



# Monthly Environmental Monitoring Report

Yancoal Hunter Valley Operations

April 2018

# CONTENTS

1.0	INTRODUCTION.....	4
2.0	AIR QUALITY.....	4
2.1	Meteorological Monitoring .....	4
2.1.1	Rainfall.....	4
2.1.2	Wind Speed and Direction .....	4
2.2	Depositional Dust.....	6
2.3	Suspended Particulates .....	6
2.3.1	HVAS PM <sub>10</sub> Results .....	6
2.3.2	TSP Results .....	7
2.3.3	Real Time PM <sub>10</sub> Results .....	7
2.3.4	Real Time Alarms for Air Quality.....	7
3.0	WATER QUALITY .....	9
3.1.1	Surface Water.....	9
3.1.2	Site Water Use .....	9
3.1.3	HRSTS Discharge.....	9
3.2.1	Groundwater Monitoring Results.....	9
4.0	BLASTING.....	10
4.1	Blast Monitoring Results.....	10
5.0	NOISE.....	13
5.1	Attended Noise Monitoring Results .....	13
6.0	OPERATIONAL DOWNTIME.....	18
7.0	REHABILITATION.....	18
8.0	COMPLAINTS.....	19
9.0	ENVIRONMENTAL INCIDENTS.....	19
	Appendix A: Meteorological Data.....	20

## Figures

Figure 1: Rainfall Summary 2018	4
Figure 2: HVO Corporate Wind Rose – April 2018	4
Figure 3: HVO Cheshunt Wind Rose – April 2018	4
Figure 4: Air Quality Monitoring Location Plan	5
Figure 5: Depositional Dust Results – April 2018	6
Figure 6: Individual PM <sub>10</sub> Results – April 2018	6
Figure 7: Year to Date Average PM <sub>10</sub> – April 2018	7
Figure 8: Year to Date Average Total Suspended Particulates – April 2018	7
Figure 9: Real Time PM <sub>10</sub> 24hr average and YTD average – April 2018	8
Figure 10: Moses Crossing Blast Monitoring Results – April 2018	10
Figure 11: Jerrys Plains Blast Monitoring Results – April 2018	10
Figure 12: Maison Dieu Blast Monitoring Results – April 2018	11
Figure 13: Warkworth Blast Monitoring Results – April 2018	11
Figure 14: Knodlers Lane Blast Monitoring Results – April 2018	11
Figure 15: Blast Monitoring Location Plan	12
Figure 16: Noise Monitoring Location Plan	17
Figure 17: Operational Downtime by Equipment Type – April 2018	18
Figure 18: Rehabilitation YTD – April 2018	18

## Tables

Table 1: Monthly Rainfall HVO	4
Table 2: Real-time PM <sub>10</sub> Investigation Results	8
Table 3: Blasting Criteria	10
Table 4: L <sub>Aeq, 15 minute</sub> HVO South - Impact Assessment Criteria – April 2018	13
Table 5: L <sub>Aeq, 15 minute</sub> HVO South - Land Acquisition Criteria – April 2018	13
Table 6: L <sub>A1, 1minute</sub> HVO South - Impact Assessment Criteria – April 2018	14
Table 7: L <sub>Aeq, 15minute</sub> HVO North – Impact Assessment Criteria – April 2018	14
Table 8: L <sub>Aeq, 15minute</sub> HVO North - Land Acquisition Criteria – April 2018	14
Table 9: L <sub>A1, 1Minute</sub> HVO North - Impact Assessment Criteria – April 2018	15
Table 10: Low Frequency Noise Assessment - April 2018	16
Table 11: Complaints Summary YTD	19
Table 12: Meteorological Data - HVO Corporate Meteorological Station – April 2018	21

## Revision History

Version No.	Person Responsible	Document Status	Date
1.0	Environmental Advisor	Draft	29/05/2018
1.1	Environmental Specialist	Final	17/07/2018

## 1.0 INTRODUCTION

This report has been compiled to provide a monthly summary of environmental monitoring results for Hunter Valley Operations (HVO). This report includes all monitoring data collected for the period 1<sup>st</sup> April to 30<sup>th</sup> April 2018.

## 2.0 AIR QUALITY

### 2.1 Meteorological Monitoring

HVO maintains two meteorological stations; 'Corporate' and 'Cheshunt' (Refer to Figure 4: Air Quality Monitoring Location Plan).

#### 2.1.1 Rainfall

Rainfall for the period is summarised in Table 1, the 2018 trend and historical trend are shown in Figure 1.

Table 1: Monthly Rainfall HVO

2018	Monthly Rainfall (mm)	Cumulative Rainfall (mm)
April	46.0	164.2

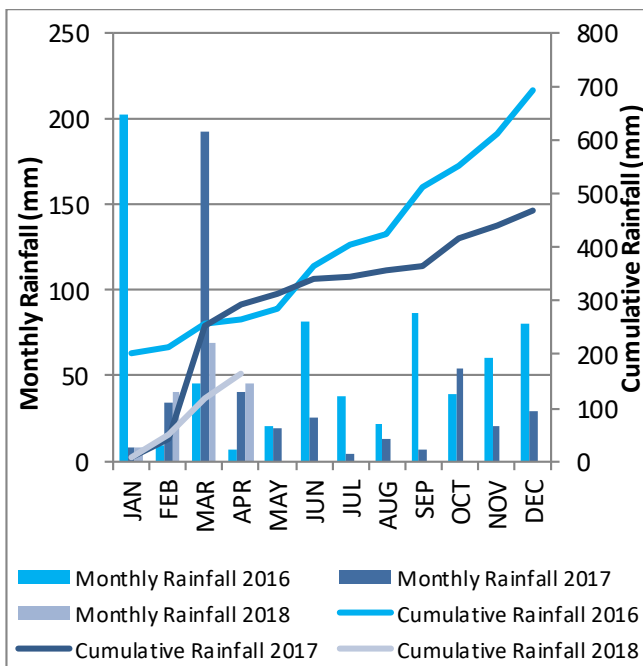


Figure 1: Rainfall Summary 2018

### 2.1.2 Wind Speed and Direction

North-westerly and South-easterly winds were dominant during April as shown in Figure 2 (HVO Corporate) and Figure 3 (HVO Cheshunt).

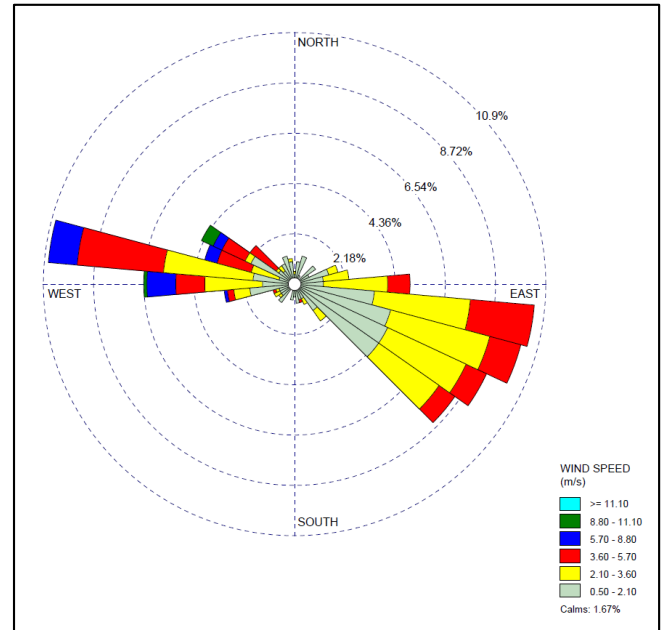


Figure 2: HVO Corporate Wind Rose - April 2018

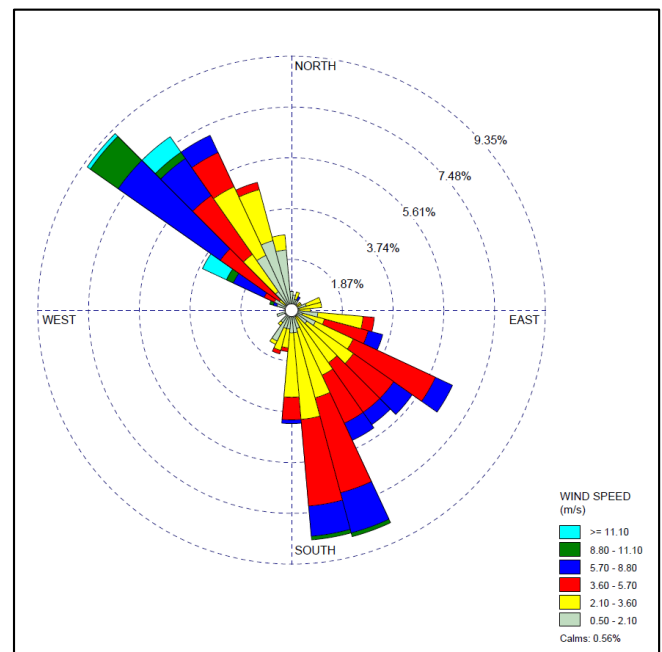


Figure 3: HVO Cheshunt Wind Rose - April 2018



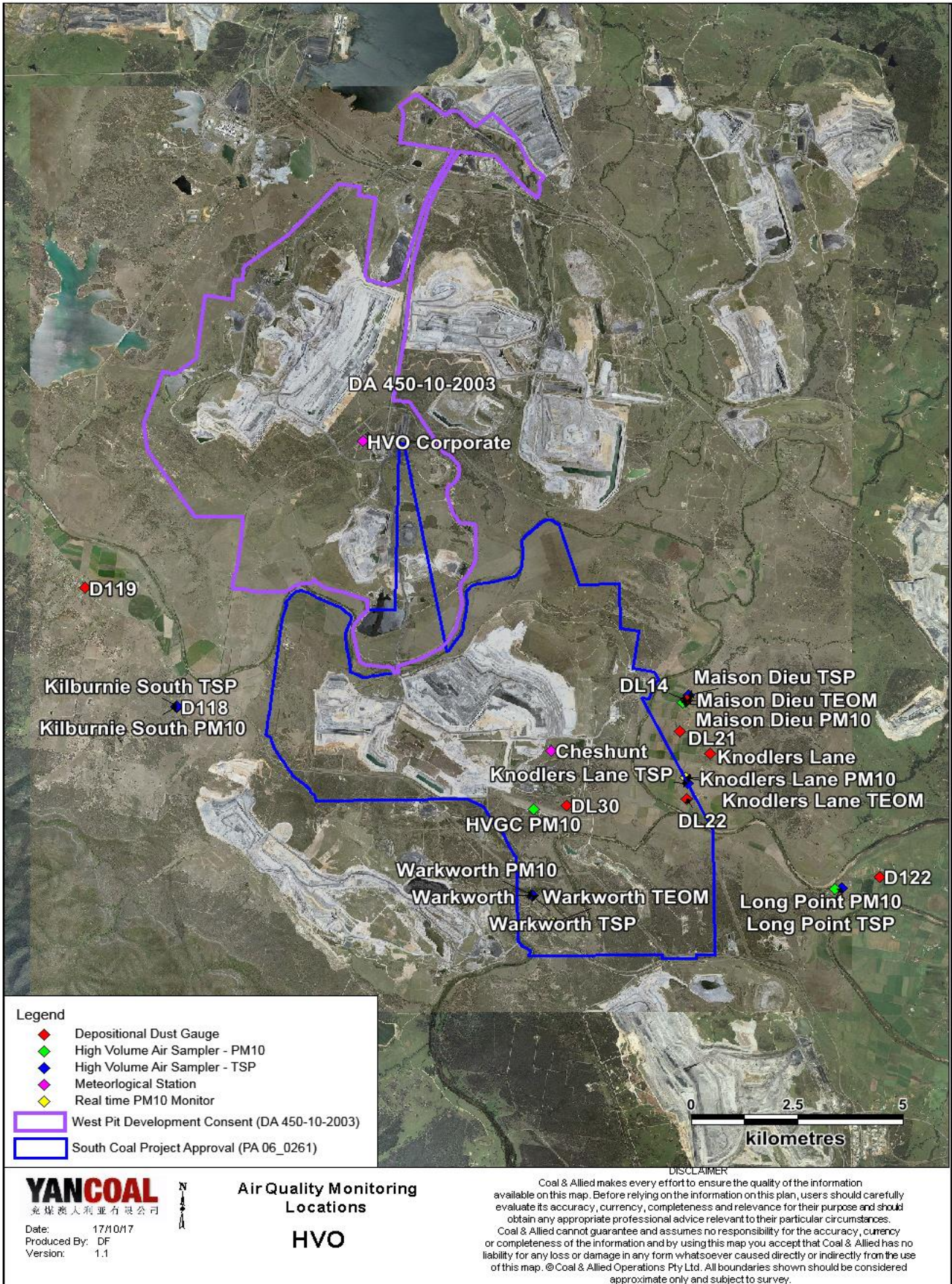


Figure 4: Air Quality Monitoring Location Plan



## 2.2 Depositional Dust

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

Figure 5 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 D118, DL30 and Warkworth monitors recorded a monthly result above the long term impact assessment criteria of 4.0 g/m<sup>2</sup> per month.

The field notes associated with the D118, DL30 and Warkworth monitor's results indicate no evidence to suggest that the result was contaminated. An assessment of HVO's contribution against the long term impact assessment criteria will be provided in the 2018 Annual Review.

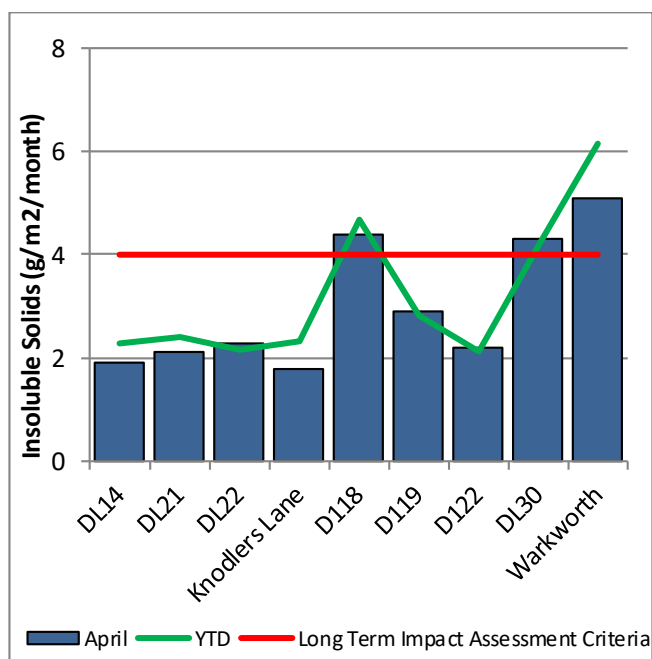


Figure 5: Depositional Dust Results – April 2018

## 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 <10µm (PM<sub>10</sub>). The location of these monitors can be found in Figure 4. Each HVAS was run for 24 hours on a six-day cycle.

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

Figure 6 shows individual PM<sub>10</sub> results at each monitoring station against the short term impact assessment criteria of 50 µg/m<sup>3</sup>.

On 13/04/2018 four HVAS PM<sub>10</sub> units recorded and elevated 24 hour averages; Glider Club (76µg/m<sup>3</sup>), Long Point (105µg/m<sup>3</sup>), Knodlers Lane (71µg/m<sup>3</sup>) and Maison Dieu (61µg/m<sup>3</sup>). Investigation determined that HVO's maximum contribution at each monitor is as follows:

- Glider Club – 49 µg/m<sup>3</sup>; or 64.5% of the measured result.
- Long Point – <49 µg/m<sup>3</sup> or <46.7% of the measured result
- Knodlers Lane - 44 µg/m<sup>3</sup> or 62% of the measured result
- Maison Dieu - 34 µg/m<sup>3</sup> or 55.7% of the measured result

Accordingly, no further action is required (as per approved Air Quality Monitoring Programme).

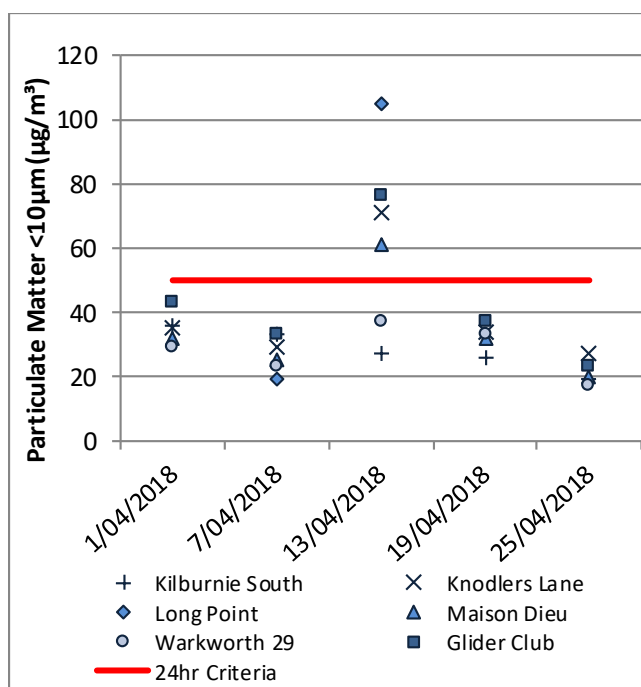


Figure 6: Individual PM<sub>10</sub> Results – April 2018

Figure 7 shows the year to date annual average PM<sub>10</sub> results.

An assessment of HVO's contribution against the long term impact assessment criteria will be provided in the 2018 Annual Review.

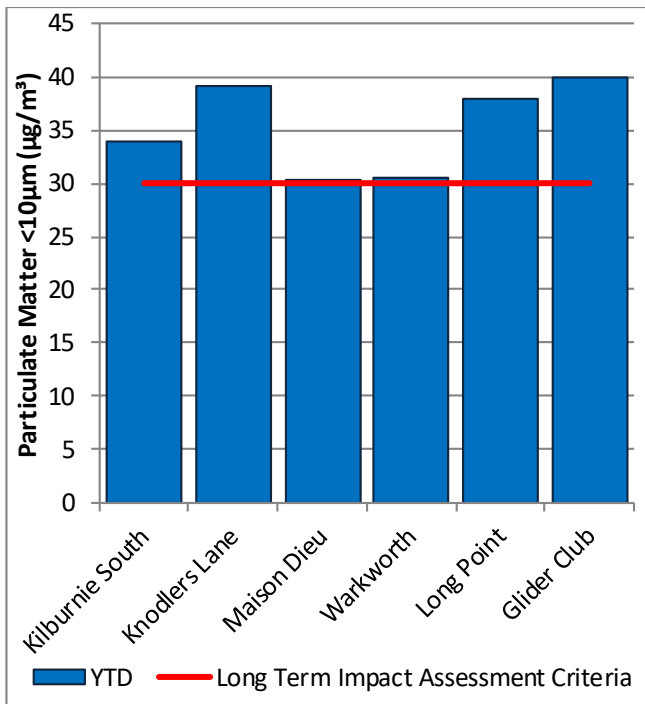


Figure 7: Year to Date Average PM<sub>10</sub> – April 2018

### 2.3.2 TSP Results

Figure 8 shows the annual average TSP results compared against the long term impact assessment criteria of 90µg/m<sup>3</sup>. An assessment of HVO’s contribution against the long term impact assessment criteria will be provided in the 2018 Annual Review.

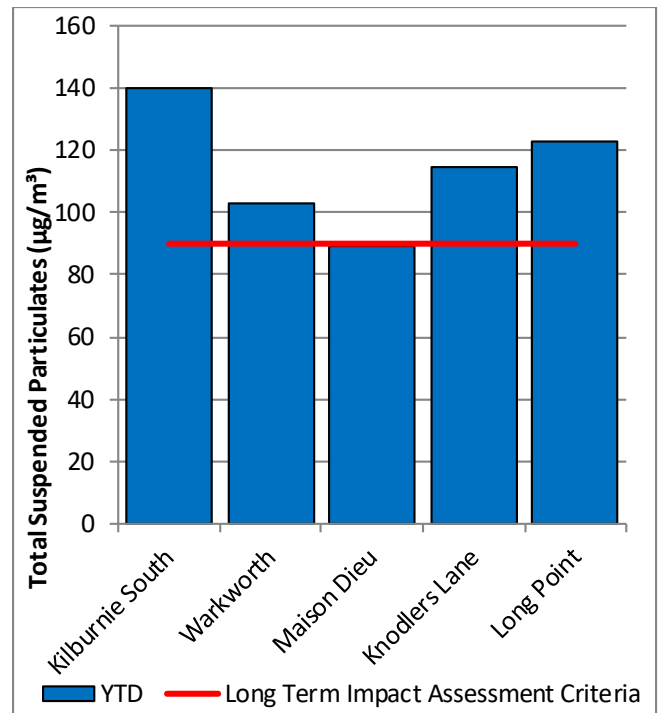


Figure 8: Year to Date Average Total Suspended Particulates – April 2018

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

Hunter Valley Operations maintains a network of real time PM<sub>10</sub> 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 from real time PM<sub>10</sub> monitoring are used as a reactive measure to guide mining operations to ensure compliance with the relevant conditions of the project approval.

Results for real time dust sampling is shown in Figure 9, including the daily 24 hour average PM<sub>10</sub> result and the year to date 24 hour PM<sub>10</sub> annual average.

Results from investigations of elevated results are presented in Table 2.

### 2.3.4 Real Time Alarms for Air Quality

During April the real time monitoring system generated 59 automated air quality related alarms. 23 were related to adverse weather conditions and 36 alarms relating to PM<sub>10</sub>.

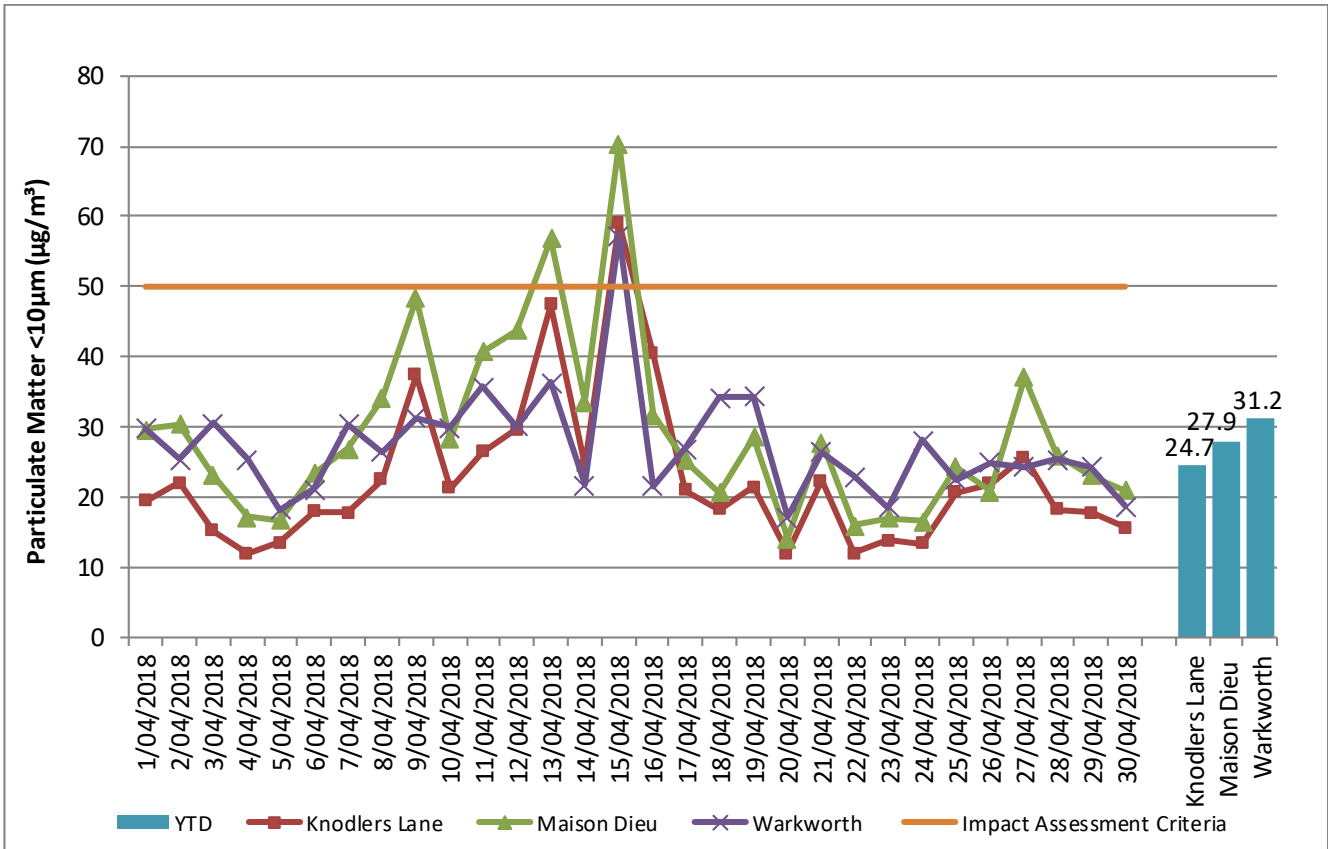


Figure 9: Real Time PM<sub>10</sub> 24hr average and YTD average – April 2018

Table 2: Real-time PM<sub>10</sub> Investigation Results

Date	Site	24hr PM <sub>10</sub> result (µg/m <sup>3</sup> )	Estimated contribution from HVO (µg/m <sup>3</sup> )	Discussion
13/04/2018	Maison Dieu TEOM	56.9	33.6	An internal investigation determined HVO maximum potential contribution to be in the order of 33.6ug/m3 or 59% of the total measured based on prevailing wind conditions and upwind monitoring results.
15/04/2018	Knodlers Lane TEOM	59.1	6.8	An internal investigation determined HVO maximum potential contribution to be in the order of 6.8g/m3 or 11.5% of the total measured based on prevailing wind conditions and upwind monitoring results.



15/04/2018	Maison Dieu TEOM	70.4	18.1	An internal investigation determined HVO maximum potential contribution to be in the order of 18.1g/m <sup>3</sup> or 25.7% of the total measured based on prevailing wind conditions and upwind monitoring results.
15/04/2018	Warkworth TEOM	57.3	5.0	An internal investigation determined HVO maximum potential contribution to be in the order of 5.0g/m <sup>3</sup> or 1.6% of the total measured based on prevailing wind conditions and upwind monitoring results.

### 3.0 WATER QUALITY

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

#### 3.1.1 Surface Water

Surface water courses are sampled on a quarterly sampling regime. Water quality is evaluated through the parameters of pH, Electrical Conductivity (EC) and Total Suspended Solids (TSS).

Results of monitoring on Site Dams and the Hunter River as well as other natural tributaries are provided on a quarterly basis, results will appear in the June 2018 report.

#### 3.1.2 Site Water Use

Under water allocation licences issued by the NSW DPI Water, HVO is permitted to extract water from the Hunter River. During the reporting period, HVO extracted 35.3ML of water from the Hunter River.

#### 3.1.3 HRSTS Discharge

HVO participates in the Hunter River Salinity Trading Scheme (HRSTS), allowing discharge from licensed discharge points Dam 11N (to Farrell's Creek), Lake James (to the Hunter River) and Parnell's Dam (to Parnell's Creek). Discharges can only take place subject to HRSTS regulations.

During the reporting period no water was discharged under the HRSTS

#### 3.2.1 Groundwater Monitoring Results

Groundwater monitoring is undertaken on a quarterly basis in accordance with the HVO Water Management Plan and Ground Water Monitoring Programme. Results of groundwater monitoring are reported quarterly and as such will be reported in the June 2018 monthly report.

## 4.0 BLASTING

HVO have a network of five 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 Figure 15.

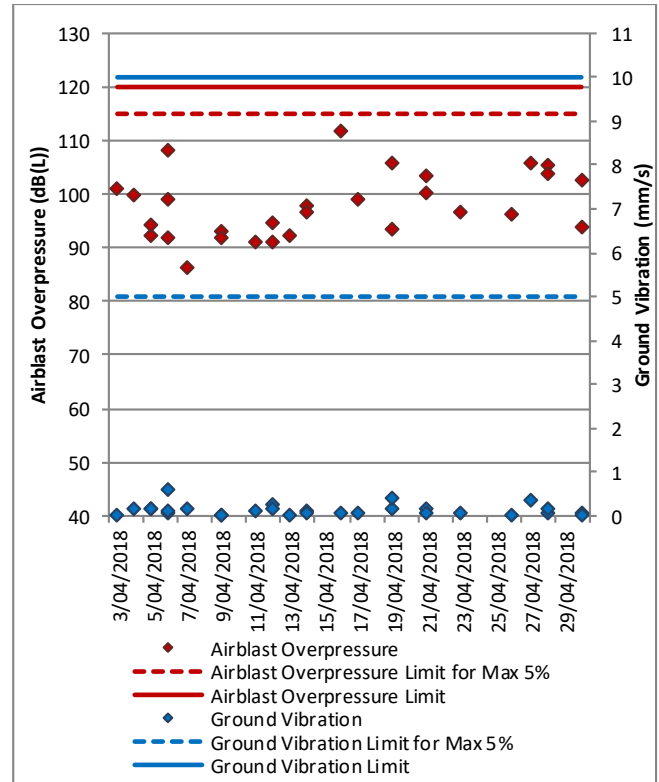
Blasting criteria are summarised in Table 3.

**Table 3: Blasting Criteria**

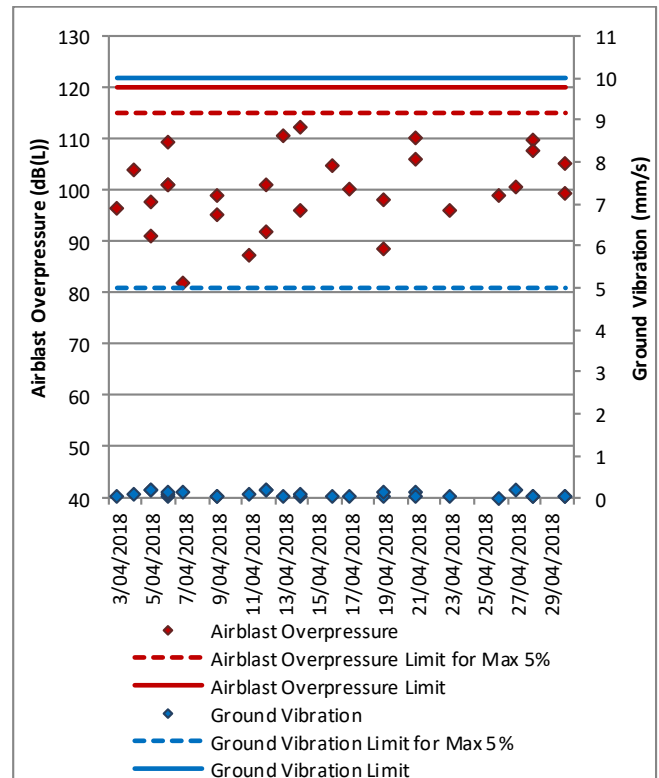
Airblast Overpressure (dB(L))	Comments
115	5% of the total number of blasts in a 12 month period
120	0%
Ground Vibration (mm/s)	Comments
5	5% of the total number of blasts in a 12 month period
10	0%

### 4.1 Blast Monitoring Results

During April, 29 blasts were initiated at HVO. Figure 10 through to Figure 14 show the blast monitoring results for the reporting period against the impact assessment criteria. The criteria are summarised in Table 3.



**Figure 10: Moses Crossing Blast Monitoring Results – April 2018**



**Figure 11: Jerrys Plains Blast Monitoring Results – April 2018**

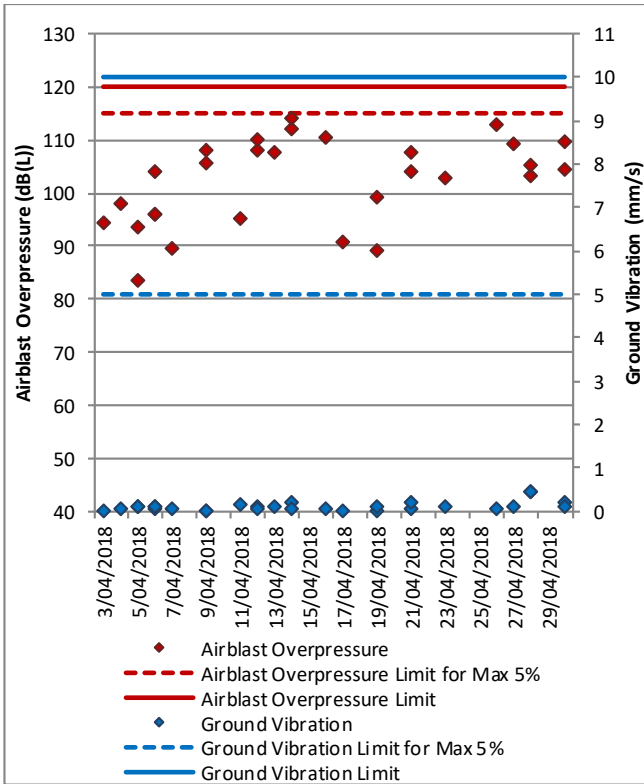


Figure 12: Maison Dieu Blast Monitoring Results – April 2018

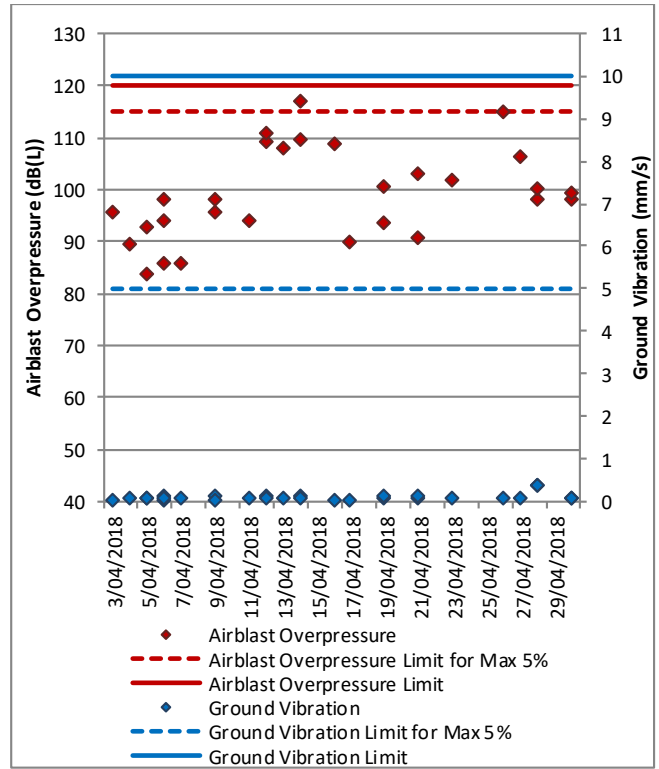


Figure 14: Knodlers Lane Blast Monitoring Results – April 2018

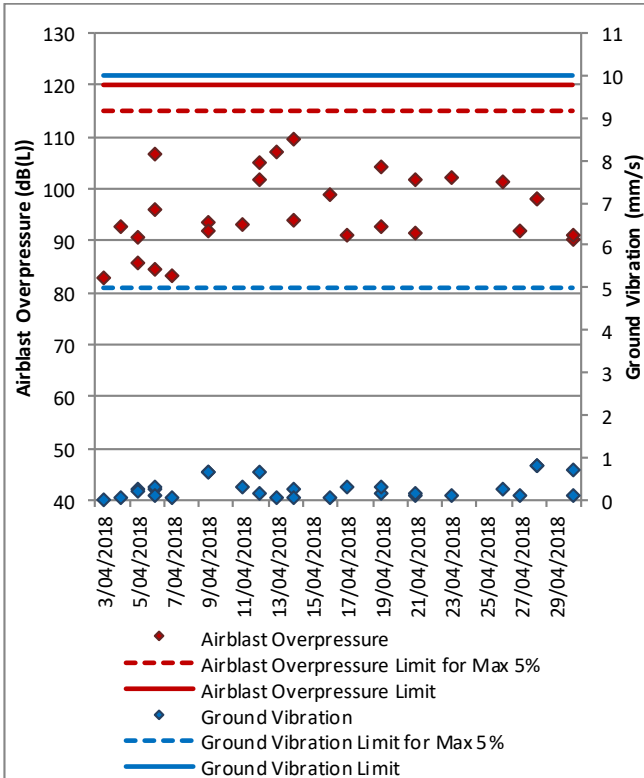


Figure 13: Warkworth Blast Monitoring Results – April 2018



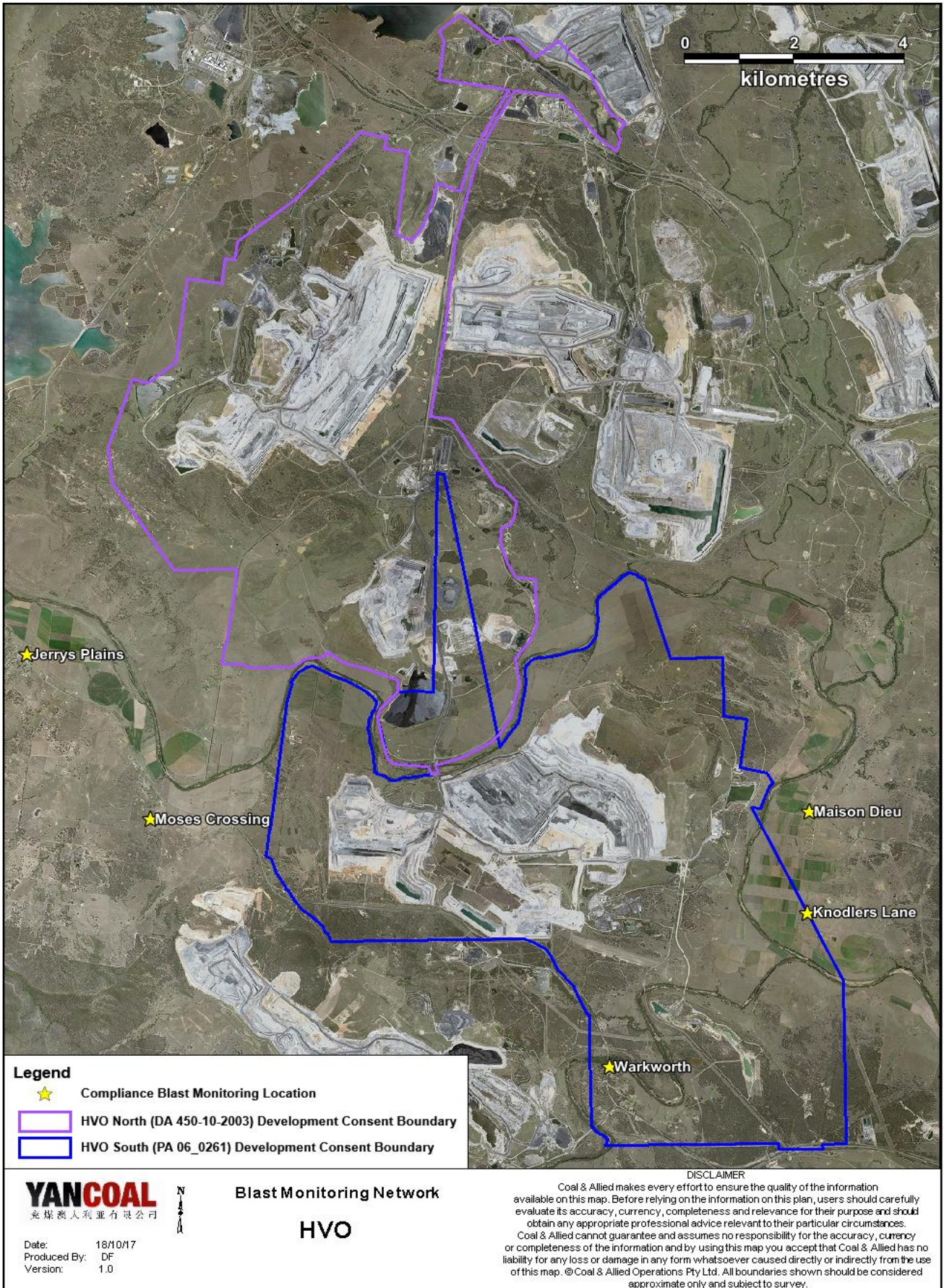


Figure 15: Blast Monitoring Location Plan



## 5.0 NOISE

Routine attended noise monitoring is carried out at defined locations around HVO as described in the HVO Noise Monitoring Programme. The purpose of the noise surveys is to quantify and describe the acoustic environment around the site and compare results with specified limits. Unattended monitoring (real time noise monitoring) also occurs at five sites surrounding HVO. The attended noise monitoring locations are displayed in Figure 16.

### 5.1 Attended Noise Monitoring Results

Attended monitoring was conducted at receiver locations surrounding HVO on the nights of 5<sup>th</sup> April 2018. Monitoring results are detailed in Table 4 to Table 9.

**Table 4: L<sub>Aeq</sub>, 15 minute HVO South - Impact Assessment Criteria – April 2018**

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	VTG <sup>5</sup>	Criterion dB (A)	Criterion Applies? <sup>1,6</sup>	HVO South L <sub>Aeq</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Knodlers Lane	5/04/2018 23:55	1	3	37	No	27	NA
Maison Dieu	6/04/2018 0:49	1	-1	37	Yes	31	Nil
Shearers Lane	6/04/2018 0:27	0.8	3	41	No	30	NA
Kilburnie South	5/04/2018 23:59	1	3	36	No	36	NA
Jerrys Plains Village	5/04/2018 21:34	3.4	0.5	35	No	IA	NA
Jerrys Plains East	5/04/2018 21:02	2	0.5	35	Yes	NM	Nil
Long Point	5/04/2018 21:28	2.3	0.5	35	Yes	IA	Nil
HVGC	6/04/2018 0:33	0.8	3	55	No	33	NA

**Table 5: L<sub>Aeq</sub>, 15 minute HVO South - Land Acquisition Criteria – April 2018**

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	VTG <sup>5</sup>	Criterion dB (A)	Criterion Applies? <sup>1,6</sup>	HVO South L <sub>Aeq</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Knodlers Lane	5/04/2018 23:55	1	3	41	No	27	NA
Maison Dieu	6/04/2018 0:49	1	-1	41	Yes	31	Nil
Shearers Lane	6/04/2018 0:27	0.8	3	41	No	30	NA
Kilburnie South	5/04/2018 23:59	1	3	41	No	36	NA
Jerrys Plains Village	5/04/2018 21:34	3.4	0.5	40	No	IA	NA
Jerrys Plains East	5/04/2018 21:02	2	0.5	40	Yes	NM	Nil
Long Point	5/04/2018 21:28	2.3	0.5	40	Yes	IA	Nil
HVGC	6/04/2018 0:33	0.8	3	NA	No	33	NA

**Table 6: L<sub>A1, 1minute</sub> HVO South - Impact Assessment Criteria – April 2018**

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	VTG <sup>5</sup>	Criterion dB (A)	Criterion Applies? <sup>1,6</sup>	HVO South L <sub>A1, 1min</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Knodlers Lane	5/04/2018 23:55	1	3	45	No	32	NA
Maison Dieu	6/04/2018 0:49	1	-1	45	Yes	43	Nil
Shearers Lane	6/04/2018 0:27	0.8	3	45	No	37	NA
Kilburnie South	5/04/2018 23:59	1	3	45	No	53	NA
Jerrys Plains Village	5/04/2018 21:34	3.4	0.5	45	No	IA	NA
Jerrys Plains East	5/04/2018 21:02	2	0.5	45	Yes	NM	Nil
Long Point	5/04/2018 21:28	2.3	0.5	45	Yes	IA	Nil
HVGC	6/04/2018 0:33	0.8	3	NA	NA	IA	NA

**Notes**

- Noise emission limits apply for wind speeds up to 3 metres per second (at a height of 10m), or temperature inversion conditions of up to 3 degrees/100m (at a height of 10m);
- Estimated or measured L<sub>Aeq,15minute</sub> dB attributed to HVO South Pit Area;
- NA in exceedance column means atmospheric conditions outside specified in approval and so criterion is not applicable;
- Bolded results in red indicate exceedance of criteria;
- Atmospheric data is sourced from the HVO Corporate or Cheshunt weather station using logged met data;
- Criterion may or may not apply due to rounding of meteorological data values

**Table 7: L<sub>Aeq, 15minute</sub> HVO North – Impact Assessment Criteria – April 2018**

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	VTG <sup>5</sup>	Criterion dB (A)	Criterion Applies? <sup>1,6</sup>	HVO North L <sub>Aeq</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Knodlers Lane	5/04/2018 23:55	3.6	-1	35	No	IA	NA
Maison Dieu	6/04/2018 0:49	3.8	-1	35	No	IA	NA
Shearers Lane	6/04/2018 0:27	3.1	-1	35	No	IA	NA
Kilburnie South	5/04/2018 23:59	3.5	-1	39	No	IA	NA
Jerrys Plains Village	5/04/2018 21:34	3.3	-1	36	No	IA	NA
Jerrys Plains East	5/04/2018 21:02	3.6	-1	39	No	IA	NA
Long Point	5/04/2018 21:28	4.2	-1	35	No	IA	NA
HVGC	6/04/2018 0:33	2.3	-0.5	NA	NA	IA	NA

**Table 8: L<sub>Aeq,15minute</sub> HVO North - Land Acquisition Criteria – April 2018**

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	VTG <sup>5</sup>	Criterion dB (A)	Criterion Applies? <sup>1,6</sup>	HVO North L <sub>Aeq</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Knodlers Lane	5/04/2018 23:55	1	3	35	Yes	IA	Nil
Maison Dieu	6/04/2018 0:49	0.9	0.5	35	Yes	IA	Nil
Shearers Lane	6/04/2018 0:27	1	-1	35	Yes	IA	Nil
Kilburnie South	5/04/2018 23:59	1	3	39	Yes	IA	Nil
Jerrys Plains Village	5/04/2018 21:34	1.5	0.5	36	Yes	30	Nil
Jerrys Plains East	5/04/2018 21:02	2	-1	39	Yes	33	Nil
Long Point	5/04/2018 21:28	2.3	0.5	35	Yes	IA	Nil

HVGC	6/04/2018 0:33	1	-1	NA	NA	IA	NA
------	----------------	---	----	----	----	----	----

**Table 9: LA<sub>1, 1Minute</sub> HVO North - Impact Assessment Criteria – April 2018**

Location	Date and Time	Wind Speed (m/s) <sup>5</sup>	VTG <sup>5</sup>	Criterion dB (A)	Criterion Applies? <sup>1,6</sup>	HVO North LA <sub>1, 1min</sub> dB <sup>2,4</sup>	Exceedance <sup>3</sup>
Knodlers Lane	5/04/2018 23:55	1	3	41	Yes	IA	Nil
Maison Dieu	6/04/2018 0:49	0.9	0.5	41	Yes	IA	Nil
Shearers Lane	6/04/2018 0:27	1	-1	41	Yes	IA	Nil
Kilburnie South	5/04/2018 23:59	1	3	41	Yes	IA	Nil
Jerrys Plains Village	5/04/2018 21:34	1.5	0.5	41	Yes	30	Nil
Jerrys Plains East	5/04/2018 21:02	2	-1	41	Yes	33	Nil
Long Point	5/04/2018 21:28	2.3	0.5	41	Yes	IA	Nil
HVGC	6/04/2018 0:33	1	-1	NA	NA	IA	NA

**Notes**

1. Noise emission limits apply under all meteorological conditions, except during periods of rain or hail, when average winds speed at microphone heights exceeds 5 metres per second, when wind speeds greater than 3 metres per second are measured at 10m above ground level, or during temperature inversion conditions greater than 3 degrees C/100m;
2. Estimated or measured LA<sub>eq, 15minute</sub> dB attributed to HVO North Area;
3. NA in exceedance column means atmospheric conditions outside specified in approval and so criterion is not applicable;
4. Bolded results in red indicate exceedance of criteria;
5. Atmospheric data is sourced from the HVO Corporate or Cheshunt weather station using logged met data;
6. Criterion may or may not apply due to rounding of meteorological data values

## 5.2 NPfi 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 April 2018 no measurements required the penalty to be applied. The assessment for low frequency noise is shown in Table 10.

**Table 10: Low Frequency Noise Assessment - April 2018**

Location	Date and Time	Measured Site Only LA <sub>eq</sub> dB (Sth/Nth)	Site Only LC <sub>eq</sub> dB <sup>1</sup> (Sth/Nth)	Site Only LC <sub>eq</sub> -LA <sub>eq</sub> dB <sup>1,4</sup> (Sth/Nth)	Result Max exceedance of ref spectrum dB <sup>2,3,4</sup> (Sth/Nth)	Penalty dB(A)	Exceedance
Knodlers Lane	5/04/2018 23:55	27/IA	NA/NA	NA/NA	NA/NA	0	Nil
Maison Dieu	6/04/2018 0:49	31/IA	54/NA	23/NA	0/NA	0	Nil
Shearers Lane	6/04/2018 0:27	30/IA	NA/NA	NA/NA	NA/NA	0	Nil
Kilburnie South	5/04/2018 23:59	36/IA	NA/NA	NA/NA	NA/NA	0	Nil
Jerrys Plains Village	5/04/2018 21:34	IA/30	NA/NA	NA/NA	NA/NA	0	Nil
Jerrys Plains East	5/04/2018 21:02	NM/33	NA/NA	NA/NA	NA/NA	0	Nil
Long Point	5/04/2018 21:28	IA/IA	NA/NA	NA/NA	NA/NA	0	Nil
HVGC	6/04/2018 0:33	33/IA	NA/NA	NA/NA	NA/NA	0	Nil

**Notes:**

1. As per NPfi, if  $LC_{eq} - LA_{eq} \geq 15$  dB further assessment of low frequency noise required.
2. As per NPfi, compare measured spectrum against reference spectrum to determine if the low frequency modifying factor is triggered and application of penalty is required;
3. 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.



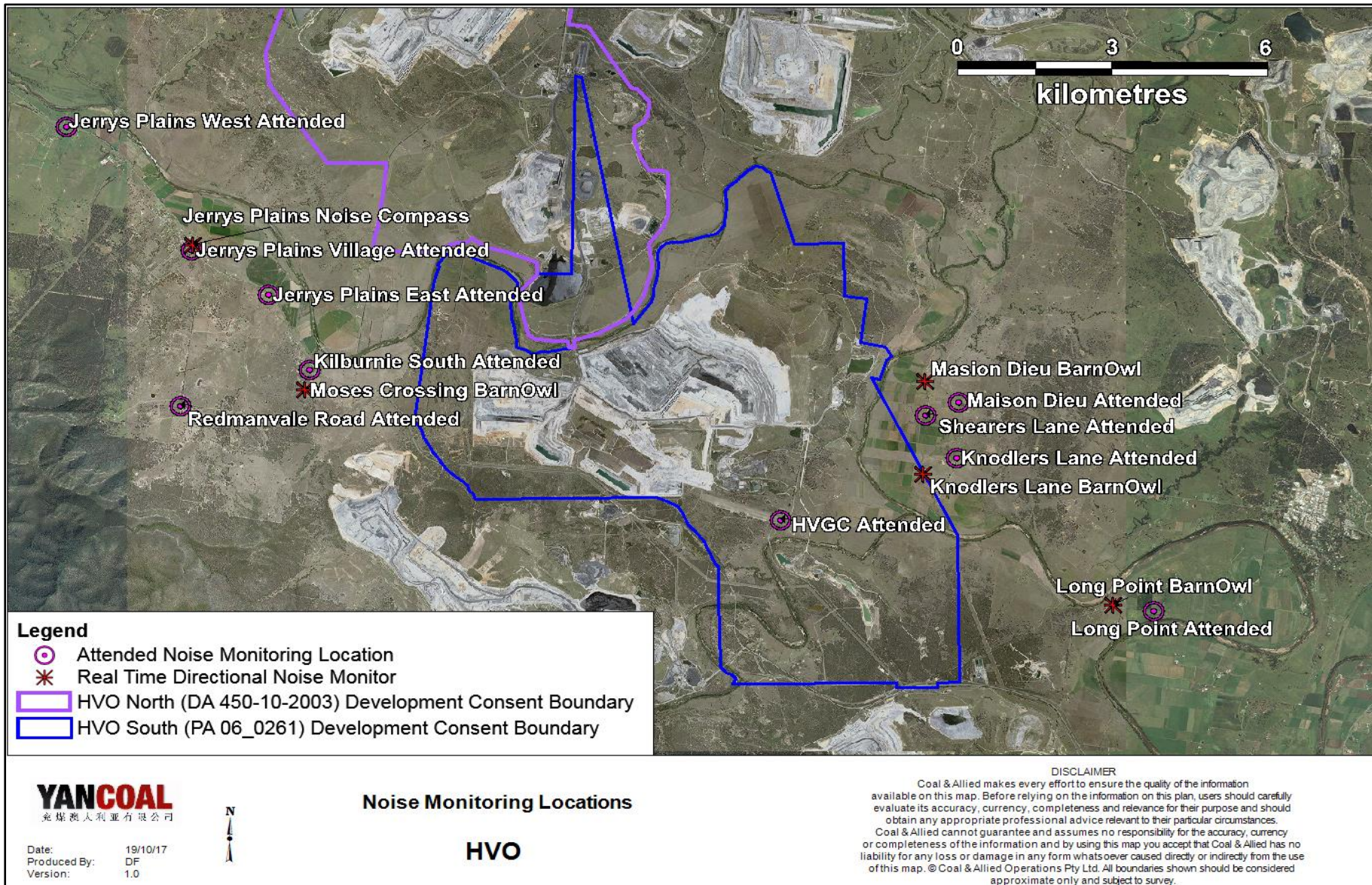


Figure 16: Noise Monitoring Location Plan

### 5.2.1 Real Time Noise Monitoring

HVO utilises a network of real-time directional noise monitors to manage noise impacts on a continuous basis. Noise alarms are in place at five monitoring locations (Knodlers Lane, Maison Dieu, Jerrys Plains, Moses Crossing, and Long Point), which alert HVO staff to elevated noise levels likely to be attributable to HVO. Noise alarms are investigated and responded to with the appropriate level of operational modification. Changes in response to a noise alarm can include replacing equipment with quieter (noise attenuated) units, changing or relocating tasks, and shutting down equipment.

It should be noted that this assessment does not compliment or conflict with attended noise monitoring detailed in Section 5.1, and that real time monitoring data includes non-mine noise sources such as dogs, cows, or more commonly, road traffic.

## 6.0 OPERATIONAL DOWNTIME

During April, a total of 89 hours of equipment downtime was logged in response to real time monitoring and visual inspections for environmental reasons such as dust, noise and meteorological conditions. Operational downtime by equipment type is shown in Figure 17.

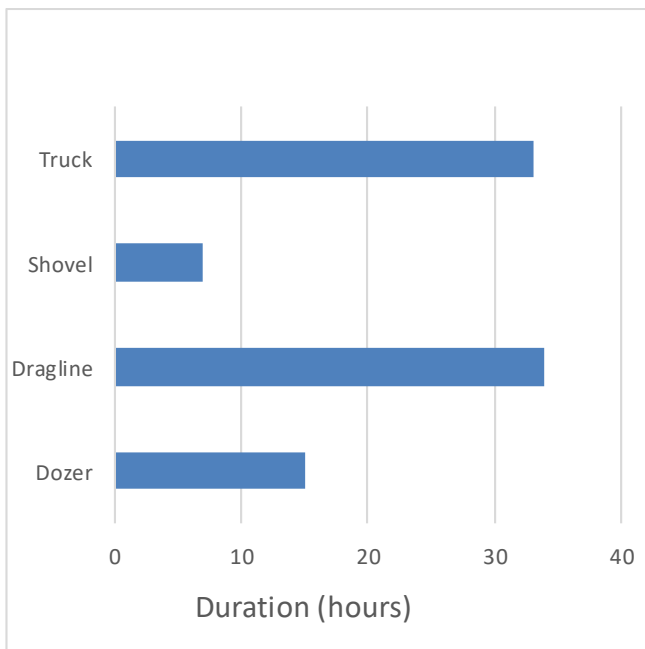


Figure 17: Operational Downtime by Equipment Type – April 2018

## 7.0 REHABILITATION

During April 0.1 Ha of land was released, 0.1 Ha of land was bulk shaped 6.1 Ha of land was topsoiled, 0.8 Ha of land was composted and 7.6 Ha of land was rehabilitated. Year to date progress can be viewed in Figure 18.

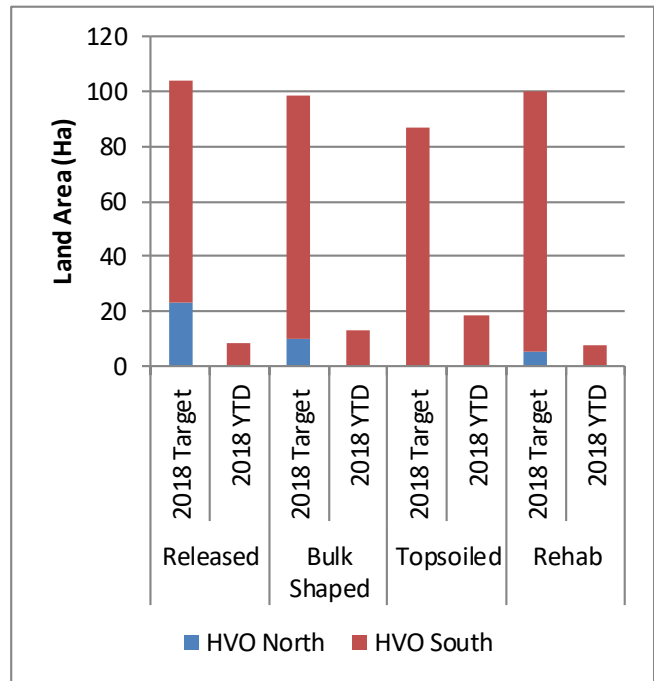


Figure 18: Rehabilitation YTD – April 2018

## 8.0 COMPLAINTS

One complaint was received during the reporting period. Details of complaints received YTD are shown in Table 11 below.

Table 11: Complaints Summary YTD

	Noise	Dust	Blast	Lighting	Other	Total
January	-	2	4	-	-	6
February	1	-	-	-	1	2
March	-	-	-	-	-	0
April	-	-	1	-	-	1
May	-	-	-	-	-	-
June	-	-	-	-	-	-
July	-	-	-	-	-	-
August	-	-	-	-	-	-
September	-	-	-	-	-	-
October	-	-	-	-	-	-
November	-	-	-	-	-	-
December	-	-	-	-	-	-
Total	1	2	5	-	1	9

## 9.0 ENVIRONMENTAL INCIDENTS

During the reporting period there were no reportable environmental incidents.

## **Appendix A: Meteorological Data**



**Table 12: Meteorological Data - HVO Corporate Meteorological Station – April 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)
1/04/2018	32	14	100	20	789	184	1.5	0.0
2/04/2018	33	16	85	19	1132	-	2.4	0.2
3/04/2018	26	14	94	45	1164	108	2.9	0.0
4/04/2018	26	15	100	49	1011	105	2.3	17.0
5/04/2018	28	14	100	35	820	132	1.1	0.0
6/04/2018	29	13	99	29	771	162	1.8	0.0
7/04/2018	30	14	100	32	741	166	1.2	0.0
8/04/2018	32	14	87	17	737	214	2.0	0.0
9/04/2018	34	15	72	12	739	245	2.9	0.0
10/04/2018	26	13	86	38	1040	113	2.7	0.0
11/04/2018	32	11	100	23	693	167	1.2	0.0
12/04/2018	31	19	36	23	634	299	4.3	0.0
13/04/2018	31	16	44	20	696	289	4.7	0.0
14/04/2018	29	13	100	29	1107	282	5.5	20.8
15/04/2018	22	14	57	30	973	283	6.1	0.0
16/04/2018	28	19	55	28	724	279	4.5	0.0
17/04/2018	25	11	85	39	957	148	2.6	0.0
18/04/2018	23	11	84	47	1076	111	3.1	0.0
19/04/2018	28	9	100	34	890	187	1.3	7.2
20/04/2018	25	13	100	45	699	162	1.8	0.0
21/04/2018	24	13	100	51	860	116	2.0	0.0
22/04/2018	23	11	100	52	1018	109	1.8	0.0
23/04/2018	24	10	100	42	812	146	1.4	0.0
24/04/2018	24	11	100	34	749	126	1.4	0.0
25/04/2018	21	10	100	67	654	190	1.3	0.0
26/04/2018	26	11	100	32	702	205	2.4	0.8
27/04/2018	21	11	89	48	961	128	2.9	0.0
28/04/2018	21	9	88	39	954	127	2.2	0.0
29/04/2018	20	8	90	48	871	137	1.5	0.0
30/04/2018	21	6	92	48	914	127	1.9	0.0

“-“ Indicates that data was not available due to technical issues.