



Maxwell Underground Coal Mine Project

Environmental Monitoring Data

February 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*.

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	February 2024
Date of Publication	28 March 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 February 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	01/02/2024	29/02/2024	micrograms per cubic metre	5 minutes	Continuous	0	21	17	231
9	ES-02	01/02/2024	29/02/2024	micrograms per cubic metre	5 minutes	Continuous	0	17	15	111
10	ES-03	01/02/2024	29/02/2024	micrograms per cubic metre	1 minute	Continuous	0	13	11	98
11	ES-04	01/02/2024	29/02/2024	micrograms per cubic metre	5 minutes	Continuous	0	18	16	96

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. On 18/10/23 the AQ-Guard at site ES-02 failed; it was replaced on 20/10/23 by a hire E-Sampler. Diagnosis of the failed AQ-Guard was that the SSD card failed due to a faulty batch received by the equipment manufacturer. Replacement SSD card was received from Palas; AQ-Guard was hardwired for power supply in office to enable SSD installation and configuration; 240v power supply caused device to short circuit and burn out. Unit returned to equipment supplier (Alpha) in Melbourne 13/11/23 awaiting instruction from Palas; unit shipped (air freight) from Alpha to Palas 24/11/23; received by Palas 12/12/23; quote for repair received from Palas 23/1/24, instruction to proceed by Malabar issued same date; advice received 8/3/24 that repaired device had been received by Alpha and would be shipped to Malabar as a priority.

Table 3. Blast monitoring results for February 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 for 20 February 2024 compared to the noise criteria in 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	61	41	63	41	60	52	87	No	Project inaudible
17	NM2	44	47	40	46	40	44	52	62	No	Project inaudible
18	NM3	40	58	35	55	35	46	52	89	No	Project inaudible
-	NM4	40	73	35	67	35	65	52	72	No	Project inaudible
Additional Information											
Date of Final Report	21 March 2024										
Weather Conditions	Wind speed 1.9 – 6.8 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, and nearby mine noise. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 5. Noise monitoring results for 21 February 2024 compared to the noise criteria in 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	62	41	64	41	59	52	84	No	Project inaudible
17	NM2	44	60	40	40	40	39	52	59	No	Project inaudible
18	NM3	40	70	35	53	35	50	52	72	No	Project inaudible
-	NM4	40	61	35	56	35	51	52	78	No	Project inaudible
Additional Information											
Date of Final Report	21 March 2024										
Weather Conditions	Wind speed 1.0 – 6.5 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, dogs, and a nearby coal mine. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 6. Noise monitoring results for 22 February 2024 compared to the noise criteria in 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	57	41	65	41	62	52	84	No	Project inaudible
17	NM2	44	43	40	36	40	43	52	56	No	Project inaudible
18	NM3	40	57	35	54	35	54	52	87	No	Project inaudible
-	NM4	40	73	35	60	35	56	52	77	No	Project inaudible
Additional Information											
Date of Final Report	21 March 2024										
Weather Conditions	Wind speed 0.7 – 3.9 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, and a nearby coal mine. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 7. Noise monitoring results for 20 February 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

20 February 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	21	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 for 21 February 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

21 February 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	23	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 for 22 February 2024 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

22 February 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

