



Maxwell Underground Coal Mine
Project
Environmental Monitoring Data
December 2023

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	December 2023
Date of Publication	24 January 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 December 2023

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	01/12/2023	31/12/2023	micrograms per cubic metre	5 minutes	Continuous	0	20	14	248
9	ES-02	01/12/2023	31/12/2023	micrograms per cubic metre	5 minutes	Continuous	0	19	15	168
10	ES-03	01/12/2023	31/12/2023	micrograms per cubic metre	1 minute	Continuous	0	14	11	347
11	ES-04	01/12/2023	31/12/2023	micrograms per cubic metre	5 minutes	Continuous	0	19	16	107

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; as of issue date of this report awaiting update from Palas.

Table 3. Blast monitoring results for December 2023

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 21 December 2023 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	68	41	66	41	59	52	81	No	Project inaudible
17	NM2	44	51	40	44	40	40	52	55	No	Project inaudible
18	NM3	40	58	35	54	35	49	52	77	No	Project inaudible
-	NM4	40	68	35	64	35	55	52	79	No	Project inaudible
Additional Information											
Date of Final Report	19 January 2024										
Weather Conditions	Wind speed 3.3 – 7.7 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, and a train. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 5. Noise monitoring results for 22 December 2023 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	69	41	64	41	63	52	86	No	Project inaudible
17	NM2	44	51	40	47	40	37	52	70	No	Project inaudible
18	NM3	40	53	35	54	35	44	52	61	No	Project inaudible
-	NM4	40	67	35	67	35	62	52	85	No	Project inaudible
Additional Information											
Date of Final Report	19 January 2024										
Weather Conditions	Wind speed 1.4 – 10.6 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, and a helicopter. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 6. Noise monitoring results for 23 December 2023 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	64	41	64	41	62	52	87	No	Project inaudible
17	NM2	44	43	40	39	40	36	52	53	No	Project inaudible
18	NM3	40	62	35	58	35	54	52	79	No	Project inaudible
-	NM4	40	68	35	66	35	60	52	82	No	Project inaudible
Additional Information											
Date of Final Report	19 January 2024										
Weather Conditions	Wind speed 0.7 – 8.2 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.										

Table 7. Noise monitoring results for 21 December 2023 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

21 December 2023 – 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	32	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 22 December compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

22 December 2023 – 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 for 23 December compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

23 December 2023 – 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

