



Mount Thorley Warkworth EPL Monitoring Data

Published 18 May 2018
FOR THE MONTH ENDING 30 April 2018

| | |
|--------------------------------|---|
| Name of Operation | Mount Thorley Coal Loader |
| Environment Protection Licence | 24 |
| Licensee | Mount Thorley Coal Loading Ltd |
| Premises | Mount Thorley Coal Loading Ltd Mount Thorley Road, Mount Thorley Via Singleton NSW 2330 |
| EPL Link | http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=89660&SYSUID=1&LICID=24 |
| Name of Operation | Mount Thorley Operations |
| Environment Protection Licence | 1976 |
| Licensee | Mount Thorley Operations Pty Limited |
| Premises | Mount Thorley Operations Mount Thorley Road Mount Thorley NSW 2330 |
| EPL Link | http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=123990&SYSUID=1&LICID=1976 |
| Name of Operation | Warkworth Coal Mine |
| Environment Protection Licence | 1376 |
| Licensee | Warkworth Mining Ltd |
| Premises | Warkworth Coal Mine Putty Road Mount Thorley NSW 2330 |
| EPL Link | http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=121545&SYSUID=1&LICID=1376 |

1 INTRODUCTION

This report provides a summary of environmental monitoring results for Mount Thorley Warkworth (MTW) in accordance with the requirements of the following Environment Protection Licences (EPL):

- EPL24 – Mount Thorley Coal Loader (MTCL);
- EPL1376 – Warkworth Mining Limited (WML); and
- EPL1976 – Mount Thorley Operations (MTO).

This report includes all monitoring data collected in accordance with the above licences for the period 1 to 30 April 2018.

Monitoring in this report includes:

- Air quality monitoring;
- Surface water monitoring including mine water discharge and effluent quality; and
- Blast monitoring.

Monitoring locations are shown in **Figure 1**.

2 AIR QUALITY

In accordance with the requirements of Condition M2.2 of WML EPL 1376 and MTO EPL 1976, MTW maintains a network of five PM₁₀ monitors.

Results of Particulates (PM₁₀) monitoring are shown in **Table 1**. Results reported represent the 24hr average PM₁₀, derived from 10 minute PM₁₀ values for the period midnight to midnight, for each calendar date during the reporting period. The last sampling date was 30 April 2018 and the data was obtained on 1 May 2018.

TABLE 1: PARTICULATE MATTER <10µM MONITORING

| Date | Unit of Measure | Monitoring Frequency & Capture | Monitoring Point | | | | |
|------------|-------------------|--------------------------------|--|---|--|---|---|
| | | | Warkworth North (EPA ID # 9 - WML EPL 1376) | MTO Boundary (EPA ID # 13 - MTO EPL 1976) | Dragline Crossing (EPA ID # 10 - WML EPL 1376 & MTO EPL 1976) | Heavy Vehicle Bridge (EPA ID # 11 - WML EPL 1376 & MTO EPL 1976) | MTIE (EPA ID # 12 - WML EPL 1376 & MTO EPL 1976) |
| 1/04/2018 | µg/m ³ | Continuous | 34.1 | 40.1 | 44.7 | 34.7 | 70.0 |
| 2/04/2018 | µg/m ³ | | 27.3 | 26.3 | 37.3 | 25.0 | 61.9 |
| 3/04/2018 | µg/m ³ | | 26.6 | 23.2 | 20.5 | 18.2 | 45.1 |
| 4/04/2018 | µg/m ³ | | 21.2 | 14.4 | 13.1 | 12.1 | 27.6 |
| 5/04/2018 | µg/m ³ | | 19.5 | 15.8 | 18.4 | 14.2 | 28.7 |
| 6/04/2018 | µg/m ³ | | 17.8 | 14.4 | 20.4 | 16.8 | 33.8 |
| 7/04/2018 | µg/m ³ | | 30.9 | 30.7 | 36.0 | 28.8 | 63.1 |
| 8/04/2018 | µg/m ³ | | 26.6 | 28.6 | 36.9 | 27.9 | 73.3 |
| 9/04/2018 | µg/m ³ | | 22.8 | 20.9 | 31.8 | 23.3 | 53.4 |
| 10/04/2018 | µg/m ³ | | 19.8 | 16.1 | 17.6 | 15.6 | 41.7 |
| 11/04/2018 | µg/m ³ | | 24.8 | 18.2 | 19.7 | 18.6 | 48.8 |
| 12/04/2018 | µg/m ³ | | # | # | # | # | # |
| 13/04/2018 | µg/m ³ | | 29.4 | 12.5 | 8.1 | 12.9 | 36.5 |
| 14/04/2018 | µg/m ³ | | 22.6 | 9.9 | 7.3 | 10.2 | 24.8 |
| 15/04/2018 | µg/m ³ | | 40.8 | 17.4 | 12.0 | 16.5 | 55.9 |
| 16/04/2018 | µg/m ³ | | 29.4 | 11.3 | 5.0 | 10.0 | 26.3 |
| 17/04/2018 | µg/m ³ | | 11.4 | 12.2 | 15.0 | 12.5 | 32.9 |
| 18/04/2018 | µg/m ³ | | 11.8 | 12.5 | 21.4 | 12.2 | 30.7 |
| 19/04/2018 | µg/m ³ | | 21.2 | 11.1 | 10.9 | 13.0 | 29.9 |
| 20/04/2018 | µg/m ³ | | 24.6 | 25.8 | 21.2 | 20.2 | 44.9 |
| 21/04/2018 | µg/m ³ | | # | 48.7 | 51.2 | 41.1 | 88.9 |

MTW EPL Monitoring Data
FOR THE MONTH ENDING 30 April 2018

| Date | Unit of Measure | Monitoring Frequency & Capture | Monitoring Point | | | | |
|-------------------------|-------------------|--------------------------------|--|---|--|---|---|
| | | | Warkworth North (EPA ID # 9 - WML EPL 1376) | MTO Boundary (EPA ID # 13 - MTO EPL 1976) | Dragline Crossing (EPA ID # 10 - WML EPL 1376 & MTO EPL 1976) | Heavy Vehicle Bridge (EPA ID # 11 - WML EPL 1376 & MTO EPL 1976) | MTIE (EPA ID # 12 - WML EPL 1376 & MTO EPL 1976) |
| 22/04/2018 | µg/m ³ | | # | 22.1 | 18.7 | 22.0 | 45.6 |
| 23/04/2018 | µg/m ³ | | # | 11.5 | 11.8 | # | 26.4 |
| 24/04/2018 | µg/m ³ | | 17.0 | 21.4 | 20.7 | 57.8 | 20.8 |
| 25/04/2018 | µg/m ³ | | 23.7 | 39.8 | 36.7 | 34.7 | 39.6 |
| 26/04/2018 | µg/m ³ | | # | # | # | 36.9 | 40.9 |
| 27/04/2018 | µg/m ³ | | # | 14.5 | 13.5 | 13.3 | 15.9 |
| 28/04/2018 | µg/m ³ | | 10.1 | 8.1 | 8.0 | 8.0 | 8.8 |
| 29/04/2018 | µg/m ³ | | 5.7 | 4.9 | 6.7 | 6.6 | 5.8 |
| 30/04/2018 | µg/m ³ | | 7.3 | 5.9 | 7.5 | 7.5 | 7.0 |
| Monthly Meaningful Data | | | | | | | |
| April | µg/m ³ | Minimum* | 5.7 | 4.9 | 5.0 | 6.6 | 5.8 |
| April | µg/m ³ | Mean* | 24.7 | 19.9 | 21.2 | 20.4 | 39.4 |
| April | µg/m ³ | Maximum* | 46.0 | 48.7 | 51.2 | 57.8 | 88.9 |
| April | µg/m ³ | Median* | 24.6 | 16.8 | 18.6 | 16.8 | 38.0 |

24 hour data unavailable due to equipment or communications issue causing one or more missing 10 minute values

*Data calculated with missing 10 minute values due to equipment or communication issue

MTIE denotes Mount Thorley Industrial Estate

3 SURFACE WATER

3.1 Mine Water Discharge Monitoring

MTW participates in the Hunter River Salinity Trading Scheme (HRSTS) and maintains two monitoring locations associated with this scheme.

MTW did not receive any discharge opportunities in the reporting period and no water was discharged as shown in **Table 2**. As such, no samples were collected during the reporting period as shown in **Table 3**.

TABLE 2: MINE WATER DISCHARGE MONITORING - VOLUME AND MASS LIMITS

| Monitoring Location | Unit of measure | Volume/mass Limit | Volume/mass Discharged |
|---|--------------------|-------------------|------------------------|
| Dam 9S Discharge / EPL Point 4 (MTO EPL 1976) Discharge pipe from Dam 9 | Megalitres per day | 100 | - |

TABLE 3: MINE WATER DISCHARGE MONITORING- CONCENTRATION LIMITS

| Discharge Point | Date | Pollutant | Unit of measure | Licence limits | No. of samples required by licence | No. of samples you collected and analysed |
|---|------|-------------------------|-----------------------------|----------------|------------------------------------|---|
| Dam 1N Discharge / Point 1 (WML EPL 1376) Dam 1N Discharge Point | N/A | Electrical Conductivity | microsiemens per centimetre | - | 0 | 0 |
| | | pH | pH | 6.5 - 9.0 | 0 | 0 |
| | | Total Suspended Solids | milligrams per litre | 120 | 0 | 0 |
| Dam 9S Discharge / EPL Point 4 (MTO EPL 1976) Discharge pipe from Dam 9 | N/A | Electrical Conductivity | microsiemens per centimetre | - | 0 | 0 |
| | | pH | pH | 6.5 - 9.0 | 0 | 0 |
| | | Total Suspended Solids | milligrams per litre | 120 | 0 | 0 |

3.2 Hunter River Tributaries Monitoring

MTW undertakes monitoring in Loders Creek, in accordance with Condition M2.3 of MTO EPL 1976 as detailed in **Table 4**.
Monthly sampling occurred 13 April 2018 and the data was obtained 10 May 2018.

TABLE 4: HUNTER WATER TRIBUTARIES MONITORING

| Monitoring Location | Pollutant | unit of measure | Monitoring frequency required by licence | No. of samples you collected and analysed | Value |
|--|-------------------------|-----------------------------|--|---|-------|
| W5 – Loders Creek / EPL Point 3 (MTO EPL 1976) Coal preparation plant access road bridge | Electrical Conductivity | microsiemens per centimetre | Once a month (min. of 4 weeks) | 1 | 5020 |
| | pH | pH units | Once a month (min. of 4 weeks) | 1 | 7.8 |
| | Total Suspended Solids | milligrams per litre | Once a month (min. of 4 weeks) | 1 | 7 |

3.3 Effluent Quality Monitoring

MTO undertakes monitoring in the MTO receiving lagoon (Dam 1S), in accordance with Condition M2.3 of MTO EPL 1976 as detailed in **Table 5**. Sampling is undertaken on a quarterly basis and as such no sampling was conducted in April 2018. The next sampling event will be in June 2018.

TABLE 5: EFFLUENT QUALITY MONITORING

| Monitoring Location | Pollutant | unit of measure | Monitoring frequency required by licence | No. of samples you collected and analysed | Value |
|---|------------------|--|--|---|-------|
| Dam 1S / EPL Point 18 (MTO EPL 1976) | Faecal Coliforms | Colony forming units per 100 millilitres | Once a quarter | - | - |
| | pH | pH units | Once a quarter | - | - |

4 BLAST MONITORING

In accordance with the requirements of Conditions M7.1 (WML EPL 1376) and M8.1 (MTO EPL 1976), MTW maintains a network of blast monitors to measure airblast overpressure and ground vibration for all blasts carried out at MTW.

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

Blast monitoring results are detailed in **Table 6** (Airblast Overpressure) and **Table 7** (Ground Vibration). The last date sampled was on 28 April 2018. The data was obtained on 15 May 2018.

TABLE 6: BLAST MONITORING (AIRBLAST OVERPRESSURE)

| Blast ID | Date and Time | Unit of Measure | Monitoring Frequency & Capture | EPL Limits | | Monitoring Point | | | | |
|---------------------------------|------------------|-----------------|--------------------------------|---------------|----------------|---|--|--|---|--|
| | | | | 95% of Blasts | 100% of Blasts | Bulga Village EPA ID # 6 (EPL 1376) & EPA ID # 7 (EPL 1976) | Wambo Road EPA ID # 5 (EPL 1376) & EPA ID # 6 (EPL 1976) | Putty Rd MTIE EPA ID # 8 (EPL 1376) & EPA ID # 9 (EPL 1976) | Warkworth EPA ID # 4 (EPL 1376) & EPA ID # 5 (EPL 1976) | Wollemi Peak Road EPA ID # 7 (EPL 1376) & EPA ID # 8 (EPL 1976) |
| w36-ble-ptg9 | 3/04/2018 11:46 | dB(L) | All Blasts 100% | 115 | 120 | 86.1 | 96.8 | 85.4 | 89.9 | 93.6 |
| w36-wyc-ps1 & w31- bla-pr1 | 4/04/2018 12:59 | dB(L) | | 115 | 120 | 94.1 | 94.4 | 100.3 | 91.1 | 94.0 |
| n41-wna-ps9 | 5/04/2018 12:24 | dB(L) | | 115 | 120 | 102.6 | 91.8 | 93.5 | 89.0 | 92.9 |
| l52-ble-ptg5 | 5/04/2018 13:12 | dB(L) | | 115 | 120 | 101.9 | 92.0 | 95.9 | 82.0 | 94.3 |
| w28-bfa-md4 | 6/04/2018 10:43 | dB(L) | | 115 | 120 | 97.9 | 96.8 | 91.7 | 90.9 | 92.2 |
| n31-wwa-ptg2 | 6/04/2018 12:01 | dB(L) | | 115 | 120 | 97.3 | 95.0 | 92.1 | 100.7 | 87.9 |
| w36-ble-ptg10 | 6/04/2018 14:46 | dB(L) | | 115 | 120 | 88.1 | 93.5 | 107.2 | 91.2 | 97.9 |
| n41-wna-ps10 | 9/04/2018 13:09 | dB(L) | | 115 | 120 | 96.1 | 88.5 | 97.0 | 94.6 | 98.5 |
| n31-bfa-ptg1 & n41- wna-ps11 | 11/04/2018 13:17 | dB(L) | | 115 | 120 | 105.1 | 103.6 | 96.7 | 92.1 | 103.1 |
| w26-wwek-co | 12/04/2018 13:08 | dB(L) | | 115 | 120 | 102.0 | 109.2 | 106.4 | 95.3 | 103.0 |

MTW EPL Monitoring Data
FOR THE MONTH ENDING 30 April 2018

| Blast ID | Date and Time | Unit of Measure | Monitoring Frequency & Capture | EPL Limits | | Monitoring Point | | | | |
|-----------------------------|------------------|-----------------|--------------------------------|---------------|----------------|---|--|--|---|--|
| | | | | 95% of Blasts | 100% of Blasts | Bulga Village EPA ID # 6 (EPL 1376) & EPA ID # 7 (EPL 1976) | Wambo Road EPA ID # 5 (EPL 1376) & EPA ID # 6 (EPL 1976) | Putty Rd MTIE EPA ID # 8 (EPL 1376) & EPA ID # 9 (EPL 1976) | Warkworth EPA ID # 4 (EPL 1376) & EPA ID # 5 (EPL 1976) | Wollemi Peak Road EPA ID # 7 (EPL 1376) & EPA ID # 8 (EPL 1976) |
| w31-bla-pr2 | 12/04/2018 13:56 | dB(L) | | 115 | 120 | 103.9 | 109.7 | 104.6 | 88.8 | 111.2 |
| w36-wyc-pr5 | 13/04/2018 11:51 | dB(L) | | 115 | 120 | 99.9 | 108.2 | 105.9 | 93.5 | 101.3 |
| n35-wha-ptg6 | 14/04/2018 10:03 | dB(L) | | 115 | 120 | 105.9 | 95.6 | 109.1 | 96.8 | 111.4 |
| w31-gmb-ptg1 | 18/04/2018 12:03 | dB(L) | | 115 | 120 | 97.8 | 96.6 | 102.8 | 86.9 | 95.7 |
| n35-wha-ptg7 | 18/04/2018 12:58 | dB(L) | | 115 | 120 | 95.0 | 97.5 | 98.8 | 100.5 | 89.2 |
| l49-gma-co1 | 19/04/2018 13:32 | dB(L) | | 115 | 120 | 99.2 | 99.1 | 91.8 | 84.5 | 101.8 |
| l49-gma-md3 & l50-gma-ps1 | 19/04/2018 13:32 | dB(L) | | 115 | 120 | 96.9 | 94.9 | 99.6 | 89.2 | 94.8 |
| w36-gmb-pr5 & w31-gmb-ps1 | 20/04/2018 11:49 | dB(L) | | 115 | 120 | 97.0 | 101.5 | 95.3 | 97.7 | 91.7 |
| w31-bla-pr3 | 20/04/2018 14:35 | dB(L) | | 115 | 120 | 95.5 | 99.0 | 105.7 | 90.3 | 95.1 |
| w31-gmb-pr1 | 23/04/2018 13:35 | dB(L) | | 115 | 120 | 100.3 | 99.7 | 104.1 | 105.1 | 97.4 |
| n35-whac-co14 & n37-gmb-ps4 | 24/04/2018 13:53 | dB(L) | | 115 | 120 | 95.8 | 98.2 | 97.4 | 90.2 | 97.1 |
| n43-rcc-ptg4 | 26/04/2018 13:54 | dB(L) | | 115 | 120 | 95.3 | 100.9 | 94.9 | 100.7 | 89.0 |

MTW EPL Monitoring Data
FOR THE MONTH ENDING 30 April 2018

| Blast ID | Date and Time | Unit of Measure | Monitoring Frequency & Capture | EPL Limits | | Monitoring Point | | | | |
|--------------------------------|------------------|-----------------|--------------------------------|---------------|----------------|---|--|--|---|--|
| | | | | 95% of Blasts | 100% of Blasts | Bulga Village EPA ID # 6 (EPL 1376) & EPA ID # 7 (EPL 1976) | Wambo Road EPA ID # 5 (EPL 1376) & EPA ID # 6 (EPL 1976) | Putty Rd MTIE EPA ID # 8 (EPL 1376) & EPA ID # 9 (EPL 1976) | Warkworth EPA ID # 4 (EPL 1376) & EPA ID # 5 (EPL 1976) | Wollemi Peak Road EPA ID # 7 (EPL 1376) & EPA ID # 8 (EPL 1976) |
| n41-wna-pr3 | 26/04/2018 13:56 | dB(L) | | 115 | 120 | 92.8 | 100.5 | 94.2 | 106.6 | 87.4 |
| w36-wyc-pr6 | 27/04/2018 11:49 | dB(L) | | 115 | 120 | 104.1 | 106.9 | 96.5 | 100.3 | 99.3 |
| n35-whac-co15 | 28/04/2018 11:30 | dB(L) | | 115 | 120 | 90.0 | 102.6 | 102.1 | 89.2 | 107.8 |
| Monthly Meaningful Data | | | | | | | | | | |
| Minimum | April | dB(L) | | 115 | 120 | 86.1 | 88.5 | 85.4 | 82.0 | 87.4 |
| Mean | April | dB(L) | | 115 | 120 | 97.6 | 98.9 | 98.8 | 93.5 | 97.1 |
| Maximum | April | dB(L) | | 115 | 120 | 105.9 | 109.7 | 109.1 | 106.6 | 111.4 |
| Median | April | dB(L) | | 115 | 120 | 97.3 | 98.2 | 97.4 | 91.2 | 95.7 |

TABLE 7: BLAST MONITORING (GROUND VIBRATION)

| Blast ID | Date and Time | Unit of Measure | Monitoring Frequency & Capture | EPL Limits | | Monitoring Point | | | | |
|---------------------------------|------------------|-----------------|--------------------------------|---------------|----------------|---|--|--|---|--|
| | | | | 95% of Blasts | 100% of Blasts | Bulga Village EPA ID # 6 (EPL 1376) & EPA ID # 7 (EPL 1976) | Wambo Road EPA ID # 5 (EPL 1376) & EPA ID # 6 (EPL 1976) | Putty Rd MTIE EPA ID # 8 (EPL 1376) & EPA ID # 9 (EPL 1976) | Warkworth EPA ID # 4 (EPL 1376) & EPA ID # 5 (EPL 1976) | Wollemi Peak Road EPA ID # 7 (EPL 1376) & EPA ID # 8 (EPL 1976) |
| w36-ble-ptg9 | 3/04/2018 11:46 | mm/s | All Blasts 100% | 5 | 10 | 0.05 | 0.03 | 0.03 | 0.10 | 0.04 |
| w36-wyc-ps1 & w31- bla-pr1 | 4/04/2018 12:59 | mm/s | | 5 | 10 | 0.78 | 0.49 | 0.14 | 0.38 | 1.04 |
| n41-wna-ps9 | 5/04/2018 12:24 | mm/s | | 5 | 10 | 0.20 | 0.48 | 0.07 | 0.80 | 0.17 |
| l52-ble-ptg5 | 5/04/2018 13:12 | mm/s | | 5 | 10 | 0.09 | 0.05 | 0.04 | 0.04 | 0.09 |
| w28-bfa-md4 | 6/04/2018 10:43 | mm/s | | 5 | 10 | 0.68 | 0.57 | 0.17 | 0.18 | 0.81 |
| n31-wwa-ptg2 | 6/04/2018 12:01 | mm/s | | 5 | 10 | 0.07 | 0.18 | 0.04 | 0.08 | 0.07 |
| w36-ble-ptg10 | 6/04/2018 14:46 | mm/s | | 5 | 10 | 0.03 | 0.03 | 0.03 | 0.07 | 0.04 |
| n41-wna-ps10 | 9/04/2018 13:09 | mm/s | | 5 | 10 | 0.34 | 0.38 | 0.13 | 0.41 | 0.33 |
| n31-bfa-ptg1 & n41- wna-ps11 | 11/04/2018 13:17 | mm/s | | 5 | 10 | 0.36 | 0.21 | 0.06 | 0.56 | 0.20 |
| w26-wwek-co | 12/04/2018 13:08 | mm/s | | 5 | 10 | 0.17 | 0.06 | 0.05 | 0.40 | 0.08 |

MTW EPL Monitoring Data
FOR THE MONTH ENDING 30 April 2018

| Blast ID | Date and Time | Unit of Measure | Monitoring Frequency & Capture | EPL Limits | | Monitoring Point | | | | |
|-----------------------------|------------------|-----------------|--------------------------------|---------------|----------------|---|--|--|---|--|
| | | | | 95% of Blasts | 100% of Blasts | Bulga Village EPA ID # 6 (EPL 1376) & EPA ID # 7 (EPL 1976) | Wambo Road EPA ID # 5 (EPL 1376) & EPA ID # 6 (EPL 1976) | Putty Rd MTIE EPA ID # 8 (EPL 1376) & EPA ID # 9 (EPL 1976) | Warkworth EPA ID # 4 (EPL 1376) & EPA ID # 5 (EPL 1976) | Wollemi Peak Road EPA ID # 7 (EPL 1376) & EPA ID # 8 (EPL 1976) |
| w31-bla-pr2 | 12/04/2018 13:56 | mm/s | | 5 | 10 | 2.00 | 1.22 | 0.27 | 0.80 | 1.97 |
| w36-wyc-pr5 | 13/04/2018 11:51 | mm/s | | 5 | 10 | 0.24 | 0.11 | 0.05 | 0.53 | 0.19 |
| n35-wha-ptg6 | 14/04/2018 10:03 | mm/s | | 5 | 10 | 0.04 | 0.04 | 0.02 | 0.11 | 0.04 |
| w31-gmb-ptg1 | 18/04/2018 12:03 | mm/s | | 5 | 10 | 0.09 | 0.04 | 0.04 | 0.07 | 0.06 |
| n35-wha-ptg7 | 18/04/2018 12:58 | mm/s | | 5 | 10 | 0.05 | 0.06 | 0.03 | 0.43 | 0.06 |
| l49-gma-co1 | 19/04/2018 13:32 | mm/s | | 5 | 10 | 1.77 | 1.53 | 0.37 | 0.48 | 2.45 |
| l49-gma-md3 & l50-gma-ps1 | 19/04/2018 13:32 | mm/s | | 5 | 10 | 0.47 | 0.36 | 0.10 | 0.21 | 0.48 |
| w36-gmb-pr5 & w31-gmb-ps1 | 20/04/2018 11:49 | mm/s | | 5 | 10 | 0.74 | 1.00 | 0.20 | 0.62 | 0.96 |
| w31-bla-pr3 | 20/04/2018 14:35 | mm/s | | 5 | 10 | 2.67 | 1.69 | 0.29 | 0.75 | 1.32 |
| w31-gmb-pr1 | 23/04/2018 13:35 | mm/s | | 5 | 10 | 1.61 | 0.85 | 0.19 | 0.38 | 1.08 |
| n35-whac-co14 & n37-gmb-ps4 | 24/04/2018 13:53 | mm/s | | 5 | 10 | 0.40 | 0.66 | 0.10 | 0.53 | 0.42 |
| n43-rcc-ptg4 | 26/04/2018 13:54 | mm/s | | 5 | 10 | 0.08 | 0.10 | 0.03 | 0.12 | 0.06 |

MTW EPL Monitoring Data
FOR THE MONTH ENDING 30 April 2018

| Blast ID | Date and Time | Unit of Measure | Monitoring Frequency & Capture | EPL Limits | | Monitoring Point | | | | |
|--------------------------------|------------------|-----------------|--------------------------------|---------------|----------------|---|--|--|---|--|
| | | | | 95% of Blasts | 100% of Blasts | Bulga Village EPA ID # 6 (EPL 1376) & EPA ID # 7 (EPL 1976) | Wambo Road EPA ID # 5 (EPL 1376) & EPA ID # 6 (EPL 1976) | Putty Rd MTIE EPA ID # 8 (EPL 1376) & EPA ID # 9 (EPL 1976) | Warkworth EPA ID # 4 (EPL 1376) & EPA ID # 5 (EPL 1976) | Wollemi Peak Road EPA ID # 7 (EPL 1376) & EPA ID # 8 (EPL 1976) |
| n41-wna-pr3 | 26/04/2018 13:56 | mm/s | | 5 | 10 | 0.81 | 0.66 | 0.19 | 0.79 | 0.55 |
| w36-wyc-pr6 | 27/04/2018 11:49 | mm/s | | 5 | 10 | 0.78 | 0.33 | 0.07 | 0.12 | 0.39 |
| n35-whac-co15 | 28/04/2018 11:30 | mm/s | | 5 | 10 | 0.03 | 0.03 | 0.03 | 0.13 | 0.03 |
| Monthly Meaningful Data | | | | | | | | | | |
| Minimum | April | mm/s | | 5 | 10 | 0.03 | 0.03 | 0.02 | 0.04 | 0.03 |
| Mean | April | mm/s | | 5 | 10 | 0.58 | 0.45 | 0.11 | 0.36 | 0.52 |
| Maximum | April | mm/s | | 5 | 10 | 2.67 | 1.69 | 0.37 | 0.80 | 2.45 |
| Median | April | mm/s | | 5 | 10 | 0.34 | 0.33 | 0.07 | 0.38 | 0.20 |

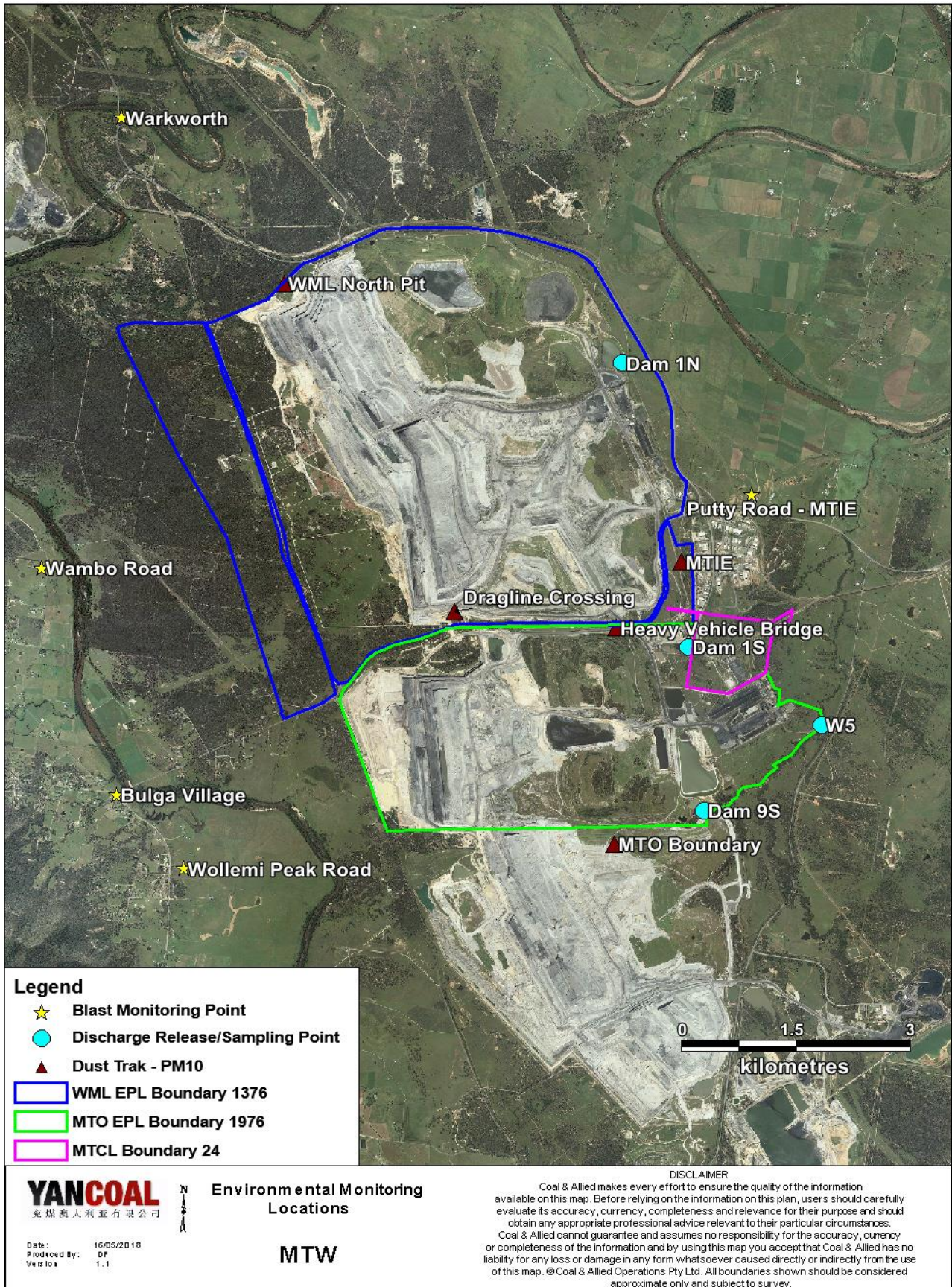


Figure 1 : Mount Thorley Warkworth Environmental Monitoring Locations