MALABAR

# Maxwell Underground Coal Mine

Environmental Monitoring Data as required by EPL 1323

and

Noise Monitoring Data for Development Consents for

SSD 9526 and DA 106-04-00

May 2026

# 1 INTRODUCTION

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

This report also provides the noise monitoring requirements of Development Consent 9526 for the Maxwell Underground Coal Mine Project and Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur.

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<br>Thomas Mitchell Drive<br>Muswellbrook NSW 2333 |
| **Link to the EPA Register** | http://app.epa.nsw.gov.au/prpoeoapp/ |
| **Reporting Month** | May 2026 |
| **Date of Publication** | 9 June 2026 |
| **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 the reporting period**

| 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 | 01/05/2026 | 31/05/2026 | micrograms per cubic metre | 5 minutes | Continuous | 0 | 17 | 17 | 63 |
| 9 | ES-02 | 01/05/2026 | 31/05/2026 | micrograms per cubic metre | 1 minute | Continuous | 2 | 20 | 17 | 134 |
| 10 | ES-03 | 01/05/2026 | 31/05/2026 | micrograms per cubic metre | 1 minute | Continuous | 0 | 10 | 8 | 175 |
| 11 | ES-04 | 01/05/2026 | 31/05/2026 | micrograms per cubic metre | 5 minutes | Continuous | 0 | 7 | 6 | 54 |

Sites ES-01 and ES-04 have a Met One E-Sampler device; sites ES-02 and ES-03 have a Palas AQ-Guard Smart device. Significant downtime or issues during the reporting period are as follows:

1. ES-01: 91% data capture. Device offline from 20.05 hrs 28/5/26 due to low voltage due to low solar input (cloud and rain 28/5 and 29/5). Lead-acid battery dropped below critical level and hence was replaced 1/6. Lithium battery replacements planned for both ES-01 and ES-04 which should reduce the likelihood of a reoccurrence, as those batteries do not have the same critical failure issue due to an internal battery management system.
2. ES-03: 91% data capture. Device offline from 22.06hrs 22/5/26 to 14.45hrs 25/5/26; came back online after a manual restart. Suspected issue with the USB datastick disconnecting from the internet.

**Table 3. Blast monitoring results for the reporting period**

| 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 (dB(A)) for 12 May 2026 compared to the noise criteria in EPL1323 and Development Consent SSD 9526**

| EPA identification no. | Sampling point | Day ($L_{A\ eq\ (15\ minute)}$) | | | Evening ($L_{A\ eq\ (15\ minute)}$) | | | Night ($L_{A\ eq\ (15\ minute)}$) | | | Night ($L_{A1\ (1\ minute)}$) | | | Exceedance (yes/no) | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | | |
| 16 | NM1 | 50[2] | 64 | NA | 46[2] | 51 | 36 | 46[2] | 52 | 35 | 57[2] | 72 | 38 | No | Project audible |
| 17 | NM2 | 44 | 49 | NA | 45[2] | 39 | 33 | 45[2] | 37 | 35 | 57[2] | 50 | 39 | No | Project audible |
| 18 | NM3 | 45[2] | 55 | NA | 40[2] | 49 | NA | 40[2] | 45 | NA | 57[2] | 67 | NA | No | Project inaudible |
| - | NM4 | 40 | 62 | NA | 35 | 72 | NA | 35 | 27 | NA | 52 | 56 | NA | No | Project inaudible |
| **Additional Information** | | | | | | | | | | | | | | | |
| Date of Final Report | 5 June 2026 | | | | | | | | | | | | | | |
| Weather Conditions | Wind speed 0.9 – 7.2 m/s. No rain during monitoring. | | | | | | | | | | | | | | |
| Notes | Measured noise sources included traffic, birds, insects, frogs, and MU operational noise. The Maxwell Underground Coal Mine Project was inaudible at NM3 and NM4 at all locations and times, however was audible at NM1 and NM2 during the evening and night-time periods.<br>1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))<br>2. MET conditions outside those specified in Condition L4.3 of EPL, applicable noise limit is noise limit specified in Condition L4.1 plus 5 dB. | | | | | | | | | | | | | | |

**Table 5. Noise monitoring results (dB(A)) for 13 May 2026 compared to the noise criteria in EPL1323 and Development Consent SSD 9526**

| EPA identification no. | Sampling point | Day ($L_{A\ eq\ (15\ minute)}$) | | | Evening ($L_{A\ eq\ (15\ minute)}$) | | | Night ($L_{A\ eq\ (15\ minute)}$) | | | Night ($L_{A1\ (1\ minute)}$) | | | Exceedance (yes/no) | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | | |
| 16 | NM1 | 45 | 63 | NA | 46[2] | 55 | 32 | 46[2] | 54 | 30 | 57[2] | 82 | 34 | No | Project audible |
| 17 | NM2 | 49[2] | 41 | NA | 45[2] | 40 | 37 | 45[2] | 35 | 32 | 57[2] | 45 | 35 | No | Project audible |
| 18 | NM3 | 45[2] | 57 | NA | 40[2] | 48 | NA | 40[2] | 50 | NA | 57[2] | 71 | NA | No | Project inaudible |
| - | NM4 | 40 | 62 | NA | 35 | 61 | NA | 35 | 67 | NA | 52 | 95 | NA | No | Project inaudible |

| Additional Information | |
|---|---|
| Date of Final Report | 5 June 2026 |
| Weather Conditions | Wind speed 0.8 – 5.7 m/s. No rain during monitoring. |
| Notes | Measured noise sources included traffic, birds, insects, frogs, dogs, a train, and MU operational noise. The Maxwell Underground Coal Mine Project was inaudible at NM3 and NM4 at all locations and times, however was audible at NM1 and NM2 during the evening and night-time periods.<br><br>1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))<br>2. MET conditions outside those specified in Condition L4.3 of EPL, applicable noise limit is noise limit specified in Condition L4.1 plus 5 dB. |

**Table 6. Noise monitoring results (dB(A)) for 14 May 2026 compared to the noise criteria in EPL1323 and Development Consent SSD 9526**

| EPA identification no. | Sampling point | Day ($L_{A\ eq\ (15\ minute)}$) | | | Evening ($L_{A\ eq\ (15\ minute)}$) | | | Night ($L_{A\ eq\ (15\ minute)}$) | | | Night ($L_{A1\ (1\ minute)}$) | | | Exceedance (yes/no) | Observations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | Criteria | Noise Level, Total | Noise Level, MU[1] | | |
| 16 | NM1 | 45 | 60 | NA | 46[2] | 51 | 29 | 46[2] | 46 | 31 | 57[2] | 69 | 35 | No | Project audible |
| 17 | NM2 | 49[2] | 41 | NA | 45[2] | 41 | 35 | 45[2] | 40 | 32 | 57[2] | 60 | 35 | No | Project audible |
| 18 | NM3 | 45[2] | 54 | NA | 40[2] | 49 | NA | 40[2] | 47 | NA | 57[2] | 67 | NA | No | Project inaudible |
| - | NM4 | 40 | 63 | NA | 35 | 69 | NA | 35 | 65 | NA | 52 | 91 | NA | No | Project inaudible |
| **Additional Information** | | | | | | | | | | | | | | | |
| Date of Final Report | 5 June 2026 | | | | | | | | | | | | | | |
| Weather Conditions | Wind speed 1.7 – 4.5 m/s. No rain during monitoring. | | | | | | | | | | | | | | |
| Notes | Measured noise sources included traffic, birds, insects, frogs, and MU operational noise. The Maxwell Underground Coal Mine Project was inaudible at NM3 and NM4 at all locations and times, however was audible at NM1 and NM2 during the evening and night-time periods.<br>1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))<br>2. MET conditions outside those specified in Condition L4.3 of EPL, applicable noise limit is noise limit specified in Condition L4.1 plus 5 dB. | | | | | | | | | | | | | | |

**Table 7. Noise monitoring results (dB(A)) for 12 May 2026 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur**

| EPA identification no. | Sampling point | Day ($L_{A\ eq\ (15\ minute)}$) | | Evening ($L_{A\ eq\ (15\ minute)}$) | | Night ($L_{A\ eq\ (15\ minute)}$) | | Exceedance (yes/no) |
|---|---|---|---|---|---|---|---|---|
| | | Criteria | Noise Level[1,2] | Criteria | Noise Level[1,2] | Criteria | Noise Level[1,2] | |
| 16 | NM1 | 40 | NA | 40 | NA | 40 | NA | No |
| 17 | NM2 | 40 | NA | 40 | NA | 40 | NA | No |
| **NOTES:** | | | | | | | | |
| 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 (dB(A)) for 13 May 2026 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur**

| EPA identification no. | Sampling point | Day ($L_{A\ eq\ (15\ minute)}$) | | Evening ($L_{A\ eq\ (15\ minute)}$) | | Night ($L_{A\ eq\ (15\ minute)}$) | | Exceedance (yes/no) |
|---|---|---|---|---|---|---|---|---|
| | | Criteria | Noise Level[1,2] | Criteria | Noise Level[1,2] | Criteria | Noise Level[1,2] | |
| 16 | NM1 | 40 | NA | 40 | 29 | 40 | NA | No |
| 17 | NM2 | 40 | NA | 40 | NA | 40 | NA | No |
| **NOTES:** | | | | | | | | |
| 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 (dB(A)) for 14 May 2026 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur**

| EPA identification no. | Sampling point | Day ($L_{A\ eq\ (15\ minute)}$) | | Evening ($L_{A\ eq\ (15\ minute)}$) | | Night ($L_{A\ eq\ (15\ minute)}$) | | Exceedance (yes/no) |
|---|---|---|---|---|---|---|---|---|
| | | Criteria | Noise Level[1,2] | Criteria | Noise Level[1,2] | Criteria | Noise Level[1,2] | |
| 16 | NM1 | 40 | NA | 40 | NA | 40 | NA | No |
| 17 | NM2 | 40 | NA | 40 | NA | 40 | NA | No |
| **NOTES:** | | | | | | | | |
| 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