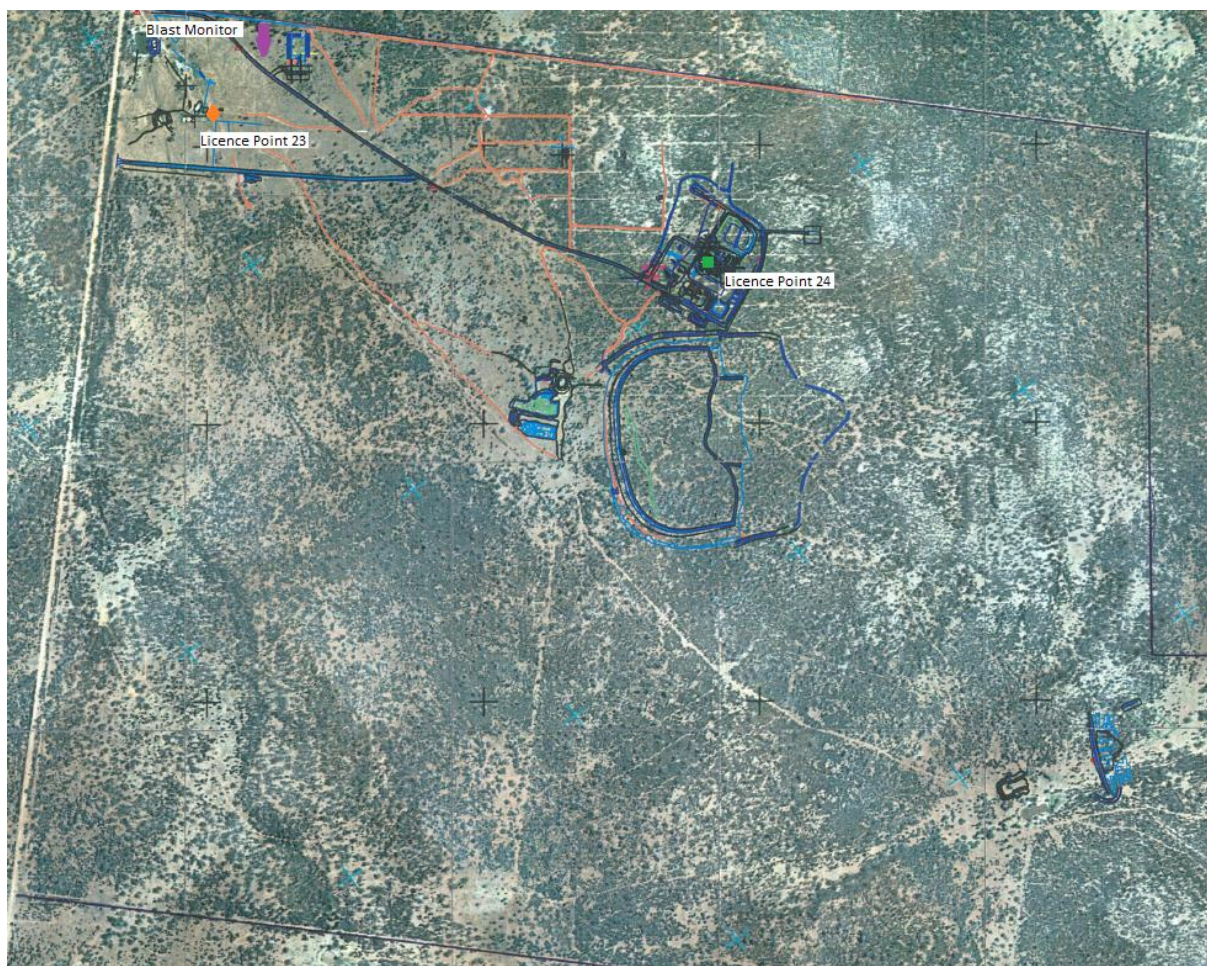


|   |   |
|---|---|
| <b>Licensee</b>                         | Aurelia Metals Limited  |
| <b>Address</b>                          | 'The Peak, Burthong Road, Nymagee, NSW 2831   |
| <b>Environmental Protection Licence</b> | 20179   |
| <b>Link to Licence</b>                  | <a href="http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=32372&amp;SYSUID=1&amp;LICID=20179">http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=32372&amp;SYSUID=1&amp;LICID=20179</a> |
| <b>Reporting Period</b>                 | March 2015  |
| <b>Date Published</b>                   | 21/04/2015  |

## Weather Monitoring

Aurelia Metals Limited (AMI) has one licenced weather station (licence point 23) associated with the site (**Figure 1**). A summary of the licence conditions (Environmental Protection Licence (EPL) 20179) associated with this point is presented in **Table 1**.



**Figure 1.** Location of the licence points associated with Gold Room Stack monitoring (Licence Point 24), Blast monitoring and meteorological monitoring (Licence Point 23).

**Table 1.** Summary of EPL 20179 conditions associated with the licensed weather station.

| Parameter             | Frequency  |
|-----------------------|------------|
| Air Temperature (°C)  | Continuous |
| Wind Direction (°)    | Continuous |
| Wind Speed (m/s)      | Continuous |
| Sigma Theta (°)       | Continuous |
| Rainfall (mm)         | Continuous |
| Relative Humidity (%) | Continuous |

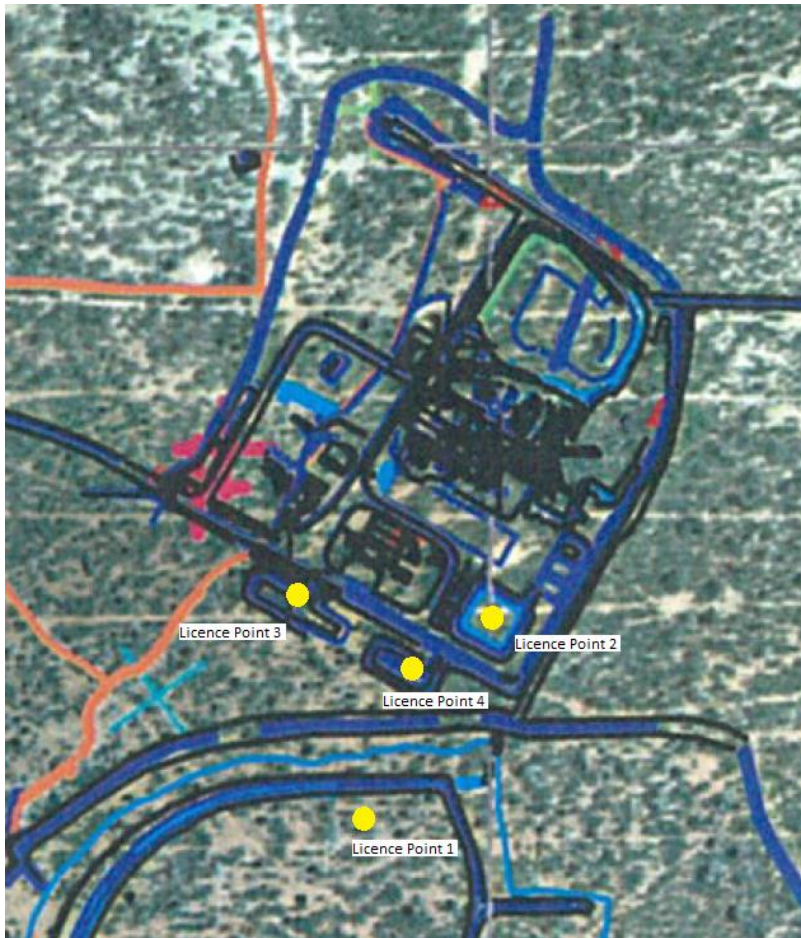
Meteorological monitoring is conducted on a continuous basis. **Table 2** is a summary of the data collected by the weather station in March 2015.

**Table 2.** Summary of meteorological data for March 2015.

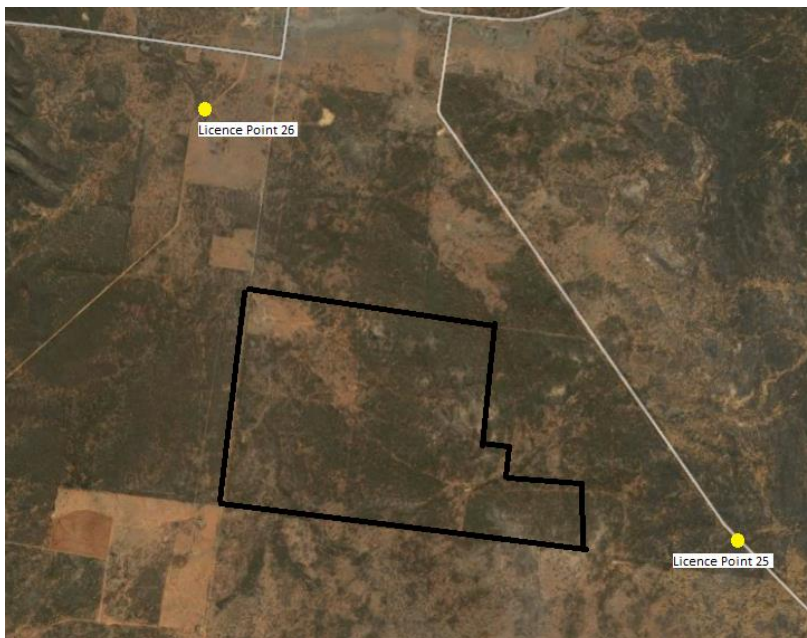
| Pollutant             | No. of measurements for month | Min. value | Mean value | Median value | Max. value |
|-----------------------|-------------------------------|------------|------------|--------------|------------|
| Air Temperature (°C)  | Continuous                    | 3.34       | 22.25      | 22.74        | 35.99      |
| Wind Direction (°)    | Continuous                    | 15.83      | 168.33     | 188.91       | 334.89     |
| Wind Speed (m/s)      | Continuous                    | 0.00       | 1.99       | 1.93         | 6.53       |
| Sigma Theta (°)       | Continuous                    | 1.58       | 21.77      | 16.73        | 98.06      |
| Rainfall (mm)         | Continuous                    | 0.00       | 0.00       | 0.00         | 0.00       |
| Relative Humidity (%) | Continuous                    | 15.80      | 44.01      | 42.66        | 86.58      |

## Surface Water Monitoring

AMI has six licence points associated with surface waters. Four of these points are located within the Mining Lease (**Figure 2**) and two are located on Box creek, upstream and downstream of the lease (**Figure 3**). A summary of the licence conditions associated with these licence points is presented in **Table 3**.



**Figure 2.** Licensed surface water monitoring points located onsite.



**Figure 3.** Licensed surface water monitoring points located offsite. The black outline represents the Mining Lease.

**Table 3.** Summary of EPL 20179 conditions associated with licensed surface water monitoring points.

| EPA ID No.  | Monitoring Frequency                  | Limit                         |
|---|---------------------------------------|-------------------------------|
| 1, 2  | Daily during discharge                |                               |
| 3, 4, 25, 26  | During discharge                      |                               |
|   | Pollutant                             |                               |
| 1   | Cyanide (weak acid dissociable (WAD)) | 10 mg/L                       |
| 2   | Cyanide (WAD)                         | 20 mg/L (90 percentile limit) |
|   |                                       | 30 mg/L (max. limit)          |
| 3, 4, 25, 26 (Please note: Limits only apply to Licence Points 3 and 4) | Aluminium                             | 0.055 mg/L                    |
|   | Arsenic                               | 0.024 mg/L                    |
|   | Boron                                 | 0.370 mg/L                    |
|   | Cadmium                               | 0.0002 mg/L                   |
|   | Copper                                | 0.0014 mg/L                   |
|   | Cyanide (WAD)                         | 0.007 mg/L                    |
|   | Electrical Conductivity               | 1000 ( $\mu$ S/cm)            |
|   | Lead                                  | 0.0034 mg/L                   |
|   | Manganese                             | 1.90 mg/L                     |
|   | Nickel                                | 0.011 mg/L                    |
|   | Nitrogen (total)                      | 0.5 mg/L                      |
|   | Oil and Grease                        | 10 mg/L                       |
|   | pH                                    | 6.5-8.5                       |
|   | Phosphorus (total)                    | 0.025 mg/L                    |
|   | Silver                                | 0.00005 mg/L                  |
|   | Total suspended solids                | 50 mg/L                       |
| Zinc  | 0.008 mg/L                            |                               |

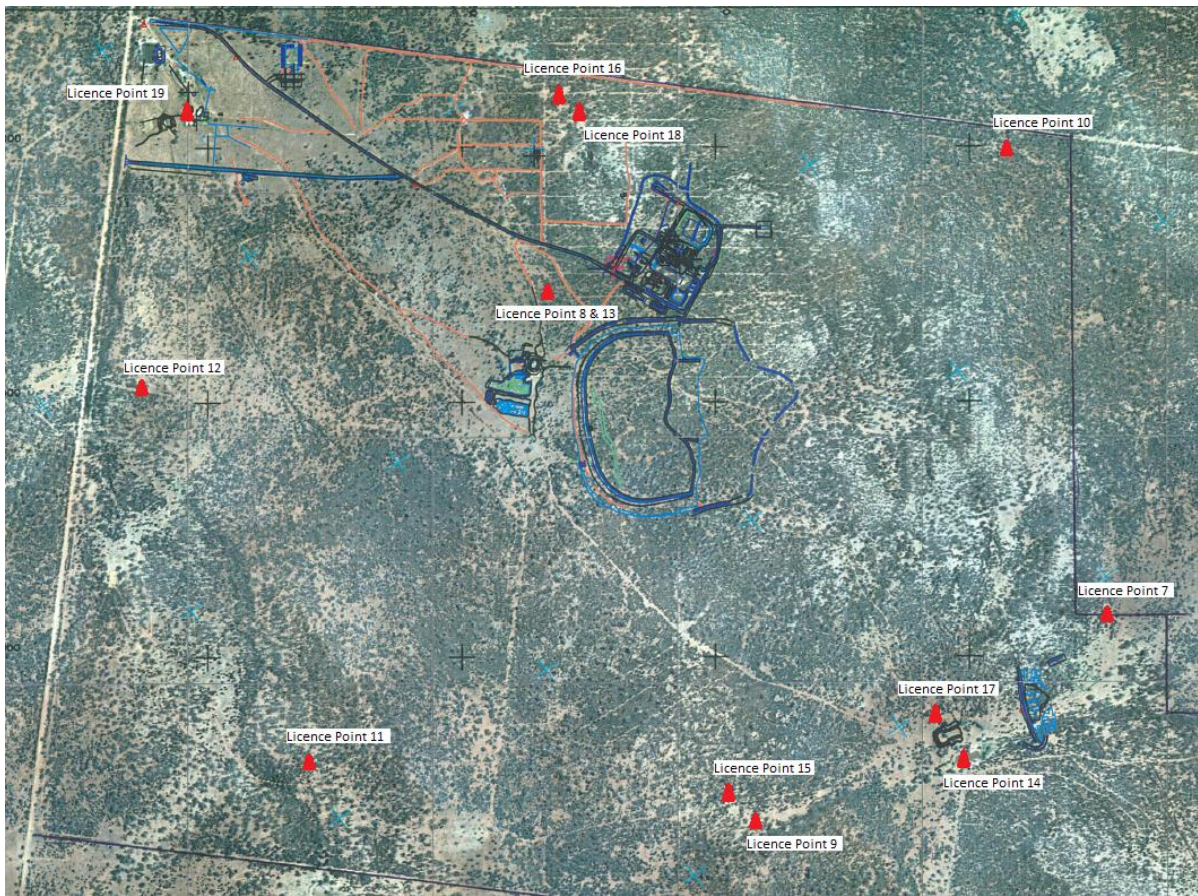
**Table 4** is a summary of the surface water quality results. The table has also been colour coordinated by the licence limit that applies to each licence point. Licence Point 3, 4, 25 and 26 did not discharge for the month. AMI are currently in discussions with the EPA regarding the sample frequency of Licence Point 1 and 2. Previously the Licence Points have been sampled monthly by a National Association of Testing Authorities (NATA) Accredited Laboratory. However, in the future the licence points will be sample at the required frequency by the AMI laboratory.

**Table 4.** Summary of surface water quality results for March 2015.

|                |       | Analytes (mg/L)     |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
|----------------|-------|---------------------|------|--------|------|--------------|-------|------|--------|--------|---------------------|--------|-----|-------|-----|-----------------|---------|-------|---------|-----|-------|--|--|
|                |       | WAD CN- (mg/L)      |      |        |      | Al           | Ar    | B    | Cd     | Cu     | EC<br>( $\mu$ S/cm) | Pb     | Mn  | Ni    | N   | Oil &<br>Grease | pH      | P     | Ag      | TSS | Zn    |  |  |
|                |       | Min.                | Mean | Median | Max. |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| Licence Limits |       | 10                  |      |        |      | 0.055        | 0.024 | 0.37 | 0.0002 | 0.0014 | 1000                | 0.0034 | 1.9 | 0.011 | 0.5 | 10              | 6.5-8.5 | 0.025 | 0.00005 | 50  | 0.008 |  |  |
|                |       | 20 (90 Percentile)  |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
|                |       | 30 (max.)           |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
|                |       | 0.007               |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| Licence Points |       |                     |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| 1              | 0.082 | Single sample taken |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| 2              | 0.092 | Single sample taken |      |        |      |              |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| 3              |       |                     |      |        |      | No discharge |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| 4              |       |                     |      |        |      | No discharge |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| 25             |       |                     |      |        |      | No discharge |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |
| 26             |       |                     |      |        |      | No discharge |       |      |        |        |                     |        |     |       |     |                 |         |       |         |     |       |  |  |

## Groundwater Monitoring

AMI has 13 licence points associated with ground waters. These points are located within the Mining Lease (**Figure 4**) and are a combination of observation bores and productions bores. A summary of the licence conditions associated with these licence points is presented in **Table 5**.



**Figure 4.** Licensed groundwater monitoring points.

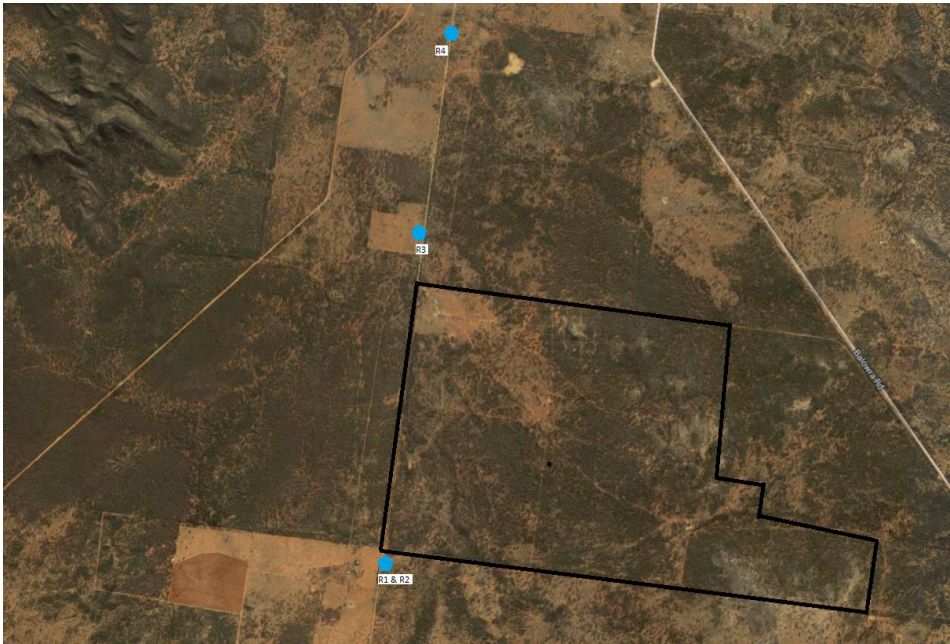
**Table 5.** Summary of EPL 20179 conditions associated with licensed groundwater monitoring points.

| EPA ID No.                                      | Monitoring Frequency                                |
|---|---|
| 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 | Quarterly   |
|   | Pollutant   |
| 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19     | Antimony (mg/L)                                     |
|   | Arsenic (mg/L)                                      |
|   | Bicarbonate (mg/L)                                  |
|   | Boron (mg/L)  |
|   | Cadmium (mg/L)                                      |
|   | Calcium (mg/L)                                      |
|   | Carbonate (mg/L)                                    |
|   | Chloride (mg/L)                                     |
|   | Chromium (mg/L)                                     |
|   | Copper (mg/L)                                       |
|   | Cyanide (free) (mg/L)                               |
|   | Cyanide (total) (mg/L)                              |
|   | Cyanide (WAD) (mg/L)                                |
|   | Electrical Conductivity ( $\mu\text{S}/\text{cm}$ ) |
|   | Iron (mg/L)   |
|   | Lead (mg/L)   |
|   | Magnesium (mg/L)                                    |
|   | Mercury (mg/L)                                      |
|   | Molybdenum (mg/L)                                   |
|   | Nickel (mg/L)                                       |
|   | pH  |
|   | Potassium (mg/L)                                    |
|   | Silver (mg/L)                                       |
|   | Sodium (mg/L)                                       |
| 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 | Standing Water Level (m)                            |

Groundwater quality sampling is conducted on a quarterly basis. The last water quality data was provided in January 2015.

## Noise Monitoring

AMI has four licenced locations (R1, R2, R3 and R4) monitoring points located along the Burthong Road (**Figure 5**). The locations are strategically placed near AMI’s nearest neighbours. R1 and R2 are measured from the same point as both neighbours are located very close to each other. A summary of the licence associated with these licence points is presented in **Table 6**.



**Figure 5.** Licensed noise monitoring locations. The black outline represents the Mining Lease.

**Table 6.** Summary of EPL 20179 conditions associated with noise monitoring.

| Location       | Pollutant - Noise                               | Limits                            |
|----------------|---|-----------------------------------|
| R1, R2, R3, R4 | Monday to Friday - 0700 hours (hrs) to 1800 hrs | LAeq (15 minute) 35 decibels (dB) |
|                | Monday to Friday - 1800 hrs to 2200 hrs         | LAeq (15 minute) 35 dB            |
|                | All other times                                 | LAeq (15 minute) 35 dB            |
|                | Aluminium                                       | LA1 (1 minute) 45 dB              |

**Table 7** is a summary of the noise results for the month. A number of results were recorded above licence limits. However, as wind speeds were greater than 3 meters per second (m/s) at 10 meters (m) above ground level it is difficult to determine the interference to results caused by the wind. As a result the limits do not apply as per licence requirements.

**Table 7.** Summary of noise monitoring results for March 2015.

| Date       | Time  | Site  | Period of day | Wind speed (m/s) | LA1 (dB) | LAeq (dB) | Mine Audible? | Noise heard  |
|------------|-------|-------|---------------|------------------|----------|-----------|---------------|--|
| 21/03/2015 | 13:13 | R1/R2 | Day           | 3.01             | n/a      | 42.08     | No            | Wind, birds, car in distance   |
| 21/03/2015 | 12:49 | R3    | Day           | 3.90             | n/a      | 33.46     | Yes           | wind, birds, aeroplane, very faint hum from vent fan, occasional truck noise                           |
| 21/03/2015 | 12:26 | R4    | Day           | 3.59             | n/a      | 32.77     | No            | Wind, birds, crickets, aeroplane, reverse beeper from town direction, truck on Burthong Rd in distance |
| 21/03/2015 | 21:51 | R1/R2 | Evening       | 4.58             | n/a      | 35.46     | No            | Wind, crickets   |
| 21/03/2015 | 21:26 | R3    | Evening       | 4.09             | n/a      | 36.10     | Yes           | Crickets, wind, vent fan   |
| 21/03/2015 | 21:00 | R4    | Evening       | 3.61             | n/a      | 45.84     | No            | wind, crickets, car drove passed   |
| 22/03/2015 | 7:00  | R1/R2 | Night         | 3.90             | 53.60    | 32.31     | Yes           | Wind, birds, vent fan  |
| 22/03/2015 | 6:36  | R3    | Night         | 3.87             | 57.40    | 34.54     | Yes           | wind, magpies, vent fan  |
| 22/03/2015 | 6:13  | R4    | Night         | 3.73             | 41.30    | 28.36     | No            | wind   |

## Blast Monitoring

AMI has one licenced blast monitor. The monitor is located to the east of the personnel accommodation (**Figure 1**). A summary of the licence conditions associated with this licence point is presented in **Table 8**.

**Table 8.** Summary of EPL 20179 conditions associated with blast monitoring.

| Location         | Pollutant                        | Limits                       |
|------------------|----------------------------------|------------------------------|
| Blast monitoring | Ground vibration                 | 10 mm/s (max.)               |
|                  | <i>(monitor for every blast)</i> | 5 mm/s (95% of total blasts) |
|                  | Airblast overpressure            | 120 dB (max.)                |
|                  | <i>(monitor for every blast)</i> | 115 dB (95% of total blasts) |

AMI conducted a total of 27 blasts in March 2015. The characteristics of each blast is presented in **Table 9**. The blast monitor was out of service due to calibration from the 1/03/2015 until the 5/03/2015. This is required on an annual basis but downtime is minimise where possible.

**Table 9.** Summary of blast monitoring results for March 2015.

| Date       | Time  | Vibration (mm/s) | Overpressure (dB) | Comments                     |
|------------|-------|------------------|-------------------|------------------------------|
| 1/03/2015  | 12:15 | NR               |                   | Monitor away for calibration |
| 1/03/2015  | 6:00  | NR               |                   | Monitor away for calibration |
| 2/03/2015  | 15:05 | NR               |                   | Monitor away for calibration |
| 2/03/2015  | 18:45 | NR               |                   | Monitor away for calibration |
| 2/03/2015  | 6:00  | NR               |                   | Monitor away for calibration |
| 3/03/2015  | 1:00  | NR               |                   | Monitor away for calibration |
| 3/03/2015  | 6:45  | NR               |                   | Monitor away for calibration |
| 4/03/2015  | 2:30  | NR               |                   | Monitor away for calibration |
| 4/03/2015  | 7:00  | NR               |                   | Monitor away for calibration |
| 5/03/2015  | 19:00 | <0.350           |                   |                              |
| 5/03/2015  | 6:00  | <0.350           |                   |                              |
| 5/03/2015  | 7:00  | <0.350           |                   |                              |
| 6/03/2015  | 0:00  | <0.350           |                   |                              |
| 6/03/2015  | 19:00 | <0.350           |                   |                              |
| 6/03/2015  | 6:00  | <0.350           |                   |                              |
| 6/03/2015  | 6:00  | <0.350           |                   |                              |
| 7/03/2015  | 6:30  | <0.350           |                   |                              |
| 8/03/2015  | 18:30 | <0.350           |                   |                              |
| 9/03/2015  | 13:00 | <0.350           |                   |                              |
| 12/03/2015 | 22:05 | 0.737            | 93.98             |                              |
| 14/03/2015 | 6:30  | <0.350           |                   |                              |
| 15/03/2015 | 18:35 | <0.350           |                   |                              |
| 19/03/2015 | 20:25 | <0.350           |                   |                              |
| 26/03/2015 | 13:00 | 0.75             | 93.98             |                              |
| 28/03/2015 | 14:15 | 0.554            | <88               |                              |
| 29/03/2015 | 18:20 | 0.677            | <88               |                              |
| 30/03/2015 | 13:00 | 0.509            | <88               |                              |

## Gold Room Stack Monitoring

AMI has one licenced gold room stack monitoring (**Figure 1**). A summary of the licence conditions associated with this licence Point is presented in **Table 10**.

**Table 10.** Summary of EPL 20179 conditions associated with gold room stack monitoring monitoring.

| EPA ID No. | Monitoring Frequency              |
|------------|-----------------------------------|
| 24         | Yearly                            |
|            | Pollutant                         |
|            | Nitric Oxide (mg/m <sup>3</sup> ) |

Gold Room stack monitoring is conducted on an annual basis. The last sample was taken in November 2014.

## Complaints

One complaint was received in March 2015 (**Table 11**). The complaint was relating to noise, light and blast vibration allegedly originating from the Hera Mine.

**Table 11.** Summary of complaints received in March 2015.

| Date       | Pollution complaint category     |
|------------|----------------------------------|
| 20/03/2015 | Noise, blast vibration and light |