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

November 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	November 2025
Date of Publication	23 December 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	01/11/2025	30/11/2025	micrograms per cubic metre	5 minutes	Continuous	0	32	30	292
9	ES-02	01/11/2025	30/11/2025	micrograms per cubic metre	1 minute	Continuous	2	22	19	473
10	ES-03	01/11/2025	30/11/2025	micrograms per cubic metre	1 minute	Continuous	0	14	11	385
11	ES-04	01/11/2025	30/11/2025	micrograms per cubic metre	5 minutes	Continuous	0	21	9	2,394

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 or issues during the reporting period are as follows:

1. ES-03. The device was offline from 10/11/25 23.19 hrs to 14/11/25 11.30 hrs. The USB datastick lost connection to the internet and required a restart. Upon restarting, the data came back online.
2. ES-04. Data spikes of up to 2,394 µg/m3 from 0100 to 0800 hrs 3/11/25. On 4/11/25 a replacement E-Sampler was installed. The data was reviewed on 23/12/25 and no further instances have occurred since the replacement; hence the issue is deemed resolved.

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

11 November 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	61	NA	41	57	NA	41	53	27	52	75	43	No	Project audible
17	NM2	44	48	NA	40	40	NA	40	33	28	52	44	35	No	Project audible
18	NM3	40	53	NA	35	57	NA	35	47	NA	52	63	NA	No	Project inaudible
-	NM4	40	74	NA	35	58	NA	35	55	NA	52	80	NA	No	Project inaudible

Additional Information	
Date of Final Report	3 December 2025
Weather Conditions	Wind speed 0.7 – 10.4 m/s. No rain during monitoring.
Notes	Measured noise sources included traffic, birds, insects, frogs, and trains, wind, a nearby coal mine, and the Project. The Maxwell Underground Coal Mine Project was audible at NM1 and NM2 during the night-time period, however, was inaudible at all other locations and times. 1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))

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

12 November 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	61	NA	41	51	34	41	51	32	52	71	37	No	Project audible
17	NM2	44	36	NA	40	43	NA	40	39	28	52	49	33	No	Project audible
18	NM3	40	50	NA	35	56	NA	35	42	NA	52	59	NA	No	Project inaudible
-	NM4	40	73	NA	35	58	NA	35	60	NA	52	86	NA	No	Project inaudible

Additional Information	
Date of Final Report	3 December 2025
Weather Conditions	Wind speed 0.9 – 7.0 m/s. No rain during monitoring.
Notes	Measured noise sources included traffic, birds, insects, frogs, aeroplanes, trains, a nearby coal mine, and the Project. The Maxwell Underground Coal Mine Project was audible at NM1 during the evening period, and at NM1 and NM2 during the night-time period, however, was inaudible at all other locations and times. 1. NA - MU was inaudible or not quantifiable (i.e <20dB(A))

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

13 November 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	61	NA	41	54	NA	41	52	NA	52	75	NA	No	Project inaudible
17	NM2	44	49	NA	40	35	NA	40	34	NA	52	53	NA	No	Project inaudible
18	NM3	40	54	NA	35	51	NA	35	40	NA	52	60	NA	No	Project inaudible
-	NM4	40	68	NA	35	66	NA	35	64	NA	52	93	NA	No	Project inaudible
Additional Information															
Date of Final Report	3 December 2025														
Weather Conditions	Wind speed 0.8 – 5.6 m/s. No rain during monitoring.														
Notes	Measured noise sources included traffic, birds, insects, a train, and a nearby coal mine. 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 November 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

11 November – 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	35	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 November 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

12 November 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	29	40	27	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 November 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

13 November 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	21	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