



# Maxwell Underground Coal Mine Project

## Environmental Monitoring Data

### December 2022

## 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 Private Mail Bag 9 Muswellbrook NSW 2333
Premises	Maxwell Underground Coal Mine Project Thomas Mitchell Drive 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	December 2022
Date of Publication	24 January 2023
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**.

Maps of monitoring locations are provided in **Appendix 1**.

**Table 2. Air quality monitoring results for December 2022**

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	01/12/2022	31/12/2022	micrograms per cubic metre	5 minutes	Continuous	0	13	10	70
9	ES-02	01/12/2022	31/12/2022	micrograms per cubic metre	5 minutes	Continuous	0	10	9	54
10	ES-03	01/12/2022	31/12/2022	micrograms per cubic metre	5 minutes	Continuous	0	3551	3740	4114
11	ES-04	01/12/2022	31/12/2022	micrograms per cubic metre	5 minutes	Continuous	0	13	12	42

As stated in previous reports, a large range of values from the E-Sampler at site ES-03 have been recorded and are deemed spurious. Monthly scheduled calibrations note a 'Solenoid error' on the operating screen; all other checks passed (leak check, temperature, pressure, flow, battery etc). The same scheduled calibrations for ES-02 recorded a 'Detector error' however there is less effect on the data. Due to the ongoing issues with the E-Samplers and a lack of alternative hire equipment, Malabar conducted a review of alternatives, obtained a quotation for a replacement and in June 2022 submitted an application to the EPA to vary the EPL to permit an alternative to the E-Sampler. Malabar has continued to closely monitor the situation with this equipment and received an EPL amendment to enable the replacement of the faulty equipment. In September 2022 Malabar issued a purchase order to a supplier for the provision of two new PALAS AQ Smart devices; following receipt of funds, the supplier advised that Goods were ordered on 17 October 2022; the lead time was estimated as being 6–8 weeks plus delivery time from Germany. The units were received in January and as of the date of issue of this report are being commissioned; it is anticipated they will be deployed at locations ES-02 and ES-03 in February.

**Table 3. Blast monitoring results for December 2022**

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)	6/12/22 14:31hrs	7/12/22	Airblast overpressure	dB (Lin Peak)	Instantaneous	102.8	120	115	No	Within background levels
14	Monitoring location BM2 (Plashett)						109.9			No	Within background levels
15	Monitoring location BM3 (Bowfield)						106.6			No	Within background levels
13	Monitoring location BM1 (Antiene)			Ground vibration peak particle velocity	mm/second	Instantaneous	0.105	10	5	No	With background levels
14	Monitoring location BM2 (Plashett)						0.047			No	Within background levels
15	Monitoring location BM3 (Bowfield)						0.039			No	Within background levels

\* 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 28 December 2022**

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	74	41	67	41	57	52	84	No	Project inaudible
17	NM2	44	50	40	42	40	37	52	64	No	Project inaudible
18	NM3	40	54	35	59	35	51	52	73	No	Project inaudible
-	NM4	40	63	35	65	35	63	52	88	No	Project inaudible
<b>Additional Information</b>											
Date of Final Report	10 January 2023										
Weather Conditions	Wind speed 1.5 – 4.8 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, train, birds, frogs, and insects. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

**Table 5. Noise monitoring results for 29 December 2022**

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	64	41	63	41	60	52	83	No	Project inaudible
17	NM2	44	48	40	36	40	35	52	54	No	Project inaudible
18	NM3	40	54	35	56	35	52	52	75	No	Project inaudible
-	NM4	40	68	35	70	35	63	52	86	No	Project inaudible
Additional Information											
Date of Final Report	10 January 2023										
Weather Conditions	Wind speed 2.9 – 8.6 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, train, birds, frogs, and insects. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

**Table 6. Noise monitoring results for 30 December 2022**


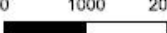
EPA identification no.	Sampling point	Day (L <sub>A</sub> eq (15 minute))		Evening (L <sub>A</sub> eq (15 minute))		Night (L <sub>A</sub> eq (15 minute))		Night (L <sub>A1</sub> (1 minute))		Exceedance (yes/no)	Observations
		Criteria	Noise Level	Criteria	Noise Level	Criteria	Noise Level	Criteria	Noise Level		
16	NM1	45	65	41	65	41	60	52	86	No	Project inaudible
17	NM2	44	42	40	45	40	39	52	65	No	Project inaudible
18	NM3	40	55	35	55	35	58	52	85	No	Project inaudible
-	NM4	40	67	35	69	35	59	52	90	No	Project inaudible
<b>Additional Information</b>											
Date of Final Report	10 January 2023										
Weather Conditions	Wind speed 3.5 – 10.6 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, insects, and frogs. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

## **APPENDIX 1 – MAPS OF MONITORING LOCATIONS**







	<p>0 1000 2000 m</p> 	<p><b>Legend</b></p> <p><b>Development Application Area</b></p> <ul style="list-style-type: none"> <li>Development Application Area (Red dashed line)</li> <li>Indicative Surface Development Area (Yellow fill)</li> <li>Extent of Conventional Subsidence (Blue dashed line)</li> </ul> <p><b>Monitoring Locations</b></p> <ul style="list-style-type: none"> <li>Attended Noise Monitoring (Red circle)</li> <li>Real-time Noise Monitor (Green circle)</li> <li>Blast Monitor (Blue circle)</li> <li>Weather Station (Light blue circle)</li> </ul>	<p><b>Maxwell UG Project</b></p> <p><b>Noise and Blast Monitoring Locations</b></p>
			<p>Drawn by: DM  Date: 7/2/22  CRS: GDA94/MGA zone 56  Aerial image: Google Satellite 2020</p>