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

June 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	June 2025
Date of Publication	28 August 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	01/06/2025	30/06/2025	micrograms per cubic metre	5 minutes	Continuous	0	13	12	52
9	ES-02	01/06/2025	30/06/2025	micrograms per cubic metre	1 minute	Continuous	0	13	11	82
10	ES-03	01/06/2025	30/06/2025	micrograms per cubic metre	1 minute	Continuous	0	8	6	83
11	ES-04	01/06/2025	30/06/2025	micrograms per cubic metre	5 minutes	Continuous	0	19	6	2545

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 have a Met One E-Sampler device. Downtime during the reporting period is as follows:

1. Palas AQ Guard Smart located at site ES-03. During June 2025, multiple rain events and cloudy conditions resulted in reduced solar input to the batteries and loss of power to the device and hence loss of data (91.2% data capture for the month). The batteries were replaced on 30/6/25 together with a new solar charge controller, improvements to the wiring and changes to the protective cattle panels that were shading the solar panels late in the day.

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

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

23 June 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	48	NA	41	52	NA	41	50	NA	52	69	NA	No	Project inaudible
17	NM2	44	65	NA	40	43	NA	40	42	NA	52	56	NA	No	Project inaudible
18	NM3	40	58	NA	35	51	NA	35	48	NA	52	74	NA	No	Project inaudible
-	NM4	40	72	NA	35	53	NA	35	43	NA	52	68	NA	No	Project inaudible

Additional Information	
Date of Final Report	23 July 2025
Weather Conditions	Wind speed 0.8 – 6.0 m/s. No rain during monitoring.
Notes	Measured noise sources included traffic, birds, frogs, wind, and dogs. 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 24 June 2025 compared to the noise criteria in EPL1323 and Development Consent SSD 9526

24 June 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	43	NA	41	51	NA	41	52	NA	52	72	NA	No	Project inaudible
17	NM2	44	60	NA	40	45	NA	40	47	NA	52	52	NA	No	Project inaudible
18	NM3	40	55	NA	35	57	NA	35	51	NA	52	64	NA	No	Project inaudible
-	NM4	40	68	NA	35	53	NA	35	34	NA	52	45	NA	No	Project inaudible
Additional Information															
Date of Final Report	23 July 2025														
Weather Conditions	Wind speed 2.3 – 8.5 m/s. No rain during monitoring.														
Notes	Measured noise sources included traffic, birds, frogs, insects, wind, 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 6. Noise monitoring results (dB(A)) for 26&25 June 2025 compared to the noise criteria in EPL1323 and Development Consent SSD 9526

26&25 June 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	38	NA	41	56	NA	41	43	NA	52	62	NA	No	Project inaudible
17	NM2	44	65	NA	40	46	NA	40	42	NA	52	51	NA	No	Project inaudible
18	NM3	40	72	NA	35	56	NA	35	51	NA	52	69	NA	No	Project inaudible
-	NM4	40	58	NA	35	58	NA	35	46	NA	52	76	NA	No	Project inaudible
Additional Information															
Date of Final Report	23 July 2025														
Weather Conditions	Wind speed 1.2 – 7.5 m/s. No rain during monitoring.														
Notes	Measured noise sources included traffic, insects, birds, frogs, a train, 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 23 June 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

23 June 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 24 June 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

24 June 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 25&26 June 2025 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

25&26 June 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	27	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