



# Monthly Environmental Monitoring Report

Yancoal Mt Thorley Warkworth
February 2018

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### **Revision History**

Version No.	Person Responsible	Document Status	Date
1.0	Environmental Advisor	Draft	27/03/2018
1.1	Environmental Specialist	Final	05/04/2018

#### 1.0 INTRODUCTION

This report has been compiled to provide a monthly summary of environmental monitoring results for Mt Thorley Warkworth (MTW). This report includes all monitoring data collected for the period 1<sup>st</sup> February to 28<sup>th</sup> February 2018.

### 2.0 AIR QUALITY

### 2.1 Meteorological Monitoring

Meteorological data is collected at MTW's 'Charlton Ridge' meteorological station (refer to Figure 3: Air Quality Monitoring Locations).

#### 2.1.1 Rainfall

Rainfall for the period is summarised in Table 1, the year-todate trend and historical trend are shown in **Error! Reference source not found.**.

Table 1: Monthly Rainfall MTW

2018	Monthly Rainfall (mm)	Cumulative YTD Rainfall (mm)
February	68.6	79.4

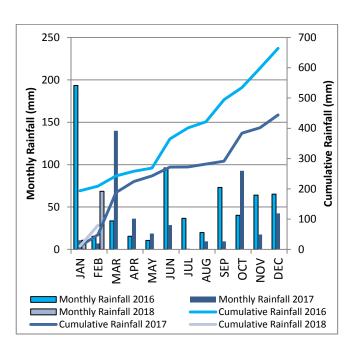


Figure 1: Rainfall Trend YTD

#### 2.1.2 Wind Speed and Direction

Winds from the South – East were dominant throughout the reporting period as shown in **Error! Reference source not found.** 

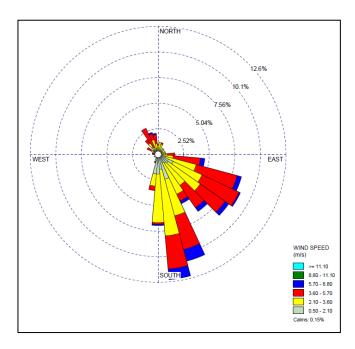


Figure 2: Charlton Ridge Wind Rose - February 2018

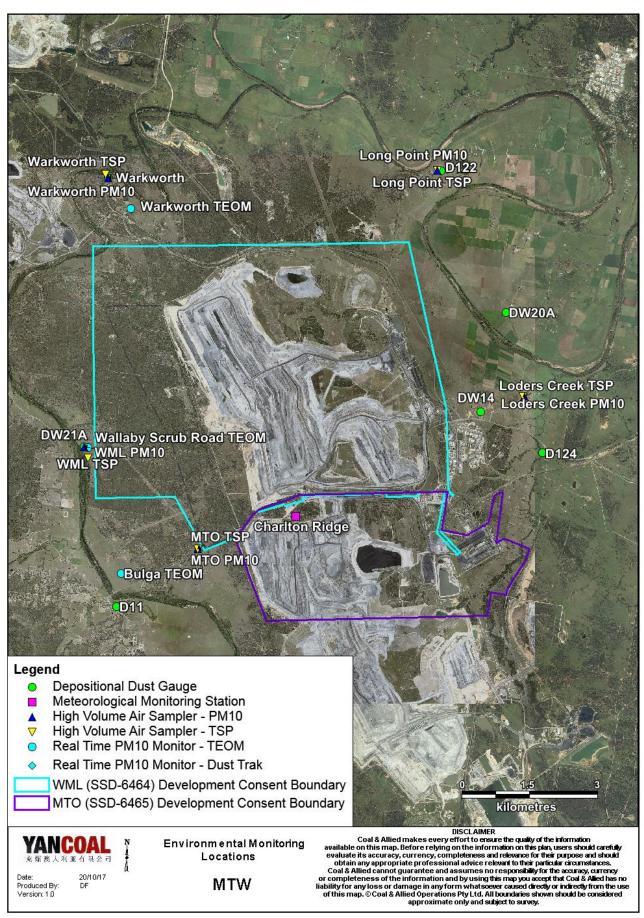


Figure 3: Air Quality Monitoring Locations

#### 2.2 Depositional Dust

To monitor regional air quality, MTW operates and maintains a network of seven depositional dust gauges, situated on private and mine owned land surrounding MTW.

**Error! Reference source not found.** displays insoluble solids results from depositional dust gauges during the reporting period compared against the year-to-date average and the annual impact assessment criteria.

During the reporting period the D122, D124 and Warkworth monitors recorded monthly results above the long term impact assessment criteria of 4.0 g/m<sup>2</sup> per month. Field notes associated with D122, D124 and Warkworth confirm the presence of bird droppings and/or vegetation and/or insects. As such the results are considered contaminated and will be excluded from calculation of the annual average.

An assessment of MTW's contribution to the long term assessment criteria will be reported in the 2018 Annual Return.

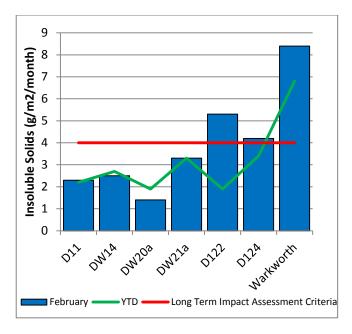


Figure 4: Depositional Dust – February 2018

#### 2.3 Suspended Particulates

Suspended particulates are measured by a network of High Volume Air Samplers (HVAS) measuring Total Suspended Particulates (TSP) and Particulate Matter <10 $\mu$ m (PM<sub>10</sub>). The location of these monitors can be found in Figure 3. Each HVAS was run for 24 hours on a six-day cycle in accordance with EPA requirements.

#### 2.3.1 HVAS PM<sub>10</sub> Results

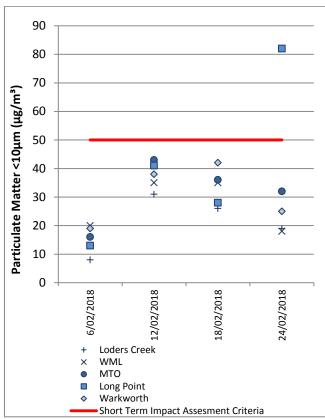


Figure 5 shows the individual  $PM_{10}$  results at each monitoring station against the short term impact assessment criteria of  $50\mu g/m^3$ .

On 24/02/2018 the Long Point HVAS  $PM_{10}$  unit recorded a result of  $82\mu g/m^3$ , which is greater than the short term (24hr)  $PM_{10}$  impact assessment criteria.

An Investigation determined that the wind direction was generally not from MTW's angle of influence at Long Point on the 24<sup>th</sup> February. Accordingly, no further action is required.

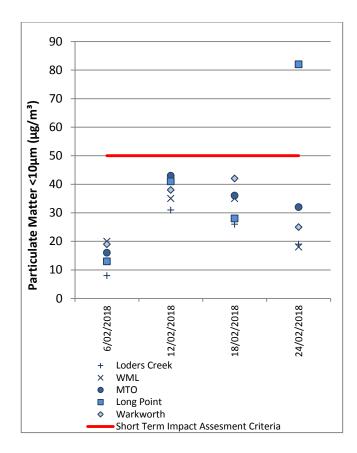


Figure 5: Individual PM<sub>10</sub> Results – February 2018

Figure 6 shows the annual average  $PM_{10}$  results against the long term impact assessment criteria.

An assessment of MTW's contribution to the long term assessment criteria will be reported in the 2018 Annual Return.

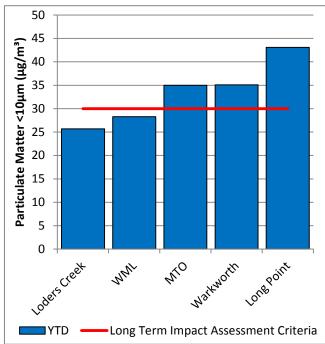


Figure 6: Annual Average PM<sub>10</sub> – February 2018

#### 2.3.2 TSP Results

Figure 7 shows the annual average TSP results compared against the long term impact assessment criteria of  $90\mu g/m^3$ .

An assessment of MTW's contribution to the long term assessment criteria will be reported in the 2018 Annual Return.

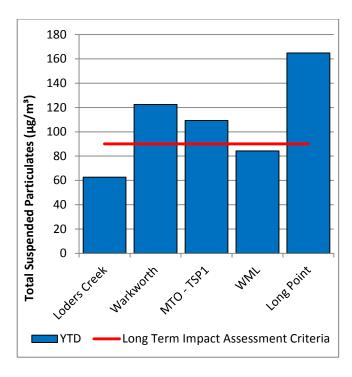


Figure 7: Annual Average Total Suspended Particulates – February 2018

Mt Thorley Warkworth maintains a network of real time  $PM_{10}$  monitors. The real time air quality monitoring stations continuously log information and transmit data to a central database, generating alarms when particulate matter levels exceed internal trigger limits.

Results for real time dust sampling are shown in Figure 8, including the daily 24 hour average  $PM_{10}$  result and the annual  $PM_{10}$  average.

Seven TEOM  $PM_{10}$  measurements exceeded the 24 hour short term impact assessment criteria during the reporting period. Each was investigated to determine the level of contribution from MTW activities in accordance with the compliance protocol outlined in the MTW Air Quality Management Plan. All recorded exceedances were determined to be compliant with the relevant criterion.

A summary of the investigations undertaken for each short term  $PM_{10}$  exceedance are provided in Table 2.

#### 2.3.3 Real Time PM<sub>10</sub> Results

Table 2: 24hr PM<sub>10</sub> Investigations

Date	Site	24hr PM <sub>10</sub> result (μg/m³)	Estimated contribution from MTW (µg/m³)	Discussion		
15/02/2018	Bulga TEOM	66.7	3.9	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 3.9µg/m3 or ~5.8% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.		
16/02/2018	Bulga TEOM	57.9	1.6	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 1.6µg/m3 or ~2.8% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.		

15/02/2018	Wallaby Scrub Road TEOM	62.3	40.8	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 40.8µg/m3 or ~65.5% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.
09/02/2018	Warkworth OEH TEOM	52.5	16.7	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 16.7μg/m3 or ~31.8% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.
15/02/2018	Warkworth OEH TEOM	92.6	29.8	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 29.8µg/m3 or ~32.2% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.
16/02/2018	Warkworth OEH TEOM	52.4	23.3	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 23.3µg/m3 or ~44.6% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.
19/02/2018	Warkworth OEH TEOM	58.1	34.8	An analysis of meteorological data has determined the maximum potential MTW contribution to the result to be in the order of 34.8µg/m3 or ~ 59.9% of the measured result. As the calculated contribution was less than 75% of the measured result MTW operations are not considered to be a significant contributor to the result as described in the MTW Air Quality Management Plan.

# 2.3.4 Real Time Alarms for Air Quality

During February, the real time monitoring system generated 196 automated air quality related alerts, including 6 alerts for adverse meteorological conditions and 190 alerts for elevated  $PM_{10}$  levels.

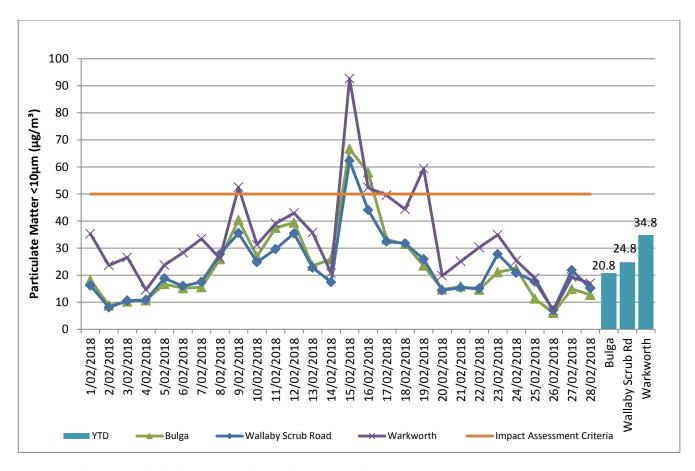


Figure 8: Real Time  $PM_{10}$  daily 24hr average and annual average – February 2018

#### 3.0 WATER QUALITY

MTW maintains a network of surface water and groundwater monitoring sites.

#### 3.1 Surface Water

Monitoring is conducted at mine site dams and surrounding natural watercourses.

Surface water courses are sampled on a monthly or quarterly sampling regime. Water quality is evaluated through the parameters of pH, Electrical Conductivity (EC) and Total Suspended Solids (TSS). The Hunter River and the Wollombi Brook are sampled both upstream and downstream of mining operations, to monitor the potential impact of mining on the river. Other Hunter River tributaries are also monitored.

Results of monitoring are reported quarterly, next available in the March 2018 report.

#### 3.2 Groundwater Monitoring

Groundwater monitoring is undertaken on a quarterly basis in accordance with the MTW Groundwater Monitoring Programme.

Groundwater results are reported quarterly, next available in the March 2018 report.

#### 3.3 HRSTS Discharge

MTW participates in the Hunter River Salinity Trading Scheme (HRSTS), allowing discharge from licensed discharge points Dam 1N and Dam 9S. Discharges can only take place subject to HRSTS regulations.

During the reporting period no water was discharged under the HRSTS.

#### 4.0 BLAST MONITORING

MTW have a network of six blast monitoring units. These are located at nearby privately owned residences and function as regulatory compliance monitors.

The location of these monitors can be found in **Error!** Reference source not found..

#### 4.1 Blast Monitoring Results

During February 2018, 26 blasts were initiated at MTW. **Error! Reference source not found.** to **Error! Reference source not found.** show the blast monitoring results for the reporting period against the impact assessment criteria. The criteria are summarised in Table 3.

**Table 3: Blasting Limits** 

Airblast Overpressure (dB(L))	Comments
115	5% of the total number of blasts in a 12 month period
120	0%
Ground Vibration (mm/s)	Comments
Ground Vibration (mm/s) 5	Comments  5% of the total number of blasts in a 12 month period

During the reporting period no blasts exceeded the  $115\ dB(L)\ 5\%$  threshold for airblast overpressure or  $5mm/s\ 5\%$  threshold for ground vibration.

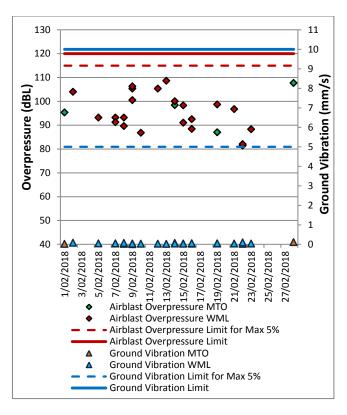


Figure 9: Abbey Green Blast Monitoring Results - February 2018

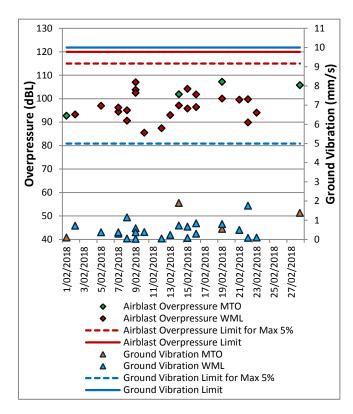


Figure 10: Bulga Village Blast Monitoring Results – February 2018

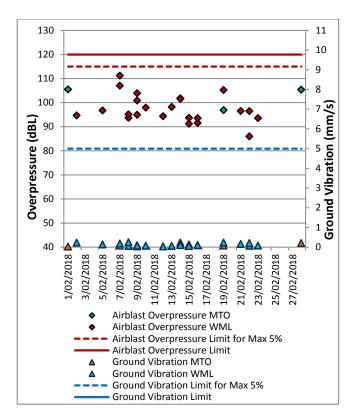


Figure 12: MTIE Blast Monitoring Results - February 2018

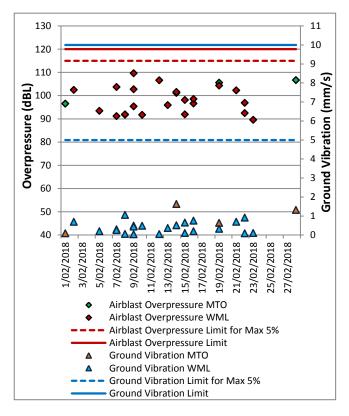


Figure 13: Wollemi Peak Road Blast Monitoring Results – February 2018

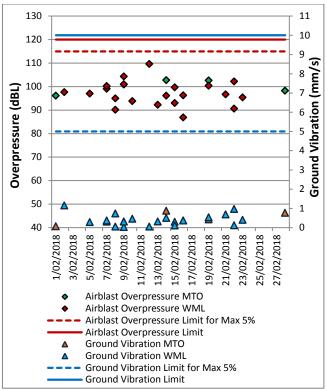


Figure 11: Wambo Road Blast Monitoring Results – February 2018

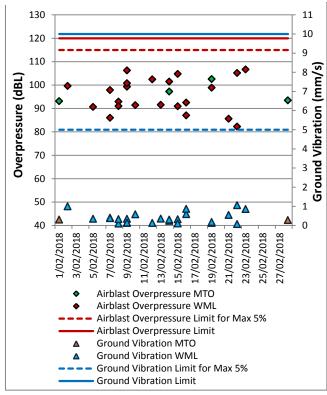


Figure 14: Warkworth Blast Monitoring Results - February 2018

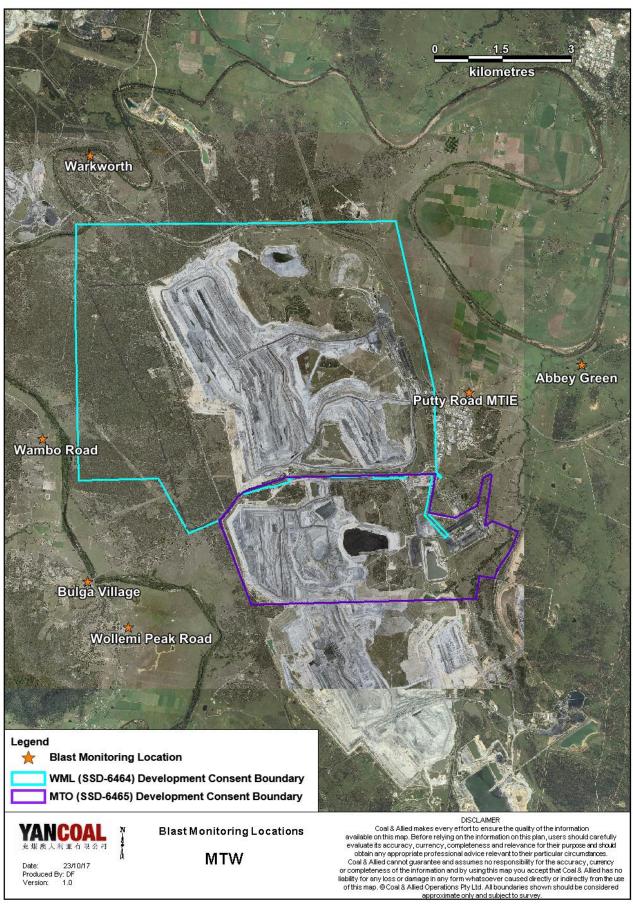


Figure 15: MTW Blast Monitoring Location Plan

#### 5.0 NOISE

Routine attended noise monitoring is carried out in accordance with the MTW Noise Management Plan. A review against EIS predictions will be reported in the Annual Review. The purpose of the noise surveys is to quantify and describe the acoustic environment around the site and compare results with specified limits. Real time noise monitoring also occurs at five sites surrounding MTW. Noise monitoring locations are displayed in Figure 16.

#### **5.1 Attended Noise Monitoring Results**

Attended monitoring was conducted at receiver locations surrounding MTW on the night of 20 February 2018. All measurements complied with the relevant criteria. Results are detailed in Table 4 to Error! Reference source not found.

#### 5.1.1 WML Noise Assessment

Compliance assessments undertaken against the WML noise criteria are presented in Tables 4 and 5.

Table 4: L<sub>Aeq, 15 minute</sub> Warkworth Impact Assessment Criteria – February 2018

7.04) 25u.c	•	Wind Speed	Stability	Criterion	Criterion	WML L <sub>Aeq</sub>	. 3
Location	Date and Time	(m/s) <sup>5</sup>	Class	dB(A)	Applies? <sup>1,5</sup>	dB <sup>2,4</sup>	Exceedance
Bulga RFS	21/02/2018 0:04	3.0	D	37	Yes	IA	Nil
Bulga Village	20/02/2018 22:01	2.7	E	38	Yes	<20	Nil
Gouldsville	20/02/2018 22:00	2.7	E	38	Yes	30	Nil
Inlet Rd	20/02/2018 21:34	4.2	D	37	No	IA	NA
Inlet Rd West	20/02/2018 21:08	2.8	F	35	No	IA	NA
Long Point	20/02/2018 21:38	4.2	D	35	No	IA	NA
South Bulga	21/02/2018 0:47	2.9	D	35	Yes	IA	Nil
Wambo Road	20/02/2018 22:37	2.6	E	38	Yes	<25	Nil

Notes:

Table 5: L<sub>A1, 1 minute</sub> Warkworth - Impact Assessment Criteria – February 2018

Location	Location Date and Time		Stability Class	Criterion dB(A)	Criterion Applies? <sup>1,5</sup>	WML $L_{A1, 1min}$ $dB^{2,4}$	Exceedance <sup>3</sup>
Bulga RFS	21/02/2018 0:04	3.0	D	47	Yes	IA	Nil
Bulga Village	20/02/2018 22:01	2.7	E	48	Yes	<20	Nil
Gouldsville	20/02/2018 22:00	2.7	E	48	Yes	37	Nil
Inlet Rd	20/02/2018 21:34	4.2	D	47	No	IA	NA
Inlet Rd West	20/02/2018 21:08	2.8	F	45	No	IA	NA
Long Point	20/02/2018 21:38	4.2	D	45	No	IA	NA
South Bulga	21/02/2018 0:47	2.9	D	45	Yes	IA	Nil
Wambo Road	20/02/2018 22:37	2.6	E	48	Yes	26	Nil
				•		•	

<sup>1.</sup> Noise emission limits apply during all meteorological conditions except the following: during periods of rain or hail; average wind speed at microphone height exceeds 5 m/s; wind speeds greater than 3 m/s measured at 10 metres above ground level; stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level; or stability category G temperature inversion conditions:

<sup>2.</sup> Estimated or measured LAeq,15minute attributed to WML;

<sup>3.</sup> NA means atmospheric conditions outside conditions specified in development consent and so criterion is not applicable;

<sup>4.</sup> Bolded results in red are possible exceedances of relevant criteria; and

<sup>5.</sup> Criterion may or may not apply due to rounding of meteorological data values.

- 1. Noise emission limits apply during all meteorological conditions except the following: during periods of rain or hail; average wind speed at microphone height exceeds 5 m/s; wind speeds greater than 3 m/s measured at 10 metres above ground level; stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level; or stability category G temperature inversion conditions;
- 2. Estimated or measured LA1,1minute attributed to Warkworth mine (WML);
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in project approval and so criterion is not applicable. NA (not applicable) in criterion column means criterion not specified for this location;
  4. Bolded results in red are possible exceedances of relevant criteria; and
- 5. Criterion may or may not apply due to rounding of meteorological data values.

#### 5.1.3 MTO Noise Assessment

Compliance assessments undertaken against the MTO noise criteria are presented in Table 6 and 7.

Table 6: L<sub>Aeq. 15minute</sub> Mount Thorley - Impact Assessment Criteria – February 2018

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	Stability Class	Criterion dB	Criterion Applies? <sup>1,5</sup>	MTO L <sub>Aeq</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Bulga RFS	21/02/2018 0:04	3.0	D	37	Yes	IA	Nil
Bulga Village	20/02/2018 22:01	2.7	E	38	Yes	IA	Nil
Gouldsville	20/02/2018 22:00	2.7	E	35	Yes	IA	Nil
Inlet Rd	20/02/2018 21:34	4.2	D	37	No	<25	NA
Inlet Rd West	20/02/2018 21:08	2.8	F	35	No	<20	NA
Long Point	20/02/2018 21:38	4.2	D	35	No	26	NA
South Bulga	21/02/2018 0:47	2.9	D	36	Yes	IA	Nil
Wambo Road	20/02/2018 22:37	2.6	E	38	Yes	IA	Nil

#### Notes:

- 2. Estimated or measured LAeq,15minute attributed to Mt Thorley Operations (MTO);
- 3. NA means atmospheric conditions outside conditions specified in development consent and so criterion is not applicable:
- 4. Bolded results in red are possible exceedances of relevant criteria; and
- $5.\ Criterion\ may\ or\ may\ not\ apply\ due\ to\ rounding\ of\ meteorological\ data\ values.$

Table 7: L<sub>A1, 1Minute</sub> Mount Thorley - Impact Assessment Criteria – February 2018

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	Stability Class	Criterion dB	Criterion Applies? <sup>1,5</sup>	MTO $L_{A1, 1min}$ dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Bulga RFS	21/02/2018 0:04	3.0	D	47	Yes	IA	Nil
Bulga Village	20/02/2018 22:01	2.7	Е	48	Yes	IA	Nil
Gouldsville	20/02/2018 22:00	2.7	E	45	Yes	IA	Nil
Inlet Rd	20/02/2018 21:34	4.2	D	47	No	<25	NA
Inlet Rd West	20/02/2018 21:08	2.8	F	45	No	<20	NA
Long Point	20/02/2018 21:38	4.2	D	45	No	30	NA
South Bulga	21/02/2018 0:47	2.9	D	46	Yes	IA	Nil
Wambo Road	20/02/2018 22:37	2.6	E	48	Yes	IA	Nil

<sup>1.</sup> Noise emission limits apply during all meteorological conditions except the following: during periods of rain or hail; average wind speed at microphone height exceeds 5 m/s; wind speeds greater than 3 m/s measured at 10 metres above ground level; stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level; or stability category G temperature inversion conditions;

<sup>1.</sup> Noise emission limits apply during all meteorological conditions except the following: during periods of rain or hail; average wind speed at microphone height exceeds 5 m/s; wind speeds greater than 3 m/s measured at 10 metres above ground level; stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level; or stability category G temperature inversion conditions:

<sup>2.</sup> Estimated or measured LA1,1minute attributed to Mt Thorley Operations (MTO);

<sup>3.</sup> NA in exceedance column means atmospheric conditions outside conditions specified in project approval and so criterion is not applicable. NA (not applicable) in criterion column means criterion not specified for this location:

<sup>4.</sup> Bolded results in red are possible exceedances of relevant criteria; and

<sup>5.</sup> Criterion may or may not apply due to rounding of meteorological data values.

### 5.1.4 NPfl Low Frequency Assessment

In accordance with the requirements of the EPA's Noise Policy for Industry (NPfI), the applicability of the low frequency modification penalty has been assessed. During February 2018 no measurements required the penalty to be applied. The assessment for low frequency noise is shown in Error! Reference source not found.

Table 8: Low Frequency Noise Modifying Factor Assessment - February 2018

Location	Date and Time	Measured Site Only LA <sub>eq</sub> dB (WML/MTO)	Site Only L <sub>Ceq</sub> dB <sup>4</sup> (WML/MTO)	Site Only LCeq – LAeq dB <sup>1,4</sup> (WML/MTO)	Result Max exceedance of ref spectrum dB (WML/MTO) 2,3,4	Penalty dB(A)	Exceedance
Bulga RFS	21/02/2018 0:04	IA/IA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Bulga Village	20/02/2018 22:01	<20/IA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Gouldsville	20/02/2018 22:00	30/IA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Inlet Rd	20/02/2018 21:34	IA/<25	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Inlet Rd West	20/02/2018 21:08	IA/<20	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Long Point	20/02/2018 21:38	IA/26	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
South Bulga	21/02/2018 0:47	IA/IA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA
Wambo Road	20/02/2018 22:37	<25/IA	NA/NA	NA/NA	NA/NA	NA/NA	NA/NA

Notes:

<sup>1.</sup> As per NPfl, if LCeq – LAeq >= 15 dB further assessment of low frequency noise required.

<sup>2.</sup> As per NPfl, compare measured spectrum against reference spectrum to determine if the low frequency modifying factor is triggered and application of penalty is required;

<sup>3.</sup> Bold results and penalties in red are where the relevant modifying factor trigger was exceeded; and
4. Where it is not possible to determine the site only result due to the presence of other low frequency noise sources occurring during the measurement, or where criteria were not applicable due to meteorological conditions, this is noted as NA (not available) and no further assessment has been undertaken.

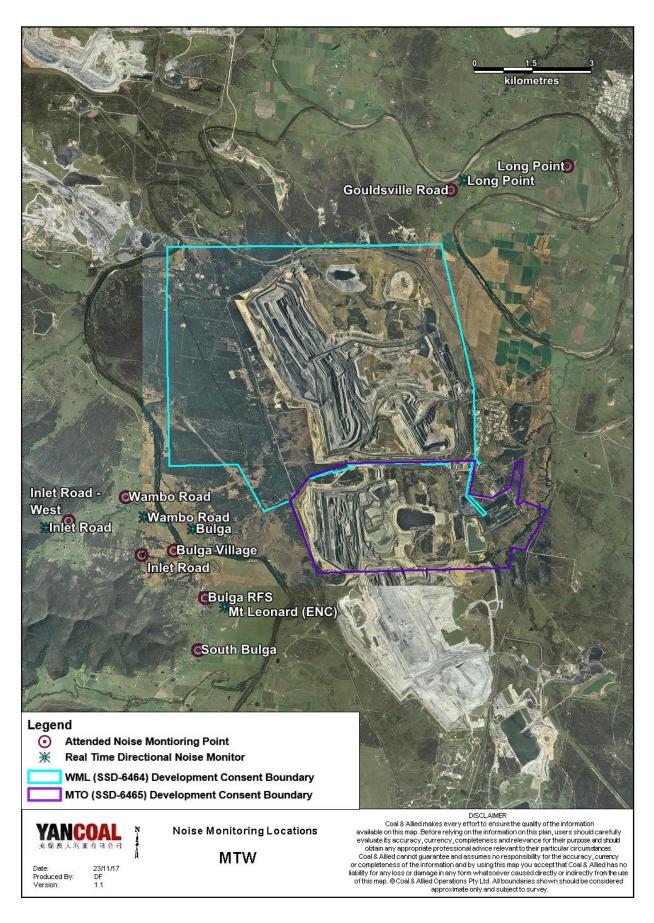


Figure 16: Noise Monitoring Location Plan

#### 5.2 Noise Management Measures

A program of targeted supplementary attended noise monitoring is in place at MTW, supported by the real-time directional monitoring network and ensuring the highest level of noise management is maintained. The supplementary program is undertaken by MTW personnel and involves:

- Routine inspections from both inside and outside the mine boundary;
- Routine and as-required handheld noise assessments (undertaken in response to noise alarm and/or community complaint), comparing measured levels against consent noise limits; and
- Validation monitoring following operational modifications to assess the adequacy of the modifications.

Where a noise assessment identifies noise emissions which are exceeding the relevant noise limit(s) for any particular residence, modifications will be made so as to ensure that the noise event is resolved within 75 minutes of identification. The actions taken are commensurate with the nature and severity of the noise event, but can include:

- Changing the haul route to a less noise sensitive haul:
- Changing dump locations (in-pit or less exposed dump option);
- Reducing equipment numbers;
- Shut down of task; or
- Site shut down.

A summary of these assessments undertaken during February are provided in Table 9.

Table 9: Supplementary Attended Noise Monitoring Data – February 2018

	No. of	No. of	No. of nights	% greater	
	assessments	assessments >	where		
		trigger	assessments	than	
			> trigger	trigger	
			> ti iggei	trigger	

Note: Measurements are taken under all meteorological conditions, including conditions under which the consent noise criteria do not apply.

#### 6.0 OPERATIONAL DOWNTIME

During February, a total of 346 hours of equipment downtime was logged in response to environmental events such as dust, noise and adverse meteorological conditions. Operational downtime by equipment type is shown in Figure 17.

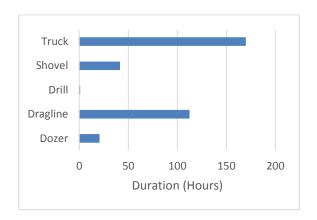


Figure 17: Operational Downtime by Equipment Type – February 2018

#### 7.0 REHABILITATION

During February, 8.9 Ha of land was released, 9.7 Ha of land was bulk shaped and 2.4 Ha of land was composted.

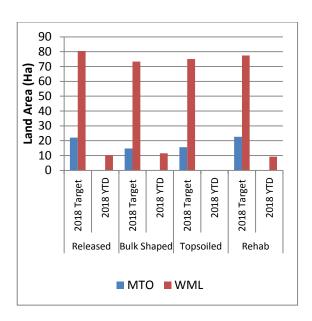


Figure 18: Rehabilitation YTD – February 2018

### **8.0 ENVIRONMENTAL INCIDENTS**

During the reporting period there were no reportable environmental incidents.

### 9.0 COMPLAINTS

During the reporting period 19 complaints were received. Details of these complaints are shown in **Error! Reference source not found.** below.

	Noise	Dust	Blast	Lighting	Other	Total	
January	9	6	14	0	1	30	
February	8	4	2	3	2	19	
March	-	-	-	-	-	-	
April	-	-	-	-	-	-	
May	-	-	-	-	-	-	
June	-	-	-	-	-	-	
July	-	-	-	-	-	-	
August	-	-	-	-	-	-	
September	-	-	-	-	-	-	
October	-	-	-	-	-	-	
November	-	-	-	-	-	-	
December	-	-	-	-	-	-	
Total	17	10	16	3	3	49	

Figure 19: Complaints Summary – YTD February

Appendix A: Meteorological Data

Table 10: Meteorological Data – Charlton Ridge Meteorological Station – February 2018

Date	Air Temperature Maximum (°C)	Air Temperature Minimum (°C)	Relative Humidity Maximum (%)	Relative Humidity Minimum (%)	Solar Radiation Maximum (W/Sq. M)	Wind Direction Average (°)	Wind Speed Average (m/sec)	Rainfall(mm)
1/02/2018 0:00	23	16	67	39	1212	138	3.3	0.0
2/02/2018 0:00	23	14	79	40	969	153	3.4	0.0
3/02/2018 0:00	27	14	90	37	1465	155	4.1	3.4
4/02/2018 0:00	28	14	83	31	1545	142	3.8	0.0
5/02/2018 0:00	32	13	84	19	1102	153	2.4	0.0
6/02/2018 0:00	31	15	81	22	1344	135	3.1	0.0
7/02/2018 0:00	32	16	78	24	1205	130	3.1	0.0
8/02/2018 0:00	35	14	74	12	1082	145	1.9	0.0
9/02/2018 0:00	40	18	79	10	1233	159	2.9	2.2
10/02/2018	36	18	89	22	1051	156	2.4	0.0
11/02/2018	39	20	73	11	1301	186	3.4	0.0
12/02/2018	38	20	79	6	1163	153	3.0	0.0
13/02/2018	34	20	83	26	1137	134	3.2	0.0
14/02/2018	40	21	84	4	1161	205	3.1	0.0
15/02/2018	37	19	71	7	1064	157	3.2	0.0
16/02/2018	37	16	86	3	1300	184	2.9	0.0
17/02/2018	32	19	75	30	1137	131	3.3	0.0
18/02/2018	37	17	82	17	1008	144	2.7	0.0
19/02/2018	31	18	70	27	1316	141	3.4	0.0
20/02/2018	22	15	92	56	560	145	4.3	5.8
21/02/2018	28	14	88	31	1384	140	3.5	0.0
22/02/2018	30	15	78	28	1452	137	2.9	0.0
23/02/2018	33	16	81	25	1175	149	2.4	0.0
24/02/2018	35	18	84	29	1525	246	2.8	0.0
25/02/2018	35	15	95	32	1321	244	4.1	40.8
26/02/2018	19	14	98	77	1413	172	4.1	16.4
27/02/2018	27	13	85	37	1443	139	3.1	0.0
28/02/2018	34	11	92	29	1045	235	2.5	0.0

<sup>&</sup>quot;-" Indicates that data was not available due to technical issues.