



# Maxwell Underground Coal Mine Project

## Environmental Monitoring Data

### May 2024

## 1 INTRODUCTION

The Maxwell Underground Coal Mine Project is owned by Maxwell Ventures (Management) Pty Limited. This report has been compiled to present environmental monitoring data for the Maxwell Underground Coal Mine Project Environment Protection Licence 1323. This report complies with Section 66(6) of the *Protection of the Environment Operations Act 1997*.

A summary of the Licence details is provided in **Table 1**.

**Table 1. A summary of licence and report details**

|                                       |  |
|---------------------------------------|--|
| Environment Protection Licence Number | 1323   |
| Licensee Details                      | Maxwell Ventures (Management) Pty Limited<br>Private Mail Bag 9<br>Muswellbrook NSW 2333 |
| Premises                              | Maxwell Underground Coal Mine Project<br>Thomas Mitchell Drive<br>Muswellbrook NSW 2333  |
| Link to the EPA Register              | <a href="http://app.epa.nsw.gov.au/prpoeoapp/">http://app.epa.nsw.gov.au/prpoeoapp/</a>  |
| Reporting Month                       | May 2024   |
| Date of Publication                   | 21 June 2024   |
| Version                               | 1  |
| Correction Log                        | -  |

## 2 MONITORING RESULTS

Air quality monitoring results are provided in **Table 2**.

Blast monitoring results are provided in **Table 3**

Noise monitoring results are provided in **Table 4** to **Table 9**.

A map of the monitoring locations is provided in **Appendix 1**.

**Table 2. Air quality monitoring results for May 2024**

| EPA identification no. | Sampling point | Sampling period start date | Sampling period finished date | Unit of measure            | Averaging period | Monitoring frequency | Minimum value | Mean value | Median value | Maximum value |
|------------------------|----------------|----------------------------|-------------------------------|----------------------------|------------------|----------------------|---------------|------------|--------------|---------------|
| 8                      | ES-01          | 01/05/2024                 | 31/05/2024                    | micrograms per cubic metre | 5 minutes        | Continuous           | 0             | 40         | 11           | 6692          |
| 9                      | ES-02          | 01/05/2024                 | 31/05/2024                    | micrograms per cubic metre | 5 minutes        | Continuous           | 0             | 8.7        | 7.5          | 72            |
| 10                     | ES-03          | 01/05/2024                 | 31/05/2024                    | micrograms per cubic metre | 1 minute         | Continuous           | 0             | 9.3        | 7.7          | 105           |
| 11                     | ES-04          | 01/05/2024                 | 31/05/2024                    | micrograms per cubic metre | 5 minutes        | Continuous           | 0             | 11         | 10           | 89            |

Palas AQ-Guard Smart devices were installed at site ES-02 on 27/1/23 and 30/1/23 at ES-03. Sites ES-01 and ES-04 continue to have the Met One E-Sampler device. Refer to previous monthly reports for further details of the history of any downtime for each device. Following commissioning and testing, the repaired AQ-Guard device was installed at location ES-02 on 9 April 2024, replacing a hired E-Sampler. Due to problems with the power supply judged to be resulting from a faulty solar regulator, there were three periods of missing data at site ES-02 during the reporting period. These were from 5.10pm 13/5/24 to 11.14am 15/5/24; from 7.08pm 20/5/24 to 11.39am 21/5/24 and from 5.29pm 22/5/24 to 1.03pm 23/5/24. A replacement solar regulator has been ordered and will be installed during the next reporting period.

**Table 3. Blast monitoring results for May 2024**

| EPA identification no. | Sampling point                     | Time and Date of blast               | Date data obtained | Monitored variable                      | Unit of measure | Averaging period | Measured value* | 100 percentile limit for all blasts during each reporting period | 95 percentile limit for all blasts during reporting period | Exceedance (yes/no) | Observations |
|------------------------|------------------------------------|--------------------------------------|--------------------|---|-----------------|------------------|-----------------|--|--|---------------------|--------------|
| 13                     | Monitoring location BM1 (Antiene)  | No blast during the reporting period | -                  | Airblast overpressure                   | dB (Lin Peak)   | Instantaneous    | -               | 120  | 115  | -                   | -            |
| 14                     | Monitoring location BM2 (Plashett) |                                      |                    |   |                 |                  | -               |  |  | -                   |              |
| 15                     | Monitoring location BM3 (Bowfield) |                                      |                    |   |                 |                  | -               |  |  | -                   |              |
| 13                     | Monitoring location BM1 (Antiene)  |                                      |                    | Ground vibration peak particle velocity | mm/second       | Instantaneous    | -               | 10   | 5  | -                   | -            |
| 14                     | Monitoring location BM2 (Plashett) |                                      |                    |   |                 |                  | -               |  |  | -                   |              |
| 15                     | Monitoring location BM3 (Bowfield) |                                      |                    |   |                 |                  | -               |  |  | -                   |              |

\* The measured value presented is the maximum measured value 15 minutes prior to and 15 minutes after the blast. Whilst the blast monitor measures continuously, measured levels were either very low or did not exceed background levels, and hence no specific measurements can be attributed to the blast. The reporting period for the EPL is 1 May to 30 April each year.

**Table 4. Noise monitoring results for 13 May 2024 compared to the noise criteria in Development Consent SSD 9526**

| EPA identification no.        | Sampling point  | Day (L <sub>A eq</sub> (15 minute)) |             | Evening (L <sub>A eq</sub> (15 minute)) |             | Night (L <sub>A eq</sub> (15 minute)) |             | Night (L <sub>A1</sub> (1 minute)) |             | Exceedance (yes/no) | Observations      |
|-------------------------------|---|-------------------------------------|-------------|---|-------------|---------------------------------------|-------------|------------------------------------|-------------|---------------------|-------------------|
|                               |   | Criteria                            | Noise Level | Criteria                                | Noise Level | Criteria                              | Noise Level | Criteria                           | Noise Level |                     |                   |
| 16                            | NM1   | 45                                  | 64          | 41                                      | 53          | 41                                    | 53          | 52                                 | 81          | No                  | Project inaudible |
| 17                            | NM2   | 44                                  | 44          | 40                                      | 40          | 40                                    | 41          | 52                                 | 52          | No                  | Project inaudible |
| 18                            | NM3   | 40                                  | 53          | 35                                      | 55          | 35                                    | 53          | 52                                 | 73          | No                  | Project inaudible |
| -                             | NM4   | 40                                  | 63          | 35                                      | 65          | 35                                    | 52          | 52                                 | 78          | No                  | Project inaudible |
| <b>Additional Information</b> |   |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Date of Final Report          | 12 June 2024  |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Weather Conditions            | Wind speed 0.4 – 3.3 m/s. No rain during monitoring.  |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Notes                         | Measured noise sources included traffic, birds, frogs, insects, dogs, residential noise, a train, and a nearby coal mine. The Maxwell Underground Coal Mine Project was inaudible at all locations and times. |                                     |             |   |             |                                       |             |                                    |             |                     |                   |

**Table 5. Noise monitoring results for 14 May 2024 compared to the noise criteria in Development Consent SSD 9526**

| EPA identification no. | Sampling point  | Day (L <sub>A</sub> eq (15 minute)) |             | Evening (L <sub>A</sub> eq (15 minute)) |             | Night (L <sub>A</sub> eq (15 minute)) |             | Night (L <sub>A1</sub> (1 minute)) |             | Exceedance (yes/no) | Observations      |
|------------------------|---|-------------------------------------|-------------|---|-------------|---------------------------------------|-------------|------------------------------------|-------------|---------------------|-------------------|
|                        |   | Criteria                            | Noise Level | Criteria                                | Noise Level | Criteria                              | Noise Level | Criteria                           | Noise Level |                     |                   |
| 16                     | NM1   | 45                                  | 60          | 41                                      | 44          | 41                                    | 58          | 52                                 | 80          | No                  | Project inaudible |
| 17                     | NM2   | 44                                  | 33          | 40                                      | 53          | 40                                    | 39          | 52                                 | 54          | No                  | Project inaudible |
| 18                     | NM3   | 40                                  | 55          | 35                                      | 53          | 35                                    | 48          | 52                                 | 69          | No                  | Project inaudible |
| -                      | NM4   | 40                                  | 55          | 35                                      | 55          | 35                                    | 61          | 52                                 | 85          | No                  | Project inaudible |
| Additional Information |   |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Date of Final Report   | 12 June 2024  |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Weather Conditions     | Wind speed 0.9 – 2.9 m/s. No rain during monitoring.  |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Notes                  | Measured noise sources included traffic, birds, frogs, insects, and dogs. The Maxwell Underground Coal Mine Project was inaudible at all locations and times. |                                     |             |   |             |                                       |             |                                    |             |                     |                   |

**Table 6. Noise monitoring results for 15 May 2024 compared to the noise criteria in Development Consent SSD 9526**

| EPA identification no.        | Sampling point  | Day (L <sub>A</sub> eq (15 minute)) |             | Evening (L <sub>A</sub> eq (15 minute)) |             | Night (L <sub>A</sub> eq (15 minute)) |             | Night (L <sub>A1</sub> (1 minute)) |             | Exceedance (yes/no) | Observations      |
|-------------------------------|---|-------------------------------------|-------------|---|-------------|---------------------------------------|-------------|------------------------------------|-------------|---------------------|-------------------|
|                               |   | Criteria                            | Noise Level | Criteria                                | Noise Level | Criteria                              | Noise Level | Criteria                           | Noise Level |                     |                   |
| 16                            | NM1   | 45                                  | 62          | 41                                      | 64          | 41                                    | 55          | 52                                 | 80          | No                  | Project inaudible |
| 17                            | NM2   | 44                                  | 38          | 40                                      | 40          | 40                                    | 38          | 52                                 | 52          | No                  | Project inaudible |
| 18                            | NM3   | 40                                  | 56          | 35                                      | 57          | 35                                    | 51          | 52                                 | 72          | No                  | Project inaudible |
| -                             | NM4   | 40                                  | 63          | 35                                      | 62          | 35                                    | 56          | 52                                 | 83          | No                  | Project inaudible |
| <b>Additional Information</b> |   |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Date of Final Report          | 12 June 2024  |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Weather Conditions            | Wind speed 0.6 – 2.5 m/s. No rain during monitoring.  |                                     |             |   |             |                                       |             |                                    |             |                     |                   |
| Notes                         | Measured noise sources included traffic, birds, frogs, insects, dogs, a train, and a nearby coal mine. The Maxwell Underground Coal Mine Project was inaudible at all locations and times |                                     |             |   |             |                                       |             |                                    |             |                     |                   |

**Table 7. Noise monitoring results for 13 May 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur**

| 13 May 2024 – Noise Monitoring Results (Rail Loop & Spur)  |                |                                     |                            |   |                            |                                       |                            |                     |
|--|----------------|-------------------------------------|----------------------------|---|----------------------------|---------------------------------------|----------------------------|---------------------|
| EPA identification no.   | Sampling point | Day (L <sub>A</sub> eq (15 minute)) |                            | Evening (L <sub>A</sub> eq (15 minute)) |                            | Night (L <sub>A</sub> eq (15 minute)) |                            | Exceedance (yes/no) |
|  |                | Criteria                            | Noise Level <sup>1,2</sup> | Criteria                                | Noise Level <sup>1,2</sup> | Criteria                              | Noise Level <sup>1,2</sup> |                     |
| 16   | NM1            | 40                                  | NA                         | 40                                      | NA                         | 40                                    | 31                         | No                  |
| 17   | NM2            | 40                                  | NA                         | 40                                      | NA                         | 40                                    | NA                         | No                  |
| <b>NOTES:</b>  |                |                                     |                            |   |                            |                                       |                            |                     |
| 1. Maxwell Rail Loop and Antiene Rail Spur noise contribution only<br>2. NA - Maxwell Rail Loop and Antiene Rail spur was inaudible or not quantifiable (i.e <20dB(A)) |                |                                     |                            |   |                            |                                       |                            |                     |



**Table 8. Noise monitoring results for 14 May 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur**

| 14 May 2024 – Noise Monitoring Results (Rail Loop & Spur)  |                |                                     |                            |   |                            |                                       |                            |                     |
|--|----------------|-------------------------------------|----------------------------|---|----------------------------|---------------------------------------|----------------------------|---------------------|
| EPA identification no.   | Sampling point | Day (L <sub>A</sub> eq (15 minute)) |                            | Evening (L <sub>A</sub> eq (15 minute)) |                            | Night (L <sub>A</sub> eq (15 minute)) |                            | Exceedance (yes/no) |
|  |                | Criteria                            | Noise Level <sup>1,2</sup> | Criteria                                | Noise Level <sup>1,2</sup> | Criteria                              | Noise Level <sup>1,2</sup> |                     |
| 16   | NM1            | 40                                  | NA                         | 40                                      | NA                         | 40                                    | NA                         | No                  |
| 17   | NM2            | 40                                  | NA                         | 40                                      | NA                         | 40                                    | NA                         | No                  |
| <b>NOTES:</b>  |                |                                     |                            |   |                            |                                       |                            |                     |
| 1. Noise level = Maxwell Rail Loop and Antiene Rail Spur noise contribution only<br>2. NA - Maxwell Rail Loop and Antiene Rail spur was inaudible or not quantifiable (i.e <20dB(A)) |                |                                     |                            |   |                            |                                       |                            |                     |

**Table 9. Noise monitoring results for 15 May 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur**

| 15 May 2024 – Noise Monitoring Results (Rail Loop & Spur)  |                |                                     |                            |   |                            |                                       |                            |                     |
|--|----------------|-------------------------------------|----------------------------|---|----------------------------|---------------------------------------|----------------------------|---------------------|
| EPA identification no.   | Sampling point | Day (L <sub>A</sub> eq (15 minute)) |                            | Evening (L <sub>A</sub> eq (15 minute)) |                            | Night (L <sub>A</sub> eq (15 minute)) |                            | Exceedance (yes/no) |
|  |                | Criteria                            | Noise Level <sup>1,2</sup> | Criteria                                | Noise Level <sup>1,2</sup> | Criteria                              | Noise Level <sup>1,2</sup> |                     |
| 16   | NM1            | 40                                  | NA                         | 40                                      | 37                         | 40                                    | NA                         | No                  |
| 17   | NM2            | 40                                  | NA                         | 40                                      | NA                         | 40                                    | NA                         | No                  |
| <b>NOTES:</b>  |                |                                     |                            |   |                            |                                       |                            |                     |
| 1. Noise level = Maxwell Rail Loop and Antiene Rail Spur noise contribution only<br>2. NA - Maxwell Rail Loop and Antiene Rail spur was inaudible or not quantifiable (i.e <20dB(A)) |                |                                     |                            |   |                            |                                       |                            |                     |

# APPENDIX 1 – MAP OF MONITORING LOCATIONS

