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

August 2025

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 Private Mail Bag 9 Muswellbrook NSW 2333
Premises	Maxwell Underground Coal Mine Thomas Mitchell Drive Muswellbrook NSW 2333
Link to the EPA Register	http://app.epa.nsw.gov.au/prpoeoapp/
Reporting Month	August 2025
Date of Publication	11 September 2025
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	01/08/2025	31/08/2025	micrograms per cubic metre	5 minutes	Continuous	0	15	14	175
9	ES-02	01/08/2025	31/08/2025	micrograms per cubic metre	1 minute	Continuous	1	11	10	55
10	ES-03	01/08/2025	31/08/2025	micrograms per cubic metre	1 minute	Continuous	0	7	5	67
11	ES-04	01/08/2025	31/08/2025	micrograms per cubic metre	5 minutes	Continuous	0	5	5	135

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

1. Palas AQ Guard Smart located at site ES-02. Data loss from 22:30 21/8 to 09:00 25/8. The LTE USB datastick was not connecting to the internet which was resolved following a power disconnection and restart. This outage resulted in an overall 88.9% data capture rate for the month at ES-02.

   The downtime associated with the above events coincided with high rainfall and wet ground conditions, and hence negligible dust risk conditions from the Maxwell Underground Mine.

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 11 August 2025 compared to the noise criteria in EPL1323 and Development Consent SSD 9526

11 August 2025 – Noise Monitoring Results															
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	66	NA	41	53	NA	41	49	NA	52	70	NA	No	Project inaudible
17	NM2	44	42	NA	40	46	NA	40	45	NA	52	67	NA	No	Project inaudible
18	NM3	40	58	NA	35	50	NA	35	55	NA	52	75	NA	No	Project inaudible
-	NM4	40	68	NA	35	62	NA	35	49	NA	52	72	NA	No	Project inaudible
Additional Information															
Date of Final Report	9 September 2025														
Weather Conditions	Wind speed 1.1 – 3.5 m/s. No rain during monitoring.														
Notes	Measured noise sources included traffic, birds, frogs, dogs, and aeroplanes. The Maxwell Underground Coal Mine Project was inaudible at all locations and times. 1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))														

Table 5. Noise monitoring results (dB(A)) for 12 August 2025 compared to the noise criteria in EPL1323 and Development Consent SSD 9526

12 August 2025 – Noise Monitoring Results														
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	65	NA	41	55	NA	41	56	NA	52	74	NA	No	Project inaudible
17	NM2	44	40	NA	40	46	NA	40	41	NA	52	50	NA	No	Project inaudible
18	NM3	40	61	NA	35	62	NA	35	53	NA	52	71	NA	No	Project inaudible
-	NM4	40	69	NA	35	50	NA	35	52	NA	52	73	NA	No	Project inaudible
Additional Information															
Date of Final Report	9 September 2025														
Weather Conditions	Wind speed 0.7 – 3.2 m/s. No rain during monitoring.														
Notes	Measured noise sources included traffic, birds, frogs, and a train. The Maxwell Underground Coal Mine Project was inaudible at all locations and times. 1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))														

Table 6. Noise monitoring results (dB(A)) for 13 August 2025 compared to the noise criteria in EPL1323 and Development Consent SSD 9526

13 August 2025 – Noise Monitoring Results															
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	65	NA	41	58	NA	41	57	NA	52	78	NA	No	Project inaudible
17	NM2	44	43	NA	40	41	NA	40	39	NA	52	47	NA	No	Project inaudible
18	NM3	40	58	NA	35	58	NA	35	48	NA	52	67	NA	No	Project inaudible
-	NM4	40	68	NA	35	48	NA	35	54	NA	52	74	NA	No	Project inaudible
Additional Information															
Date of Final Report	9 September 2025														
Weather Conditions	Wind speed 0.7 – 3.8 m/s. No rain during monitoring.														
Notes	Measured noise sources included traffic, birds, frogs, and insects. The Maxwell Underground Coal Mine Project was inaudible at all locations and times. 1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))														

Table 7. Noise monitoring results (dB(A)) for 11 August 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

August 2025 – Noise Monitoring Results (Rail Loop & 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 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 12 August 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

12 August 2025 – Noise Monitoring Results (Rail Loop & 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 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 13 August 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

13 August 2025 – Noise Monitoring Results (Rail Loop & 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	25	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 2. NA - Maxwell Rail Loop and Antiene Rail spur was inaudible or not quantifiable (i.e <20dB(A))								

APPENDIX 1 – MAP OF MONITORING LOCATIONS