

**WAMBO COAL
POLLUTION MONITORING DATA
1 MAY 2020 – 31 MAY 2020**

FINAL REPORT

Published 23 July 2020

**Environment Protection Licence Number: 529
Licensee: Wambo Coal Pty Limited, PMB 1, Singleton NSW 2330
Premises: Wambo Coal Pty Limited, Jerrys Plains Road, Warkworth NSW 2330**

The following pollution monitoring data is published as a requirement of the Wambo Environmental Protection Licence (EPL) 529. A link to EPL529 can be found on the Environmental Protection Authority (EPA) Public Register. A link to the EPA's public register can be found at: <https://www.epa.nsw.gov.au/licensing-and-regulation/public-registers/about-prpoeo>

Monthly interim reports will be provided on a fortnightly basis until a final monthly report is produced when all monthly data is available.

The location of each sampling point is provided in 'Plan 2672-2' at the end of this document.

Monitoring Data

Surface and Mine Water Dam Monitoring

Monitoring Frequency: Once per month

Sampling Method: Grab sample

Limits: Nil

Table 1 - WCPL Surface and Mine Water Dam Results

EPL ID	Site ID	Date	pH	EC (µS/cm)	TSS (mg/L)	Comments
Point 24	SW01	29/05/2020				No Access
Point 25	SW02	29/05/2020	7.2	795	<5	
Point 26	SW03	29/05/2020	7.1	925	<5	
Point 27	SW04	29/05/2020				Dry
Point 28	SW05	29/05/2020				No Flow
Point 29	SW06	29/05/2020	6.8	515	<5	
Point 30	SW07	29/05/2020				No Flow
Point 31	SW08	29/05/2020	6.5	458	<5	
Point 32	SW14	26/05/2020	8.4	686	<5	
Point 33	SW15	26/05/2020	8.7	4820	20	
Point 34	SW27a	29/05/2020				Dry
Point 35	SW31	26/05/2020	8.7	1144	38	
Point 36	SW32a	29/05/2020				Dry
Point 37	SW38	26/05/2020	9.1	4690	21	
Point 38	SW12	26/05/2020	8.8	6980	14	
Point 39	SW39	29/05/2020				No Flow
Point 40	SW40	29/05/2020				No Flow
Point 41	SW41	29/05/2020				Dry
Point 46	SW52	26/05/2020	9.1	3380	6	
Point 47	Wombat Dam	26/05/2020	8.1	512	9	
Point 48	Milk Can Dam	26/05/2020	8.5	1955	37	
Point 49	Rug Dump Dam	26/05/2020				No water
Point 50	Montrose East 1	29/05/2020	8.5	467	142	
Point 52	Montrose East 2	29/05/2020	8.2	400	76	

Water Discharge Monitoring

Monitoring Frequency: Continuous during discharge (EC, pH, Turbidity)
 Daily during discharge (TSS, Volume)

Sampling Method: In line instrumentation (EC, pH Turbidity)
 Grab sample (TSS)

Limits: pH- 6.5 to 9.5
 TSS – 120
 Volume – 250ML/day

Date sampled: Continuous
Date obtained: Continuous

Table 2 - WCPL Discharge Monitoring

Site	Date	pH	TSS (mg/L)	Turbidity (NTU)	Volume (ML/day)	Comments
Point 4						No Discharges
Point 19						No Discharges

Sewerage Treatment Monitoring

Monitoring Frequency: Quarterly during discharge

Sampling Method: Grab sample

Limits: Nil

Date sampled: No monitoring in May
Date obtained: No monitoring in May

Table 3- WCPL Discharge Monitoring

Site	Date	pH	Faecal Coliforms	Comments
Point 18				No monitoring in May
Point 42				No monitoring in May
Point 52				No monitoring in May

PM10 Monitoring

Monitoring Frequency: Continuous

Sampling Method: AM22

Limits: Nil

Date sampled: Continuous

Date obtained: Continuous

Table 4 - WCPL PM10 Results

Date of Run	PM01 - Coralie (EPA13)		PM02 - Wambo Road (Caban) (EPA14)		PM03 - Thelander (EPA15)		PM04 - Muller (EPA16)	
	PM10 24 Hour Result (ug/m ³)	YTD Average	PM10 24 Hour Result (ug/m ³)	YTD Average	PM10 24 Hour Result (ug/m ³)	YTD Average	PM10 24 Hour Result (ug/m ³)	YTD Average
01/05/2020	10.3	27.21	10.9	27.24	7.2	23.91	7.4	27.62
02/05/2020	13.6	27.10	10.8	27.10	6.7	23.77	8.3	27.46
03/05/2020	10.6	26.97	9.7	26.96	7.0	23.63	15.7	27.37
04/05/2020	19.8	26.91	15.0	26.87	13.5	23.55	21.2	27.32
05/05/2020	15.4	26.82	12.7	26.76	12.5	23.46	18.1	27.25
06/05/2020	12.3	26.70	10.5	26.63	6.0	23.32	6.4	27.08
07/05/2020	14.8	26.61	24.4	26.61	9.3	23.21	9.7	26.95
08/05/2020	17.7	26.54	24.1	26.59	10.1	23.11	10.7	26.82
09/05/2020	16.2	26.46	18.9	26.53	11.1	23.01	11.6	26.70
10/05/2020	9.2	26.33	6.9	26.38	5.8	22.88	5.2	26.54
11/05/2020	16.4	26.26	17.2	26.31	8.6	22.77	17.0	26.47
12/05/2020	NaN*	26.26	19.3	26.26	10.2	22.68	13.7	26.37
13/05/2020	15.7	26.18	23.2	26.24	11.8	22.60	14.3	26.28
14/05/2020	23.1	26.15	22.1	26.21	11.2	22.51	18.2	26.22
15/05/2020	15.4	26.07	12.6	26.11	11.3	22.43	19.8	26.17
16/05/2020	14.7	25.99	8.6	25.98	11.8	22.35	21.0	26.14
17/05/2020	29.4	26.02	13.6	25.89	20.3	22.34	40.3	26.24
18/05/2020	24.8	26.01	16.4	25.82	13.9	22.27	25.6	26.23
19/05/2020	11.1	25.90	12.6	25.73	11.5	22.20	15.1	26.15
20/05/2020	21.8	25.87	20.7	25.69	8.4	22.10	10.2	26.04
21/05/2020	13.9	25.78	13.7	25.61	7.1	21.99	6.5	25.90
22/05/2020	11.0	25.68	8.7	25.49	5.1	21.87	5.5	25.76
23/05/2020	12.4	25.59	18.6	25.44	8.8	21.78	8.7	25.64
24/05/2020	6.5	25.46	9.2	25.33	7.6	21.68	5.5	25.50
25/05/2020	8.4	25.34	8.1	25.21	6.6	21.58	6.3	25.37
26/05/2020	8.6	25.22	9.2	25.10	9.0	21.49	10.5	25.27
27/05/2020	19.8	25.19	12.7	25.02	11.2	21.42	14.5	25.20
28/05/2020	12.6	25.10	15.3	24.95	10.9	21.35	14.8	25.13
29/05/2020	18.4	25.06	13.3	24.87	15.9	21.32	24.4	25.12
30/05/2020	11.7	24.97	8.8	24.77	9.3	21.23	17.4	25.07
31/05/2020	12.6	24.89	10.3	24.67	7.3	21.14	23.7	25.06

*NaN due to power outage >75% of data collection period

Blast Monitoring

Monitoring Frequency: Every blast

Airblast Overpressure Limit: 120 dBL
115 dBL (5% of blast each year)

Ground Vibration Limit: 10mm/s
5mm/s (5% of blast each year)

Date sampled: Continuous

Date obtained: Continuous

Table 5 - WCPL Blast Monitoring Results

Date & Time	ID	BM02 – Kelly (EPA10)		BM05 – Muller (EPA11)		BM07 – Thelander (EPA12)	
		dBL	mm/sec	dBL	mm/sec	dBL	mm/sec
Fri/01/May/2020 1533hrs	WTA 500_1 & WMA 490_3	100.8	0.15	96.9	0.43	91.9	0.48
Fri/08/May/2020 1158hrs	WTA 501_1	98.8	1.34	97.3	0.14	95.3	0.17
Fri/08/May/2020 1204hrs	WMA 503	92.7	0.23	95.4	0.45	90.0	0.34
Wed/20/May/2020 1507hrs	WMA_502	86.2	0.04	83.0	0.08	85.5	0.13
Wed/20/May/2020 1513hrs	WTA 501_2	94.8	0.22	94.0	0.19	94.9	0.23
Wed/20/May/2020 1523hrs	RCA 504	90.2	0.23	95.9	0.46	93.6	0.39
Thu/28/May/2020 1503hrs	WMA 506_1	75.4	0.07	99.4	0.27	95.8	0.24
Thu/28/May/2020 1506hrs	WTA_500_2	77.6	0.20	99.0	0.41	98.4	0.31

Refer to Annual Blasting Report for Annual compliance limits

Meteorological Monitoring

Monitoring Frequency: Continuous

Sampling Method: Site Meteorological Station EPA17

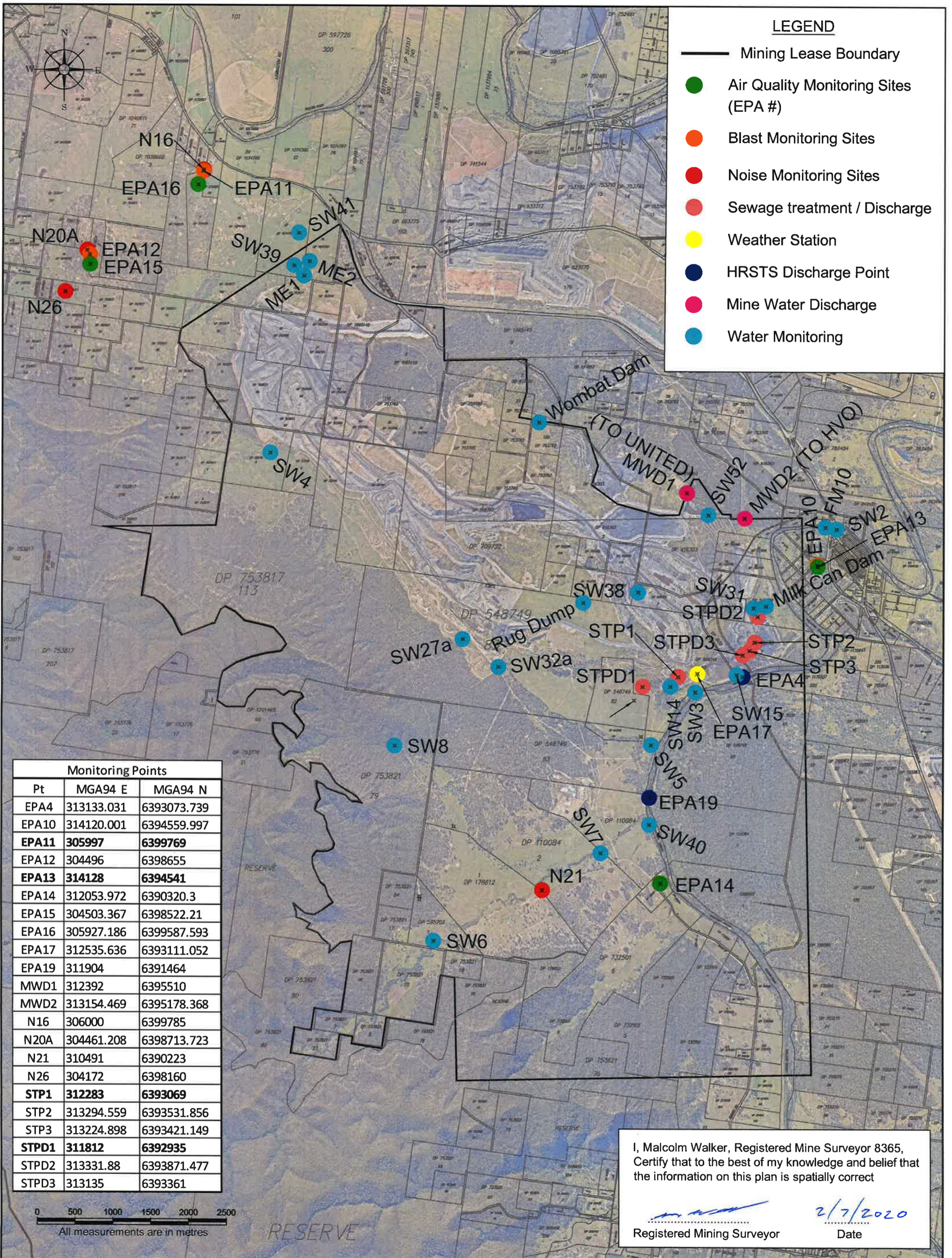
Limits: Nil

Date sampled: continuous

Date obtained: continuous

Table 6 - WCPL Meteorology

Date	Temperature (2m)			Temperature (10m)			Humidity			Solar Radiation		RAIN	Wind Speed			Wind Direction at 10m	Sigma Theta		
	Average	Min	Max	Average	Min	Max	Average	Min	Max	Average	Max	Sum (mm)	Average	Min	Max	Average	Average	Max	Min
01/05/2020	12.5	10.1	15.8	12.6	10.3	15.6	61.5	42.2	78.2	158.1	803.1	0	4.5	2.5	7.5	300	19.1	27.3	14.6
02/05/2020	14.4	12	17.5	14.5	12.1	17.5	59.8	45.5	72	174.8	823.6	0	4.8	0.5	8.2	293	20.2	66.1	13.2
03/05/2020	12.6	5.8	20.4	13	6.3	19.8	62.6	32.8	97.7	202.9	785.8	0	1.3	0.2	4.1	292	25.1	83.3	8.9
04/05/2020	10.7	2.5	20.3	11.5	3.5	20.3	76.7	36.6	99.4	197.4	735.5	0	0.1	0	2	253	32.6	98.5	5.2
05/05/2020	12.9	6.4	18.9	13.2	7.4	18.4	88.8	64.1	99.6	97.7	614.9	0	0.7	0.1	4.2	127	25.7	83.7	6.1
06/05/2020	12.5	6.3	21.7	13.1	7.2	21.5	86.8	50.1	100	156.3	746.3	0.2	0.4	0.1	2.9	310	25.6	93.1	5.6
07/05/2020	12.9	4.4	22.7	13.5	4.7	22.4	81.3	51.1	100	132.2	575.3	0	0.9	0.1	4.2	288	26.6	86.0	5.9
08/05/2020	15.2	6.3	26.1	16.2	7.5	25.8	73.2	37.4	99.9	183.1	691.1	0	1.1	0.1	4.5	301	26.6	96.8	5.4
09/05/2020	15.4	7	24.3	16	7.9	24	75.4	44.4	99	125.2	762.8	0	1.8	0.1	6.3	301	25.5	93.1	5.3
10/05/2020	12.2	5.1	18.8	13.3	8.2	18.4	62.1	24.4	96.5	194.1	722.3	0.2	0.7	0.1	4.2	277	27.6	81.5	6.6
11/05/2020	8.9	1.4	18.9	9.8	2.8	18.5	69.7	29.9	98.6	191.1	714.6	0	0.2	0.1	2.9	111	29.2	93.9	5.9
12/05/2020	8.9	-0.2	20.1	9.6	0.4	19.8	76.6	40.5	99.1	183	707.5	0	0.2	0.1	2.3	309	28.8	94.1	4.9
13/05/2020	9.9	1.8	19.3	10.7	2.8	18.8	77.2	40.8	99.6	118.4	699.7	0	0.7	0.1	3.9	293	26.3	96.6	7.3
14/05/2020	10.7	1.3	18.8	11.2	2.2	18.3	78	49.3	99.8	148.3	782.6	0	1.2	0.1	3.5	145	25.2	96.9	7.5
15/05/2020	14.2	10	18.1	14.4	11.3	17.4	75.2	54	99	111.5	625.4	0.4	1.6	0.4	4.1	139	19.7	55.1	8.6
16/05/2020	14	7.5	20.1	14.5	8.3	19.8	79.6	48.1	99.5	145.3	784.5	0	1.2	0.2	5.1	133	22.8	60.3	6.6
17/05/2020	12.5	5.5	20.9	13.2	6.8	20.5	80.8	48.1	99.5	130.1	707.7	0	0.7	0	3.9	140	23.5	95.6	7.3
18/05/2020	14.6	9.3	18.9	14.9	10	18.6	84.8	67	99	82.6	652.6	0	1.1	0.1	3.8	125	22.5	90.1	6.6
19/05/2020	13.7	8	20.6	14.1	8.5	20.1	87.7	57.2	100	147.6	689.7	0	0.3	0.1	2.5	91	26.6	88.5	4.6
20/05/2020	15.5	8.4	23.9	16.2	9.2	23.5	76.5	46.5	100	128.4	659.2	0	1.1	0.1	4.5	311	25.3	96.2	5.8
21/05/2020	14.5	9.5	17.9	14.9	9.7	17.7	80.4	52.7	94.9	42.6	341.2	0.4	1.4	0.1	5.1	315	23.9	83.5	8.4
22/05/2020	13.1	8.2	18.1	13.2	8.3	17.9	62.4	43.5	83.6	102.3	608.5	0.2	2.7	1.3	5.2	288	20.4	46.4	12.9
23/05/2020	11.6	10.1	14.5	11.6	10.1	14	75.4	64.8	92.5	73.9	558.7	0.2	3.9	1.3	6.4	309	21.2	36.1	14.7
24/05/2020	14.6	11.3	17.9	14.8	11.4	18	65.4	49.4	89.7	46.7	479.4	0.2	1.3	0.3	4.8	251	21.1	77.1	10.7
25/05/2020	14.1	11.1	16.1	14.4	12.6	15.9	73	55.4	97.8	47.8	372.2	8.4	1.5	0.1	5.4	196	24.9	79.2	10.4
26/05/2020	15.2	11.3	18.9	15.6	13.2	18.7	77.9	62.8	95	96	630.4	0.2	2.4	0.1	4.9	169	24.6	92.3	9.2
27/05/2020	13.6	8.3	19.8	14.1	8.7	19.8	84.9	58.8	100	126.1	792.9	0	0.2	0.1	2.5	123	27.5	96.7	7.6
28/05/2020	13	6.2	21.2	13.4	7.1	20.9	86.3	52.9	100	150.2	622.5	0	0.4	0.1	2.9	306	29.0	87.1	7.4
29/05/2020	13.7	8	20.3	14.2	9.2	20	86.1	50.1	100	115.5	708.5	0	0.5	0.1	4.8	114	31.4	94.3	4.2
30/05/2020	12.3	6.8	19.7	12.7	7.5	19.2	89.6	58.9	100	140.8	611.1	0	0.2	0	2.6	68	23.0	72.3	2.2
31/05/2020	12.2	6.4	22	12.8	7	21.7	87.1	47.1	100	74.2	675	0	0.4	0	4	278	27.7	97.2	6.1
	12.97	-0.20	26.10	13.46	0.40	25.80	76.86	24.40	100.0	129.81	823.60	10.4	1.27	0.00	8.20	224	25.3	98.5	2.2



LEGEND

- Mining Lease Boundary
- Air Quality Monitoring Sites (EPA #)
- Blast Monitoring Sites
- Noise Monitoring Sites
- Sewage treatment / Discharge
- Weather Station
- HRSTS Discharge Point
- Mine Water Discharge
- Water Monitoring

Monitoring Points		
Pt	MGA94 E	MGA94 N
EPA4	313133.031	6393073.739
EPA10	314120.001	6394559.997
EPA11	305997	6399769
EPA12	304496	6398655
EPA13	314128	6394541
EPA14	312053.972	6390320.3
EPA15	304503.367	6398522.21
EPA16	305927.186	6399587.593
EPA17	312535.636	6393111.052
EPA19	311904	6391464
MWD1	312392	6395510
MWD2	313154.469	6395178.368
N16	306000	6399785
N20A	304461.208	6398713.723
N21	310491	6390223
N26	304172	6398160
STP1	312283	6393069
STP2	313294.559	6393531.856
STP3	313224.898	6393421.149
STPD1	311812	6392935
STPD2	313331.88	6393871.477
STPD3	313135	6393361

I, Malcolm Walker, Registered Mine Surveyor 8365, Certify that to the best of my knowledge and belief that the information on this plan is spatially correct

2/7/2020
 Registered Mining Surveyor Date

0 500 1000 1500 2000 2500
 All measurements are in metres

Rev.	Drawn	Description	Approved
D	MJW	Water monitoring and discharge sites added	
E	MJW	Monitoring points except water monitoring added to coordinate table	
G	MJW	STPD3 Location amended	
H	MJW	EPA 13, STP 1, STPD1 & EPA 11 Locations amended	JB

WAMBO COAL PTY LIMITED
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Prepared by NWU Survey Ph: 02 65 702318

Wambo mine		Environment Protection Licence 529		Plan of Premises- Monitoring Sites	
Date	Scale: 1:45,000	Drawn MJW	Checked JB	Approved PJ	Sheet Size A3

Drawing No. 2672-2
 Revision No. H_2/07/2020