



Maxwell Underground Coal Mine
Project
Environmental Monitoring Data
September 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	September 2023
Date of Publication	Version 1: 17 October 2023 Version 2: 12 December 2023
Version	2
Correction Log	Version 2 includes an assessment against the new noise assessment criteria under Modification 1 to Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

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 8**.

A map of the monitoring locations is provided in **Appendix 1**.

Table 2. Air quality monitoring results for September 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	01/09/2023	30/09/2023	micrograms per cubic metre	5 minutes	Continuous	0	18	9	1196
9	ES-02	01/09/2023	30/09/2023	micrograms per cubic metre	1 minute	Continuous	0	15	12	133
10	ES-03	01/09/2023	30/09/2023	micrograms per cubic metre	1 minute	Continuous	0	14	11	196
11	ES-04	01/09/2023	30/09/2023	micrograms per cubic metre	5 minutes	Continuous	0	14	13	72

A Palas AQ-Guard Smart device was 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.

Table 3. Blast monitoring results for September 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 19 September 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	70	41	70	41	58	52	85	No	Project inaudible
17	NM2	44	53	40	37	40	36	52	55	No	Project inaudible
18	NM3	40	56	35	54	35	52	52	74	No	Project inaudible
-	NM4	40	70	35	66	35	53	52	81	No	Project inaudible
Additional Information											
Date of Final Report	11 December 2023										
Weather Conditions	Wind speed 1.8 – 7.6 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, a surrounding coal mine, and a nearby water pump. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 5. Noise monitoring results for 20 September 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	70	41	69	41	66	52	90	No	Project inaudible
17	NM2	44	56	40	49	40	39	52	61	No	Project inaudible
18	NM3	40	60	35	58	35	53	52	76	No	Project inaudible
-	NM4	40	67	35	66	35	55	52	77	No	Project inaudible
Additional Information											
Date of Final Report	11 December 2023										
Weather Conditions	Wind speed 2.4 – 10.2 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, insects, and dogs. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 6. Noise monitoring results for 21 September 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	71	41	68	41	57	52	83	No	Project inaudible
17	NM2	44	55	40	40	40	36	52	67	No	Project inaudible
18	NM3	40	58	35	57	35	52	52	74	No	Project inaudible
-	NM4	40	71	35	67	35	58	52	80	No	Project inaudible
Additional Information											
Date of Final Report	11 December 2023										
Weather Conditions	Wind speed 3.1 – 12.3 m/s. No rain during monitoring.										
Notes	Measured noise sources included traffic, birds, frogs, dogs, and a surrounding coal mine. The Maxwell Underground Coal Mine Project was inaudible at all locations and times.										

Table 7. Noise monitoring results for 19 September 2023 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

19 th September 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 8. Noise monitoring results for 20 September 2023 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

20 th September 2023 – Noise Monitoring Results (Rail Loop & Spur)								
EPA identification no.	Sampling point	Day (LA eq (15 minute))		Evening (LA eq (15 minute))		Night (LA 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 20 September 2023 compared to the noise criteria in Development Consent DA 106-04-00 for the Maxwell Rail Loop and Antiene Rail Spur

21 st September 2023 – Noise Monitoring Results (Rail Loop & Spur)								
EPA identification no.	Sampling point	Day (LA eq (15 minute))		Evening (LA eq (15 minute))		Night (LA 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

