WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
49th Meeting of the Committee held on site at the Werris Creek Coal Mine
Wednesday, 13 March 2019 at 9:30am

The normal quarterly meeting will begin at 9:30am, with a site tour following the meeting (weather conditions permitting)

Meeting opened at 9:40am with a presentation being made to both Col Stewart and Jane Bradford by Gae Swain as both received an OAM on Australia Day 2019

1 Record of attendance

Gae Swain	Independent Chairperson
Jane Bradford	Independent Minute Taker
Rod Hicks	Werris Creek Coal (WCC) Operations Manager
Lynden Cini	WCC Environmental Officer
Lindsay Bridge	Community Representative – Phone No. 0431 319 302
Noel Taylor	Community Representative
James O'Brien	Community Representative
Col Stewart	Community Representative
Donna Ausling	Director of Environment – Liverpool Plains Shire Council
Ian Lobsey	Councillor – Liverpool Plains Shire Council

Apologies

Mike Lomax Community Representative

Moved Lindsay Bridge, **seconded** Noel Taylor, THAT the apologies be accepted.

CARRIED

2 Declaration of Pecuniary or Other Interests

a) Gae Swain confirmed – has a son-in-law working for Whitehaven Coal and the Narrabri Underground Mine and a son working at the Maule's Creek Mine – noted

Note Mike Silver is the alternate Chairperson – not required as yet.

3 New Matters for Discussion under General Business today

a) Lindsay Bridge – letter sent to Committee for discussion
b) Lindsay Bridge – note sent to Committee for discussion
C) Noel Taylor – Water
D) Noel Taylor – Fire retardant used in underground workings

4 Minutes of the Previous Meeting

Moved Clr Ian Lobsey, **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 2018 – to 31 January 2019

Lynden Cini provided commentary on each section of the above report

2.1.1 Air quality– Elevated monitoring results during the period were associated with regional dust storms and were reported to the Department of Environment and Planning
2.2.1 Only very slight variation
2.3.1 Train dust minimal over the period
3.1 Noise levels – no issues for the period
4.1 Blasting – within guidelines and will be blasting today at 1:00pm
5.1 Ground Water – General conversation around levels
5.2 Surface Water -as could be expected without further drought relieving rains.
6.0 Very few complaints and all relating to blasting. All blasting was within compliance guidelines

Moved Donna Ausling, **seconded** Col Stewart**, THAT** the Environmental Monitoring Report be accepted. CARRIED

7 General Business

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Lindsay noted when the mine closed there would be a void left – could this not be another Quipolly Dam concept? We should be making enquiries now so that planning can be in place by the time closure of the mine is approaching. Request that consideration be given to the concept. General discussion within the committee that this request be directed to the Department of Environment and Planning.

Moved Lindsay Bridge**, seconded** James O'Brien **THAT** A letter from the Committee to be sent to Mr O'Donoghue for his comment and to check about the next steps to be taken. CARRIED

Coal dust – The Department of Environment and Planning should be considering a use for coal dust and note the three points raised by Lindsay in his letter outlining the use of coal dust / fines in combustion engines.

Moved Lindsay Bridge, **seconded** Noel Taylor **THAT** a letter be sent to Mr O'Donoghue for his comment. CARRIED

Q – Where is the water for use in the irrigation coming from?

A Lynden advised the water used on the irrigation project is coming from stored, retained water stocks, historically held both in pit and out of pit in storage dams. The surplus water stocks were originally in the underground workings and stored onsite since WCC began working through this area. There is still a slight water surplus, albeit significantly reduced given we are receiving below average rainfall in the region.

Q – If there is a fire in the underground workings, what fire retardant would be used?

A We do not use chemical fire retardant on the underground workings. they are sealed with clay to reduce oxygen ingress and irrigated / flooded to assist in extinguishing hot area.

Lynden Cini confirmed that was his last meeting with this Group as he was being transferred to Gunnedah. Chair Gae wished him well and thanked him for his work with this group.

At the end of the meeting the Chairman informed the Consultative Committee of an independent planning meeting held in Boggabri recently where she was said to have an undeclared pecuniary interest in Whitehaven with the word corrupt being expressed. Mrs Swain declared she has always clearly articulated her pecuniary interest at all meetings and was upset by the inuendo. She expressed extreme concern and disappointment that such comments were allowed and that further comments have been forthcoming in the media re the CCC being merely a "box ticking" exercise. The Chairman was particularly annoyed that such personal attacks and also that further remarks devalue the commitment and dedication of the voluntary work carried out by the committee members.

Next meeting Wednesday, 10 July 2019 at 9:30am – same venue and to include a mine tour of Werris Creek Coal (weather permitting).

Meeting closed at 10:30AM

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

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Gae Swain – Independent Chairperson Date

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

October, November, December 2018 and January 2019

This Environmental Monitoring Report covers the period 1st October 2018 to 31st January 2019 for the Werris Creek Coal Mine Community Consultative Committee.

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

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

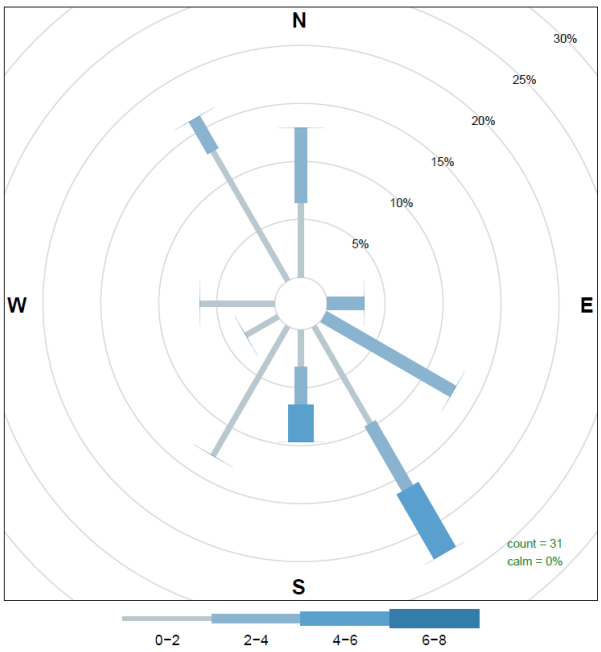
CONTENTS

1.0 METEOROLOGY

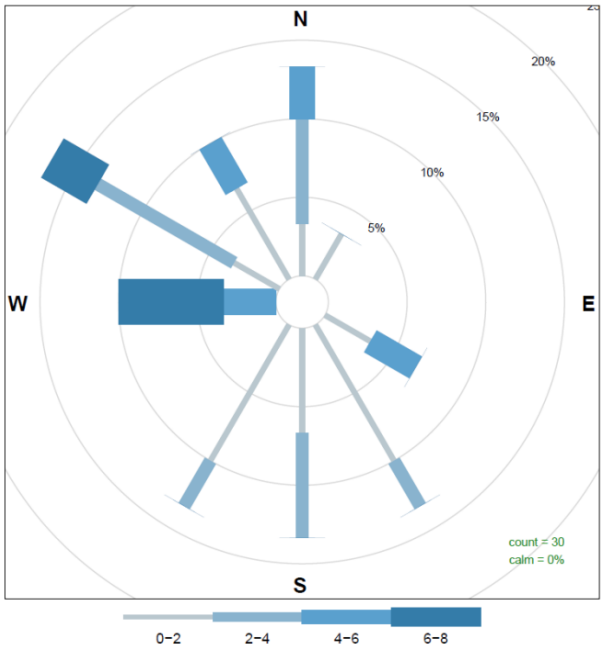
1.1 WEATHER STATION

Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. Monthly totals in October and November 2018 were higher than the historical average and lower in December 2018 and January 2019. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the south-south-east and north-west in October, north-west and south in November, north and south-south-east in December 2018 and north-north-west in January 2019.

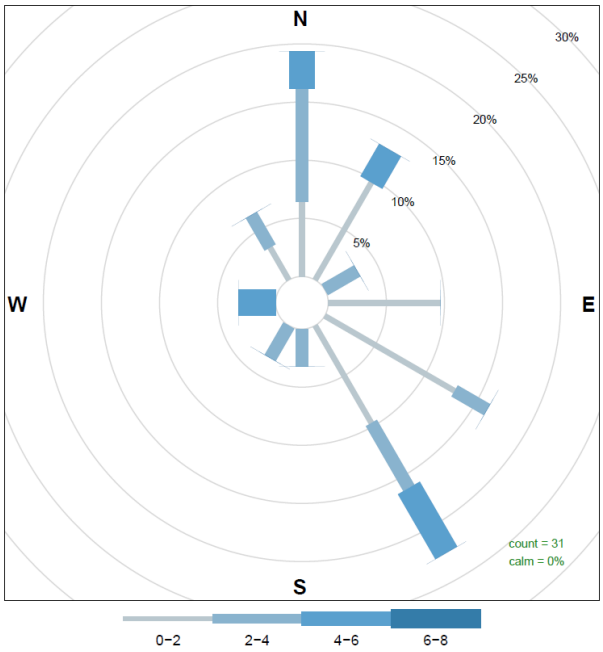
Month	Rainfall *(mm)*			
	Onsite	***Historical Average***	***2018 Total***	***2019 Total***
October 2018	75	52.1	280.6	
November 2018	97.6	85.9	378.2	
December 2018	45.6	92.1	423.8	
January 2019	34	61.7		34



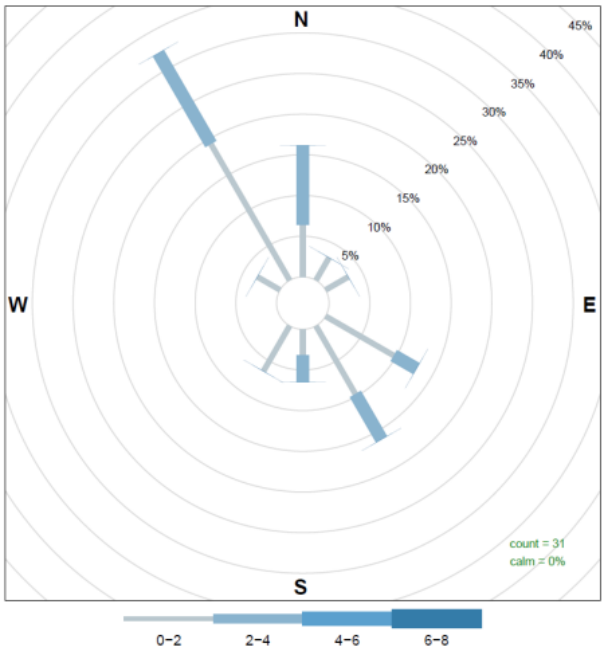
October 2018



November 2018



December 2018



January 2019

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 ($\mu g/m^3$)	October 2018 ($\mu g/m^3$)	November 2018 ($\mu g/m^3$)	December 2018 ($\mu g/m^3$)	January 2019 ($\mu g/m^3$)	2018 Average ($g/m^2/month$)	2019 Average ($g/m^2/month$)	Criteria ($\mu g/m^3$)	
								Annual	Daily
$PM_{2.5}$ – TEOM92 "Werris Creek"	20.5	5.7	6.8	10.9	11.9	7.4	11.9	8	25
PM_{10} – TEOM92 "Werris Creek"	**98.0**	11.0	20.7	20.9	29.4	16.1	29.4	30	50
PM_{10} – HVP20 "Tonsley Park"	41.7	24.5	24.7	32.5	28.1	20.6	28.1	30	50
PM_{10} - HVP1 "Escott"	**67.1**	11.5	19.5	28.8	21.0	13.7	21.0	30	50
PM_{10} – HVP11 "Glenara"	49.5	18.2	21.4	35.2	27.8	23.4	27.8	30	50
PM_{10} – HVP98 "Kyooma"	48.9	11.4	18.3	27.4	22.8	14.9	22.8	30	50
TSP – HVT98 "Kyooma"	94.6	23.3	37.1	61.5	52.1	36.7	52.1	90	-

Yellow Bold – Elevated dust level.

2.1.2 Discussion - Compliance / Non Compliance

All TSP, PM_{10} and $PM_{2.5}$ dust results were within criteria during the period with the exception of six PM10 results measured at "TEOM92 "Werris Creek"", on the 22nd and 23rd November 2018, 14 and 15 December 2018 and 29 January 2019 and "HVP1 "Escott" on the 15 December 2018. On all occasions the exceedances were reported with the elevated results were affected high regional elevated dust levels.

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	October 2018 *(g/m²/month)*	November 2018 *(g/m²/month)*	December2018 *(g/m²/month)*	January 2019 *(g/m²/month)*	2018 Average *(g/m²/month)*	2019 Average *(g/m²/month)*	Annual Criteria *(g/m²/month)*
DG1 "Escott"	0.6	1.6	2.7	1.7	1.1	1.7	4.0
DG2 "Cintra"	4.5	2.8	5.5	3.6	4.2	3.6	4.0
DG3 "Eurunderee"	1.5	3.1	3.9	4.8	2.0	4.8	4.0
DG5 "Railway View"	1.5	3.0	4.5	2.0	2.8	2.0	4.0
DG9 "Marengo"	15.0	6.2	3.5	2.4	4.0	2.4	4.0
DG11 "Glenara"	1.0	2.5	2.9	2.7	1.5	2.7	4.0
DG14 "Greenslopes"	0.9	3.9	3.4	6.3*	1.5	NA	4.0
DG15 "Plain View"	1.0	1.6	3.1	2.4	1.4	2.4	4.0
DG17 "Woodlands"	1.9	1.2	3.5	2.5	1.5	2.5	4.0
DG20 "Tonsley Park"	7.2	1.9	3.7	3.2	2.1	3.2	4.0
DG22 "Mountain View"	2.1	2.6	4.5	4.1	2.0	4.1	4.0
DG24 "Hazeldene"	0.5	1.8	3.3	2.7	1.5	2.7	4.0
DG34 8 Kurrara St	0.7	1.5	23.3	2.3	8.7	2.3	4.0
DG62 Werris Creek South	0.7	1.7	3.2	1.7	2.8	1.7	4.0
DG92 Werris Creek Centre	0.6	1.4	3.2	2.0	1.1	2.0	4.0
DG96 "Talavera"	NS	NS	NS	NS	NA	NA	4.0
DG98 "Kyooma"	0.6	1.4	3.0	1.5	1.1	1.5	4.0
DG101 "Westfall"	1.9	2.6	3.3	3.6	1.5	3.6	4.0
DG103 West Street	1.6	4.5	5.1	2.0	2.0	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 4.0g/m^2/month throughout the period with the exception of DG2 (Cintra) which had high results in October and December 2018 and a rolling average above criteria. DG9 (Marengo) had high results in October 2018 however the rolling average remains below criteria.

DG9 (Marengo) in October 2018 and DG34 (8 Kurrara St) in December 2018 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.

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	October 2018		November 2018		December 2018		January 2019		2018 Average *(g/m²/month)*	2019 Average *(g/m²/month)*
	g/m²/month	*% Coal*	*g/m²/month*	*% Coal*	*g/m²/month*	*% Coal*	*g/m²/month*	*% Coal*		
DDW30	2.2	20%	2.4	<5%	3.5	<5%	3.3	30%	1.7	3.3
DDW20	1.9	15%	3.2	<5%	4.1	5%	2.4	25%	2.0	2.4
DDW13	3.6	20%	2.4	<5%	3.2	<5%	2.8	30%	1.9	2.8
Train Line										
DDE13	4.9*	5%	2.7	<5%	4.8	5%	2.6	30%	2.2	2.6
DDE20	2.2	15%	2.0	<5%	4.3	<5%	3.2	20%	2.0	3.2
DDE30	1.6	5%	3.5*	<5%	6.3	<5%	4.1	20%	2.5	4.1

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); NS – Not Sampled, bottle and funnel smashed.

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/m^2/month and comparable to the levels monitored around Werris Creek Coal Mine. Levels were slightly elevated at all sites in December 2018. Coal contributions to the dust fraction remain generally low.

2.4 AIR QUALITY COMPLAINTS

There were no dust complaints recorded during the period.

3.0 NOISE

3.1 OPERATIONAL NOISE

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

3.1.1 Monitoring Data Results

The WCC operations only noise level (not ambient noise) results for the last three months are outlined in the table below. Noise monitoring locations are identified in **Figure 2**.

Monday 29th October 2018

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	NM#	40
C	**Central Quipolly**(R10*,R11*)	Inaudible	40	Inaudible	40
D	**"Hazeldene"** R24	Inaudible	37	Inaudible	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible	38	Inaudible#	37
H	**"Kyooma"** R98	Inaudible	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

Monday 26th November 2018

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	NM#	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	26#	38	Inaudible	37
H	**"Kyooma"** R98	Inaudible	40	26#	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	24	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 18th December 2018

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

H	**"Kyooma"** R98	Inaudible#	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

January 2019

January data has not yet been issued by the noise monitoring consultant at the time of writing this report.

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-one 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.

October 2018		**"Glenara" R11**		**"Kyooma" R98**		**Werris Creek South R62**		**Werris Creek Mid R92**	
		mm/s	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*
Monthly Average		0.09	99.61	0.71	102.14	0.33	99.31	0.18	97.17
Monthly Maximum		0.23	107.70	1.87	110.00	0.68	107.70	0.38	104.10
Annual Average		0.10	99.49	0.67	100.89	0.31	99.73	0.20	97.87
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	1.52%	0.00%	0.76%	0.00%	0.76%	0.00%	0.76%
	Reporting Year	0.00%	1.75%	0.00%	0.88%	0.00%	0.88%	0.00%	0.88%

November 2018		**"Glenara" R11**		**"Kyooma" R98**		**Werris Creek South R62**		**Werris Creek Mid R92**	
		mm/s	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*
Monthly Average		0.11	99.97	0.87	103.60	0.53	103.69	0.26	100.24
Monthly Maximum		0.20	105.90	1.59	109.40	0.84	113.80	0.35	108.40
Annual Average		0.10	99.53	0.69	101.13	0.33	100.09	0.20	98.09
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	1.55%	0.00%	0.78%	0.00%	0.78%	0.00%	0.78%
	Reporting Year	0.00%	1.65%	0.00%	0.83%	0.00%	0.83%	0.00%	0.83%

December 2018	**"Glenara" R11**		**"Kyooma" R98**		**Werris Creek South R62**		**Werris Creek Mid R92**	
	mm/s	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*	*mm/s*	*dB(L)*
Monthly Average	0.11	97.64	0.68	94.01	0.35	96.81	0.19	92.94

December 2018		"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 Maximum		0.16	110.10	1.41	104.80	0.58	105.70	0.29	102.40
Annual Average		0.10	99.38	0.69	100.54	0.33	99.81	0.20	97.66
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	1.55%	0.00%	0.78%	0.00%	0.78%	0.00%	0.78%
	Reporting Year	0.00%	1.55%	0.00%	0.78%	0.00%	0.78%	0.00%	0.78%

January 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		0.09	97.3	0.58	97.7	0.36	96.4	0.18	96.2
Monthly Maximum		0.13	99.4	1.56	100.9	0.56	100.4	0.34	100.4
Annual Average		0.09	97.28	0.58	97.67	0.36	96.44	0.18	96.21
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	**Rolling Ave**	0.00%	1.45%	0.00%	0.72%	0.00%	0.72%	0.00%	0.72%
	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 eight 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 2, 5 and 6 November 2018 and 8, 9, 10 January 2019. 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-18	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	50.93	-2%
	MW3	**20.15**	-1%
	MW4B	**18.03**	-1%
	MW5	**13.18**	-1%
	MW6	**16.24**	0%
	MW27*	53.94	0%
	MW36A	22.7	-3%
	MW36B	22.68	-3%
Werrie Basalt	**MW8***	**20.12**	-1%
	MW10	**14.93**	-2%
	MW14	17.68	-5%
	MW17B*	14.05	-1%
	MW19A*	No access	
	MW20*	**23.05**	-3%
	MW38A	13.69	-3%
	MW38B*	10.26	0%
	MW38C*	23.50	0%
	MW38E*	**11.35**	-1%
	MW41	**9.87**	-2%
	MW43	**8.62**	-2%
#[1]	**MW24A***	16.24	2%
	MW29*	**30.72**	-53%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	**6.26**	-2%
	MW13D*	**6.54**	-6%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	**8.76**	-4%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	**4.54**	-2%
	MW23B*	No access	
	MW26B*	**10.34**	-3%
	MW28A*	**16.92**	-2%
	MW32*	**4.35**	-3%
	MW40	**9.90**	-2%
	MW42	**8.51**	-2%
#[2]	**MW34***	11.4	1%

Site		January-19	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	52.18	-2%
	MW3	20.29	-1%
	MW4B	18.35	-2%
	MW5	13.32	-1%
	MW6	16.24	0%
	MW36A*	17.52	0%
	MW36A	17.52	30%
	MW36B	17.48	30%
Werrie Basalt	**MW8***	20.33	-1%
	MW10	14.72	1%
	MW14	13.26	0%
	MW17B*	14.26	-1%
	MW19A*	No sample	
	MW20*	22.62	2%
	MW38A	12.68	8%
	MW38B*	10.20	1%
	MW38C*	24.12	0%
	MW38E*	11.70	-3%
	MW41	10.05	-2%
	MW43	8.80	-2%
#[1]	**MW24A***	16.89	-4%
	MW29*	15.97	92%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	6.38	-2%
	MW13D*	6.52	0%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.95	-2%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.72	-4%
	MW23B*	4.63	-8%
	MW26B*	10.52	-2%
	MW28A*	17.28	-2%
	MW32*	4.51	-4%
	MW40	10.13	-2%
	MW42	8.69	-2%
#[2]	**MW34***	11.62	-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 November 2018 and January 2019 with the exception of changes in depth at MW29 due to the windmill running in November 2018 and increases in depth at MW36A and MW36B in January 2019.

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 27 November 2018. Surface water monitoring locations are identified in **Figure 5**.

5.2.1 Monitoring Data Results

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

27th November 2018

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	Dry	Dry	Dry	Dry	Dry- just grass at bottom
SB9	Dry	Dry	Dry	Dry	Dry
SB10	7.41	191	168	<5	Dry previous quarter. Low water level.
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Dry. Gravel bed.
QCD	7.93	1090	9	<5	pH and EC slightly decreased, TSS slight increased and O&G unchanged. Gently flowing.
WCU	7.34	156	16	<5	Dry previous quarter. Pools
WCD	7.83	947	27	<5	pH and EC slightly decreased, TSS slightly increased and O&G unchanged. 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 27 November 2018 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

There were no discharge events in October, November, December 2018 and January 2019.

5.3 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

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

#	Date	Issue	Complaint	Investigation	Action Taken
596	6/10/2018	Blast	Complainant advised they felt the blast at their residence.	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.
597	16/11/2018	Blast	Complainant advised they felt the blast at their residence.	EO explained that all monitors indicated the blast was within compliance limits.	No further follow-up actions
598	16/11/2018	Blast	Complainant advised they felt the blast at their residence.	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.
599	16/11/2018	Blast	Complainant advised they felt the blast at their residence.	EO explained that all monitors indicated the blast was within compliance limits.	No further follow-up actions
600	30/11/2018	Blast	Complainant advised they felt the blast at their residence.	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.
601	16/1/2019	Blast	Complainant advised they felt the blast at their residence.	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.
602	27/1/2019	Blast	Complainant advised they felt the blast at their residence.	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.
603	27/1/2019	Blast	Complainant advised they felt the blast at their residence.	EO explained that all monitors indicated the 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.

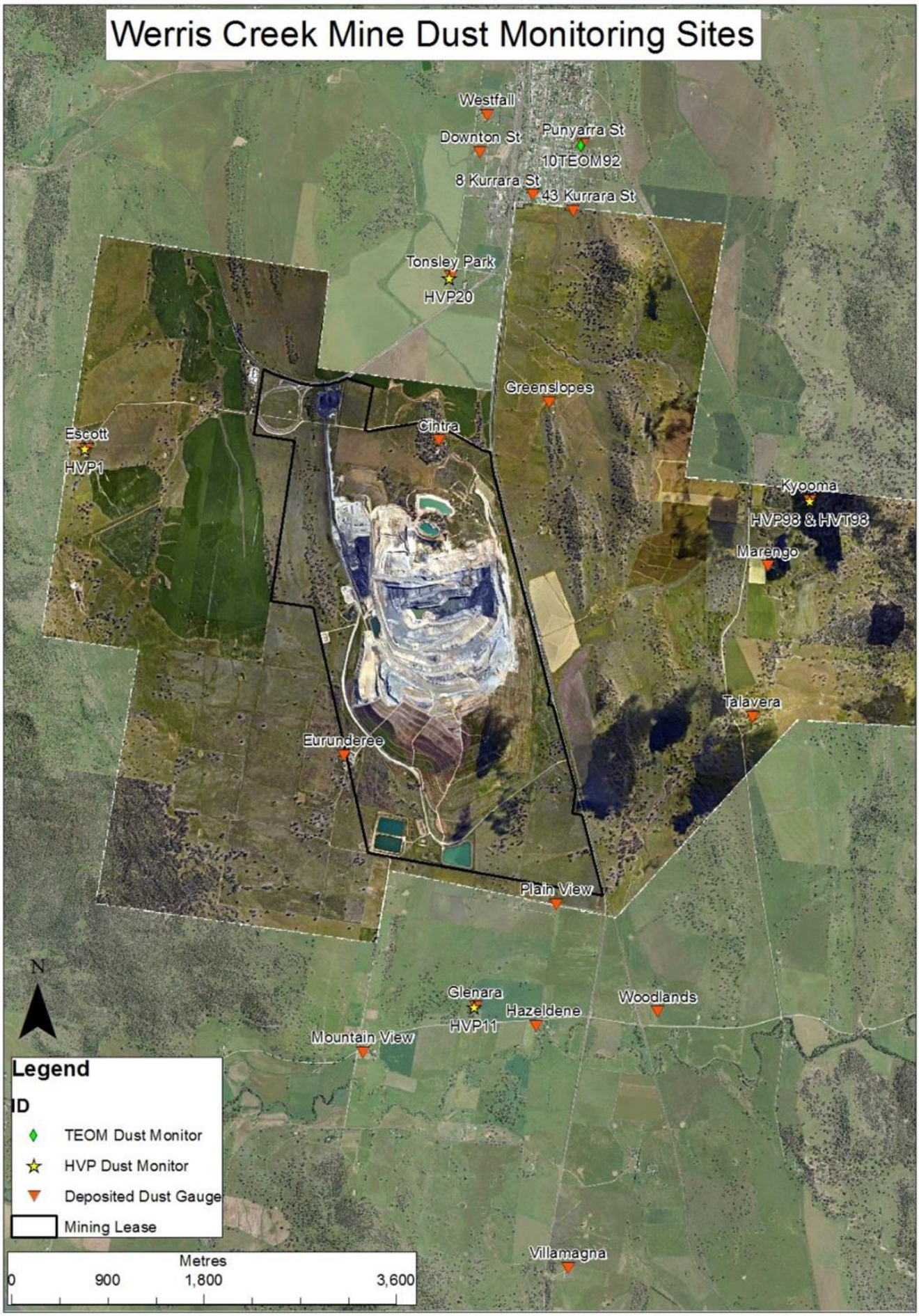


Figure 1 – WCC Dust Monitoring Locations

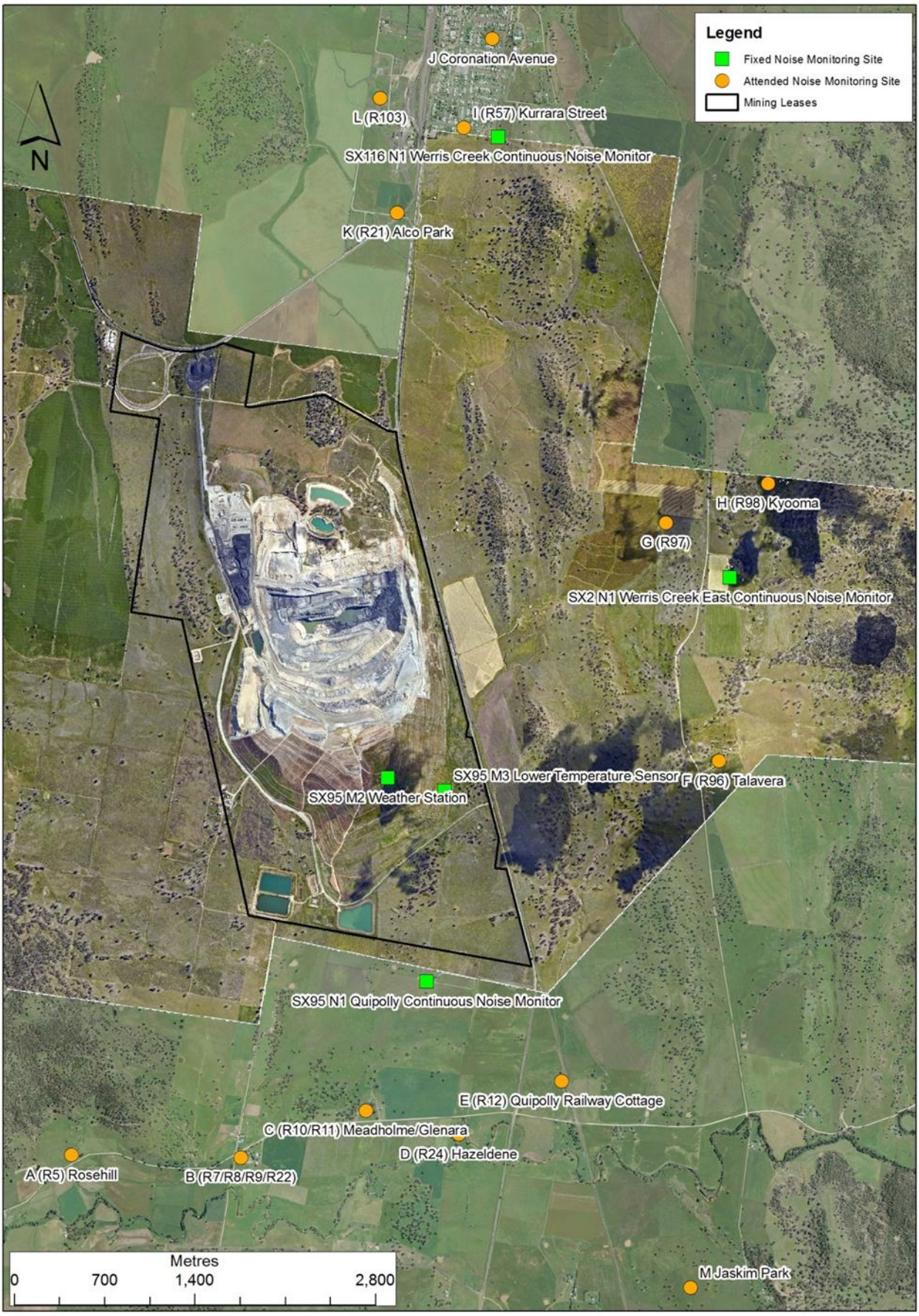


Figure 2 – WCC Noise Monitoring Locations

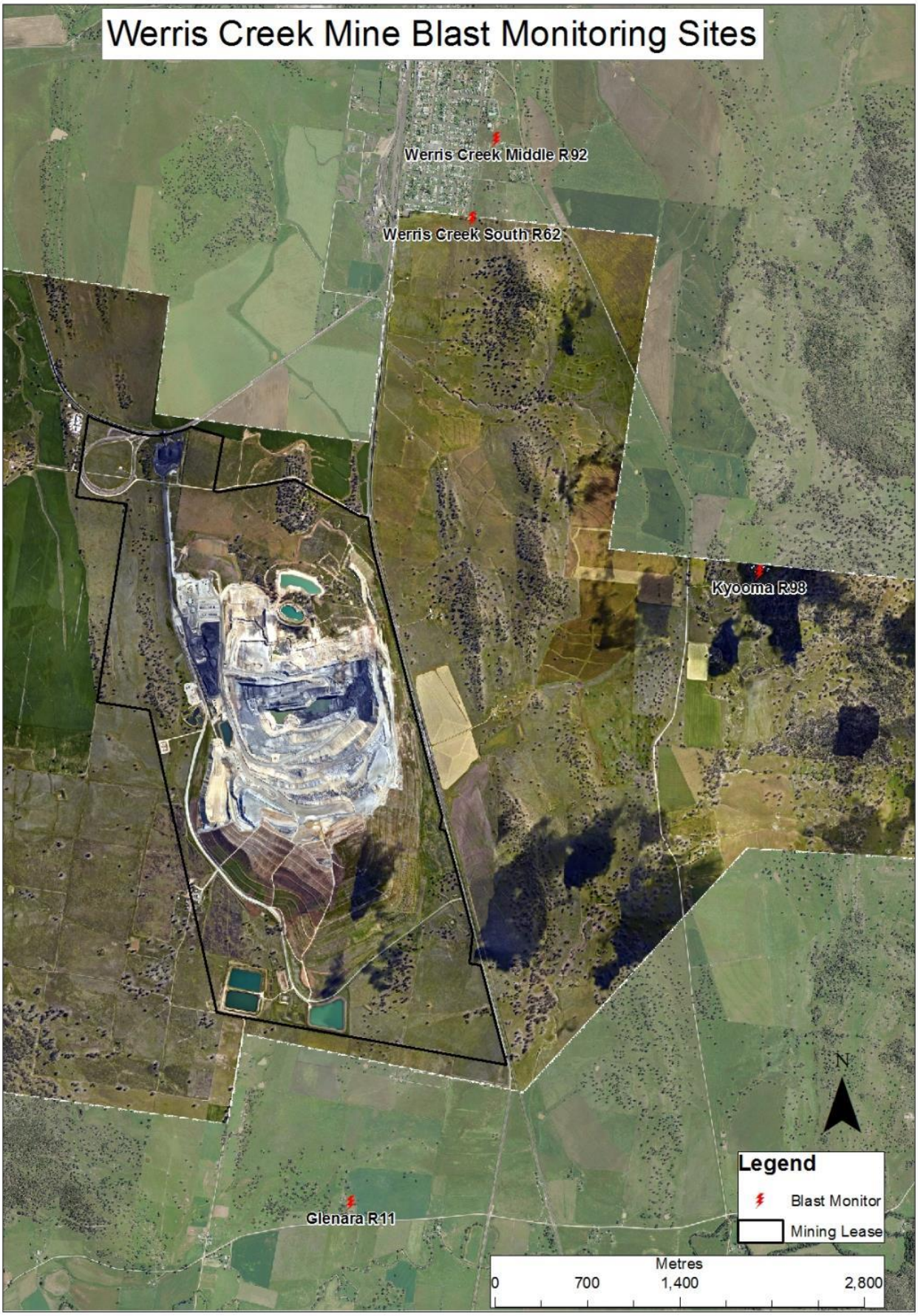


Figure 3 – WCC Blast Monitoring Locations

Figure 4 – WCC Groundwater Monitoring Locations

Figure 5 – WCC Surface Water Monitoring Locations

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
50th Meeting of the Committee held on site at the Werris Creek Coal Mine
Wednesday, 10 July 2019 at 9:30am

The normal four monthly meeting will begin at 9:30am - NO site tour today due to weather conditions

Meeting opened at 9:40am due to traffic delays for a few attendees

Record of attendance

Michael Silver OAM	Independent Alternate Chairperson
Jane Bradford OAM	Independent Minute Taker
Rod Hicks	Werris Creek Coal (WCC) Operations Manager
Jessica Hannigan	WCC Environmental Officer
Lindsay Bridge	Community Representative – Phone No. 0431 319 302
Noel Taylor	Community Representative
James O'Brien	Community Representative
Col Stewart OAM	Community Representative
Mike Lomax	Community Representative

Apologies
Gae Swain (Chair)
Donna Ausling – Director of Environment – Liverpool Plains Shire Council
Moved Lindsay Bridge, **seconded** James O'Brien, THAT the apologies be accepted.
CARRIED

2 Declaration of Pecuniary or Other Interests - Nil

3 New Matters for Discussion under General Business today
a) Letter from NSW Mining in response to letter from Gae Swain (Chair)
b) Letter to Dept of Planning and Environment (no response received at this stage)
c) Lindsay Bridge – letter to Committee outlining who Lindsay has been in contact with since last meeting.

4 Minutes of the Previous Meeting
Moved Col Stewart, **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 February 2019 – to 31 May 2019
Jessica Hannigan provided commentary on each section of the above report
1.1 Meteorology – Weather Station – March and May rainfall heavier than average with no rainfall recorded for February and April; conditions still very dry
2.1.1 Air quality– Elevated maximum monitoring results during the period were associated with regional dust storm in February, elevated monitoring results also recorded in March
2.2.1 Very slight variation
2.3.1 Train dust minimal over the period
3.1 Noise levels – no issues for the period
4.1 Blasting – within guidelines and blasted today at 9:30am – 74 blasts for the year to date
5.1 Ground Water –Committee members requested bore ID details for the four new monitoring bores in Wadwells Lane and Paynes Lane – 2 alluvial (MW40 and MW42) and 2 basalt (MW41 and MW43) Groundwater levels measured during the period indicated generally stable levels.

5.2 Surface Water -as could be expected without further drought relieving rains.
6.0 Very few complaints - blasting complaints resulted from one event and was within compliance guidelines

Moved Mike Lomax, **seconded** Col Stewart**, THAT** the Environmental Monitoring Report be accepted. CARRIED

7 General Business

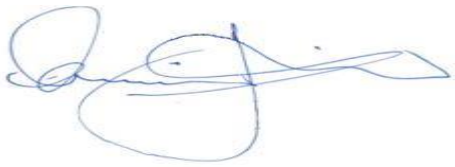
a) Letter from NSW Mining in response to letter from Gae Swain (Chair) - noted
b) Letter to Dept of Planning and Environment (no response received at this stage) - noted
c) Lindsay Bridge – letter to Committee outlining who Lindsay has been in contact with since last meeting - noted

7.2 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

Next meeting Wednesday, 13 November 2019 at 9:30am – same venue and to include a mine tour of Werris Creek Coal (weather permitting).

Meeting closed at 10:15AM

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



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Michael J Silver OAM – 18 May 2019
Independent Alternate Chairperson

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT

February, March, April and May 2019

This Environmental Monitoring Report covers the period 1st February 2019 to 31st May 2019 for the Werris Creek Coal Mine Community Consultative Committee.

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

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

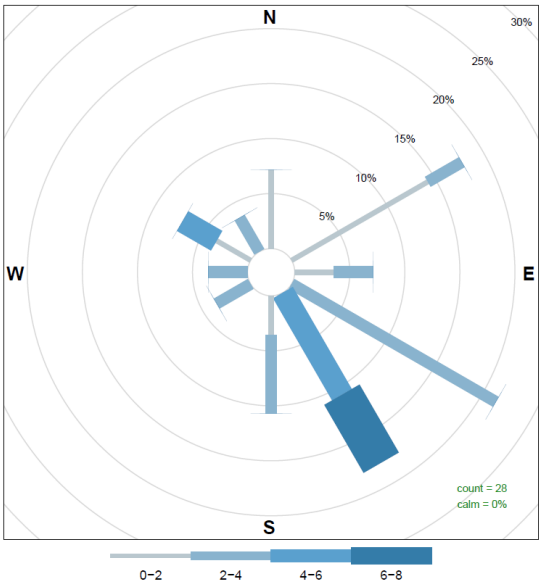
CONTENTS

1.0 METEOROLOGY

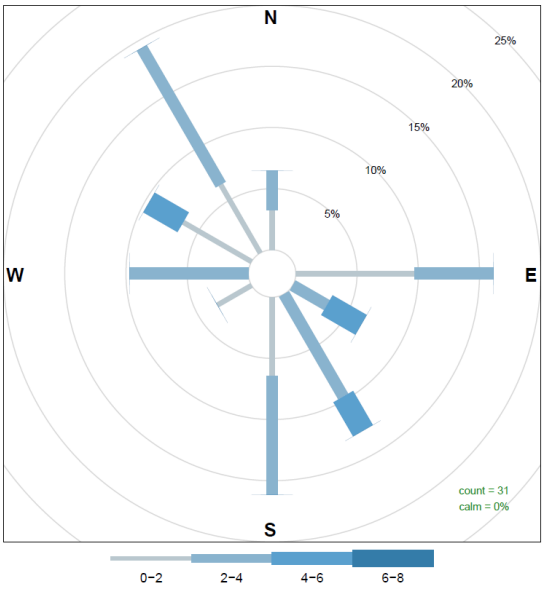
1.1 WEATHER STATION

Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. Monthly rainfall totals in March and May 2019 were higher than the historical average and lower in February 2019 and April 2019. Directional wind data, presented in the wind-rose figures below, indicate the prevailing wind direction was predominantly from the south-south-east/ south east in February, north-north-west March, south-south-east in April and north-west in May 2019.

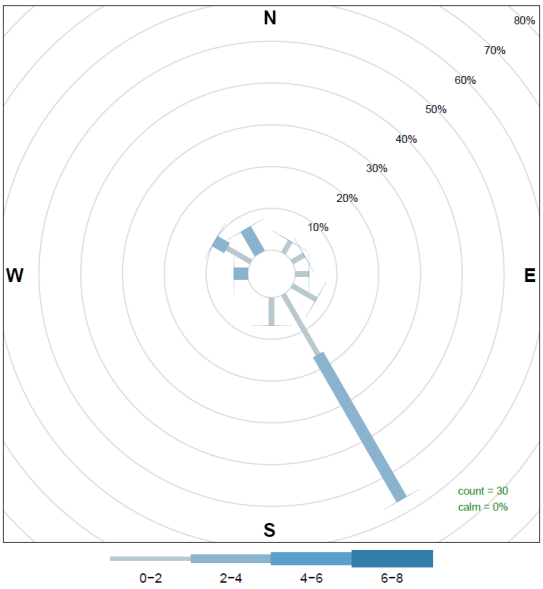
Month	Rainfall *(mm)*		
	Onsite	***Historical Average***	***2019 Total***
February 2019	0	64.1	34.0
March 2019	86.4	55.1	120.4
April 2019	0	28.7	120.4
May 2019	47.8	33.0	168.2



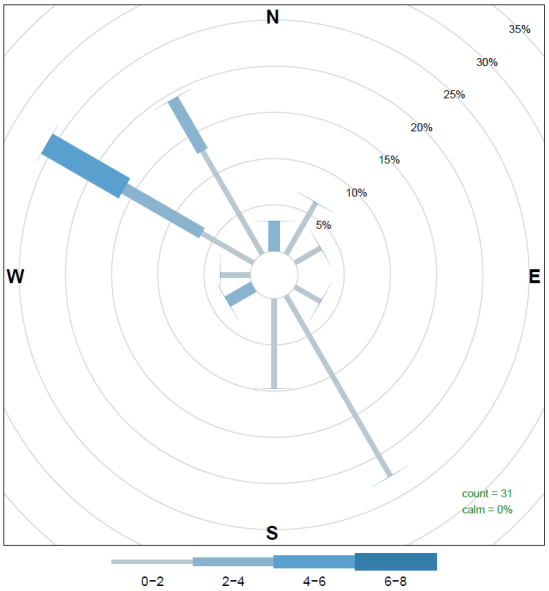
February 2019



March 2019



April 2019



May 2019

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 (µg/m^3) of air sampled. In addition, WCC operates a Tapered Element Oscillating Microbalance (TEOM) monitor in Werris Creek measuring real time PM_{10} and $PM_{2.5}$ (particulate matter less than 2.5 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 *(µg/m³)*	February 2019 *(µg/m³)*	March 2019 *(µg/m³)*	April 2019 *(µg/m³)*	May 2019 *(µg/m³)*	2019 Average *(g/m²/month)*	Criteria *(µg/m³)*	
							Annual	Daily
$PM_{2.5}$ – TEOM92 "Werris Creek"	15.7	5.4	5.3	4.9	4.0	6.3	8	25
PM_{10} – TEOM92 "Werris Creek"	**159.2**	24.2	17.2	15.1	11.2	19.4	30	50
PM_{10} – HVP20 "Tonsley Park"	**207.0**	65.7	26.6	23.9	20.7	**33.0**	30	50
PM_{10} - HVP1 "Escott"	**185.0**	63.5	17.7	15.2	8.3	23.2	30	50
PM_{10} – HVP11 "Glenara"	**213.0**	78.7	25.7	27.5	19.7	**33.9**	30	50
PM_{10} – HVP98 "Kyooma"	**192.0**	52.2	16.1	12.9	8.7	22.5	30	50
TSP – HVT98 "Kyooma"	**410.0**	110.3	35.9	31.1	18.8	49.6	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 nine PM10 results measured at "TEOM92 "Werris Creek"", on the 13th February 2019 and 31st March 2019, "HVP20 "Tonsley Park" on the 13 and 19 February 2019 and 15 March 2019, "HVP98 "Kyooma" on the 13 February 2019, "HVP1 "Escott" on the 13 February 2019 and "HVP11 "Glenara" on the 13 and 19 February 2019. On all occasions the exceedances were reported with the elevated results were affected high regional elevated dust levels. Based on the 2019 annual averages "HVP20 "Tonsley Park" and "HVP98 "Kyooma" are currently exceeding the PM10 criteria.

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	February 2019 (g/m²/month)	March 2019 (g/m²/month)	April 2019 (g/m²/month)	May 2019 (g/m²/month)	2019 Average (g/m²/month)	Annual Criteria (g/m²/month)
DG1 "Escott"	1.0	0.4	0.4	0.5	0.8	4.0
DG2 "Cintra"	3.3	5.0	4.5	5.4	4.4	4.0
DG3 "Eurunderee"	2.1	2.0	2.7	2.2	2.8	4.0
DG5 "Railway View"	2.5	3.1	3.0	4.1*	2.7	4.0
DG9 "Marengo"	1.5	1.5	0.9	0.8	1.4	4.0
DG11 "Glenara"	1.3	1.6	1.2	0.8	1.5	4.0
DG14 "Greenslopes"	2.1	2.1	0.7	0.9	1.5	4.0
DG15 "Plain View"	0.7	1.5	1.1	0.9	1.3	4.0
DG17 "Woodlands"	0.6	1.8	0.8	0.8	1.3	4.0
DG20 "Tonsley Park"	2.9	1.5	1.0	2.0	2.1	4.0
DG22 "Mountain View"	0.6	2.3	1.3	1.6	2.0	4.0
DG24 "Hazeldene"	0.8	1.9	1.4	0.8	1.5	4.0
DG34 8 Kurrara St	10.7	33.9	1.0	25.1	14.6	4.0
DG62 Werris Creek South	1.6	1.4	0.8	0.6	1.2	4.0
DG92 Werris Creek Centre	1.4	1.4	0.8	0.4	1.2	4.0
DG96 "Talavera"	NS	NS	NS	NS	NA	NA
DG98 "Kyooma"	1.6	8.5*	0.8	0.5	1.1	4.0
DG101 "Westfall"	2.6	2.2	1.3	1.9	2.3	4.0
DG103 West Street	1.8	1.7	1.0	1.6	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 4.0g/m^2/month throughout the period with the exception of DG2 (Cintra) which had high results in March, April and May 2019 and a rolling average above criteria.

DG34 (8 Kurrara St) had high dust levels in February, March and May 2019 and a current 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	February 2019		March 2019		April 2019		May 2019		2019 Average (g/m²/month)
	g/m²/month	% Coal	g/m²/month	% Coal	g/m²/month	% Coal	g/m²/month	% Coal	
DDW30	1.6	25%	2.5	<5%	1.2	5%	1.3	25%	2.0
DDW20	0.8	15%	1.9	5%	1.6	5%	1.9	10%	1.7
DDW13	2.6	25%	2.9	5%	1.4	5%	1.7	20%	2.3
Train Line									
DDE13	11.2*	5%	2.8	5%	1.0	<5%	6.5*	5%	2.1
DDE20	1.7	25%	5.4*	<5%	1.0	5%	0.8	20%	1.7
DDE30	2.5	10%	9.3*	<5%	3.9*	<5%	3.4*	5%	3.3

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); NS – Not Sampled, bottle and funnel smashed.

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/m^2/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 were two 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**.

Monday 11 and Tuesday 12th February 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	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	23#	38	22#	37
H	**"Kyooma"** R98	22#	38	24#	38
I	**Kurrara St, WC** R57	Inaudible	35	24#	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

Wednesday 27th and Thursday 28th March 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	Inaudible	40
C	**Central Quipolly**(R10*,R11*)	Inaudible	40	Inaudible	40
D	**"Hazeldene"** R24	Inaudible#	37	Inaudible#	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible#	38	Inaudible#	37
H	**"Kyooma"** R98	Inaudible	40	24#	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

Wednesday 17th and Thursday 18th April 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	Inaudible#	40
C	**Central Quipolly**(R10*,R11*)	Inaudible	40	Inaudible#	40
D	**"Hazeldene"** R24	Inaudible	37	Inaudible	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible	38	Inaudible#	37
H	**"Kyooma"** R98	Inaudible	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	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

Tuesday 21st and Wednesday 22nd May 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	29	35
B	**West Quipolly** (R7*, R8*,R9* & R22*)	Inaudible	40	27	40
C	**Central Quipolly**(R10*,R11*)	Inaudible	40	25	40
D	**"Hazeldene"** R24	Inaudible	37	23	37
E	**"Railway Cottage"** R12	25	38	Inaudible	38
F	**"Talavera"** R96	Inaudible	38	Inaudible	37
H	**"Kyooma"** R98	Inaudible	40	Inaudible	40
I	**Kurrara St, WC** R57	Inaudible	35	27	35
J	**Coronation Ave, WC**	Inaudible	35	Inaudible	35
K	**Alco Park** (R21*)	24	40	29	40
L	**West St, WC** (R103)	Inaudible	35	29	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-five 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.

February 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		0.14	102.0	0.75	99.6	0.41	102.5	0.25	100.8
Monthly Maximum		0.36	109.3	1.55	107.3	0.89	112.1	0.39	106.3
Annual Average		0.12	99.61	0.67	98.64	0.39	99.49	0.21	98.50
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	1.50%	0.00%	0.75%	0.00%	0.75%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

March 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		0.11	99.3	0.69	101.5	0.40	103.2	0.23	100.4
Monthly Maximum		0.25	101.8	1.02	112.0	0.59	107.6	0.37	110.6
Annual Average		0.11	99.52	0.67	99.60	0.39	100.72	0.22	99.12
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	1.54%	0.00%	0.77%	0.00%	0.77%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

April 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		0.09	98.9	0.51	100.2	0.30	102.3	0.19	101.3
Monthly Maximum		0.15	105.5	0.83	108.8	0.57	111.8	0.33	109.1
Annual Average		0.11	99.37	0.63	99.75	0.37	101.12	0.21	99.67
Criteria		5	115	5	115	5	115	5	115
% >115dB(L) or 5mm/s	Rolling Ave	0.00%	1.52%	0.00%	0.76%	0.00%	0.76%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

May 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		0.12	99.7	0.63	100.5	0.34	101.3	0.24	99.3
Monthly Maximum		0.23	105.7	1.39	106.4	0.88	113.1	0.46	111.9
Annual Average		0.11	99.43	0.63	99.90	0.36	101.15	0.22	99.61
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%	0.76%	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 5, 6, 7, 11 and 13 March 2019 and 1, 6 and 8 May 2019. 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-19		Site		May-19	
		mbgl	%			**mbgl**	%
Werrie Basalt near WCC	**MW1**	Dry		Werrie Basalt near WCC	**MW1**	Dry	
	MW2	53.28	-2%		**MW2**	Dry	
	MW3	20.42	-1%		**MW3**	20.57	-1%
	MW4B	18.54	-1%		**MW4B**	18.78	-1%
	MW5	13.54	-2%		**MW5**	13.56	0%
	MW6	16.26	0%		**MW6**	16.25	0%
	MW27*	53.45	0%		**MW27***	54.60	0%
	MW36A	19.17	-2%		**MW36A**	21.08	-3%
	MW36B	19.98	-6%		**MW36B**	21.09	-3%
Werrie Basalt	**MW8***	20.53	-1%	Werrie Basalt	**MW8***	20.69	-1%
	MW10	14.35	1%		**MW10**	14.22	0%
	MW14	14.78	-1%		**MW14**	16.42	-3%
	MW17B*	14.47	-1%		**MW17B***	14.54	0%
	MW19A*	No access			**MW19A***	No access	
	MW20*	22.73	2%		**MW20***	22.71	0%
	MW38A	12.05	0%		**MW38A**	12.20	-1%
	MW38B*	10.07	1%		**MW38B***	10.40	-3%
	MW38C*	24.38	0%		**MW38C***	24.11	1%
	MW38E*	11.57	1%		**MW38E***	11.76	-2%
	MW41	10.20	-1%		**MW41**	10.34	-1%
	MW43	8.96	-2%		**MW43**	9.12	-2%
#[1]	**MW24A***	17.67	-4%	#[1]	**MW24A***	17.65	0%
	MW29*	14.54	10%		**MW29***	14.63	-1%
Quipolly Alluvium	**MW12***	Dry		Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry			**MW13***	Dry	
	MW13B*	6.53	-2%		**MW13B***	6.55	0%
	MW13D*	6.6	-1%		**MW13D***	6.62	0%
	MW15*	No access			**MW15***	No access	
	MW16*	Dry			**MW16***	Dry	
	MW17A*	8.15	10%		**MW17A***	8.25	-1%
	MW18A*	Dry			**MW18A***	Dry	
	MW21A*	Dry			**MW21A***	Dry	
	MW22A*	Dry			**MW22A***	Dry	
	MW22B*	Dry			**MW22B***	Dry	
	MW23A*	4.84	-2%		**MW23A***	4.79	1%
	MW23B*	4.70	-1%		**MW23B***	4.75	-1%
	MW26B*	10.52	0%		**MW26B***	10.65	-1%
	MW28A*	17.55	-2%		**MW28A***	Dry	
	MW32*	Pump over bore			**MW32***	Pump over bore	
	MW40	10.22	-1%		**MW40**	10.38	-2%
	MW42	8.84	-2%		**MW42**	9.01	-2%
#[2]	**MW34***	12.13	-4%	#[2]	**MW34***	No access	

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 March and May 2019.

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 11th February 2019 and 21st May 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.

11th February 2019

Site	pH	EC	TSS	O&G	Change from Previous Quarter or General Comments
ONSITE					
SB2	Dry	Dry	Dry	Dry	Dry- grassy in bottom of dam
SB9	Dry	Dry	Dry	Dry	Dry- just grass at bottom
SB10	Dry	Dry	Dry	Dry	Dry. Low water level last quarter.
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Dry. Creek bed.
QCD	7.9	1420	90	<5	pH slightly decreased and EC increased, TSS increased and O&G unchanged. Very low/ small pools
WCU	Dry	Dry	Dry	Dry	Dry creek bed. Pooled last quarter.
WCD	7.96	664	35	<5	pH increased and EC decreased, TSS slightly increased and O&G unchanged. Pools

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

21st May 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- grassy basin
SB10	Dry	Dry	Dry	Dry	Dry
OFFSITE					
QCU	Dry	Dry	Dry	Dry	Dry. Gravel bed.
QCD	Dry	Dry	Dry	Dry	Dry. Gravel bed. Pooled last quarter.
WCU	Dry	Dry	Dry	Dry	Dry. Gravel bed.
WCD	8.1	1330	17	<5	pH and EC increased, TSS decreased and O&G unchanged. Just 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 11 February and 21 May 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 with the exception of an increased TSS level at QCD in February 2019.

5.3 SURFACE WATER DISCHARGES

There were no discharge events in February, March, April and May 2019.

5.3 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

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

#	Date	Issue	Complaint	Investigation	Action Taken
604	9/3/2019	Dust	Complainant noted dust lift off from the mine site	EO called the complainant and explained operations had ceased two hours prior to the time of the issue.	No further follow-up actions
605	9/5/2019	Blast	Complainant left a voice mail message on the EO phone advised they felt the blast at their residence. Requested results via email no call back required	EO confirmed blast was within compliance limits	EO emailed a copy of the results to the complainant.
606	15/5/2019	Odour	Complainant advised they could detect an odour (smell of burning) at their residence	EO provided a verbal response on the current mining operations and odour / spon com management practices currently in place. Advised of additional ecological burn program on southern side of site	No further follow-up actions
607	15/5/2019	Dust	Complainant noted dust from the mine site	EO advised dust suppression techniques were in place and actions taken to limit dust.	No further follow-up actions
608	17/5/2019	Blast	Complainant advised they felt the blast at their residence on the 9/05/2019	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.

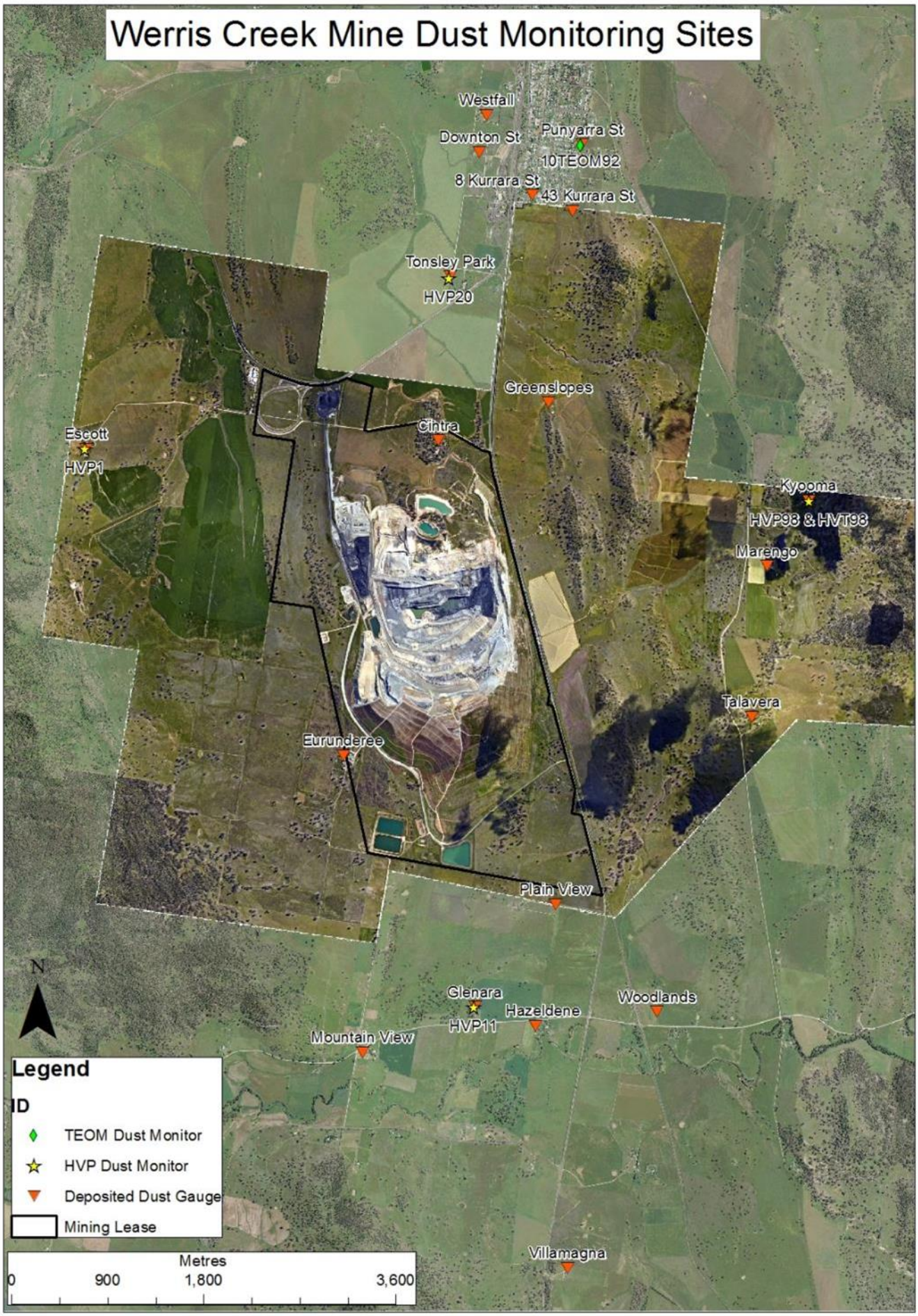


Figure 1 – WCC Dust Monitoring Locations

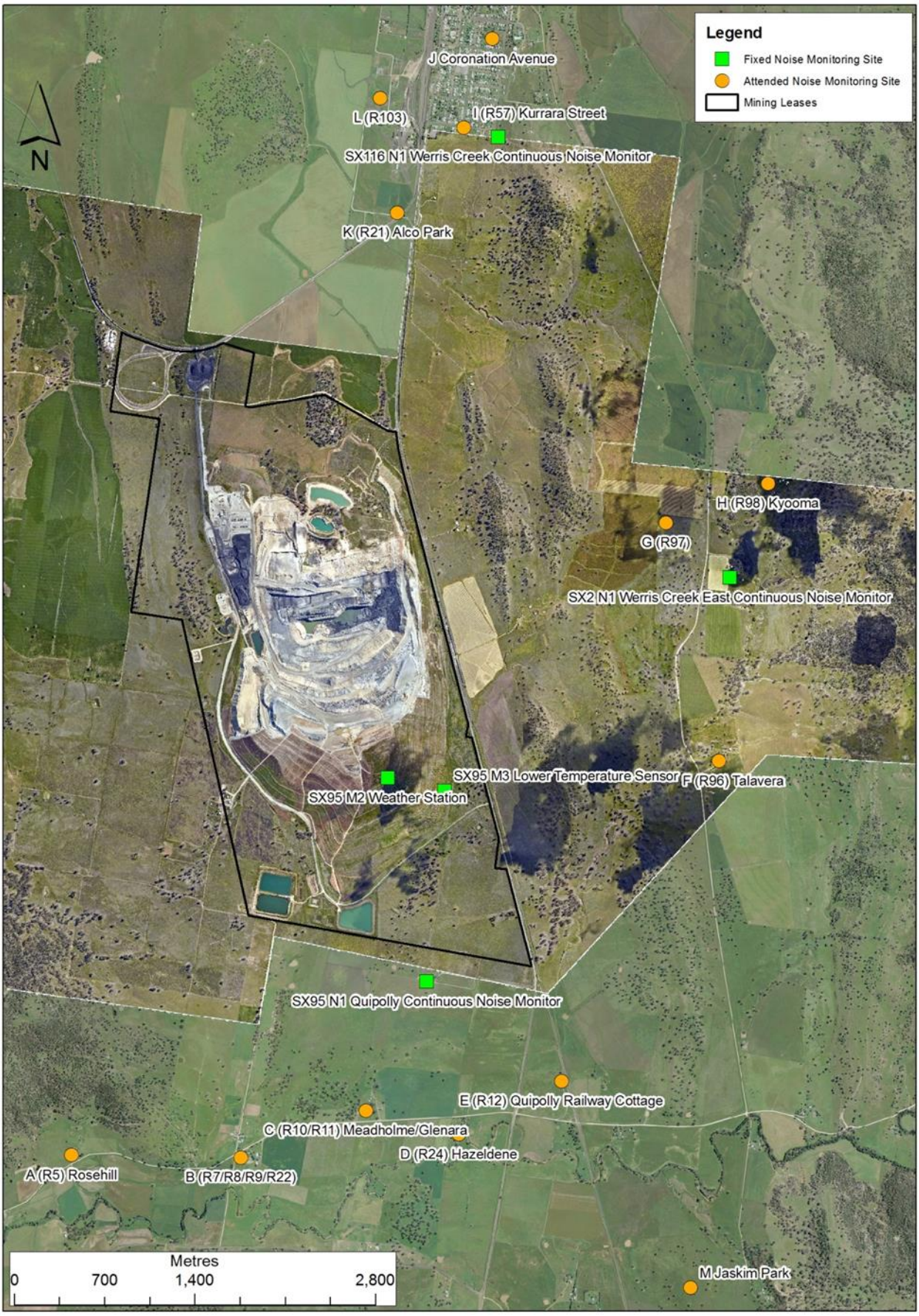


Figure 2– WCC Noise Monitoring Locations

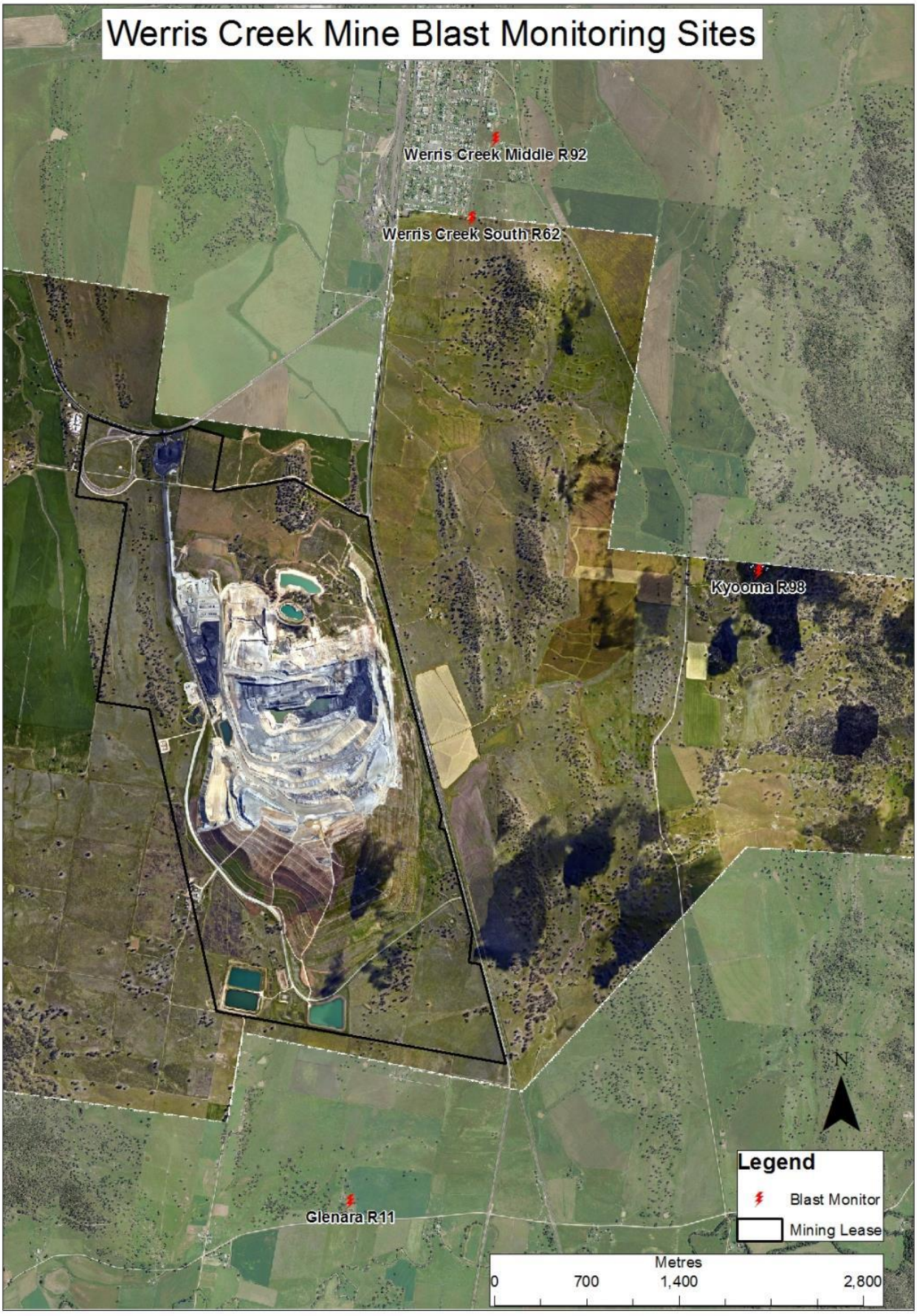


Figure 3 – WCC Blast Monitoring Locations

Figure 4 – WCC Groundwater Monitoring Locations

Figure 5 – WCC Surface Water Monitoring Locations

WERRIS CREEK COAL COMMUNITY CONSULTATIVE COMMITTEE
51st Meeting of the Committee held on site at the Werris Creek Coal Mine
Wednesday, 13 November 2019 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

Gae Swain	Independent Chairperson
Jane Bradford OAM	Independent Minute Taker
Rod Hicks	Werris Creek Coal (WCC) Operations Manager
Lynden Cini	Whitehaven Coal. Group Superintendent - Environment
Matt Hollis	Werris Creek Coal Environmental Superintendent
Donna Ausling	Director of Environment – Liverpool Shire Council
Ian Lobsey	Councillor – Liverpool Shire Council (proxy for Virginia Black)
Lindsay Bridge	Community Representative – Phone No. 0431 319 302
Noel Taylor	Community Representative
James O'Brien	Community Representative
Col Stewart OAM	Community Representative

Apologies

Mike Lomax Community Representative

Moved Lindsay Bridge, **seconded** Noel Taylor, THAT the apologies be accepted.

CARRIED

2 Declaration of Pecuniary or Other Interests – Gae Swain has non-pecuniary interests – Son works at Gunnedah Mine and Son-in-law at Narrabri Mine
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) Alleged explosion at the mine on 12 October last after 1:00pm –to be discussed.
b) Water, associated with the use of the irrigator.
c) Tabled – Email received from Mr Peter Wills requesting response on water management at Werris Creek Coal

4 Minutes of the Previous Meeting

Moved Lindsay Bridge, **seconded** Col Stewart, 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 June 2019 – to 30 September 2019

Lynden Cini provided commentary on each section of the above report.

1.1 Meteorology – Weather Station – minimal rainfall (33.8) for period recorded - conditions still very dry
2.1.1 Air quality– Dust storms regionally
2.2 Donna Ausling forwarded the web site to check dust levels as follows:
https://www.environment.nsw.gov.au/aqms/subscribe.htm
2.2.1 Very slight variation
2.3.1 Rail dust slight spike in August but coal as normal

3.1 Noise levels – no issues for the period
4.1 Blasting – within guidelines
5.1 Ground Water –MW24A – slight adjustment – back to normal
6.0 Very few complaints – mainly blasting related complaints, all blasts were within compliance guidelines.
Moved Col Stewart, **seconded** Lindsay Bridge**, THAT** the Environmental Monitoring Report be accepted. CARRIED

7 General Business

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

7.2 Water – Pivot irrigator seems to be using excessive water / running for longer periods
Lynden confirmed that the Werris Creek Coal reports annually on any usage as water is metered to the irrigator.

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? WCC personnel to review details and report back for these Minutes.*

7.4 Email from Mr Peter Wills, discussed. It is noted that the questions raised by Noel are of a similar theme to the items raised by Mr Wills. Response from Whitehaven Coal to items raised by Mr Wills will be forth coming.

Next meeting Wednesday, 11 March 2020 at 9:30am – same venue and to include a mine tour of Werris Creek Coal (weather permitting).

Meeting closed at 10:05AM

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

Appendices

A) Response to items taken on notice under General Business.
B) Discussed email from Mr Peter Wills.

_____ _____

Gae Swain 18 November 2019
Independent Chairperson

WERRIS CREEK COAL PTY LTD

QUARTERLY ENVIRONMENTAL MONITORING REPORT - DRAFT

June, July, August and September 2019

This Environmental Monitoring Report covers the period 1st June 2019 to 30th September 2019 for the Werris Creek Coal Mine Community Consultative Committee.

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

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

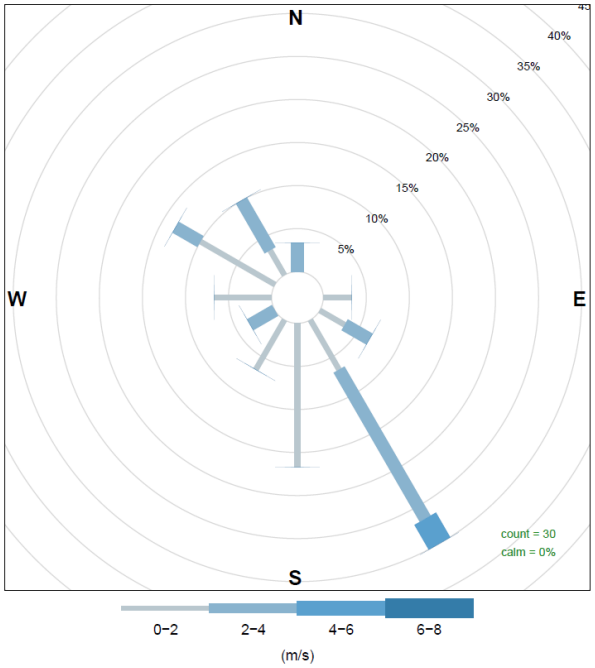
CONTENTS

1.0 METEOROLOGY

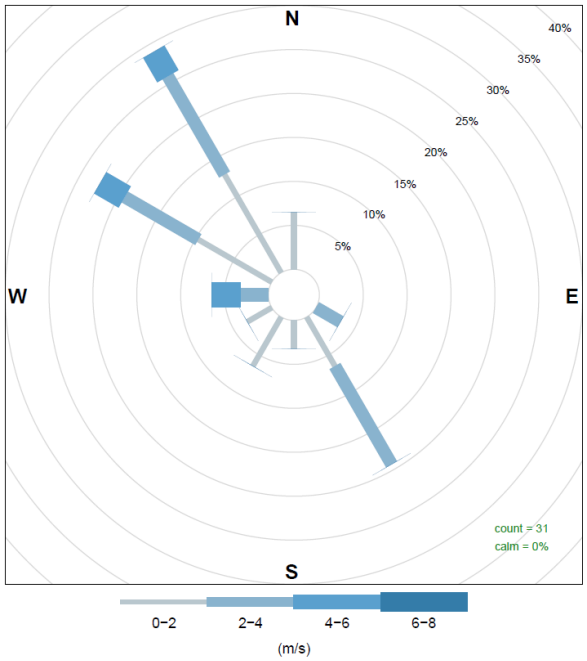
1.1 WEATHER STATION

Werris Creek Coal (WCC) collects meteorological data from the onsite weather station located on the top level of the overburden emplacement. The following table summarises rainfall data for the last four months. 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 SSE in June, NW/ NWN in July and August and S/SW in September2019.

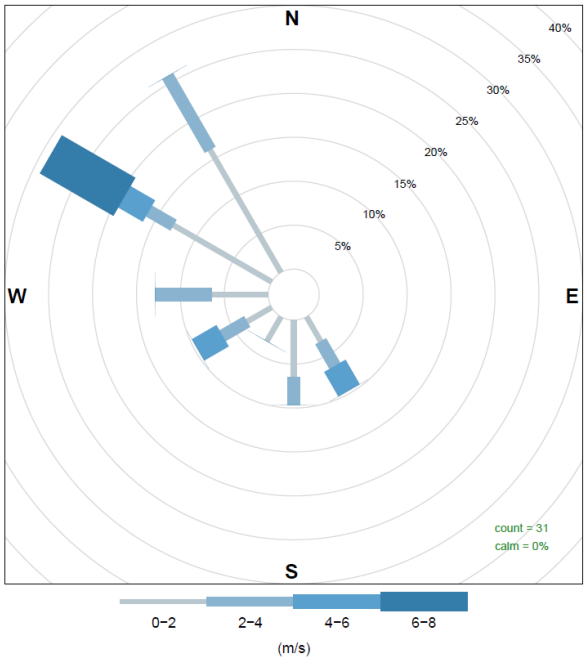
Month	Rainfall *(mm)*		
	Onsite	***Historical Average***	***2019 Total***
June 2019	13.0	61.0	181.2
July 2019	14.4	37.3	195.6
August 2019	2.2	33.6	197.8
September 2019	4.2	47.7	202.0



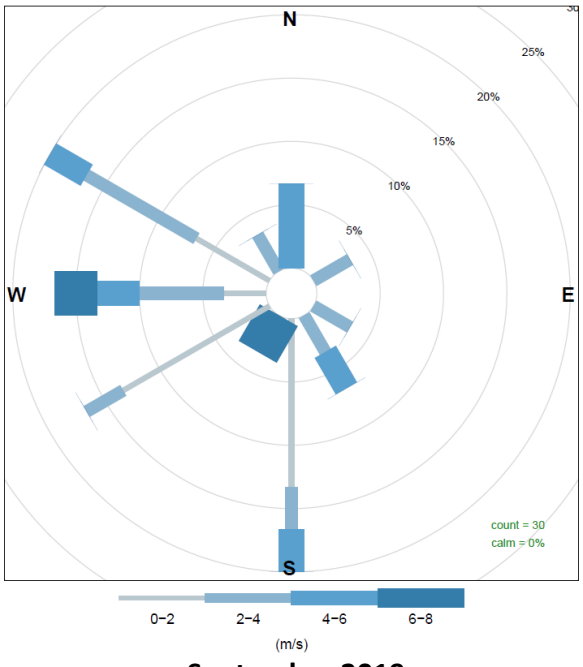
June 2019



July 2019



August 2019



September 2019

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 ($\mu g/m^3$)	June 2019 ($\mu g/m^3$)	July 2019 ($\mu g/m^3$)	August 2019 ($\mu g/m^3$)	September 2019 ($\mu g/m^3$)	2019 Average (g/m^2/month)	Criteria ($\mu g/m^3$)	
							Annual	Daily
$PM_{2.5}$ – TEOM92 "Werris Creek"	14.7	4.8	3.2	3.7	5.4	5.4	8	25
PM_{10} – TEOM92 "Werris Creek"	**118.3**	9.6	9.6	17.2	20.7	17.1	30	50
PM_{10} – HVP20 "Tonsley Park"	32.2	15.9	11.2	14.2	19.7	24.8	30	50
PM_{10} - HVP1 "Escott"	27.0	7.2	6.8	9.6	11.1	16.5	30	50
PM_{10} – HVP11 "Glenara"	33.3	13.7	13.0	17.8	19.6	25.6	30	50
PM_{10} – HVP98 "Kyooma"	17.0	4.8	6.9	7.2	10.9	15.6	30	50
TSP – HVT98 "Kyooma"	41.1	11.9	13.1	19.1	28.6	35.2	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 two PM10 results measured at "TEOM92 "Werris Creek"", on the 6th and 7th September 2019. On both occasions the exceedances were reported with the elevated results affected by high regional elevated dust levels.

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	June 2019 (g/m^2/month)	July 2019 (g/m^2/month)	August 2019 (g/m^2/month)	September 2019 (g/m^2/month)	2019 Average (g/m^2/month)	Annual Criteria (g/m^2/month)
DG1 "Escott"	0.3	0.1	2.3	0.8	0.8	4.0
DG2 "Cintra"	**5.0**	**5.8**	**4.1**	**8.3**	**5.0**	4.0
DG3 "Eurunderee"	1.0	3.5	0.8	1.2	2.3	4.0
DG5 "Railway View"	2.6	1.0	0.7	3.8	2.3	4.0
DG9 "Marengo"	0.7	0.5	0.7	0.7	1.1	4.0
DG11 "Glenara"	0.7	0.5	2.7	0.7	1.4	4.0
DG14 "Greenslopes"	2.1	0.3	0.6	2.6	1.4	4.0
DG15 "Plain View"	0.8	0.4	0.6	1.4	1.1	4.0
DG17 "Woodlands"	1.0	0.4	0.5	0.6	1.0	4.0
DG20 "Tonsley Park"	1.3	0.6	3.1	1.2	1.9	4.0
DG22 "Mountain View"	0.7	0.8	1.1	0.6	1.5	4.0
DG24 "Hazeldene"	**10.2**	0.6	0.7	1.4	2.3	4.0
DG34 8 Kurrara St	0.8	0.6	0.6	0.8	**8.4**	4.0
DG62 Werris Creek South	0.5	0.2	0.6	0.5	0.9	4.0
DG92 Werris Creek Centre	0.5	0.2	2.5	0.5	1.1	4.0
DG96 "Talavera"	NS	NS	NS	NS	NA	NA
DG98 "Kyooma"	0.4	0.2	0.8	0.5	0.8	4.0
DG101 "Westfall"	0.9	0.5	2.2	1.6	1.9	4.0
DG103 West Street	1.4	0.5	0.6	0.6	1.2	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/m^2/month throughout the period with the exception of DG2 (Cintra) which had high results in June, July, August and September 2019 and a rolling average above criteria.

DG24 (Hazeldene) in June 2019 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) has a current 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	June 2019		July 2019		August 2019		September 2019		2019 Average (g/m^2/month)
	g/m^2/month	% Coal	g/m^2/month	% Coal	g/m^2/month	% Coal	g/m^2/month	% Coal	
DDW30	1.0	10%	0.4	40%	1.8	10%	1.2	20%	1.6
DDW20	1.9	10%	1.0	5%	9.4*	<5%	1.2	10%	1.6
DDW13	1.5	30%	0.9	5%	4.1*	<5%	1.5	25%	1.9
Train Line									
DDE13	0.5	25%	0.9	20%	1.4	15%	1.0	20%	1.5
DDE20	0.7	50%	0.5	10%	1.1	15%	0.8	10%	1.2
DDE30	2.5	<5%	0.8	10%	2.3	<5%	0.2	10%	2.1

* - sample contaminated with excessive organic matter (>50%) from non-mining source (i.e. bird droppings and insects); NS – Not Sampled, bottle and funnel smashed.

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/m^2/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 one dust complaint 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**.

Thursday 20th June 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	Inaudible#	40
C	**Central Quipolly**(R10*,R11*)	Inaudible#	40	Inaudible#	40
D	**"Hazeldene"** R24	Inaudible#	37	Inaudible	37
E	**"Railway Cottage"** R12	25#	38	Inaudible#	38
F	**"Talavera"** R96	Inaudible#	38	22	37
H	**"Kyooma"** R98	26#	38	24	38
I	**Kurrara St, WC** R57	Inaudible#	35	Inaudible#	35
J	**Coronation Ave, WC**	Inaudible#	35	Inaudible#	35
K	**Alco Park** (R21*)	Inaudible#	40	29	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

Thursday 25th July 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	25	40
C	**Central Quipolly**(R10*,R11*)	Inaudible	40	Inaudible	40
D	**"Hazeldene"** R24	Inaudible	37	Inaudible	37
E	**"Railway Cottage"** R12	Inaudible	38	Inaudible	38
F	**"Talavera"** R96	Inaudible	38	Inaudible	37
H	**"Kyooma"** R98	Inaudible	40	Inaudible	40
I	**Kurrara St, WC** R57	Inaudible	35	28	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

Monday 26TH and Tuesday 27th August 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	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	25#	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*)	Inaudible	40	25#	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

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

June 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	100.5	0.33	102.6	0.21	103.2	0.13	100.4
Monthly Maximum		0.12	106.2	0.55	112.3	0.41	110.0	0.21	106.3
Annual Average		0.10	99.61	0.58	100.35	0.34	101.50	0.20	99.74
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%	0.77%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

July 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	0.58	101.5	0.35	103.6	0.21	100.6
Monthly Maximum		0.20	106.0	1.08	106.7	0.93	115.6	0.54	114.0
Annual Average		0.10	99.84	0.58	100.52	0.34	101.80	0.20	99.86
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%	0.75%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	0.00%

August 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		0.09	99.2	0.56	101.9	0.28	101.8	0.14	102.8
Monthly Maximum		0.22	113.1	1.28	109.0	0.56	112.0	0.28	111.9
Annual Average		0.10	99.76	0.58	100.69	0.33	101.80	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%	0.78%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	1.15%	0.00%	0.00%

September 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	100.7	0.17	103.5	0.29	102.6	0.17	98.8
Monthly Maximum		0.14	111.2	0.53	114.4	0.64	113.7	0.30	110.7
Annual Average		0.10	99.86	0.54	101.00	0.33	101.89	0.19	100.07
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%	0.84%	0.00%	0.00%
	Reporting Year	0.00%	0.00%	0.00%	0.00%	0.00%	1.06%	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 of 10mm/s) as well as the 95th percentile limits 5mm/s. However one blast was above the 95th percentile limits of 115dB(L) at Werris Creek South R62 on the 5 July 2019.

4.2 BLAST COMPLAINTS

There were six 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 5, 10, 12, 18, 22 and 24 July 2019 and 4, 5, 6 and 9 September 2019. 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-19	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	Dry	
	MW3	20.73	-1%
	MW4B	19.10	-2%
	MW5	13.70	-1%
	MW6	16.23	0%
	MW27*	Dry	
	MW36A	22.63	-4%
	MW36B	22.62	-4%
Werrie Basalt	**MW8***	20.89	-1%
	MW10	14.27	-1%
	MW14	18.26	-6%
	MW17B*	15.96	-9%
	MW19A*	No access	
	MW20*	22.88	0%
	MW38A	13.10	-7%
	MW38B*	10.40	0%
	MW38C*	24.25	0%
	MW38E*	11.81	0%
	MW41	10.51	-2%
	MW43	9.26	-2%
#[1]	**MW24A***	17.7	0%
	MW29*	14.69	0%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	6.8	-4%
	MW13D*	6.62	0%
	MW15*	Dry	
	MW16*	Dry	
	MW17A*	8.37	-1%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.83	-1%
	MW23B*	5.62	-15%
	MW26B*	10.8	-1%
	MW28A*	Dry	
	MW32*	Pump over bore	
	MW40	10.53	-1%
	MW42	9.15	-2%
#[2]	**MW34***	No access	

Site		September-19	
		mbgl	%
Werrie Basalt near WCC	**MW1**	Dry	
	MW2	58.32	-9%
	MW3	20.78	0%
	MW4B	19.35	-1%
	MW5	13.76	0%
	MW6	16.32	-1%
	MW27*	Dry	
	MW36A	23.35	-3%
	MW36B	23.34	-3%
Werrie Basalt	**MW8***	21.06	-1%
	MW10	14.32	0%
	MW14	19.32	-5%
	MW17B*	15.94	0%
	MW19A*	No access	
	MW20*	23.03	-1%
	MW38A	13.73	-5%
	MW38B*	10.42	0%
	MW38C*	24.24	0%
	MW38E*	11.92	-1%
	MW41	10.60	-1%
	MW43	9.36	-1%
#[1]	**MW24A***	16.05	10%
	MW29*	14.84	-1%
Quipolly Alluvium	**MW12***	Dry	
	MW13*	Dry	
	MW13B*	6.82	0%
	MW13D*	6.63	0%
	MW15*	No access	
	MW16*	Dry	
	MW17A*	8.59	-3%
	MW18A*	Dry	
	MW21A*	Dry	
	MW22A*	Dry	
	MW22B*	Dry	
	MW23A*	4.9	-1%
	MW23B*	5.67	-1%
	MW26B*	10.93	-1%
	MW28A*	Dry	
	MW32*	Pump over bore	
	MW40	10.63	-1%
	MW42	9.25	-1%
#[2]	**MW34***	12.33	-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 July and September 2019.

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 8th August 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.

8th August 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
WCU	Dry	Dry	Dry	Dry	Dry
WCD	8.19	1560	38	<5	pH increased and EC decreased, TSS slightly increased and O&G unchanged. Pooled.

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 8 August 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

There were no discharge events in June, July, August and September 2019.

5.3 WATER COMPLAINTS

There were no water release complaints during the period.

6.0 COMPLAINTS SUMMARY

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

#	Date	Issue	Complaint	Investigation	Action Taken
609	3/7/2019	Vibration	Complainant advised they felt the blast vibration at their workshop.	EO explained that all monitors indicated the blast was within compliance limits.	No further follow - up actions
610	5/7/2019	Blast	Complainant left a voice mail message on the EO phone advised they felt the blast at their residence. Requested results via email no call back required	EO confirmed blast was within compliance limits	EO emailed a copy of the results to the complainant.
611	8/7/2019	Blast	Complainant advised they felt the blast at their residence on the 3/07/2019	EO explained that all monitors indicated the blast was within compliance limits.	EO emailed a copy of the results to the complainant.
612	21/8/2019	Blast	Complainant left a voice mail message on the EO phone advised they felt the blast at their residence. Requested results via email.	EO left message on phone indicating blast did not trigger and would download results following manual trigger and send via e-mail.	EO emailed a copy of the results to the complainant.
613	21/8/2019	Blast	Complainant left a voice mail message on the EO phone advised they felt the blast at their residence. Did not want a call back, just to formally register complaint	EO confirmed blast was within compliance limits	No further follow-up actions
614	10/9/2019	Blast	Complainant left a voice mail message on the EO phone advised they felt the blast at their residence. Did not want a call back, just to formally register complaint	EO confirmed blast was within compliance limits	No further follow-up actions
615	17/9/2019	Dust	Complainant left a voice mail message on the EO phone wanting to register a complaint regarding dust leaving the mine site and heading towards town.	EO called back and spoke with Complainant notifying them that the entire pit, crusher and TLO had been shut down due to rapid wind increase and risk of dust.	EO checked dust monitors and confirmed no exceedances had been recorded. 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.

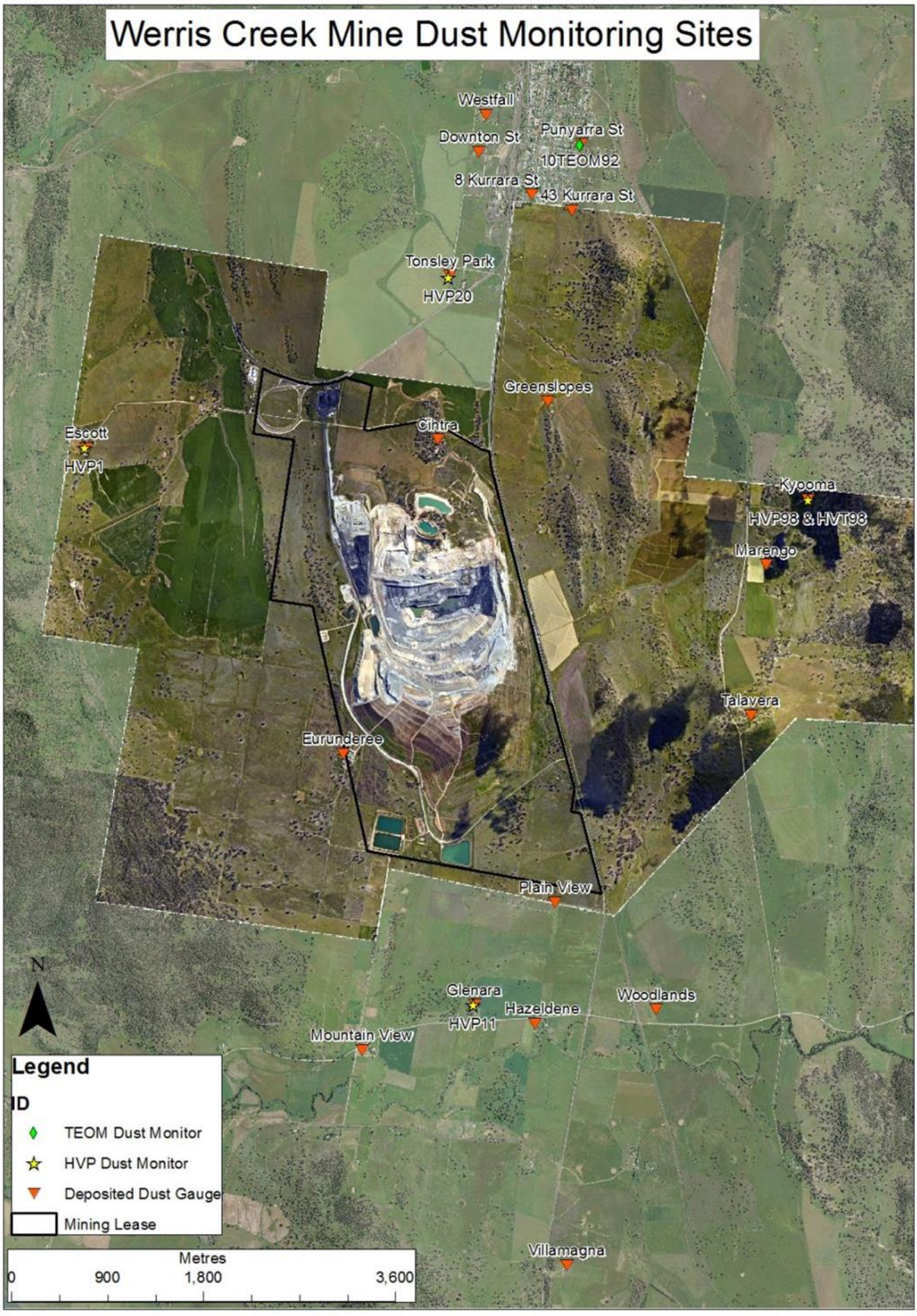


Figure 1 – WCC Dust Monitoring Locations

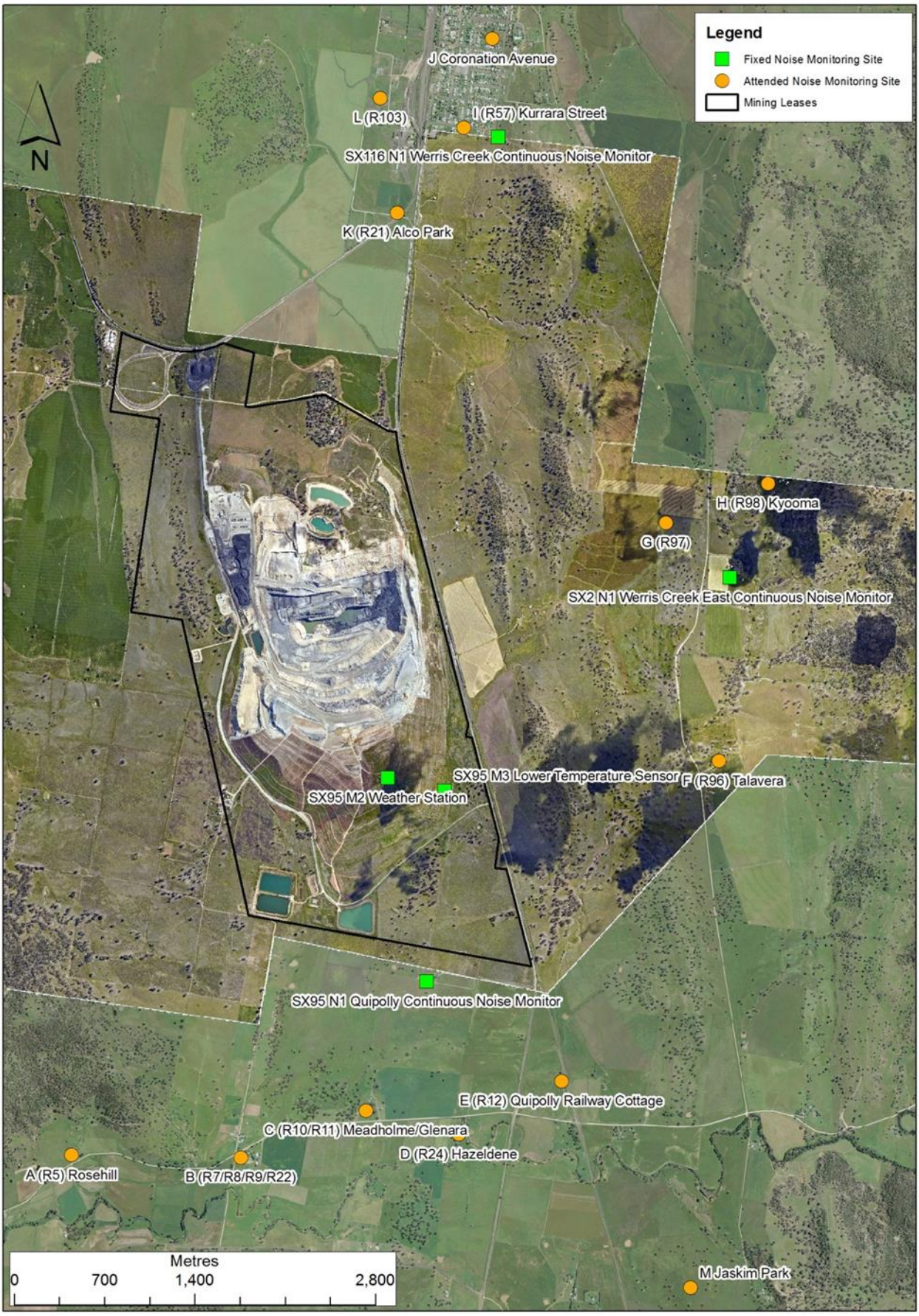


Figure 2– WCC Noise Monitoring Locations

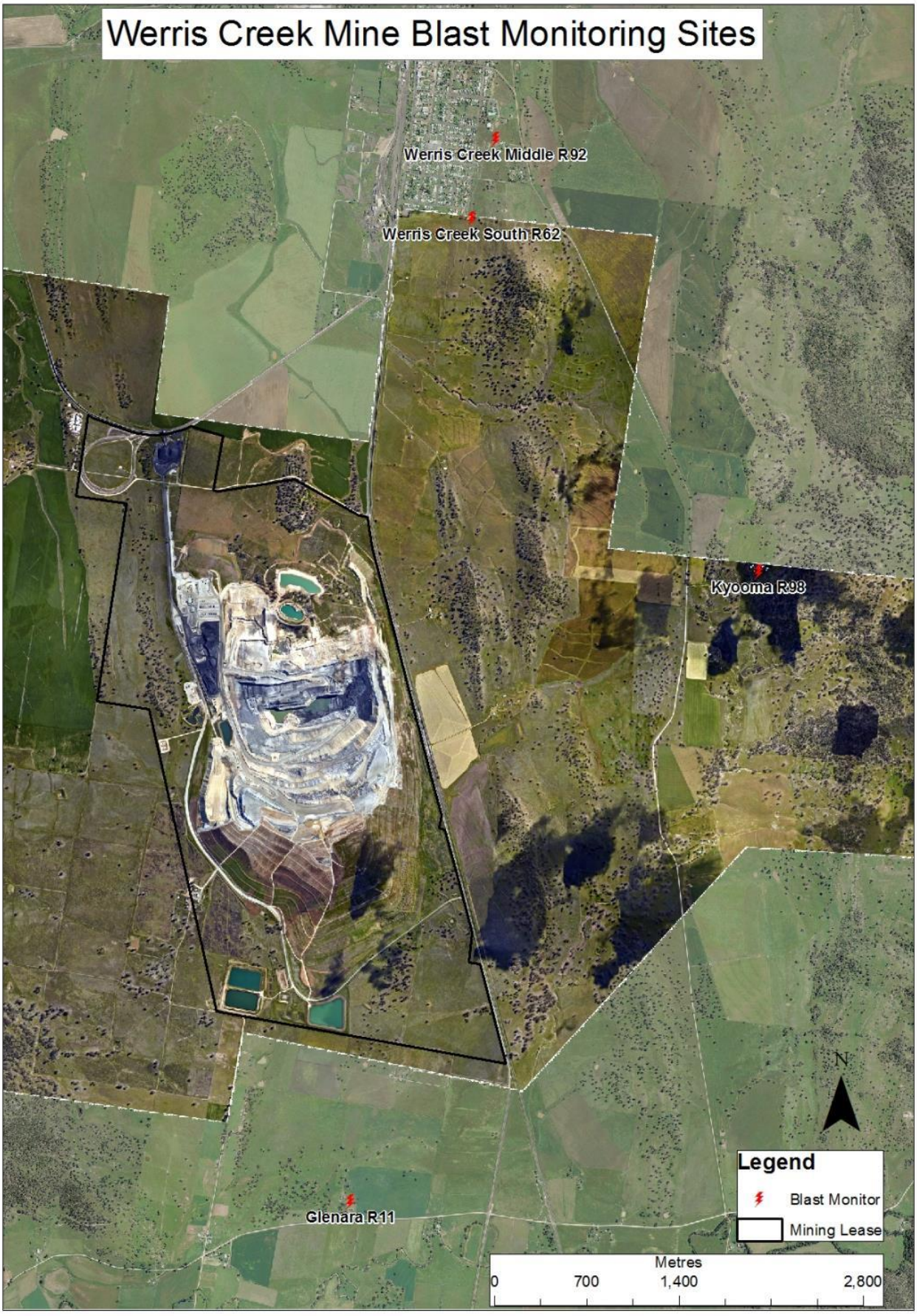


Figure 3 – WCC Blast Monitoring Locations

Figure 4 – WCC Groundwater Monitoring Locations

Figure 5 – WCC Surface Water Monitoring Locations

Appendix A

Follow up advice to information requested by CCC members at 51st CCC Meeting of 13th November 2019.

General Business Item:

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

WCC Response: Werris Creek Coal have reviewed blasting records and can confirm that no blast was undertaken on the 12th October 2019 at Werris Creek Coal 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? *WCC personnel to review details and report back for these Minutes.*

WCC Response: Werris Creek Coal holds Water Access Licences for the Werris Creek Coal mine. The quantity of water used by the centre pivot varies, however measured application is approximately 7.4ML (average) per operational event from December 2017 to November 2019. There have been 34 operational events during the same period.

Appendix B

-------- Original message --------
From: Peter Wills <peterjameswills@hotmail.com>
Date: 6/11/19 11:25 am (GMT+10:00)
To: Gae Swain
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
