MALABAR

Maxwell Underground Coal Mine Project

Environmental Monitoring Data as required by EPL 1323 and Noise Monitoring Data for Development Consents for SSD 9526 and DA 106-04-00

June 2024

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*.

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 Project Thomas Mitchell Drive Muswellbrook NSW 2333
Link to the EPA Register	http://app.epa.nsw.gov.au/prpoeoapp/
Reporting Month	June 2024
Date of Publication	15 July 2024
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 June 2024

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	01/06/2024	30/06/2024	micrograms per cubic metre	5 minutes	Continuous	0	18	17	977
9	ES-02	01/06/2024	30/06/2024	micrograms per cubic metre	1 minute	Continuous	0	7	6	108
10	ES-03	01/06/2024	30/06/2024	micrograms per cubic metre	1 minute	Continuous	0	7	6	124
11	ES-04	01/06/2024	30/06/2024	micrograms per cubic metre	5 minutes	Continuous	0	9	8	55

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 continue to have the Met One E-Sampler device. Refer to previous monthly reports for further details of the history of any downtime for each device. Following commissioning and testing, the repaired AQ-Guard device was installed at location ES-02 on 9 April 2024, replacing a hired E-Sampler. Due to problems with the power supply judged to be resulting from a faulty solar regulator, there were multiple periods of missing data at site ES-02 during the reporting period. These were from 3.59pm 2/6/24 to 10.33am 4/6/24; 10.59pm 4/6/24 to 9.28am 6/6/24; 20.29pm 7/6/24 to 10.13am 11/6/24; 4.29am 12//6/24 to 8.42am 13/6/24; 11.59pm 14/6/24 to 10.55am 17/6/24; 1.49am 18/6/24 to 9.21am 18/6/24; 0.39am 24/6/624 to 11.47am 24/6/24; 2.49am 28/6/24 to 2.07pm 28/6/24. A replacement solar regulator was installed 24/6, an additional solar panel was installed on 27/8 however a blown fuse occurred on 28/6 and was repaired 28/6 resulting in some loss of data on that date.

Table 3. Blast monitoring results for June 2024

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 June 2024 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 dB(A)	Noise Level	Criteria	Noise Level	Criteria	Noise Level	Criteria	Noise Level		
16	NM1	45	64	41	63	41	53	52	76	No	Project audible
17	NM2	44	45	40	48	40	43	52	54	No	Project audible
18	NM3	40	56	35	58	35	48	52	66	No	Project inaudible
-	NM4	40	64	35	58	35	61	52	83	No	Project inaudible
Additional Information											
Date of Final Report	28 June 2024										
Weather Conditions	Wind speed 2.1–7.6 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, a train, and site noise. The Maxwell Underground Coal Mine Project was inaudible at all locations during the day and evening periods but was audible during the night time period at NM1 and NM2, below the applicable criterion.										

Table 5. Noise monitoring results (dB(A)) for 12 June 2024 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	Criteria	Noise Level	Criteria	Noise Level	Criteria	Noise Level		
16	NM1	45	63	41	65	41	55	52	79	No	Project audible
17	NM2	44	45	40	44	40	41	52	56	No	Project audible
18	NM3	40	57	35	57	35	52	52	77	No	Project inaudible
-	NM4	40	67	35	66	35	56	52	86	No	Project inaudible
Additional Information											
Date of Final Report	28 June 2024										
Weather Conditions	Wind speed 0.7–12.2 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, residential noise, a train, and site noise. The Maxwell Underground Coal Mine Project was inaudible at all locations during the day and evening periods but was audible during the night time period at NM1 and NM2, below the applicable criterion.										

Table 6. Noise monitoring results (dB(A)) for 13 June 2024 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	Criteria	Noise Level	Criteria	Noise Level	Criteria	Noise Level		
16	NM1	45	65	41	63	41	51	52	76	No	Project audible
17	NM2	44	35	40	42	40	37	52	58	No	Project audible
18	NM3	40	54	35	48	35	48	52	70	No	Project inaudible
-	NM4	40	64	35	59	35	57	52	80	No	Project inaudible
Additional Information											
Date of Final Report	28 June 2024										
Weather Conditions	Wind speed 0.7–2.4 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, and site noise. The Maxwell Underground Coal Mine Project was inaudible at all locations during the day and evening periods but was audible during the night time period at NM1 and NM2, and the evening period at NM1, below the applicable criterion.										

Table 7. Noise monitoring results (dB(A)) for 11 June 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

11 June 2024 – 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	28	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 June 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

12 June 2024 – 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	23	40	34	40	NA	No
17	NM2	40	NA	40	NA	40	N4	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 June 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

13 June 2024 – 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))

APPENDIX 1 – MAP OF MONITORING LOCATIONS