

**WAMBO COAL
POLLUTION MONITORING DATA
1 JANUARY 2022 – 31 JANUARY 2022**

JANUARY MONTHLY REPORT

Published 02 February 2022

**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 | 10/01/2022 | 7.42 | 647 | 6 | |
| Point 25 | SW02 | 10/01/2022 | 7.46 | 564 | 8 | |
| Point 26 | SW03 | 10/01/2022 | 7.43 | 583 | 15 | |
| Point 27 | SW04 | 10/01/2022 | | | | No Flow |
| Point 28 | SW05 | 10/01/2022 | 7.09 | 273 | 238 | |
| Point 29 | SW06 | 10/01/2022 | 7.06 | 283 | <5 | |
| Point 30 | SW07 | 10/01/2022 | 7.5 | 410 | <5 | |
| Point 31 | SW08 | 10/01/2022 | 7.80 | 480 | <5 | |
| Point 33 | SW15 | 10/01/2022 | 8.07 | 367 | 90 | |
| Point 34 | SW27a | 20/01/2022 | | | | No Flow |
| Point 36 | SW32a | 20/01/2022 | | | | Dry |
| Point 39 | SW39 | 20/01/2022 | | | | Dry |
| Point 40 | SW40 | 20/01/2022 | 7.42 | 638 | 10 | |
| Point 41 | SW41 | 20/01/2022 | | | | No Flow |

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 sample in January
 Date obtained:

Table 3- WCPL Discharge Monitoring

| EPL ID | Site ID | Date | pH | Faecal Coliforms | Comments |
|----------|---------|------|----|------------------|--------------|
| Point 42 | STPD2 | | | | |
| Point 52 | STP2 | | | | |
| Point 55 | STPD1 | - | - | - | No discharge |

PM10 Monitoring

Monitoring Frequency: Continuous

Sampling Method: AM22

Limits: Nil

Date sampled: Continuous

Date obtained: Continuous

Table 4 - WCPL PM10 Results

| Date | PM02 - Wambo Road (Caban) (EPA14) | | PM03 - Thelander (EPA15) | | PM04 - Muller (EPA16) | | PM05 - Kelly (EPA 53) | |
|------------|--|----------------|--|----------------|--|----------------|--|----------------|
| | PM10 24 Hour Result (ug/m ³) | Annual Average | PM10 24 Hour Result (ug/m ³) | Annual Average | PM10 24 Hour Result (ug/m ³) | Annual Average | PM10 24 Hour Result (ug/m ³) | Annual Average |
| 1/01/2022 | 16.3 | 12.26 | 11.9 | 8.19 | 18.2 | 13.12 | 14.6 | 14.59 |
| 2/01/2022 | 18.1 | 12.29 | 12.5 | 8.20 | 19.9 | 13.16 | 10.3 | 14.60 |
| 3/01/2022 | 19.8 | 12.32 | 14.4 | 8.22 | 21.8 | 13.19 | 17.3 | 14.64 |
| 4/01/2022 | 16.1 | 12.34 | 15.5 | 8.24 | 20.2 | 13.21 | 10.7 | 14.66 |
| 5/01/2022 | 11.5 | 12.34 | 13.5 | 8.26 | 12.5 | 13.22 | 10.9 | 14.65 |
| 6/01/2022 | 16.0 | 12.36 | 9.7 | 8.27 | 15.6 | 13.25 | 18.0 | 14.68 |
| 7/01/2022 | 12.9 | 12.37 | 13.1 | 8.29 | 15.0 | 13.25 | 18.5 | 14.70 |
| 8/01/2022 | 9.5 | 12.37 | 8.3 | 8.30 | 8.8 | 13.25 | 7.6 | 14.71 |
| 9/01/2022 | 11.1 | 12.37 | 9.7 | 8.31 | 13.6 | 13.24 | 9.8 | 14.70 |
| 10/01/2022 | 15.7 | 12.39 | 16.9 | 8.34 | 21.3 | 13.28 | 22.7 | 14.75 |
| 11/01/2022 | 15.7 | 12.41 | 16.0 | 8.37 | 19.2 | 13.30 | 13.4 | 14.77 |
| 12/01/2022 | 15.0 | 12.42 | 16.9 | 8.39 | 20.8 | 13.33 | 16.5 | 14.80 |
| 13/01/2022 | 11.2 | 12.39 | 8.3 | 8.39 | 14.5 | 13.32 | 15.6 | 14.82 |
| 14/01/2022 | 14.7 | 12.39 | 14.1 | 8.39 | 18.1 | 13.31 | 21.1 | 14.83 |
| 15/01/2022 | 16.2 | 12.38 | 10.5 | 8.38 | 15.9 | 13.30 | 17.4 | 14.82 |
| 16/01/2022 | 17.0 | 12.35 | 17.5 | 8.37 | 20.6 | 13.30 | 14.6 | 14.78 |
| 17/01/2022 | 34.0 | 12.39 | 24.8 | 8.42 | 32.3 | 13.34 | 27.4 | 14.80 |
| 18/01/2022 | 13.2 | 12.37 | 13.8 | 8.41 | 17.0 | 13.32 | 20.1 | 14.82 |
| 19/01/2022 | 8.3 | 12.33 | 7.9 | 8.40 | 9.2 | 13.29 | 4.9 | 14.79 |
| 20/01/2022 | 16.6 | 12.32 | 11.7 | 8.39 | 25.2 | 13.29 | 20.6 | 14.79 |
| 21/01/2022 | 16.6 | 12.33 | 14.0 | 8.39 | 23.9 | 13.31 | 17.7 | 14.82 |
| 22/01/2022 | 9.0 | 12.30 | 9.3 | 8.37 | 15.7 | 13.27 | 9.4 | 14.83 |
| 23/01/2022 | 9.0 | 12.26 | 10.3 | 8.36 | 19.7 | 13.26 | 12.2 | 14.83 |
| 24/01/2022 | 10.4 | 12.23 | 8.6 | 8.34 | 14.9 | 13.25 | 11.3 | 14.83 |
| 25/01/2022 | 17.4 | 12.21 | 11.8 | 8.33 | 19.7 | 13.23 | 15.7 | 14.83 |
| 26/01/2022 | 13.7 | 12.20 | 12.0 | 8.32 | 20.5 | 13.21 | 15.0 | 14.84 |
| 27/01/2022 | 13.8 | 12.19 | 10.2 | 8.31 | 20.9 | 13.22 | 11.6 | 14.81 |
| 28/01/2022 | 15.8 | 12.20 | 13.3 | 8.33 | 20.9 | 13.23 | 14.1 | 14.85 |
| 29/01/2022 | 16.6 | 12.23 | 14.6 | 8.37 | 24.3 | 13.28 | 19.1 | 14.89 |
| 30/01/2022 | 14.7 | 12.26 | 12.7 | 8.40 | 18.9 | 13.31 | 15.4 | 14.93 |
| 31/01/2022 | 13.9 | 12.26 | 15.5 | 8.43 | 27.2 | 13.35 | 16.9 | 14.95 |

*NaN >75% of data collected during period

Meteorological Monitoring

Monitoring Frequency: Continuous

Sampling Method: Site Meteorological Station EPA17

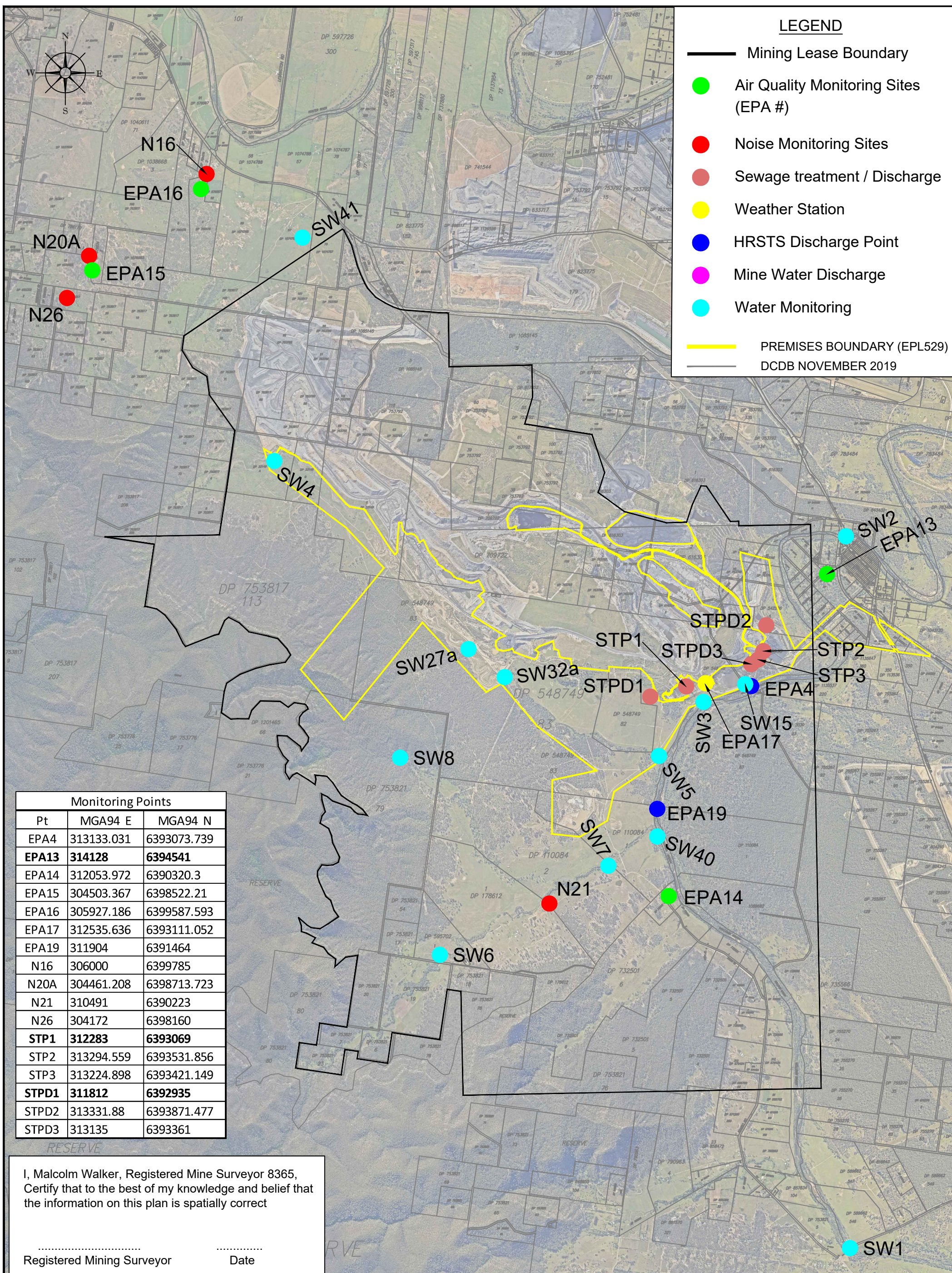
Limits: Nil

Date sampled: continuous

Date obtained: continuous

Table 5 - 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 |
| 1/01/2022 | 25.6 | 17.6 | 29.7 | 25.3 | 17.8 | 29.0 | 60.8 | 44.9 | 95.4 | 491.6 | 1359.2 | 0.0 | 2.1 | 0.3 | 4.3 | 91.3 | 24.9 | 68.4 | 7.2 |
| 2/01/2022 | 24.6 | 15.6 | 32.0 | 24.6 | 16.1 | 31.4 | 66.3 | 38.1 | 100.0 | 404.6 | 1203.3 | 0.0 | 2.0 | 0.1 | 5.1 | 115.1 | 28.3 | 92.7 | 6.5 |
| 3/01/2022 | 24.0 | 18.6 | 29.5 | 23.9 | 19.1 | 28.9 | 63.4 | 42.8 | 87.6 | 348.7 | 1339.6 | 0.0 | 2.8 | 0.8 | 6.5 | 130.9 | 19.0 | 60.0 | 9.1 |
| 4/01/2022 | 23.6 | 18.7 | 28.7 | 23.6 | 19.1 | 28.1 | 69.5 | 49.8 | 94.5 | 230.5 | 877.7 | 0.0 | 2.9 | 0.8 | 5.9 | 120.8 | 16.8 | 39.1 | 8.8 |
| 5/01/2022 | 22.9 | 20.3 | 26.4 | 22.9 | 20.2 | 26.0 | 91.2 | 73.7 | 100.0 | 168.4 | 1297.1 | 16.8 | 2.0 | 0.3 | 4.3 | 145.8 | 18.7 | 75.4 | 8.4 |
| 6/01/2022 | 25.3 | 21.7 | 29.2 | 25.2 | 21.8 | 28.6 | 76.8 | 61.5 | 96.5 | 262.9 | 1253.9 | 0.0 | 3.5 | 1.4 | 6.0 | 114.7 | 19.8 | 28.1 | 12.5 |
| 7/01/2022 | 26.4 | 22.0 | 31.6 | 26.3 | 22.0 | 31.1 | 75.2 | 55.7 | 100.0 | 270.0 | 1122.4 | 1.2 | 2.5 | 0.9 | 5.9 | 127.3 | 21.8 | 46.5 | 10.2 |
| 8/01/2022 | 25.8 | 20.0 | 32.8 | 25.6 | 19.9 | 32.1 | 73.5 | 48.1 | 100.0 | 282.0 | 1204.8 | 15.4 | 2.0 | 0.1 | 5.4 | 200.6 | 26.9 | 78.4 | 10.3 |
| 9/01/2022 | 24.8 | 20.3 | 29.1 | 24.6 | 20.2 | 28.5 | 78.1 | 60.2 | 100.0 | 269.3 | 1200.2 | 50.2 | 2.3 | 0.5 | 4.8 | 145.6 | 20.5 | 67.5 | 7.3 |
| 10/01/2022 | 25.9 | 23.4 | 29.1 | 25.8 | 23.5 | 28.9 | 79.5 | 64.3 | 92.5 | 125.8 | 642.0 | 0.2 | 1.3 | 0.2 | 3.0 | 143.1 | 20.6 | 79.2 | 8.4 |
| 11/01/2022 | 24.5 | 21.5 | 30.3 | 24.5 | 21.6 | 29.7 | 85.9 | 59.4 | 100.0 | 154.9 | 1270.0 | 3.0 | 1.3 | 0.0 | 4.4 | 150.9 | 24.5 | 100.1 | 7.4 |
| 12/01/2022 | 23.8 | 20.6 | 27.6 | 23.8 | 21.0 | 27.2 | 78.9 | 56.9 | 100.0 | 170.9 | 828.3 | 0.2 | 2.1 | 0.1 | 5.3 | 122.2 | 17.4 | 51.7 | 6.7 |
| 13/01/2022 | 23.8 | 19.1 | 29.2 | 23.7 | 19.5 | 28.7 | 73.4 | 46.8 | 98.8 | 270.8 | 1392.2 | 0.0 | 2.4 | 0.6 | 5.2 | 121.4 | 19.3 | 54.0 | 9.7 |
| 14/01/2022 | 24.2 | 19.0 | 29.6 | 24.2 | 19.3 | 29.1 | 76.7 | 52.0 | 100.0 | 253.3 | 1197.8 | 0.0 | 1.2 | 0.1 | 3.3 | 143.1 | 26.7 | 86.0 | 7.8 |
| 15/01/2022 | 24.2 | 18.0 | 34.0 | 24.2 | 18.4 | 33.2 | 80.8 | 41.1 | 100.0 | 299.7 | 1203.9 | 7.6 | 1.9 | 0.1 | 34.3 | 203.5 | 30.3 | 90.9 | 9.2 |
| 16/01/2022 | 24.0 | 17.7 | 31.8 | 23.8 | 17.7 | 31.2 | 82.8 | 53.8 | 100.0 | 348.1 | 1262.1 | 0.2 | 2.0 | 0.0 | 5.9 | 163.1 | 25.0 | 88.7 | 7.9 |
| 17/01/2022 | 26.4 | 21.5 | 34.1 | 26.4 | 21.9 | 33.8 | 76.0 | 41.2 | 99.0 | 330.8 | 1195.3 | 1.6 | 1.3 | 0.1 | 4.2 | 141.2 | 27.3 | 94.2 | 6.0 |
| 18/01/2022 | 23.7 | 21.5 | 26.9 | 23.7 | 21.5 | 26.7 | 91.9 | 69.6 | 100.0 | 78.9 | 387.0 | 4.4 | 1.2 | 0.0 | 3.9 | 147.4 | 21.3 | 90.3 | 7.5 |
| 19/01/2022 | 20.3 | 18.3 | 21.8 | 20.3 | 18.4 | 21.9 | 90.0 | 69.8 | 100.0 | 72.0 | 358.2 | 21.6 | 2.2 | 0.8 | 4.2 | 149.0 | 17.6 | 25.5 | 10.4 |
| 20/01/2022 | 20.9 | 18.2 | 25.0 | 20.8 | 18.4 | 24.4 | 69.5 | 46.8 | 83.7 | 275.8 | 1318.3 | 0.0 | 3.3 | 1.2 | 7.5 | 140.4 | 19.3 | 26.1 | 12.8 |
| 21/01/2022 | 21.2 | 16.3 | 26.2 | 21.2 | 16.9 | 25.6 | 67.3 | 44.4 | 93.0 | 291.0 | 1190.6 | 0.0 | 3.1 | 0.9 | 6.1 | 125.7 | 16.7 | 28.8 | 9.1 |
| 22/01/2022 | 21.0 | 16.1 | 26.6 | 21.0 | 17.0 | 25.9 | 74.1 | 44.3 | 100.0 | 187.5 | 1275.5 | 0.0 | 2.0 | 0.2 | 5.1 | 140.5 | 18.5 | 42.1 | 7.5 |
| 23/01/2022 | 21.4 | 15.9 | 27.0 | 21.5 | 16.5 | 26.3 | 74.3 | 51.2 | 100.0 | 245.5 | 1269.6 | 0.0 | 1.7 | 0.1 | 5.3 | 134.4 | 26.9 | 90.5 | 8.5 |
| 24/01/2022 | 22.3 | 18.1 | 27.2 | 22.1 | 18.4 | 26.8 | 76.9 | 53.4 | 99.8 | 220.0 | 1000.4 | 0.0 | 1.8 | 0.1 | 4.6 | 124.9 | 21.6 | 62.8 | 9.0 |
| 25/01/2022 | 22.8 | 16.3 | 29.0 | 22.8 | 16.7 | 28.3 | 73.7 | 51.1 | 100.0 | 252.1 | 1139.2 | 0.0 | 1.3 | 0.1 | 3.4 | 128.3 | 29.0 | 94.8 | 6.3 |
| 26/01/2022 | 22.9 | 19.6 | 26.4 | 22.8 | 19.9 | 25.7 | 67.3 | 55.6 | 80.4 | 149.9 | 844.7 | 0.0 | 2.3 | 0.6 | 5.5 | 119.5 | 17.8 | 32.7 | 11.1 |
| 27/01/2022 | 23.2 | 16.5 | 29.7 | 23.1 | 16.8 | 29.1 | 66.4 | 45.0 | 92.4 | 264.1 | 1228.5 | 0.0 | 2.0 | 0.4 | 4.3 | 130.6 | 22.2 | 53.6 | 9.2 |
| 28/01/2022 | 25.3 | 18.3 | 32.2 | 25.2 | 18.8 | 31.5 | 68.8 | 45.6 | 98.8 | 335.6 | 1228.7 | 0.0 | 1.7 | 0.2 | 5.1 | 126.0 | 25.3 | 101.8 | 10.7 |
| 29/01/2022 | 25.8 | 18.6 | 33.0 | 25.7 | 18.9 | 32.3 | 70.4 | 39.9 | 100.0 | 322.8 | 1153.9 | 0.0 | 1.7 | 0.1 | 5.4 | 118.0 | 28.1 | 94.7 | 8.9 |
| 30/01/2022 | 25.6 | 22.6 | 30.8 | 25.4 | 22.6 | 30.2 | 68.7 | 45.7 | 83.7 | 315.5 | 1347.2 | 0.0 | 2.6 | 1.1 | 5.5 | 117.3 | 21.6 | 79.2 | 10.8 |
| 31/01/2022 | 25.7 | 19.4 | 33.8 | 25.6 | 19.9 | 33.3 | 73.5 | 40.0 | 99.9 | 330.0 | 1276.9 | 0.2 | 1.3 | 0.2 | 4.9 | 128.8 | 32.2 | 94.0 | 8.2 |
| | 23.9 | 15.6 | 34.1 | 23.8 | 16.1 | 33.8 | 75.0 | 38.1 | 100.0 | 256.6 | 1392.2 | 122.6 | 2.1 | 0.0 | 34.3 | 136.3 | 22.8 | 101.8 | 6.0 |



LEGEND

- Mining Lease Boundary
- Air Quality Monitoring Sites (EPA #)
- Noise Monitoring Sites
- Sewage treatment / Discharge
- Weather Station
- HRSTS Discharge Point
- Mine Water Discharge
- Water Monitoring
- PREMISES BOUNDARY (EPL529)
- DCDB NOVEMBER 2019

| Monitoring Points | | |
|-------------------|---------------|----------------|
| Pt | MGA94 E | MGA94 N |
| EPA4 | 313133.031 | 6393073.739 |
| 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 |
| 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

.....
Registered Mining Surveyor Date

| 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 |
| I | RE | Opencut related monitors removed | JB |

WAMBO COAL PTY LIMITED
ABN 13 000 668 057

Jerry's Plains Rd, Warkworth Phone: 02 65 702200
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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

Drawing No. 2672-2
Revision No. J_26/11/2020
Sheet Size A3