes Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified

3.1.2 Discussion - Compliance / Non Compliance

Noise from Werris Creek Coal Mine was inaudible at a high percentage of the monitoring sites during the quarter. Throughout the period, Werris Creek Coal Mine adjusted mining operations and shut down equipment at various times to reduce noise generation potential in response to noise levels measured at the real time noise monitors.

3.2 Noise complaints

There were no noise complaints recorded during the period.

4.0 BLASTING

During the reporting period there was a total of forty-two 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.

Oct 2019		"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		0.10	101.3	0.65	102.2	0.40	101.8	0.25	103.6
Monthly Maximum		0.25	110.0	1.09	110.3	0.62	110.4	0.55	110.3
Annual Average		0.10	100.00	0.55	101.12	0.33	101.88	0.20	100.43
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.83%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	0.00%	0.00%

Nov 2019		"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	98.6	0.49	100.8	0.28	99.8	0.19	98.3
Monthly Maximum		0.22	103.7	1.02	106.7	0.62	108.5	0.60	106.7
Annual Average		0.10	99.88	0.54	101.09	0.33	101.69	0.20	100.23
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%

Dec 2019		"Glenara" R11		"Kyooma" R98		Werris Creek South R62		Werris Creek Mid R92	
		mm/s	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*
Monthly Average		0.07	97.7	0.53	102.3	0.25	100.1	0.14	100.6
Monthly Maximum		0.25	102.9	2.46	107.0	0.73	104.1	0.45	104.5
Annual Average		0.09	99.69	0.54	101.19	0.32	101.56	0.19	100.26
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.39%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.78%	0.00%	0.00%

Jan 2020		"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		0.10	97.5	0.59	101.5	0.42	98.6	0.23	97.9
Monthly Maximum		0.20	100.9	1.19	110.5	1.13	105.7	0.53	105.0
Annual Average		0.10	97.50	0.59	101.50	0.42	98.61	0.23	97.93
Criteria		5	5	115	5	115	5	115	5
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.79%	0.00%	0.00%
	Reporting Year	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 two blast complaints during the period.

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 on the 6, 7 and 8 November 2019 and 9, 10, and 13 January 2020. Groundwater monitoring locations are identified in **Figure 4**.

5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

Site		November-19	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	57.95	1%
	MW3	20.92	-1%
	MW4B	19.53	-1%
	MW5	13.89	-1%
	MW6	16.29	0%
	MW27*	Dry	
	MW36A	23.99	-3%
	MW36B	23.98	-3%
Werrie Basalt	**MW8***	21.28	-1%
	MW10	14.52	-1%
	MW14	20.52	-6%
	MW17B*	16.69	-4%
	MW19A*	No access	
	MW20*	23.15	-1%
	MW38A	14.32	-4%
	MW38B*	10.53	-1%
	MW38C*	24.92	-3%
	MW38E*	12.09	-1%
	MW41	10.72	-1%
	MW43	9.50	-1%
#1	**MW24A***	18.24	-12%
	MW29*	14.93	-1%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	7.10	-4%
	MW13D*	6.6	0%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.66	-1%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	5.01	-2%
	MW23B*	4.84	17%
	MW26B*	11.04	-1%
	MW28A*	Dry	
	MW32*	Pump over bore	
	MW40	10.77	-1%
	MW42	9.39	-1%
#2	**MW34***	12.56	-2%

Site		January-20	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	57.64	1%
	MW3	21.05	-1%
	MW4B	19.75	-1%
	MW5	14.04	-1%
	MW6	16.28	0%
	MW27*	55.76	
	MW36A	24.61	-3%
	MW36B	24.60	-3%
Werrie Basalt	**MW8***	21.36	0%
	MW10	14.54	0%
	MW14	21.42	-4%
	MW17B*	17.05	-2%
	MW19A*	No access	
	MW20*	23.26	0%
	MW38A	15.78	-9%
	MW38B*	10.64	-1%
	MW38C*	24.69	1%
	MW38E*	12.28	-2%
	MW41	10.91	-2%
	MW43	9.66	-2%
#1	**MW24A***	18.43	-1%
	MW29*	15.05	-1%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	7.30	-3%
	MW13D*	Dry	
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.82	-2%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	5.23	-4%
	MW23B*	5.06	-4%
	MW26B*	11.31	-2%
	MW28A*	Dry	
	MW32*	Pump over bore	
	MW40	10.94	-2%
	MW42	9.56	-2%
#2	**MW34***	12.85	-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 general sustained or decreased water levels during October 2019 and January 2020.

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 on the 26th November 2019. 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.

26th November 2019

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	Dry	Dry	Dry	Dry	Dry- grassy basin
SB9	Dry	Dry	Dry	Dry	Dry- clay basin

SB10	Dry	Dry	Dry	Dry	Dry
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Dry. Gravel bed.
QCD	Dry	Dry	Dry	Dry	Dry. Creek bed.
WCU	Dry	Dry	Dry	Dry	Dry
WCD	8.32	1620	38	<5	pH and EC increased, TSS and O&G unchanged. Pooled- not 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

5.2.2 Discussion - Compliance / Non Compliance

Quarterly surface water monitoring was undertaken on 26 November 2019 with all onsite and offsite sampling undertaken in dry conditions represented by low or dry pools, which reflected on water quality. 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 discharge event during late January 2020 following above average rainfall during the month. Sampling conducted within the Quipolly and Werris Creek systems was also during the discharge in accordance with licence conditions.

Sample Date	Dam	pH	EC	TSS	O&G	Compliance	Type	5 Day Rain
25/1/2020	**SB2**	7.69	215	**18300**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather - Uncontrolled	110.2
25/1/2020	**SB9**	6.89	266	**83**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather - Uncontrolled	110.2
25/1/2020	**SB10**	7.72	120	**900**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather - Uncontrolled	110.2
25/1/2020	**SB18**	7.42	178	**3580**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather - Uncontrolled	110.2
Criteria		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

Total Suspended Solids (sediment) levels were slightly increased however sampling results were in compliance with WCC's Environmental Protection Licence due to the rainfall trigger of 39.2mm. There were no impacts observed or monitored in Quipolly and Werris Creek systems as a result of the water discharge events.

5.4 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

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

#	Date	Issue	Complaint	Investigation	Action Taken
616	9/10/2019	Blast	Complainant left a voice mail message on the EO phone wanting to register a complaint regarding the blast and wind direction causing dust from the blast heading towards town. Complainant also requested blast results to be sent through.	EO confirmed blast was within compliance Limits. Wind during time of blast was within allowed parameters.	EO emailed a copy of the results to the complainant.
617	21/10/2019	Blast	Complainant left a voice mail message on the EO phone advised they felt the blast at their residence. Requested results via email.	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.

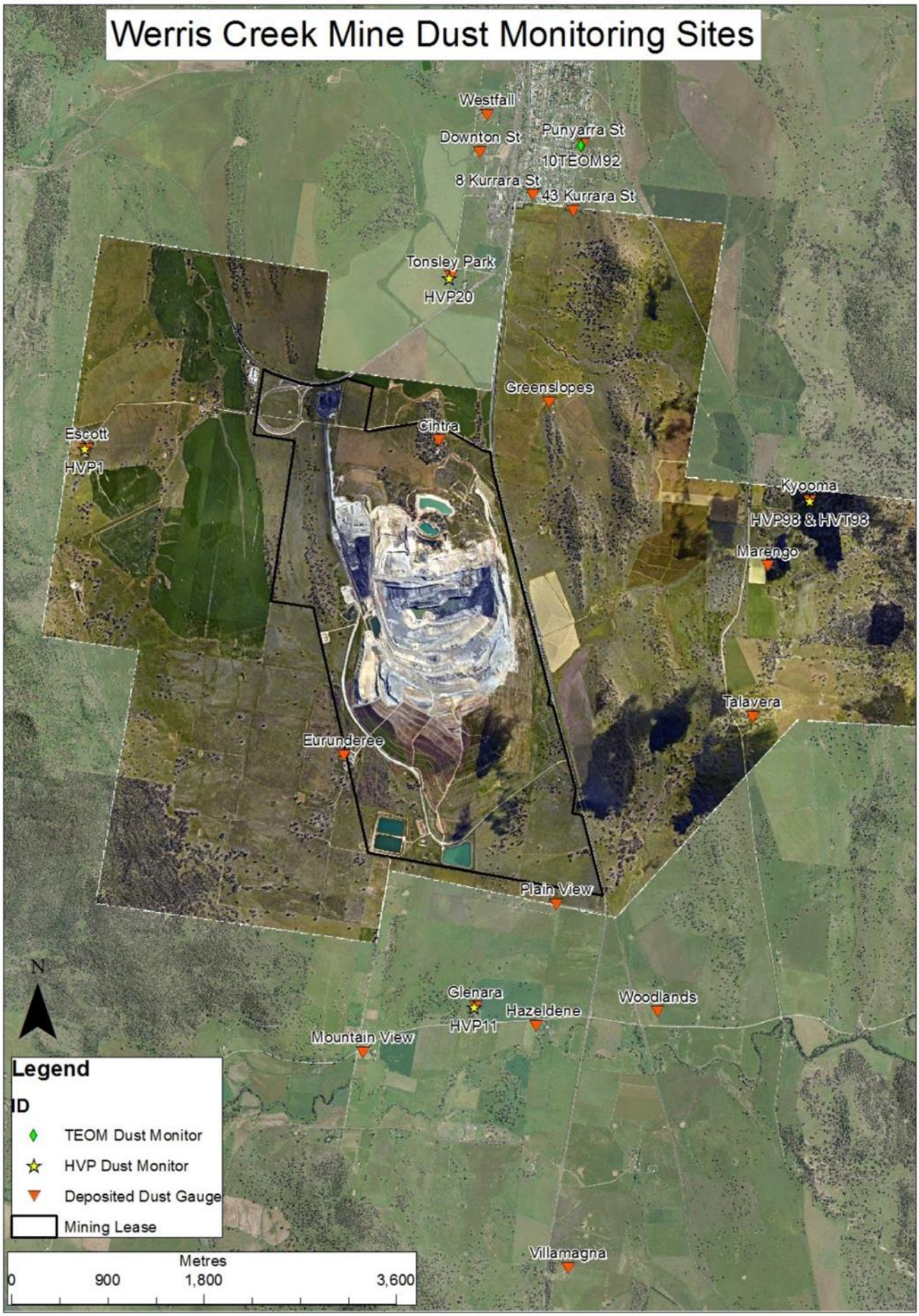


Figure 1 – WCC Dust Monitoring Locations

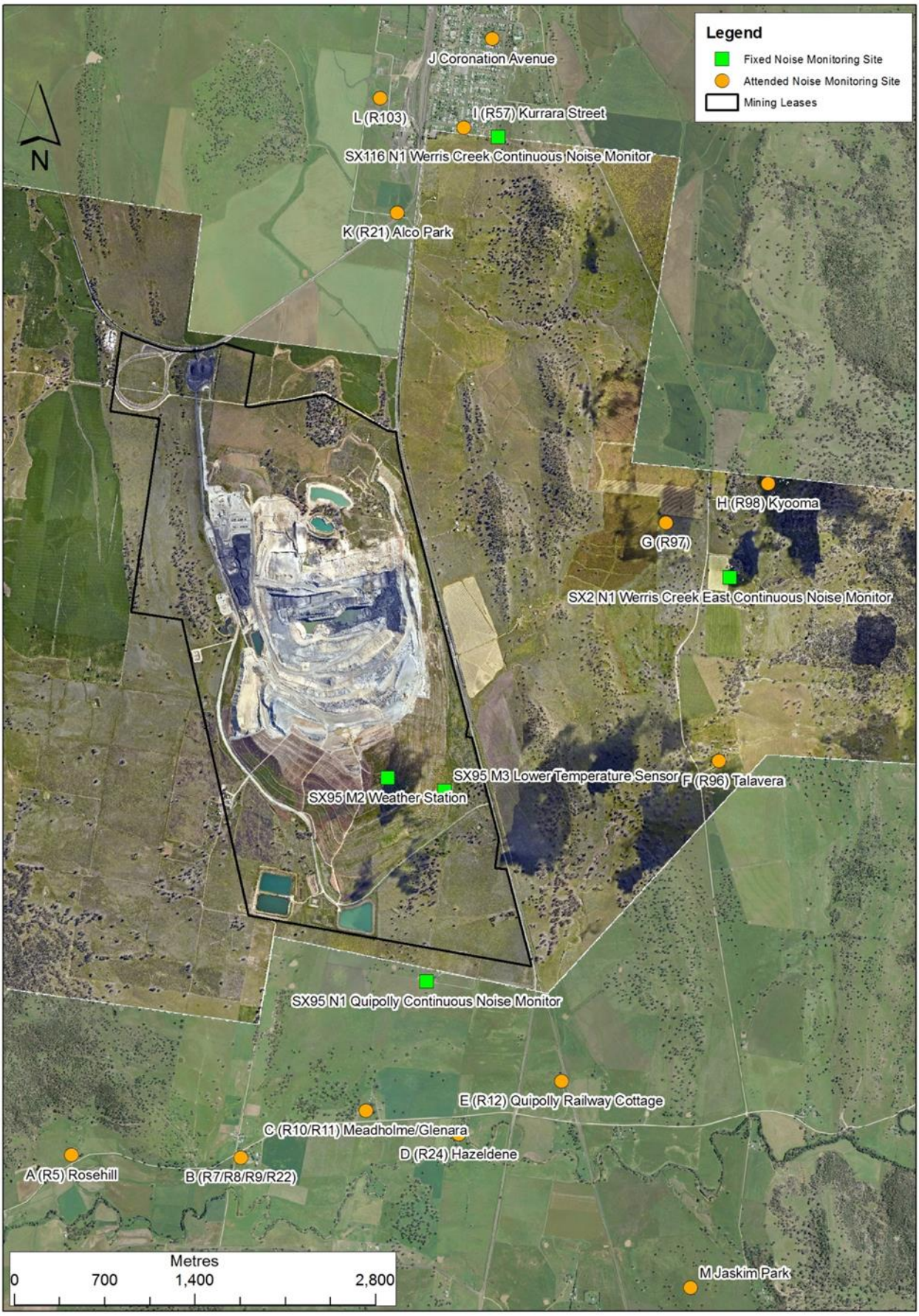


Figure 2– WCC Noise Monitoring Locations

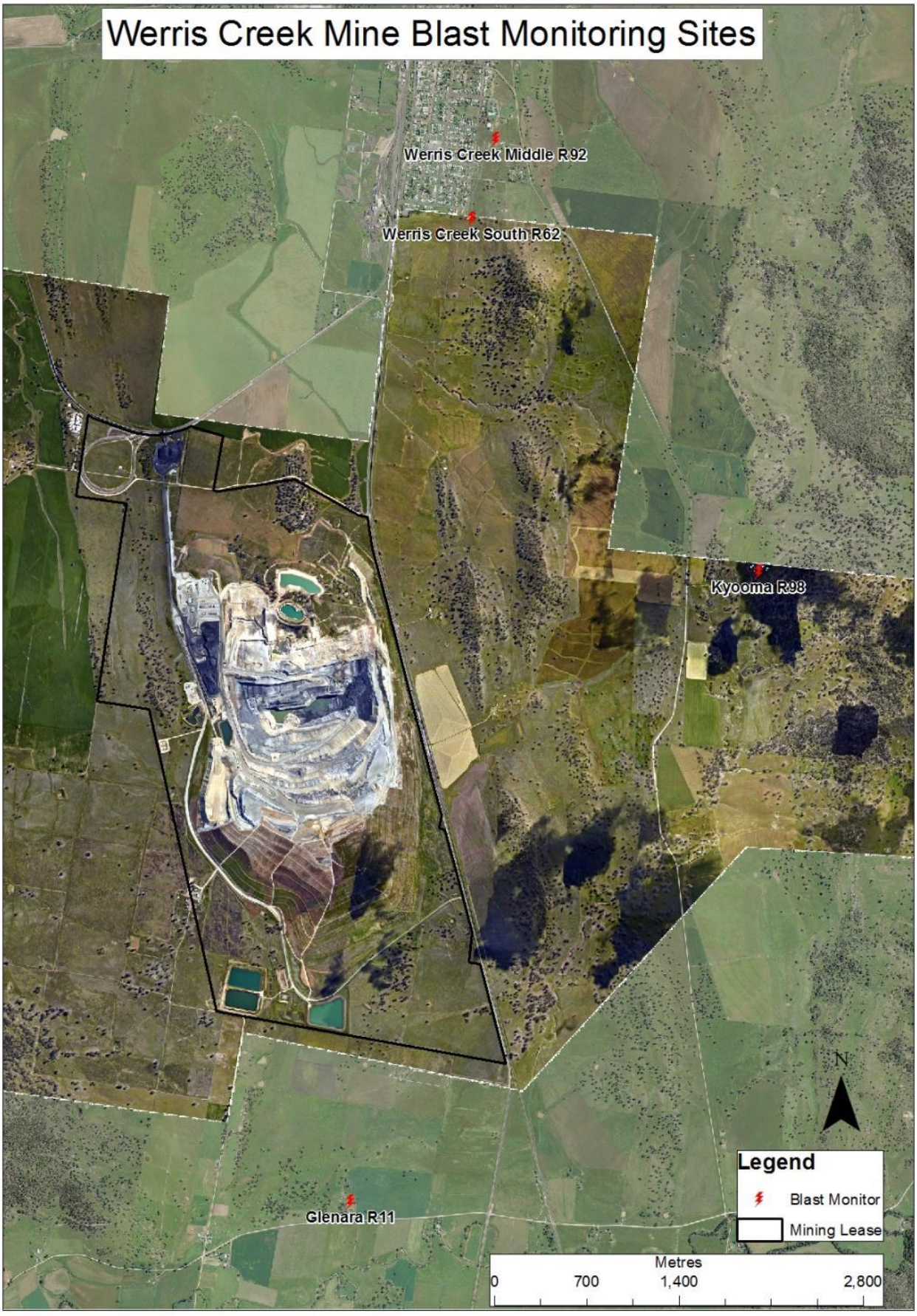


Figure 3 – WCC Blast Monitoring Locations

Figure 4 – WCC Groundwater Monitoring Locations

Figure 5 – WCC Surface Water Monitoring Locations

From: Peter Wills [mailto:peterjameswills@hotmail.com]
Sent: Wednesday, 6 November 2019 11:26 AM
To: Gae Swain <gaeswain4@gmail.com>
Subject: Questions raised at the Whitehaven AGM, regarding Werris Creek operations

Attention Mrs Gae Swain, Chair Werris Creek CCC

Please see below query's that I would like answered in the November Werris Creek CCC meeting.

I recently attended the Whitehaven AGM in Sydney and I publicly asked the full Board of Whitehaven Coal a few questions regarding water management at the Werris Creek mine site, to which both the Chair Mark Vaile and CEO Paul Flynn partially responded to the queries I raised, out of my own interest, and on the community's behalf.

As a neighbour to the Werris Creek mine site, I and many of the mines mutual neighbours, and the broader community have gained very little faith in the honesty and transparency of the Company and Community Consultative Committee regarding Water management at the Werris Creek site. I spoke directly to the board of the discrepancy that many in the community see in usage of the pivot irrigator and it's calculable water usage, and the information we have received historically via the CCC.

In an early 2018 Werris Creek CCC meeting it is noted that Lynden Cini advised that the newly installed Pivot irrigator uses "4 ML per watering" and that "WHC own the infrastructure and pay for the costs as required"

Throughout this intensifying drought neighbours have sighted the irrigator "constantly" going round and round watering crops. Discussions between neighbours and local experts in matters relating to irrigation have mentioned that the irrigator would actually use in the vicinity of 3 times the stated water usage, disputing the original amount advised from Mr Cini.

I have a series of questions I would like the Company to answer in an open and transparent manner to the community, for peace of mind in a currently highly pressurised drought environment.

1) At the AGM I challenged the water usage numbers provided of the Whitehaven owned pivot irrigator, to which the meeting Chair Mark Vaile said they will take that question on notice.

I would like to see an answer from Whitehaven now that the Chairman has been asked and deferred the answer.

Please advise the actual water usage from Dec 2017 install. Please indicate the number of irrigator rotations with water usage for each rotation.

2) Mr Flynn mentioned the "primary use of water is dust suppression" in relation to the mines onsite use.

If this water is being dispersed in its final use into a concentrated area of distribution, that being via the irrigator onto the property 'Plain View' is there any concern for increased levels of coal dust on each crop planted with the lack of rainfall, or building up in the soil over a small concentrated area, over a longer period of time?

What does the testing regime of this water quality that moves from the pit to irrigator entail.

3) Paul Flynn mentioned at the AGM that when the abundance of water and its dispersement was debated and finally accepted by Government authority that it could be used offsite "by other neighbouring people" Mr Flynn said "There were very few people who came forward and take that water, and principally it involved the investment in the infrastructure". Mr Flynn went on to say "If others would like to take that step to invest in infrastructure, lets have a chat". Mr Flynn's final comments to the AGM in my line of questioning was "the onus is on us to convey that water to those who need it"

With an unprecedented number of Quipolly basin water users investing to secure deeper water resources in the form of drilling new bores, some unsuccessfully, can any of the Quipolly basin water users source this void/seepage water via tanker transport to fill existing investment infrastructure such as dams or tanks for stock usage, or in the least as an on farm source of water for risk management moving into the high risk fire season this summer?

4) Mr Flynn told the AGM in regards to the use of the irrigator "What that farmer uses that water for is up to that farmer" "We've given that water to that farmer for use on that property" "If they're not using that in an efficient fashion, the onus is not on us to ensure that"

Can Whitehaven please explain what "given" means in terms of this relationship. Are you on-charging for this water?

Can Whitehaven please explain why they don't think they need to ensure the water they intercept in the pit shouldn't be used in the most efficient manner, in the current climate of severe lack of water availability in the Quipolly basin.

If Mr Flynn thinks its up to the farmer to decide how he or she uses that water, Whitehaven won't mind neighbouring farmers filling water storage options will they?

When I recently attended a Water NSW irrigators forum in Werris Creek, local water irrigation zones were reviewed for recent usage, and reviewed for the sustainable security of water availability in the each zone. When the Quipolly aquifer zone was mentioned it was dismissed for discussion by the room "as there's no water left in that zone because of the mine". This is the perceived view of the farming community of your company and your mine.

This letter is an opportunity for the Werris Creek mine and the CCC to regain some semblance of reputation by clearly and concisely answering these important questions that our community have.

Regards

Peter Wills

0417 333 669

WHITEHAVEN COAL

24 January 2020

Peter Wills
Via Email: peterjameswills@hotmail.com

Dear Mr Wills

I refer to your e-mail to the Chair of the Werris Creek Community Consultative Committee (CCC), Mrs Gae Swain, dated 6 November 2019 regarding water management at the Werris Creek Mine. While the subject of your e-mail was unable to be considered in detail at the 51st CCC meeting held on 13 November 2019, please see responses addressing your questions below.

Water usage from the Whitehaven-owned pivot irrigator

A metered total of 248.04ML has been irrigated from December 2017 to October 2019. The number of rotations in a watering event is variable and is dependent on the set application rate of the pivot irrigator.

Water quality at Plainview

Water used on the irrigation area is pumped from water retained in storage dams, not directly from the pit. This process is in place to ensure satisfactory water quality with low levels of suspended solids in the water applied to the approved irrigation area. Soil quality characteristics of the irrigation area are sampled, analysed and reported by an independent, specialist consultant. This information is provided to the EPA as required under conditions of EPL 12290. EPL 12290 also includes details of the water testing regime and is available at www.whitehavencoal.com.au

Water supply charges

There is no on-charge for the supply of surplus water to the offsite agricultural irrigation system.

Potential water sharing with other water users and efficient water use in the context of the drought

The initial concept for the current irrigation scheme was put to the Werris Creek CCC by local Quipolly residents as an opportunity to undertake beneficial reuse of surplus water. Following extensive departmental consultation from 2015 to 2017, Whitehaven pursued approval for the supply of surplus water to the "Plainview" irrigation system, as outlined in the Water Management Plan available at www.whitehavencoal.com.au. This decision was based on advice from DPIE that any offsite supply and use of surplus water would need to consider a number of control measures and risk management factors. We consider the current water irrigation system to be the best option for meeting all required control measures and risk management obligations in an efficient and cost effective manner.

We are always open to considering ideas put to us by community members. We also recognise the drought continues to place significant pressure on a range of stakeholders in our broader community, including other industries and water users. As you are aware, the Werris Creek Mine and our other operations directly support hundreds of jobs and make a major contribution to local economic prosperity, going some way to offset the economic impacts of drought. Nonetheless Whitehaven Coal and the Werris Creek Mine are not immune to the impacts of this severe drought and we currently do not have water surplus to operational requirements.

If you have any further questions please do not hesitate to contact Matt Hollis, Werris Creek Coal Environmental Superintendent, at mhollis@whitheavencoal.com.au.

Jane Bradford

From: Peter Wills <peterjameswills@hotmail.com>
Sent: Thursday, 20 February 2020 5:11 PM
To: Gae Swain
Cc: Matt Hollis; Jane Bradford
Subject: Re: Talent List for Community Consultative Committees

Flag Status: Flagged

Mrs Swain

My concern is over the political influence of National party membership and it's stated public policy positions, influencing you as chair of a independent CCC, and your being able to put those political sides of your life to one side, when sitting as an unqualified Chair of the CCC that deals with many political sensitive issues.

My concern does not relate to religion or rotary clubs, so my interest in those aspects are limited.

Peter Wills

Sent from my iPhone

> On 19 Feb 2020, at 9:47 pm, Gae Swain <gaeswain4@gmail.com> wrote:
>
> Attention Mr Peter Wills.
>
> In reply to your question raised regarding my perceived "pecuniary" interest regarding my membership of a political party, (and therefore my unsuitability for the role of Chair of the CCC) I personally rang the Department and requested a clarification from their perspective.
>
> I have received their clarification responding that there is nowhere in the CCC Guidelines which prohibits my holding the position as Chair. The Department also assured me that they would be responding to your direct question to them on this matter as well as possible further queries you may have raised with them.
>
> I would like to point out that I also do not need to declare that my husband is a member of the Rotary Club of Gunnedah or the fact that I hold positions in my local church. Obviously the interests I do declare – that being my son and son-in-law being employees of Whitehaven are the appropriate interests that I need to declare.
>
> Trusting this clarifies your question regarding my suitability for the CCC Chair.
>
> Gae Swain
> Chair,
> Werris Creek Coal CCC
>
> **From:** Peter Wills [mailto:peterjameswills@hotmail.com]
> **Sent:** Thursday, 30 January 2020 11:12 AM
> **To:** Gae Swain <gaeswain4@gmail.com>; Matt Hollis <MHollis@whitehavencoal.com.au>
> **Subject:** Fwd: Talent List for Community Consultative Committees

Please table my correspondence to the Planning Minister for discussion at the next CCC meeting, to complement the point I have raised in prior emails to the chair.

Sent from my iPhone

Begin forwarded message:

> **From:** Peter Wills <peterjameswills@hotmail.com>
> **Date:** 21 January 2020 at 9:53:03 pm AEDT
> **To:** "rob.stokes@parliament.nsw.gov.au" <rob.stokes@parliament.nsw.gov.au>
> **Cc:** "pittwater@parliament.nsw.gov.au" <pittwater@parliament.nsw.gov.au>
> **Subject: Talent List for Community Consultative Committees**
>
> Attention Minister Stokes
>
> Dear Mr Stokes
>
> I wish to raise to your direct and personal attention the Chairperson of the Werris Creek Community Consultative Committee, Mrs Gae Swain, and her non disclosed and I deem pecuniary interest of her political party membership, that in my mind render her position as an "Independent Chairperson", of an impartial coal mining community committee, completely untenable.
>
> Please see attached disclosure from 2016 "Part F - Candidate Information Sheet" submitted by Mrs Roslyn Gae Swain when candidate for the Gunnedah Shire Council, confirmation is noted of her political party membership of The National Party.
>
> Upon consultation of the Code of Conduct in the CCC Guidelines, I feel Mrs Swain in the very least should be disclosing her party membership. Mrs Swain already often notes that she has a son and son-in-law working for Whitehaven Coal, supporting her broader family, for the interest of disclosure at each meeting.
>
> I believe political party membership of the "Independent Chair", especially when it remains undisclosed to committee members, is not within the spirit of the Guideline standards.
>
> Mrs Swain has now been Chairperson of this committee for over 8 years, and does not appear on the 2017 talent pool list of Independent Chairs, and appears to be "Grandmothered" into this role, at the expense of community engagement and consultation, when more experienced and appropriate Chairs as sighted in the approved list.
>
> Quoting the website direct:
> "In 2017, the Department sought expressions of interest from suitably qualified and experienced people across NSW to act as independent chairpersons of CCCs."
>
> https://www.planning.nsw.gov.au/Assess-and-Regulate/Development-Assessment/Community-Consultative-Committees/Chairpersons

With many wide ranging and complex issues surrounding the Werris Creek Coal Mine, many of which are highly politicised, I, and many in the community have very little faith remaining with the openness and transparency of this CCC and its functionality and ability to deal with the important and detailed issues, especially with the current Chair in place.

With the current chair remaining, when more appropriate qualified talent exists on a specialist list, with our particular chair conspicuously absent from this talent accreditation, our community engagement will remain a unqualified process, that will remain compromised until resolved, leaving the community with zero faith in the entire process.

You attention to this matter would be very broadly appreciated by the local community.

Regards

Peter Wills
Direct neighbour to Whitehaven Coal Mine Werris Creek

Home address:
1 Moffatt St
Breeza NSW 2381

0417 333 669

Jane Bradford

From: Emily Caldwell <emilybridge3895@hotmail.com>
Sent: Saturday, 22 February 2020 11:44 AM
To: jbmail@monelu.com
Subject: Re: Reply to Mr Peter Wills letter from Whitehaven Coal - (from Lindsay Bridge)

Flag Status: Flagged

Dear WCCC members,

If the mine or its operator can irrigate crops with this water, so can the 13 Quipolly water users who have lost their bores. That gully, which the mine has interrupted, has been the environment for at least 192 years of our history. Therefore to restore the environment is to put this natural flow into this gully.
Water varies in streams due to drought of which poisonous, undrinkable water which kills fish is natural. Mine water due to rain falling into the pit is very acceptable.
I believe many in the community, including Quipolly water users who have lost this water supply, would also find this answer unacceptable.
I must disagree with Mr Wills, I find that coal dust in the water is carbon farming with all its benefits and therefore cannot accept his reply. I side with our chairperson, Mrs Gae Swain, in that I also have been guilty of handing out Nationals how-to-vote cards at Werris Creek. Hardly a secret, as I am quite well known and have been doing this for some time. I hope I may be forgiven for if Mrs Swain goes, so must I.
Whitehaven management says they "currently do not have water supplies for operational requirements". The community during the drought could see the irrigation and therefore concluded that you did have surplus during the time. Due to present rainfall, I believe you still have this surplus.
For discussion: on the 25th of January, after the local cloud burst, between about 8:30 and 9:00am, there were 3 explosions from the northern end of the pit. I was directly opposite on the Werris Creek road at the time. This was also witnessed by a member of the community about 3km away. I believe these were unscheduled explosions, 3 separate black clouds occurred with an estimated height of about 100m.

Regards,
Lindsay Bridge

Sent from Mail for Windows 10

Matt Hollis

From: Gae Swain <gaeswain4@gmail.com>
Sent: Thursday, 5 December 2019 12:24 PM
To: 'Peter Wills'
Cc: Matt Hollis
Subject: RE: 379 Payne's Road, Quipolly

Report This Email

Attention Mr Peter Wills

Dear Mr Wills
In response to your queries I have contacted the company for responses and provide them below -

"Whitehaven Coal do not have any interest in this property (379 Paynes Road) and have no immediate plans to increase the current approved irrigation area. Please see the current Werris Creek Coal Project Approval and Water Management Plan located on the Company website for further information".

The following protocol applies to the release of the minutes –

"Within one week of a meeting, the independent chairperson must distribute the draft minutes to all community members.
Committee members have one week to provide their feedback to the independent chairperson.
Within 2 weeks of receiving this feedback the independent chairperson must finalise the minutes in consultation with the members and to ensure the proponent publishes them on its website."

Our last meeting was held on 13th November, and therefore have the timeframe of minutes to be finalised and presented on the website by 11th December.

Gae Swain, Chairperson of Werris Creek Coal CCC.

From: Peter Wills [mailto:peterjameswills@hotmail.com]
Sent: Tuesday, 3 December 2019 9:00 PM
To: Gae Swain <gaeswain4@gmail.com>
Subject: 379 Payne's Road, Quipolly

Attention Mrs Swain

Chair of Werris Creek Coal Community Consultative Committee

Mrs Swain

Can Whitehaven Coal Werris Creek please urgently advise if any arrangements have been made or promises of irrigation water with the new private landholders of "379 Paynes Road, Quipolly", a 189 acre block of land, shown here below in red outline, that borders alongside mine land and the exisiting 230m pivot irrigator paddock, that is Whitehaven land owned land, the property named "Plainview".

The property "379 Payne's Road" has just changed hands to a private new owner, for approx $2500 an acre, with a run down cottage, zero considerable property improvements, significant bore/ water issues like many other neighbours, unimproved land that has never been ploughed or planted with crop, and a shared fence line with the Werris Creek coal mine.. It's been run as cattle country exclusively to the best of the

neighbours knowledge, when water has been sufficient enough. I genuinely and sincerely congratulate the prior owners who have suffered many water woes in the recent 5+ years, in their miraculous sale price.

The story that has been alleged to me is that the mine will be setting up another irrigator on this privately owned land, and supplying it excess pit water. Can you advise what if any process the mine may be exploring, if this is the case, to enable this water to be transferred from mine owned land, in a differing irrigation zone, to private land, in the "Quipolly zone".

Can Whitehaven Coal please advise how the last modification was processed to enable excess pit water to be used on Whitehavens own land "Plainview" as this usage wasn't obviously part of the original EIS process and approval. Was this advertised for locals knowledge and ability to write a submission of support or rejection.

What process is underway for this potential additional irrigation development.

Kind Regards
Peter Wills
0417 333 669

Sent from my iPhone

Matt Hollis

From:	Peter Wills <peterjameswills@hotmail.com>
Sent:	Tuesday, 21 January 2020 8:53 PM
To:	Gae Swain
Cc:	Matt Hollis; Steve O'Donoghue
Subject:	Questions Werris Creek Coal Mine CCC
Attachments:	cid2FFC85CE-53C1-4787-B8FA-D10D9251C755.pdf; ATT00001.htm

Report This Email

Attention Mrs Swain,
Chairperson of Werris Creek Coal Mine CCC.

I have a series of questions that I require the Werris Creek CCC to answer in a swift and transparent manner.

I will be furnishing community reps of my query for follow up in the next meeting.

1) Can Werris Creek Coal please advise when Coal Movement records will be disclosed on the website for the year ending 2018, and 2019.

Please advise why the 2018 movements hasn't been updated on the website for more than a year.

2) Please confirm, as is the general practice of other Community Consultative Committees, and the Dept Guidelines, that every Community Rep on Werris Creek CCC has an alternative representative pre-confirmed and authorised ready to represent should the need occur at short notice.

In addition please confirm that these people are kept up to date with documentation and agendas prior to meetings, to keep the community representation, as best and well informed across the issues as possible prior to possible meeting attendance.

With meetings now only every 4 months, we need the best informed and knowledgeable representatives as possible to fully represent the community interest.

3) Please advise a status update and timeline of meetings of Whitehaven Coal
Werris Creek and the NRAR (National Resources Access Regulator) investigators into the pivot irrigator water use.

Some concerned community members who have raised issues direct with the regulator have already had informal briefing discussions face to face with staff from NRAR.

Please place this item on the agenda for all forthcoming meetings for a full update for transparency and confidence building in the community of the satisfactory engagement of Whitehaven with this serious regulatory investigation.

4) Please advise the current status of the relationship with the pivot irrigator operator.

We note the pivot irrigator does not appear to be currently in use as frequently as before The crop appears to be in peril of being lost.

What is the current excess water situation on site in light of this status change.

5) Can Whitehaven Coal Werris Creek please confirm for the record, and note on the minutes of the next CCC meeting, the points I raised in an email to the company and CCC Chairperson on 3/12/19:

5a)
Can Whitehaven Coal Werris Creek please urgently advise if any arrangements have been made or promises of irrigation water with the new private landholders of "379 Paynes Road, Quipolly", a 189 acre block of land, that borders alongside mine land and the exisiting 230m pivot irrigator paddock, that is Whitehaven land owned land, the property named "Plainview".

5b)
The property "379 Payne's Road" has just changed hands to a private new owner, for approx $2500 an acre, with a run down cottage, zero considerable property improvements, significant bore/ water issues like many other neighbours, unimproved land that has never been ploughed or planted with crop, and a shared fence line with the Werris Creek coal mine.

The story that has been alleged to me is that the mine will be setting up another irrigator on this privately owned land, and supplying it excess pit water. Can you advise what if any process the mine may be exploring, if this is the case, to enable this water to be transferred from mine owned land, in a differing irrigation zone, to private land, in the "Quipolly zone".

5c)
Can Whitehaven Coal please advise how the modification was processed to enable excess pit water to be used on Whitehavens own land "Plainview" as this usage wasn't obviously part of the original EIS process and approval.

Was this advertised for locals knowledge and ability to write a submission of support or rejection.

6) Can Whitehaven Coal CCC please answer my querys emailed on 6/11/19, placed now over 2 months ago, in full, prior to the next CCC, and disclose these answers in the next CCC minutes.

> From: Peter Wills [mailto:peterjameswills@hotmail.com]
> Sent: Wednesday, 6 November 2019 11:26 AM
> To: Gae Swain <gaeswain4@gmail.com>
> Subject: Questions raised at the Whitehaven AGM, regarding Werris Creek operations
>
> Attention Mrs Gae Swain, Chair Werris Creek CCC
>
> Please see below query's that I would like answered in the November Werris Creek CCC meeting.
>
> I recently attended the Whitehaven AGM in Sydney and I publicly asked the full Board of Whitehaven Coal a few questions regarding water management at the Werris Creek mine site, to which both the Chair Mark Vaile and CEO Paul Flynn partially responded to the queries I raised, out of my own interest, and on the community's behalf.

As a neighbour to the Werris Creek mine site, I and many of the mines mutual neighbours, and the broader community have gained very little faith in the honesty and transparency of the Company and Community Consultative Committee regarding Water management at the Werris Creek site. I spoke directly to the board of the discrepancy that many in the community see in usage of the pivot irrigator and it's calculable water usage, and the information we have received historically via the CCC.

In an early 2018 Werris Creek CCC meeting it is noted that Lynden Cini advised that the newly installed Pivot irrigator uses "4 ML per watering" and that "WHC own the infrastructure and pay for the costs as required"

Throughout this intensifying drought neighbours have sighted the irrigator "constantly" going round and round watering crops. Discussions between neighbours and local experts in matters relating to irrigation have mentioned that the irrigator would actually use in the vicinity of 3 times the stated water usage, disputing the original amount advised from Mr Cini.

I have a series of questions I would like the Company to answer in an open and transparent manner to the community, for peace of mind in a currently highly pressurised drought environment.

1) At the AGM I challenged the water usage numbers provided of the Whitehaven owned pivot irrigator, to which the meeting Chair Mark Vaile said they will take that question on notice.

I would like to see an answer from Whitehaven now that the Chairman has been asked and deferred the answer.

Please advise the actual water usage from Dec 2017 install. Please indicate the number of irrigator rotations with water usage for each rotation.

2) Mr Flynn mentioned the "primary use of water is dust suppression" in relation to the mines onsite use.

If this water is being dispersed in its final use into a concentrated area of distribution, that being via the irrigator onto the property 'Plain View' is there any concern for increased levels of coal dust on each crop planted with the lack of rainfall, or building up in the soil over a small concentrated area, over a longer period of time?

What does the testing regime of this water quality that moves from the pit to irrigator entail.

3) Paul Flynn mentioned at the AGM that when the abundance of water and its dispersement was debated and finally accepted by Government authority that it could be used offsite "by other neighbouring people" Mr Flynn said "There were very few people who came forward and take that water, and principally it involved the

investment in the infrastructure". Mr Flynn went on to say "If others would like to take that step to invest in infrastructure, lets have a chat". Mr Flynn's final comments to the AGM in my line of questioning was "the onus is on us to convey that water to those who need it"

With an unprecedented number of Quipolly basin water users investing to secure deeper water resources in the form of drilling new bores, some unsuccessfully, can any of the Quipolly basin water users source this void/seepage water via tanker transport to fill existing investment infrastructure such as dams or tanks for stock usage, or in the least as an on farm source of water for risk management moving into the high risk fire season this summer?

4) Mr Flynn told the AGM in regards to the use of the irrigator "What that farmer uses that water for is up to that farmer" "We've given that water to that farmer for use on that property" "If they're not using that in an efficient fashion, the onus is not on us to ensure that"

Can Whitehaven please explain what "given" means in terms of this relationship. Are you on- charging for this water?

Can Whitehaven please explain why they don't think they need to ensure the water they intercept in the pit shouldn't be used in the most efficient manner, in the current climate of severe lack of water availability in the Quipolly basin.

If Mr Flynn thinks its up to the farmer to decide how he or she uses that water, Whitehaven won't mind neighbouring farmers filling water storage options will they?

When I recently attended a Water NSW irrigators forum in Werris Creek, local water irrigation zones were reviewed for recent usage, and reviewed for the sustainable security of water availability in the each zone. When the Quipolly aquifer zone was mentioned it was dismissed for discussion by the room "as there's no water left in that zone because of the mine". This is the perceived view of the farming community of your company and your mine.

This letter is an opportunity for the Werris Creek mine and the CCC to regain some semblance of reputation by clearly and concisely answering these important questions that our community have.

7) I would like immediate clarification of Mrs Swains ability to continue to serve as "Independent Chair" of the Werris Creek Coal Mine CCC.

I notice on the 2016 "Part F - Candidate Information Sheet" (attached) submitted by Mrs Roslyn Gae Swain, when Mrs Swain ran for Gunnedah Shire Council, Mrs Swain notes in her registration, party membership of the National Party.

I would like Mrs Swain to reflect upon the Code of conduct in the CCC Guidelines, to ensure that her role as chairperson, and her then, and subsequent continued non-disclosure of political membership to this committee and community reps, is within the spirit of the Guideline standards.

Upon reading of the Declaration of Pecuniary and Non- Pecuniary interests in the CCC Guidelines, the document states examples of pecuniary interest.
Point 5 states, a Member representing a stakeholder group and the stakeholder group has received funding or grants from the proponent.

I would like Mrs Swain to explain this political interest with the Department of Planning, and the Werris Creek CCC representatives at the next CCC meeting, as disclosed in 2016 documents attached.

I feel this membership that Mrs Swain then allegedly held in 2016 should rule her ineligible to sit as an "Independent Chair" as reflected by the fact that her affiliated parties policy positions held by the National Party and it's members, wouldn't necessarily render Mrs Swain as an Independent candidate to Chair meetings completely impartially.

I would like full declaration of political donations that Whitehaven Coal has made to the Liberal/National Party Coalition parties over the last 4 years since Mrs Swain last publicly disclosed her party allegiances.

I've referred my query direct to the Planning Minister, Rob Stokes, for his personal consideration.

8) As a matter of some interest, and further consideration of the CCC broader discussion, I do recall being advised previously by this CCC and it's Chairperson that I personally couldn't attend as an observer of the Werris Creek CCC, whilst being direct mind neighbour, because it was in the public domain that I had been a member of the Greens.

For the record I more recently ran as an Upper House Independent candidate in the NSW 2019 March election. Coincidentally I did bump into and have a brief chat to Mrs Swain at Gunnedah who was handing out for the National Party in March 2019.

I request again, that I wish to attend the next CCC meeting simply as an observer status attendee. I understand from the Guidelines that this is a permissible activity, and the attendee is not able to interact with the meeting, and I request the Chairperson Mrs Swain recuse herself the conversation, step aside and appoint a temporary chair for this topic discussion, considering her political bias.

I request all community reps to abide by the spirit of community representation and transparency, and the spirit of the CCC Guidelines, and reflect upon direct interactions with the Department of Planning that have instigated changes to procedures of this committee operations over the last couple of years, to bring this CCC somewhat closer to the Guideline standard and minimum expectations of the community.

I have asked a very specific line of nuanced questioning that, with all due respect I would like to hear answered with all nuanced responses and interaction and engagement from the community representatives who also may wish to follow up with similar questions along the topic lines raised.

Not all response from a committee meeting is ever fully notated in the minutes, particularly in the limited (but slightly improving) fashion of the minutes that are delivered from this particular CCC. I will be in Quirindi the day of the next CCC meeting and ready to attend once this attendee request has been discussed at the beginning of the agenda.

Peter Wills
0417 333 669

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
53rd Meeting of the Committee held on site at the Werris Creek Coal Mine
Wednesday, 8 July 2020 at 9:30am

This normal four monthly meeting **could not be held on site** due to the COVID-19 Crisis.

Instead – The Notice of Meeting together with a proposed Agenda and the Minutes of the previous meeting (which had been approved) and the current Environment Report covering March, April, May and June 2020 were emailed or posted to the Werris Creek Coal Community Consultative Committee members as usual.

The Members of this Committee were asked to forward any questions / suggestions in relation to the Environment Report either by email or letter to the Chairperson – Gae Swain by close of business on Thursday, 9 July 2020.

On Friday, 10 July 2020 – Chairperson Gae Swain – instructed Jane Bradford – the Independent Minute Taker to create a Note about this Non-Meeting on Wednesday, 8 July 2020 and confirm that no questions / suggestions were received within the time frame.

These Notes will act as the record for this Non-Meeting on Wednesday, 8 July 2020.

Next Meeting Finally, this is also to remind Members of the Community Consultative Committee that the next meeting will be held on Wednesday, 11 November 2020 at 9:30AM
Venue to be confirmed (Werris Creek or Quirindi) closer to the time.

Copy to all Committee Members
These Notes will also be posted on the Whitehaven Coal Website

_____ _____

Gae Swain 14 July 2020
Independent Chairperson

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

February, March, April and May 2020

This Environmental Monitoring Report covers the period 1st February 2020 to 31st May 2020 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 3
1.1 WEATHER STATION 3
2.0 AIR QUALITY 3
2.1 HVAS (PM_{10}) and TEOM (PM_{10} & $PM_{2.5}$) 4
2.1.1 Monitoring Data Results 4
2.1.2 Discussion - Compliance / Non Compliance 4
2.2 WERRIS CREEK MINE DEPOSITED DUST 4
2.2.1 Monitoring Data Results 4
2.2.2 Discussion - Compliance / Non Compliance 5
2.3 QUIRINDI TRAIN DUST DEPOSITION 5
2.3.1 Monitoring Data Results 5
2.3.2 Discussion - Compliance / Non Compliance 5
2.4 AIR QUALITY COMPLAINTS 5
3.0 NOISE 6
3.1 OPERATIONAL NOISE 6
3.1.1 Monitoring Data Results 6
3.1.2 Discussion - Compliance / Non Compliance 7
3.2 Noise complaints 7
4.0 BLASTING 7
4.1 BLAST MONITORING 8
4.1.1 Monitoring Data Results 8
4.1.2 Discussion - Compliance / Non Compliance 8
4.2 BLAST COMPLAINTS 8
5.0 WATER 9
5.1 GROUND WATER 9
5.1.1 Monitoring Data Results 9
5.1.2 Discussion - Compliance / Non Compliance 9
5.2 SURFACE WATER 10
5.2.1 Monitoring Data Results 10
5.2.2 Discussion - Compliance / Non Compliance 10
5.3 SURFACE WATER DISCHARGES 10
5.3 WATER COMPLAINTS 11
6.0 COMPLAINTS SUMMARY 12
7.0 GENERAL 12

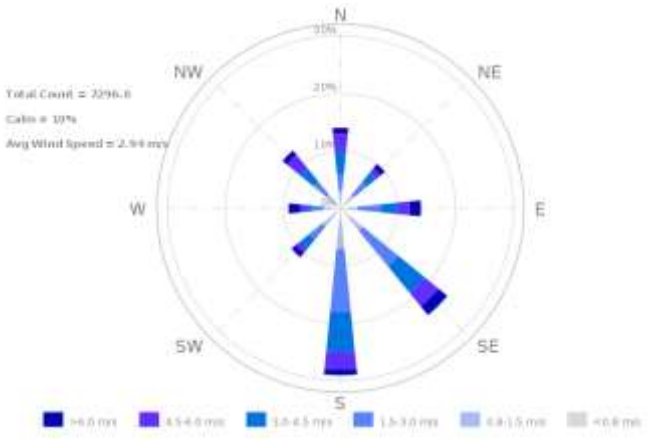
1.0 METEOROLOGY

1.1 WEATHER STATION

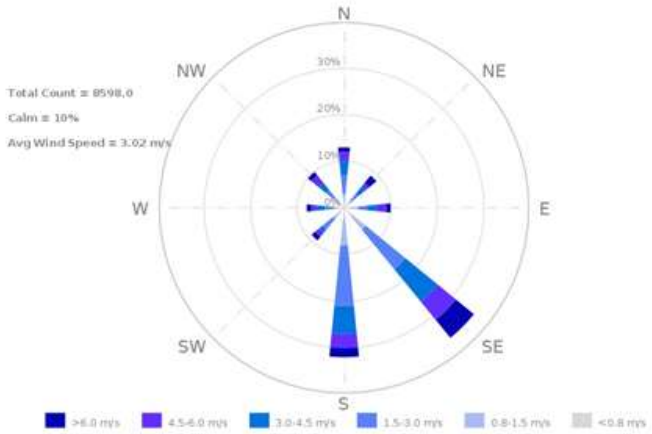
Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. The monthly rainfall total in February 2020 was lower than the historical average, but higher in March, April and May 2020. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the S in in February and May, SE in March and N in April 2020.

Month	Rainfall *(mm)*		
	Onsite	***Historical Average***	***2020 Total***
February 2020	35.8*	62.2	179.2
March 2020	77.6	56.6	256.8
April 2020	77.0	31.7	333.8
May 2020	52.4	34.2	386.2

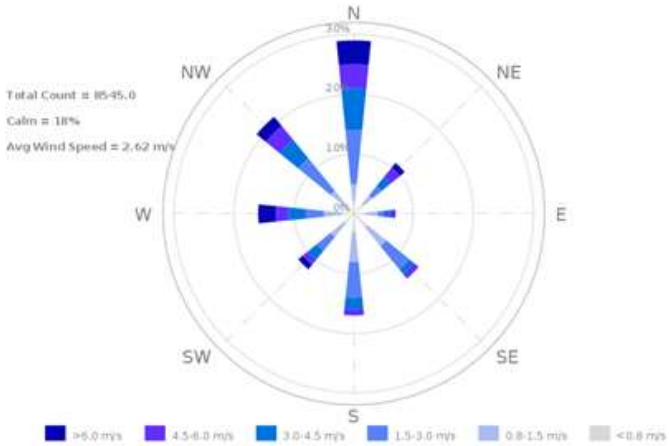
**Missing 7 days of data - no data received by monitor*



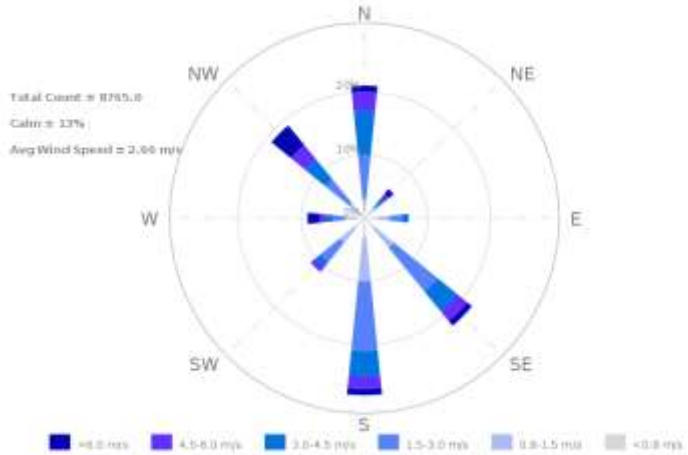
February 2020



March 2020



April 2019



May 2020

2.0 AIR QUALITY

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

WCC operates five High Volume Air Samplers (HVAS) measuring particulate matter less than 10 micron (PM_{10}) and total suspended particulate (TSP) matter at four sites. 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 ($\mu g/m^3$) 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 micron) 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.

Monitor Location	Daily Maximum ($\mu g/m^3$)	Feb 2020 ($\mu g/m^3$)	Mar 2020 ($\mu g/m^3$)	Apr 2020 ($\mu g/m^3$)	May 2020 ($\mu g/m^3$)	2020 Average (g/m^2/month)	Criteria ($\mu g/m^3$)	
							Annual	Daily
$PM_{2.5}$ – TEOM92 "Werris Creek"	24.4	13.1	7.9	11.1	8.8	12.4	8	25
PM_{10} – TEOM92 "Werris Creek"	66.0	22.4	12.2	15.5	12.5	21.5	30	50
PM_{10} – HVP20 "Tonsley Park"	46.0	22.9	14.1	14.1	11.6	24.1	30	50
PM_{10} - HVP1 "Escott"	19.3	9.8	8.8	9.8	2.8	13.6	30	50
PM_{10} – HVP11 "Glenara"	41.5	13.4	15.4	17.4	8.3	19.9	30	50
PM_{10} – HVP98 "Kyooma"	32.7	14.2	7.9	10.2	4.0	16.1	30	50
TSP – HVT98 "Kyooma"	78.2	33.0	19.5	21.6	11.4	36.6	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 with the exception of the following;

Date	Site
▪ 19 February 2020	▪ PM_{10} – TEOM92 "Werris Creek"

The recorded exceedance on 19 February 2020 had been affected by high regional dust levels reported by OEH during this 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.

Monitor Location	Feb 2020 (g/m^2/month)	Mar 2020 (g/m^2/month)	April 2020 (g/m^2/month)	May 2020 (g/m^2/month)	2020 Average (g/m^2/month)	Annual Criteria (g/m^2/month)
DG1 "Escott"	2.2	1.4	1.1	0.7	1.3	4.0
DG2 "Cintra"	11.4	8.1	5.5	7.6c	7.9	4.0
DG3 "Eurunderee"	4.0	1.4	1.5	2.1	2.5	4.0
DG5 "Railway View"	4.4	0.8	1.7	2.0	2.2	4.0
DG9 "Marengo"	6.4	0.9	0.6	0.8	18.3	4.0
DG11 "Glenara"	2.8	1.1	0.5	0.8	1.6	4.0
DG14 "Greenslopes"	0.9	0.6	0.7	0.6	1.0	4.0

Monitor Location	Feb 2020 (g/m²/month)	Mar 2020 (g/m²/month)	April 2020 (g/m²/month)	May 2020 (g/m²/month)	2020 Average (g/m²/month)	Annual Criteria (g/m²/month)
DG15 "Plain View"	4.1	1.3	1.1	0.8	1.9	4.0
DG17 "Woodlands"	4.4	1.4	1.0	1.1	2.1	4.0
DG20 "Tonsley Park"	3.1	1.8	1.3	2.8	2.2	4.0
DG22 "Mountain View"	3.3	1.5	1.0	1.4	2.2	4.0
DG24 "Hazeldene"	3.5	0.9	0.8	1.1	1.6	4.0
DG34 8 Kurrara St	3.4	1.2	0.8	0.8	1.6	4.0
DG62 Werris Creek South	5.2	1.0	0.6	0.6	1.9	4.0
DG92 Werris Creek Centre	2.1	0.7	0.6	0.4	1.1	4.0
DG96 "Talavera"	NS	NS	NS	NS	NS	NA
DG98 "Kyooma"	3.8	1.0	0.8	0.4	1.6	4.0
DG101 "Westfall"	3.5	1.0	1.1	1.0	1.9	4.0
DG103 West Street	3.0	1.0	1.2	3.1	2.0	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) had high results in February, March and April 2020 and a rolling 2020 average above criteria.
- DG5 (Railway View), DG15 (Plain View), DG17 (Woodlands) and DG62 (Werris Creek South) had a high result in February 2020
- DG9 (Marengo) had a high result in February 2020 and a rolling 2020 average above criteria due to an anomalous high dust level measurement in January 2020 that was unrelated to Werris Creek Coal Mine activities.

Elevated depositional dust levels in February 2020 were affected by high regional dust levels during the exposure period. DG2 (Cintra) has consistently high dust levels at this gauge and low deposited dust levels at other nearby isolated gauges indicate a localised source of dust generation, unrelated to activities at Werris Creek Coal Mine.

2.3 QUIRINDI TRAIN DUST DEPOSITION

2.3.1 Monitoring Data Results

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

Monitor Location	Feb 2020		Mar 2020		Apr 2020		May 2020		2020 Average (g/m²/month)
	g/m²/month	% Coal	g/m²/month	% Coal	g/m²/month	% Coal	g/m²/month	% Coal	
DDW30	3.9	<10%	1.3	20%	1.1	10%	1.2	20%	2.1
DDW20	4.4	<10%	0.9	30%	0.5	10%	0.9	<30%	1.9
DDW13	4.3	<10%	1.4	40%	1.4	10%	0.9	30%	2.1
Train Line									
DDE13	3.6	<10%	1.8	30%	1.0	<10%	0.6	20%	2.0
DDE20	3.9	<10%	3.6	20%	2.2	<10%	1.0	<10%	2.7
DDE30	1.9	<10%	0.2	30%	1.0	<10%	0.2	10%	1.0

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); NS – Not Sampled, bottle and funnel smashed. NR- change in service provider microscopic analysis not conducted as result <4

2.3.2 Discussion - Compliance / Non Compliance

Overall, the dust fallout levels adjacent to the train line are low, well below the impact assessment criteria nominated by the EPA of 4.0 g/m²/month and comparable to the levels monitored around Werris Creek Coal Mine. Coal contributions to the dust fraction remain generally low.

2.4 AIR QUALITY COMPLAINTS

There was 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**.

20th Thursday and 21st Friday February 2020

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*)	28#	40	Inaudible#	40
C	**Central Quipolly**(R10*,R11*)	20#	40	Inaudible#	40
D	**"Hazeldene"** R24	Inaudible#	37	Inaudible	37
E	**"Railway Cottage"** R12	Inaudible	38	22	38
F	**"Talavera"** R96	Inaudible	38	25	37
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 Tuesday March 2020

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	22	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	24	38	22	37
H	**"Kyooma"** R98	Inaudible	40	28#	40
I	**Kurrara St, WC** R57	Inaudible	35	Inaudible#	35
J	**Coronation Ave, WC**	Inaudible	35	Inaudible	35
K	**Alco Park** (R21*)	Inaudible	40	33	40
L	**West St, WC** (R103)	Inaudible	35	27	35

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

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

8th Wednesday and 9th Thursday April 2020

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	25	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	Inaudible#	40	29	40
C	**Central Quipolly**(R10*,R11*)	Inaudible	40	27	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#	40	Inaudible	40
I	**Kurrara St, WC** R57	Inaudible	35	Inaudible	35
J	**Coronation Ave, WC**	Inaudible#	35	Inaudible	35
K	**Alco Park** (R21*)	30#	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

Monday 11th and Tuesday 12th May 2020

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	29	35	Inaudible#	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	26	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	21	40	Inaudible#	40
I	**Kurrara St, WC** R57	Inaudible#	35	Inaudible	35
J	**Coronation Ave, WC**	Inaudible#	35	Inaudible	35
K	**Alco Park** (R21*)	29	40	26	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 thirty 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 2020		"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	99.3	0.70	99.9	0.36	100.2	0.31	99.5
Monthly Maximum		0.24	102.8	1.39	106.1	0.65	106.8	0.57	104.7
Annual Average		0.11	98.42	0.65	100.72	0.39	99.40	0.27	98.73
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.83%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	0.00%	0.00%

Mar 2020		"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	100.2	0.56	97.4	0.32	98.4	0.25	98.9
Monthly Maximum		0.17	106.4	1.25	103.3	0.63	106.0	0.52	106.3
Annual Average		0.10	99.02	0.62	99.62	0.37	99.06	0.26	98.77
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.80%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%	0.00%	0.00%

Apr 2020		"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	98.8	0.65	101.8	0.37	98.8	0.26	98.4
Monthly Maximum		0.21	104.0	1.14	108.3	0.63	104.4	0.38	106.8
Annual Average		0.11	98.96	0.62	100.16	0.37	98.99	0.26	98.69
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.39%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.78%	0.00%	0.00%

May 2020		"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		0.15	100.0	0.91	100.0	0.42	102.3	0.29	100.6
Monthly Maximum		0.33	104.8	1.90	102.5	0.62	109.6	0.52	103.3
Annual Average		0.11	99.17	0.68	100.12	0.38	99.65	0.27	99.07
Criteria		5	5	115	5	115	5	115	5
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	0.00%	0.00%	0.00%	0.00%	0.79%	0.00%	0.00%
	Reporting Year	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 two blast complaints (March 2020) during the 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 on the 5, 9, 10, 11, 12 March 2020 and 7, 8 and 13 May 2020. 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-20	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	57.69	0%
	MW3	21.05	0%
	MW4B	19.97	8%
	MW5	13.93	1%
	MW6	16.27	0%
	MW27*	54.39	3%
	MW36A	19.00	30%
	MW36B	19.05	29%
Werrie Basalt	**MW8***	20.68	3%
	MW10	14.38	1%
	MW14	18.54	16%
	MW17B*	14.77	15%
	MW19A*	Pump over bore	
	MW20*	23.22	0%
	MW38A	12.45	27%
	MW38B*	10.49	1%
	MW38C*	23.85	4%
	MW38E*	No access	
	MW41	10.46	4%
	MW43	8.99	7%
#[1]	**MW24A***	17.20	7%
	MW29*	12.24	23%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	5.90	24%
	MW13D*	5.52	20%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.20	8%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.39	19%
	MW23B*	4.36	16%
	MW26B*	10.98	3%
	MW28A*	Dry	
	MW32*	Pump over bore	
	MW40	10.49	4%
	MW42	8.88	8%
#[2]	**MW34***	10.67	20%

Site		May-20	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	53.20	8%
	MW3	21.16	-1%
	MW4B	20.05	8%
	MW5	14.11	-1%
	MW6	16.29	0%
	MW27*	53.20	2%
	MW36A	17.71	7%
	MW36B	17.70	8%
Werrie Basalt	**MW8***	20.82	-1%
	MW10	12.78	13%
	MW14	13.80	34%
	MW17B*	14.75	0%
	MW19A*	Pump over bore	
	MW20*	23.48	-1%
	MW38A	11.48	8%
	MW38B*	10.17	3%
	MW38C*	23.46	2%
	MW38E*	No access	
	MW41	10.40	1%
	MW43	8.99	7%
#[1]	**MW24A***	16.64	3%
	MW29*	11.63	5%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	6.00	-2%
	MW13D*	6.06	-9%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.27	-1%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.56	-4%
	MW23B*	4.35	0%
	MW26B*	10.76	2%
	MW28A*	Dry	
	MW32*	Pump over bore	
	MW40	10.48	0%
	MW42	8.96	-1%
#[2]	**MW34***	10.57	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 a general increase in water levels during February 2020 and May 2020.

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 on the 24 February and 27 May 2020. 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.

20th and 24th February 2020

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	8.03	254	102	<5	Previously dry now full
SB9	7.75	450	84	29	Previously dry now full
SB10	Dry	Dry	Dry	Dry	Low dam level (pumped out recently)
OFFSITE					
QCU	7.26	180	319	<5	Previously dry, now flowing *(sampled 20 Feb 2020)*
QCD	7.25	212	574	20	Previously dry, now flowing *(sampled 20 Feb 2020)*
WCU	7.94	421	9	<5	Previously dry, now flowing
WCD	7.92	573	36	<5	Not previously flowing, quality results lower

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

25th May 2020

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	7.54	462	<5	<5	EC slightly higher, pH and TSS lower
SB9	7.87	482	26	<5	TSS lower
SB10	Dry	Dry	Dry	Dry	Remained dry, basin empty
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Dry creek bed
QCD	7.62	291	44	<5	Previously flowing now only pools. TSS lower
WCU	8.18	667	12	<5	Previously flowing now only pools. pH and EC slightly higher
WCD	8.15	1200	12	<5	EC higher and TSS lower

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

5.2.2 Discussion - Compliance / Non Compliance

Quarterly surface water monitoring was undertaken on 20th & 25th of February and also 25th May 2020. All water quality results were within long-term averages and the Site Water Management Plan trigger values except for QCU and QCD (20/2/2020) with TSS over 50mg/L and Oil & Grease over 10 mg/L (QCD only).

5.3 SURFACE WATER DISCHARGES

5.3.1 Monitoring Data Results

There were several discharge events during February 2020 following above average rainfall during the month. Two control discharges occurred during May 2020.
Sampling conducted within the Quipolly and Werris Creek systems was also during the discharge in accordance with licence conditions.

Sample Date	Dam	pH	EC	TSS	O&G	Compliance	Type	5 Day Rain
3/2/2020	**SB10** (EPA14)	7.7	150	47	<5	Yes	Controlled	
9/2/2020	**SB2** (EPA10)	8.00	230	**117**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather - Uncontrolled	54.0
9/2/2020	**SB10** (EPA14)	7.20	140	**117**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather - Uncontrolled	54.0

18/2/2020	**SB2** (EPA10)	7.9	270	**53**	<5	Yes- TSS Ok because rainfall >39.2mm	Wet Weather – Uncontrolled (continued flow from 9/2/2020)	21.2
18/2/2020	**SB10** (EPA14)	5.5	430	32	<5	pH below 6.5 limit	Wet Weather – Uncontrolled	21.2
15/5/2020	**SB11** (EPA12)	8.4	590	2	<5	Yes	Controlled	
18/5/2020	**SB3** (EPA10)	8.1	420	5	<5	Yes	Controlled	
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

Total Suspended Solids (sediment) levels were slightly increased however sampling results were in compliance with WCC's Environmental Protection Licence due to the rainfall trigger of 39.2mm.

An uncontrolled discharge on the 18th February had a recorded pH lower than the license limit of 6.5 (highlighted yellow). The discharge was reported to the EPA at the time of the event and WCC subsequently enacted the Pollution Incident Response Management Plan (PIRMP) as a precaution. Subsequent investigations have not identified a cause for the low pH discharge and the matter is still being investigated by the NSW EPA. The discharge location was the ephemeral drainage system to the North of the Werris Creek Mine site towards Werris Creek.

There were no impacts observed or monitored in Quipolly and Werris Creek systems as a result of the water discharge events.

5.4 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

There were three complaints received during the period, which are summarised below.

#	Date	Issue	Complaint	Investigation	Action Taken
618	12/03/2020	Vibration	Complainant left a voice mail message on the EO Phone advised they felt the blast at their residence and woke from sleep. Requested results via email.	EO explained that all monitors indicated the blast was within compliance limits.	EO advised blast was within compliance limits and emailed a copy of the results to the complainant.
619	12/03/2020	Vibration	Complainant left a voice mail message on the complaint hotline. Advised they felt the blast at their residence in Kurrara St Werris Creek.	EO explained that all monitors indicated the blast was within compliance limits.	No further follow - up actions
620	17/05/2020	Lighting	Complainant left a Voicemail on the EO phone advising that a light was shining on their property and a bedroom window.	EO called back and spoke with the complainant. Light source was identified and relocated to an alternative location prior to the next night shift.	EO followed up with complainant following relocation of lighting plant to confirm that issue has been resolved and again a few days later to confirm no further lighting issues were apparent

7.0 GENERAL

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

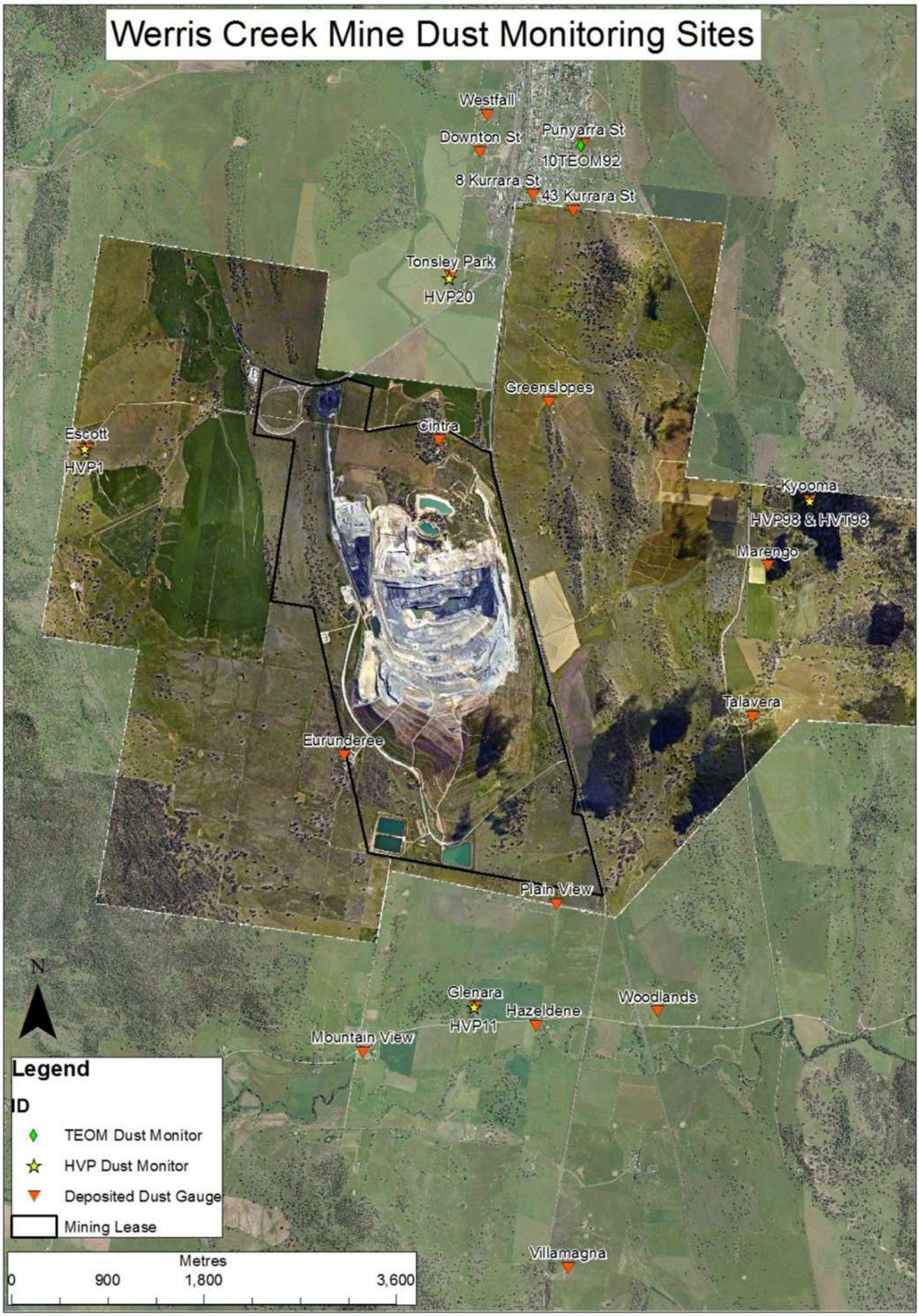


Figure 1 – WCC Dust Monitoring Locations

Figure 2– WCC Noise Monitoring Locations

Figure 3 – WCC Blast Monitoring Locations

Figure 4 – WCC Groundwater Monitoring Locations

Figure 5 – WCC Surface Water Monitoring Locations

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
54TH Meeting of the Committee held at the Werris Creek Bowling Club
Wednesday, 11 November 2020 at 9:30am

The normal four monthly meeting will begin at 9:30am - A site tour will not be available today due to COVID-19 restrictions.

Meeting opened at 9:40am.

Record of attendance

Gae Swain	Independent Chairperson
Jane Bradford OAM	Independent Minute Taker
Craig Sullivan	Werris Creek Coal - Operations Manager
Matt Hollis	Werris Creek Coal - Environmental Superintendent
Kelsy Sammons	Whitehaven Coal - Environmental Officer
Andrew Garrett	Whitehaven Coal - General Manager Community Engagement
Clr Ian Lobsey	Councillor – Liverpool Shire Council
Lindsay Bridge	Community Representative – Phone No 0431 319 302
James O'Brien	Community Representative
Mike Lomax	Community Representative

Apologies
Donna Ausling - Director of Environment – Liverpool Shire Council
Noel Taylor - Community Representative
Note - Clr Virginia Black has been replaced by Clr Ian Lobsey – Liverpool Shire Council
Moved Lindsay Bridge, **seconded** Mike Lomax, THAT the apologies be accepted. CARRIED

2 Declaration of Pecuniary or Other Interests –
Gae Swain has non-pecuniary interests – Son works at Whitehaven Administration Office, Gunnedah and Son-in-law at Narrabri Mine

3 New Matters for Discussion under General Business today
3.1 Werris Creek Coal Penalty Infringement Notice: Management of Sediment Basin 10 (SB10)

4 Notes of the Previous Non-Meeting – Wednesday, 8 July 2020
Note As no responses, questions were asked within the time-frame it was agreed that the Notes covered the Non-Meeting accurately.

5 Matters Arising - Nil

6 Environment Monitoring Report from 1 June – 30 September 2020
1.1 Meteorology – Weather Station – nothing to report
2.1.1 Air quality Exceedance on 24.08.2020 – major dust storm – a regional based event.
Crawfords generate dust along their dirt road, timber from Nundle will reduce as China has stopped importing timber for the present. Nundle has to clear the felled timber and stop until further notice.
2.2.1 DG9 "Marengo" and DG34 8 Kurrara Street (deposited dust) – both indicated anomalous results during the reporting period inconsistent with other nearby dust deposition monitors.

2.3. Quirindi Train Dust Deposition
After discussion it was agreed that there had been no issues since this was requested originally by the CCC. Werris Creek Coal requested that the CCC consider cessation of deposited dust

monitoring adjacent to the Main Northern Rail line in Quirindi as significant rail traffic for coal haulage is now present for the wider Gunnedah and Narrabri regions.
Moved Mike Lomax, **seconded** James O'Brien THAT no further Reports on Quirindi Dust Deposition would be required. CARRIED

3.1 Noise levels – no issues for the period
4.0 Blasting – two complaints from Werris Creek – felt at Werris Creek residences – within compliance
5.1 Ground Water – September – Quipolly overflow – not underflow. Little Quipolly had some surface water – going underground
5.3 Surface water – Mine had to release stored stormwater due to forecast for further rainfall – Stormwater releases are all within compliance limits and must be done to satisfy EPA license requirements.
Note Mike Lomax working through Soil Conservation and Matt Hollis with Whitehaven owned properties "Cintra" and "Escott" towards restoring improved controls for surface water run-off in and around the Whitehaven owned properties that neighbour Mike Lomax's property.
6.0 There were two minor complaints recorded.
Note Matt arranged for 6,000 new trees to be planted over past six months – based on highly favourable weather conditions. WCC plans to plant a similar amount in March / April 2021 following on from the summer period.
Moved Clr Ian Lobsey, **seconded** Lindsay Bridge THAT the Environment Report be accepted. CARRIED

7 General Business

7.1 Werris Creek Coal Penalty Infringement Notice: Management of Sediment Basin 10 (SB10) – Matt Hollis provided detailed commentary on the events leading up to the incident and actions taken following the incident occurrence:
Summary: -

- Werris Creek Coal experienced a rainfall event between 5th Feb and 13th Feb 2020 with a recorded site total of 85.8 mm over the 9 days.
- An uncontrolled discharge from Sediment Basin 10 (SB10) via Licensed Discharge Point "EPA 14" was observed on Sunday 9th February. The discharge was sampled / tested and reported as per the requirements of EPA License (EPL 12290). SB10 is located at the north western corner of the WCC Mining Lease adjacent to the WCC Train Load out complex. SB10 drains to the North via a gully system and eventually reaches Werris Creek just east of the Werris Creek Gap Weir.
- The uncontrolled discharge was observed to cease from EPA 14 on the 12th February 2020.
- SB10 was treated with a flocculent to remove or "settle out" the suspended solids on Friday 14th February in preparation for a controlled discharge (release of treated water) to restore sediment basin capacity as per EPA license requirements. The controlled discharge was scheduled to commence on Monday 17th February following confirmation of laboratory testing that the water was compliant with EPA license discharge criteria.
- A further rain event occurred on Monday 17th February at approximately 3.30am. Initial rainfall was steady and didn't result in any additional inflow to SB10.
- SB10 was sampled and submitted to the Lab for analysis by 9am on the 17th February. Results were obtained back from the laboratory at approximately 12.30pm the same day indicating EPA 14 was complaint with prescribed discharge requirements for EPL12290.
- A storm event commenced at Werris Creek Coal at approximately 1pm that resulted in the inflow of water to SB10. The planned controlled discharge was aborted due to visible changes in the contents of SB10. No discharge from SB10 had occurred

A further storm event was experienced at approximately 3.00am on 18th February.

- SB10 was observed to be discharging via licensed discharge Point EPA14 upon inspection at approximately 8am on the 18th February. Sampling / Laboratory Testing was conducted in accordance with EPA License requirements.
- Laboratory testing results obtained at 2.30pm on the 19th February indicated the discharge water from EPA14 was non-compliant for the parameter of pH. A pH was recorded of 5.45
- Werris Creek Coal enacted the PIRMP at approximately 3:45pm by formally notifying relevant government agencies and relevant neighbouring properties.
- SB10 was resampled again on the afternoon of the 19th February and lab testing indicated the discharge water had returned to a “normal” pH.

Note Werris Creek Coal consider the event to be a regrettable incident and WCC have taken steps to ensure controls and management practices are appropriate to avoid such incidents in future.

Moved Lindsay Bridge **seconded** James O’Brien THAT the explanation covered the discharge incident accurately. CARRIED

Next meeting Wednesday, 10 March 2021 at 9:30am –venue to be confirmed and to include a mine tour of Werris Creek Coal (weather and COVID-9 restrictions permitting).

Meeting closed at 10:15AM

Copy to all Committee Members
The Minutes also posted on the Whitehaven Coal Website

_____ _____

Gae Swain 16.11 2020
Independent Chairperson

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

June, July, August and September 2020

This Environmental Monitoring Report covers the period 1st June 2020 to 30th September 2020 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

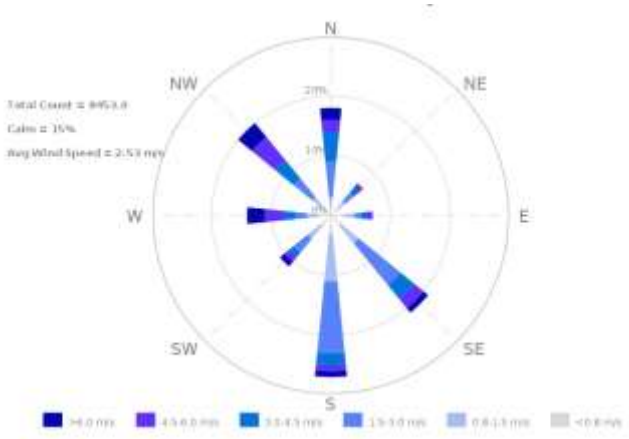
1.0 METEOROLOGY 3
1.1 WEATHER STATION 3
2.0 AIR QUALITY 4
2.1 HVAS (PM_{10}) and TEOM (PM_{10} & $PM_{2.5}$) 4
2.1.1 Monitoring Data Results 4
2.1.2 Discussion - Compliance / Non Compliance 4
2.2 WERRIS CREEK MINE DEPOSITED DUST 4
2.2.1 Monitoring Data Results 4
2.2.2 Discussion - Compliance / Non Compliance 5
2.3 QUIRINDI TRAIN DUST DEPOSITION 5
2.3.1 Monitoring Data Results 5
2.3.2 Discussion - Compliance / Non Compliance 5
2.4 AIR QUALITY COMPLAINTS 5
3.0 NOISE 5
3.1 OPERATIONAL NOISE 5
3.1.1 Monitoring Data Results 6
3.1.2 Discussion - Compliance / Non Compliance 7
3.2 Noise complaints 7
4.0 BLASTING 7
4.1 BLAST MONITORING 8
4.1.1 Monitoring Data Results 8
4.1.2 Discussion - Compliance / Non Compliance 8
4.2 BLAST COMPLAINTS 8
5.0 WATER 9
5.1 GROUND WATER 9
5.1.1 Monitoring Data Results 9
5.1.2 Discussion - Compliance / Non Compliance 9
5.2 SURFACE WATER 10
5.2.1 Monitoring Data Results 10
5.2.2 Discussion - Compliance / Non Compliance 10
5.3 SURFACE WATER DISCHARGES 10
5.3.1 Monitoring Data Results 10
5.3.2 Discussion - Compliance / Non Compliance 10
5.4 WATER COMPLAINTS 10
6.0 COMPLAINTS SUMMARY 11
7.0 GENERAL 11

1.0 METEOROLOGY

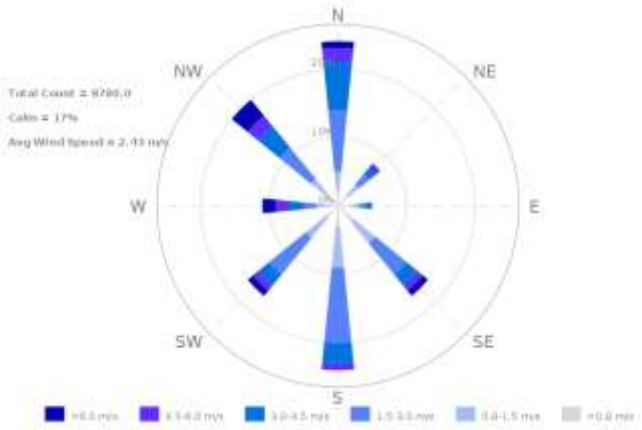
1.1 WEATHER STATION

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 June, August and September 2020 was lower than the historical average, but higher in July 2020. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the S in June, both N and S in July, NW in August and N in September 2020.

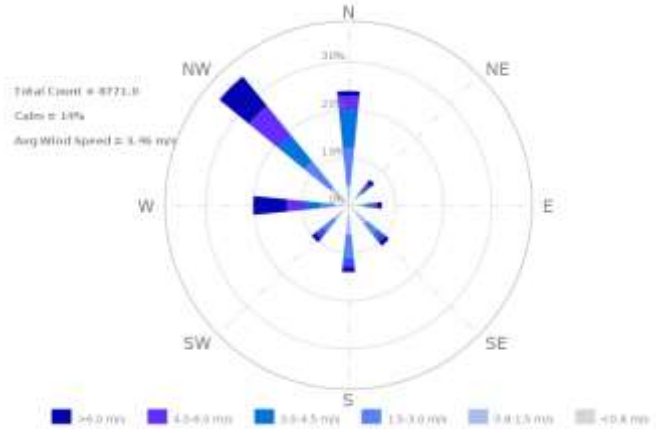
Month	Rainfall *(mm)*		
	Onsite	***Historical Average***	***2020 Total***
June 2020	39.0	59.7	425.2
July 2020	59.2	38.7	484.4
August 2020	27.8	33.2	512.2
September 2020	32.2	42.0	544.4



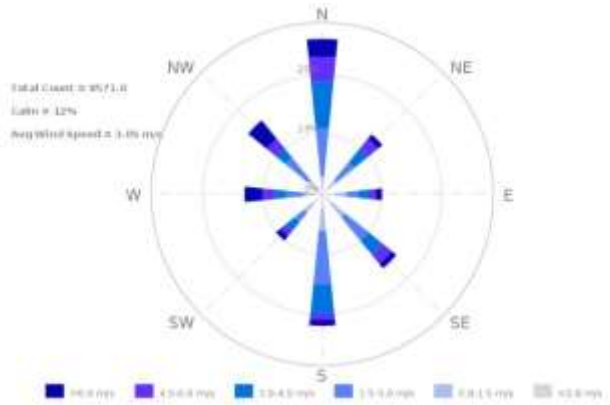
June 2020



July 2020



August 2020



September 2020

2.0 AIR QUALITY

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

WCC operates five High Volume Air Samplers (HVAS) measuring particulate matter less than 10 micron (PM_{10}) and total suspended particulate (TSP) matter at four sites. 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 ($\mu g/m^3$) 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 micron) 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.

Monitor Location	24Hr Maximum ($\mu g/m^3$)	Jun 2020 ($\mu g/m^3$)	Jul 2020 ($\mu g/m^3$)	Aug 2020 ($\mu g/m^3$)	Sep 2020 ($\mu g/m^3$)	2020 Average (g/m^2/month)	Criteria ($\mu g/m^3$)	
							Annual	24hr
$PM_{2.5}$ – TEOM92 "Werris Creek"	16.0	7.0	4.1	4.6	4.5	9.1	-	-
PM_{10} – TEOM92 "Werris Creek"	123.1	10.3	7.4	12.7	10.4	16.5	30	50
PM_{10} – HVP20 "Tonsley Park"	34.6	11.8	9.5	14.3	14.8	18.8	30	50
PM_{10} - HVP1 "Escott"	20.1	5.7	2.5	3.4	8.4	9.6	30	50
PM_{10} – HVP11 "Glenara"	37.4	12.6	5.3	8.2	10.6	14.8	30	50
PM_{10} – HVP98 "Kyooma"	15.0	4.2	2.5	4.9	8.9	11	30	50
TSP – HVT98 "Kyooma"	44.5	12.5	8.9	15.8	32.2	27.6	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. A single daily (24Hr) average result was obtained om the 24th August which coincided with a regional dust alert (NSW OEH) triggered by a widespread dust storm.

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.

Monitor Location	Jun 2020 (g/m^2/month)	Jul 2020 (g/m^2/month)	Aug 2020 (g/m^2/month)	Sep 2020 (g/m^2/month)	2020 Average (g/m^2/month)	Annual Criteria (g/m^2/month)
DG1 "Escott"	3.1	1.1	0.4	2.1	1.4	4.0
DG2 "Cintra"	4.7#	6.1	4.6	2.6	6.4	4.0
DG3 "Eurunderee"	1.1	0.6	1.4	0.8	1.8	4.0
DG5 "Railway View"	1.6	0.7	1.0	0.8	1.7	4.0
DG9 "Marengo"	0.8	0.7	0.7	1.5	10.6	4.0
DG11 "Glenara"	0.8	0.4	0.7	0.7	1.2	4.0
DG14 "Greenslopes"	0.9	0.7	0.5	0.7	0.9	4.0
DG15 "Plain View"	1.2	1.7	0.5	0.7	1.5	4.0
DG17 "Woodlands"	1.0	1.1	0.9	1.2	1.7	4.0
DG20 "Tonsley Park"	1.5	1.9	2.2	2.5	2.1	4.0
DG22 "Mountain View"	0.8	0.3	0.4	0.8	1.5	4.0
DG24 "Hazeldene"	2.6	0.8	1.2	2.8	1.7	4.0

Monitor Location	Jun 2020 *(g/m²/month)*	Jul 2020 *(g/m²/month)*	Aug 2020 *(g/m²/month)*	Sep 2020 *(g/m²/month)*	2020 Average *(g/m²/month)*	Annual Criteria *(g/m²/month)*
DG34 8 Kurrara St	0.9	15.7	0.6	0.8	2.9	4.0
DG62 Werris Creek South	0.8	0.5	0.4	0.5	1.3	4.0
DG92 Werris Creek Centre	0.7	0.5	0.7	0.5	0.9	4.0
DG96 "Talavera"	NS	NS	NS	NS	NS	NA
DG98 "Kyooma"	0.4	0.2	0.4	1.9	1.2	4.0
DG101 "Westfall"	1.3	1.1	1.0	0.8	1.5	4.0
DG103 West Street	1.1	0.7	1.4	0.9	1.6	4.0

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); # - indicates sample is contaminated from a Non-Werris Creek Coal dust source; **Yellow Bold** – Elevated dust level; NS – 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) had high results in June and July 2020 and a rolling 2020 average above criteria.
- DG34 (8 Kurrara St) had a high result in July 2020

DG2 (Cintra) has consistently high dust levels (July – August 2020) at this gauge and low deposited dust levels at other nearby isolated gauges indicate a localised source of dust generation, unrelated to activities at Werris Creek Coal Mine. The July 2020 result for DG34 is considered to be an anomaly when compared to other nearby isolated gauges and results from all other months during the reporting period.

2.3 QUIRINDI TRAIN DUST DEPOSITION

2.3.1 Monitoring Data Results

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

Monitor Location	Jun 2020		Jul 2020		Aug 2020		Sep 2020		2020 Average *(g/m²/month)*
	g/m²/month	*% Coal*	*g/m²/month*	*% Coal*	*g/m²/month*	*% Coal*	*g/m²/month*	*% Coal*	
DDW30	0.6	30%	1.1	20%	1.1	10%	1.5	20%	1.6
DDW20	0.5	30%	0.4	40%	1.1	<10%	0.9	50%	1.4
DDW13	2.3	30%	0.6	60%	1.1	10%	1.2	20%	1.8
Train Line									
DDE13	0.7	40%	0.3	60%	1.8	30%	1.0	60%	2.0
DDE20	0.4	20%	0.8	10%	1.4	30%	2.0	40%	2.7
DDE30	0.4	10%	0.6	30%	1.5	10%	1.1	40%	1.0

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); NS – Not Sampled, bottle and funnel smashed. NR- change in service provider microscopic analysis not conducted as result <4

2.3.2 Discussion - Compliance / Non Compliance

Overall, the dust fallout levels adjacent to the train line are low, well below the impact assessment criteria nominated by the EPA of 4.0 g/m²/month and comparable to the levels monitored around Werris Creek Coal Mine. Coal contributions to the dust fraction remain generally low.

2.4 AIR QUALITY COMPLAINTS

There was 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**.

17th Wednesday and 18th Thursday June 2020

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	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

6th Monday and 9th Tuesday July 2020

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	24	35	Inaudible	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	29	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

27th Thursday and 28th Friday August 2020

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	21#	40
C	**Central Quipolly** (R10*,R11*)	Inaudible#	40	Inaudible	40
D	**"Hazeldene"** R24	Inaudible#	37	27#	37
E	**"Railway Cottage"** R12	Inaudible	38	23#	38
F	**"Talavera"** R96	29	38	29#	38
H	**"Kyooma"** R98	Inaudible	38	23#	38
I	**Kurrara St, WC** R57	Inaudible	35	Inaudible#	35
J	**Coronation Ave, WC**	Inaudible	35	Inaudible#	35
K	**Alco Park** (R21*)	Inaudible#	40	22	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

Monday 28th and Tuesday 29th September 2020

	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	21#	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	21	35
J	**Coronation Ave, WC**	Inaudible#	35	Inaudible	35
K	**Alco Park** (R21*)	23	40	Inaudible#	40
L	**West St, WC** (R103)	22	35	25#	35

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

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

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 twenty-three 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.

Jun 2020		"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	94.1	0.53	96.6	0.29	94.7	0.22	94.5
Monthly Maximum		0.24	103.7	1.20	102.6	0.53	105.3	0.40	106.0
Annual Average		0.12	98.3	0.66	99.5	0.36	98.8	0.26	98.3
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	0.00%	0.00%	0.00%	0.00%	0.66%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Jul 2020		"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		0.16	96.2	1.07	98.9	0.56	99.1	0.34	98.7
Monthly Maximum		0.26	100.8	1.74	105.8	0.99	102.6	0.67	100.7
Annual Average		0.12	98.0	0.72	99.4	0.39	98.9	0.27	98.4
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Aug 2020		"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	97.1	0.66	102.7	0.37	103.9	0.22	100.6
Monthly Maximum		0.31	101.1	1.05	111.0	0.56	109.7	0.37	105.9
Annual Average		0.12	97.9	0.71	99.9	0.39	99.5	0.26	98.6
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Sep 2020		"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		0.10	95.8	0.50	96.1	0.33	95.9	0.26	97.1
Monthly Maximum		0.20	102.6	1.35	101.5	0.48	101.7	0.36	107.2
Annual Average		0.12	97.7	0.69	99.4	0.38	99.1	0.26	98.5
Criteria		5	5	115	5	115	5	115	5
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Reporting Year	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 two blast complaints (July 2020) during the 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 on the 6, 7 and 9 July 2020 and 8, 9 and 11 September 2020. Groundwater monitoring locations are identified in **Figure 4**.

5.1.1 Monitoring Data Results

A summary of groundwater monitoring results has been provided below.

Site		July-20	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	57.34	-7%
	MW3	21.17	0%
	MW4B	20.16	-1%
	MW5	14.16	0%
	MW6	16.30	0%
	MW27*	52.75	1%
	MW36A	15.78	12%
	MW36B	15.79	12%
Werrie Basalt	**MW8***	21.18	-2%
	MW10	12.45	3%
	MW14	11.85	16%
	MW17B*	14.83	-1%
	MW19A*	Pump over bore	
	MW20*	23.54	0%
	MW38A	10.42	10%
	MW38B*	9.78	4%
	MW38C*	23.82	-2%
	MW38E*	11.13	10%
	MW41	10.48	-1%
	MW43	9.07	-1%
#[1]	**MW24A***	16.39	2%
	MW29*	11.38	2%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	6.09	-1%
	MW13D*	6.18	-2%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.36	-1%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.40	4%
	MW23B*	No access	
	MW26B*	10.83	-1%
	MW28A*	17.71	-1%
	MW32*	Pump over bore	
	MW40	10.51	0%
	MW42	9.04	-1%
#[2]	**MW34***	10.79	-2%

Site		September-20	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	56.52	1%
	MW3	21.08	0%
	MW4B	20.21	0%
	MW5	13.95	2%
	MW6	16.30	0%
	MW27*	53.39	-1%
	MW36A	16.64	-5%
	MW36B	16.65	-5%
Werrie Basalt	**MW8***	17.97	18%
	MW10	11.87	5%
	MW14	12.85	-8%
	MW17B*	14.65	1%
	MW19A*	Pump over bore	
	MW20*	23.55	0%
	MW38A	9.75	7%
	MW38B*	9.64	1%
	MW38C*	22.98	4%
	MW38E*	10.82	3%
	MW41	9.90	6%
	MW43	8.47	8%
#[1]	**MW24A***	16.40	0%
	MW29*	11.53	-1%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	5.19	17%
	MW13D*	5.66	9%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	7.76	8%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.27	3%
	MW23B*	No access	
	MW26B*	10.28	5%
	MW28A*	15.27	16%
	MW32*	Pump over bore	
	MW40	9.92	6%
	MW42	8.26	9%
#[2]	**MW34***	10.42	4%

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

5.1.2 Discussion - Compliance / Non Compliance

Measured groundwater levels in the Werrie Basalt and Quipolly Alluvium aquifer indicate a general increase in water levels during July 2020 and September 2020.

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 on the 10 and 12 August 2020. 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 and 12th August 2020

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	8.5	400	10	<5	Previously wet, now dry
SB9	6.83	411	47	<5	Previously wet and now dry
SB10	7.57	158	9	<5	Previously wet and now dry
SB18	7.75	158	5	<5	Previously wet and now dry
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Previously dry, still dry
QCD	7.51	940	15	<5	Previously only pools, now still pools
WCU	7.50	452	21	<5	Previously only pools, now flowing
WCD	7.49	571	106	<5	Not previously flowing, now flowing

pH – measure of acidity/alkalinity; EC – Electrical Conductivity measures salinity; TSS – Total Suspended Solids is a measure of suspended sediment in water (i.e. similar to turbidity); O&G – Oil and Grease measures amount of hydrocarbons (oils and fuels) in water

5.2.2 Discussion - Compliance / Non Compliance

Quarterly surface water monitoring was undertaken on 10th and 12th August 2020. 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 four control discharge events between June and August 2020.

Sample Date	Dam	pH	EC	TSS	O&G	Compliance	Type	5 Day Rain
9/6/2020	**SB2** (EPA10)	8.2	730	7	<5	Yes	Controlled	N/A
17/6/2020	**SB3** (EPA10)	8.4	470	7	<5	Yes	Controlled	N/A
9/7/2020	**SB2** (EPA10)	8.2	810	14	<5	Yes	Controlled	N/A
7/8/2020	**SB3** (EPA10)	7.9	640	6	<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 two complaints received during the period, which are summarised below.

#	Date	Issue	Complaint	Investigation	Action Taken
621	07/07/20	Vibration	Phone to EO	Complainant advised they felt the blast at their residence and it frightened the family dog. Requested results via email.	EO confirmed blast was within compliance limits.
622	07/07/20	Vibration	Email to WHC	Complainant emailed to advise they were concerned by the noise and vibration from the blast	EO confirmed 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.

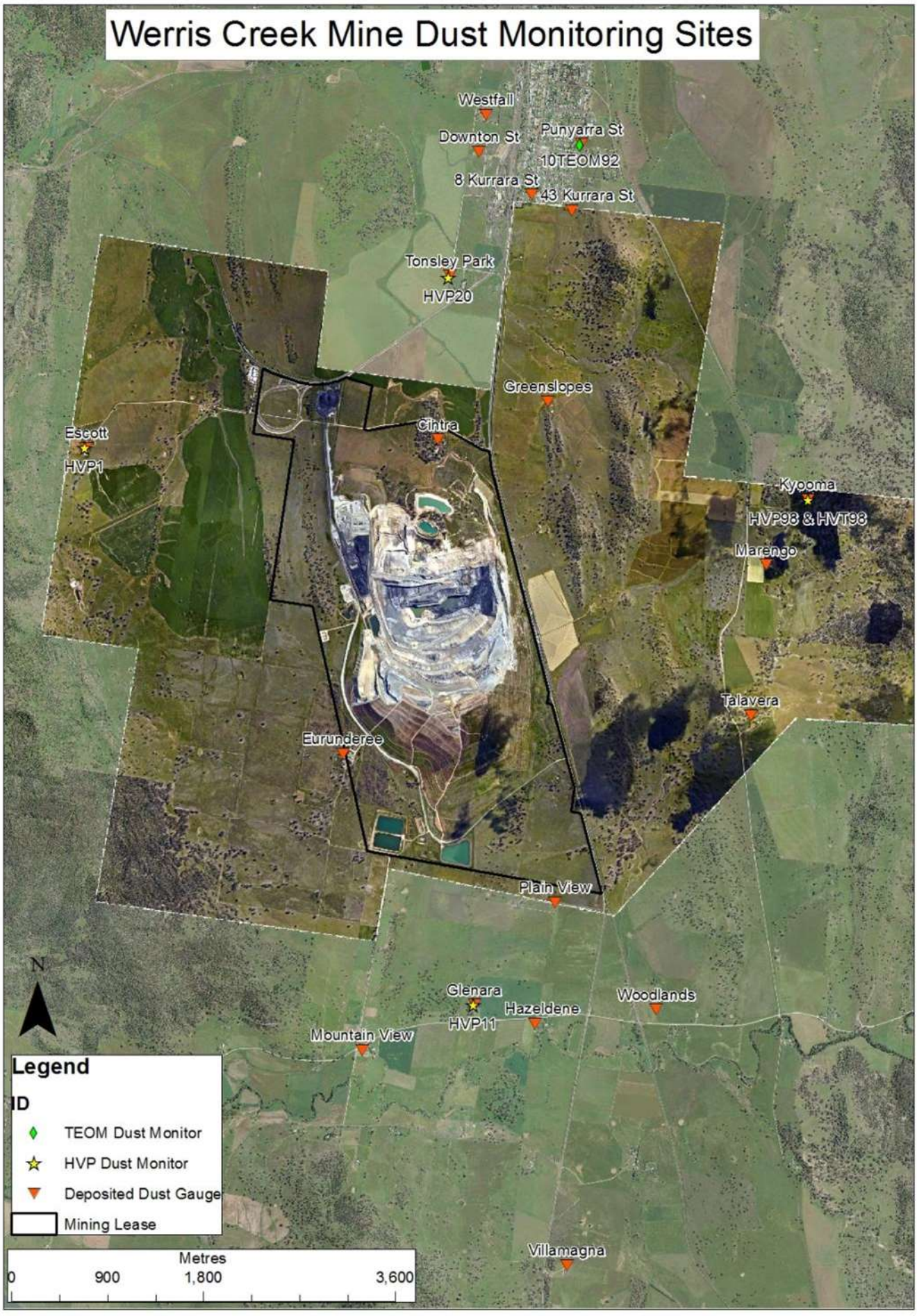


Figure 1 – WCC Dust Monitoring Locations

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