

**HUNTER VALLEY**  
OPERATIONS

**MONTHLY  
ENVIRONMENTAL  
MONITORING REPORT MAY  
2023**

**DOCUMENT NUMBER**

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21/08/2023

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[Planned Review Date]

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Environment and Community Officer



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## 1 | 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> to 31<sup>st</sup> May 2023 (the 'Reporting Period').

## 2 | AIR QUALITY

### 2.1 | METEOROLOGICAL MONITORING

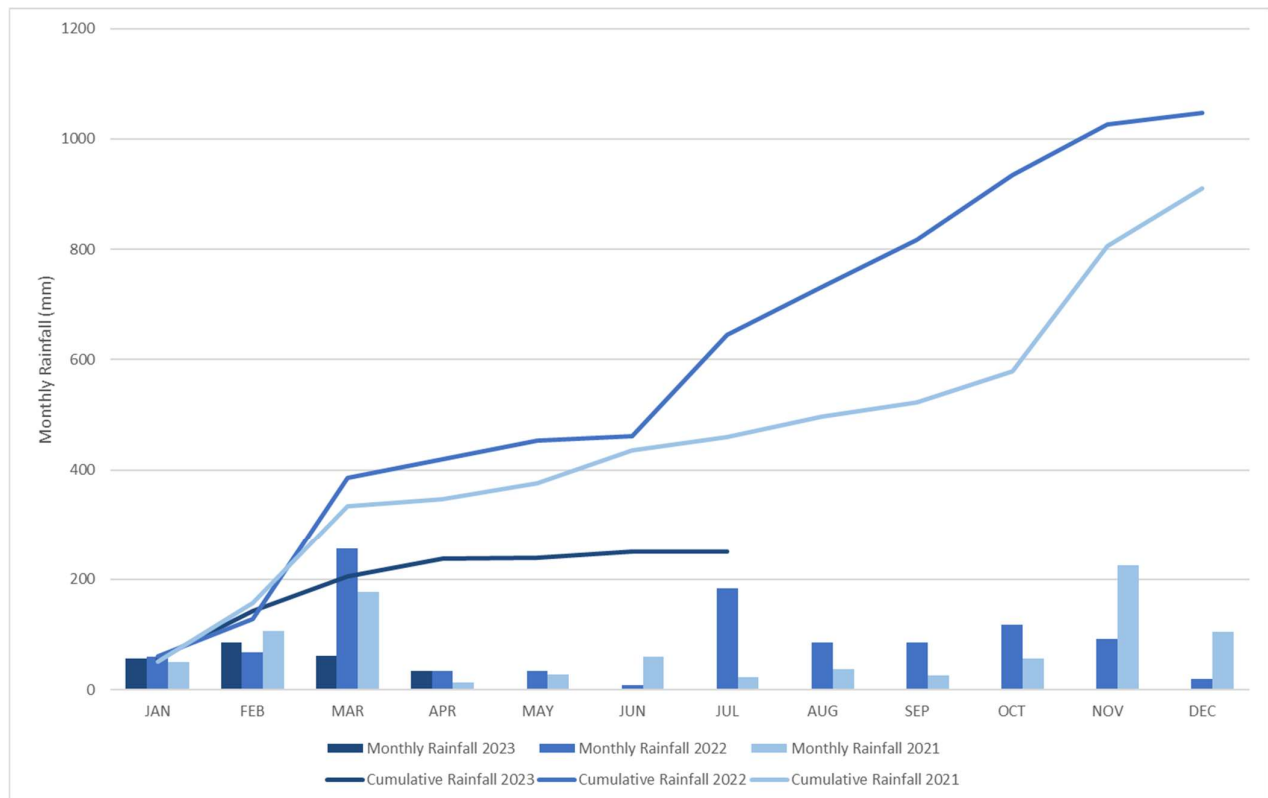
HVO maintains two meteorological stations: 'HVO Corporate' and 'Cheshunt' (refer to **Figure 4**).

#### 2.1.1 | RAINFALL

Rainfall for the period is summarised in **Table 1**. The 2021, 2022 and 2023 trends are shown in **Figure 1**.

*Table 1 - Rainfall data for the reporting period*

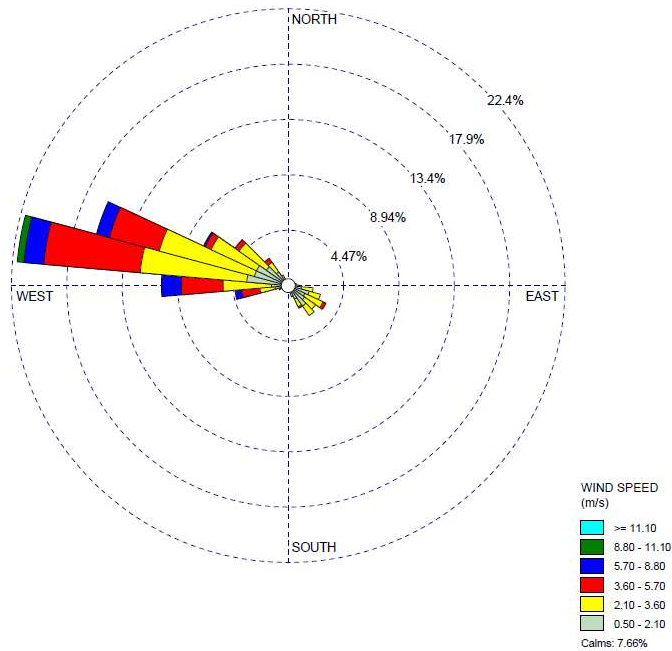
2023	Monthly Rainfall (mm)	Cumulative Rainfall (mm)
May	1.2	239.6



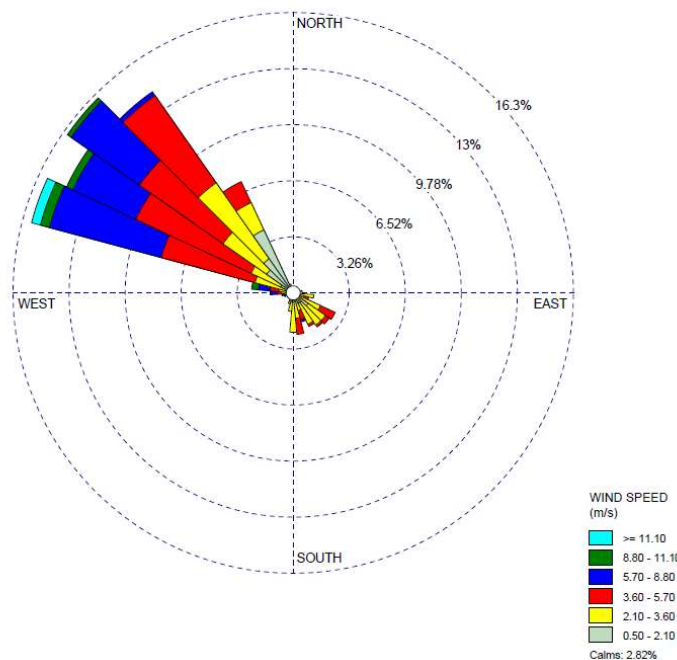
*Figure 1 - Rainfall Summary 2023*

**2.1.2 | WIND SPEED AND DIRECTION**

North-westerly winds were prevailing during the reporting period as shown in **Figure 2** (HVO Corporate) and **Figure 3** (HVO Cheshunt).



*Figure 2 – HVO Corporate Wind Rose for the Reporting Period*



*Figure 3 – HVO Cheshunt Wind Rose for the Reporting Period*

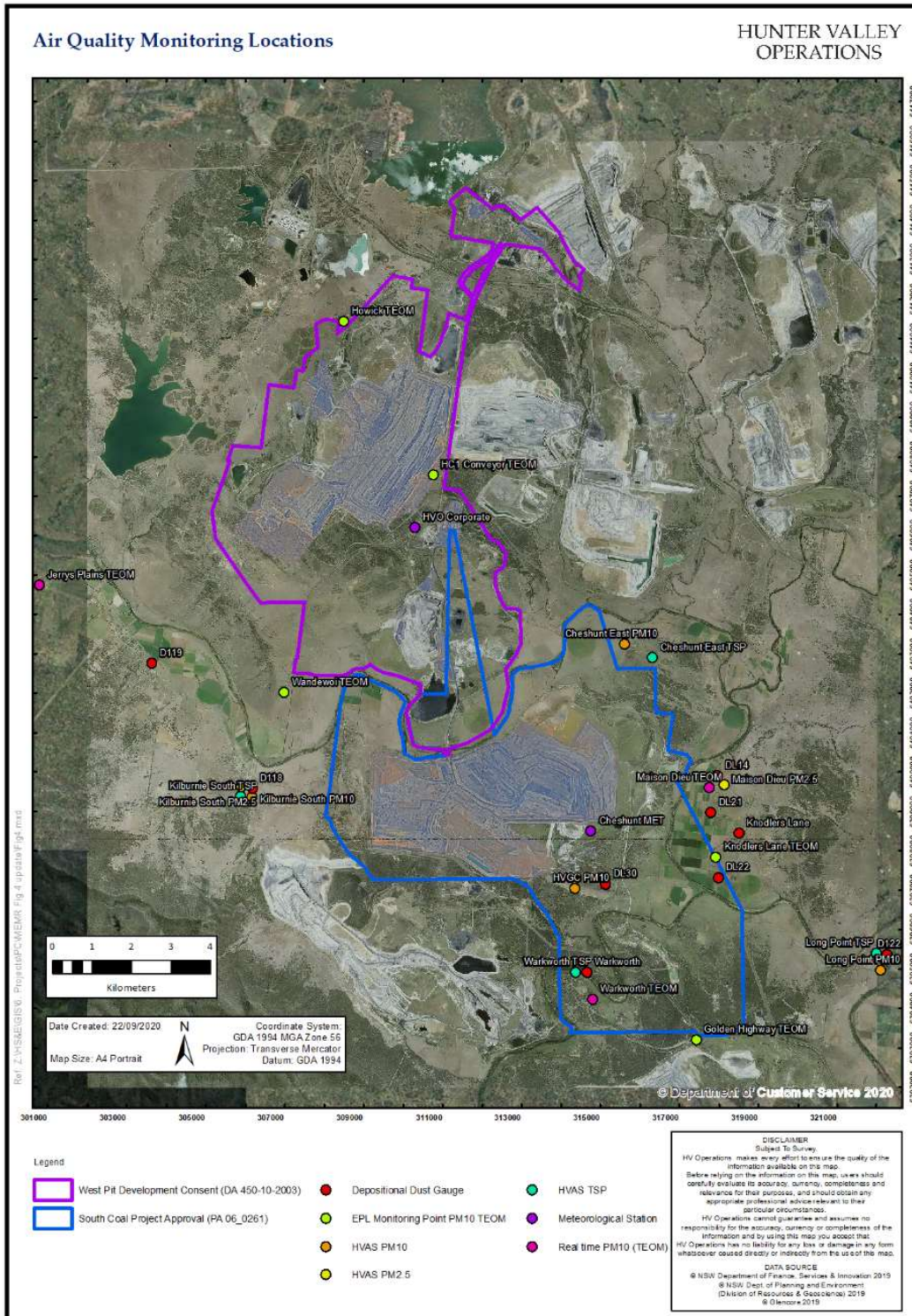


Figure 4 – Air Quality Monitoring Location Plan

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## 2.2 | DEPOSITIONAL DUST

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

Figure 5 displays insoluble solids results from depositional dust gauges during the reporting period compared against the annual impact assessment criteria. Any monthly results deemed to be contaminated (due to presence of bird droppings, insects, etc.) are not displayed. An assessment of HVO's contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

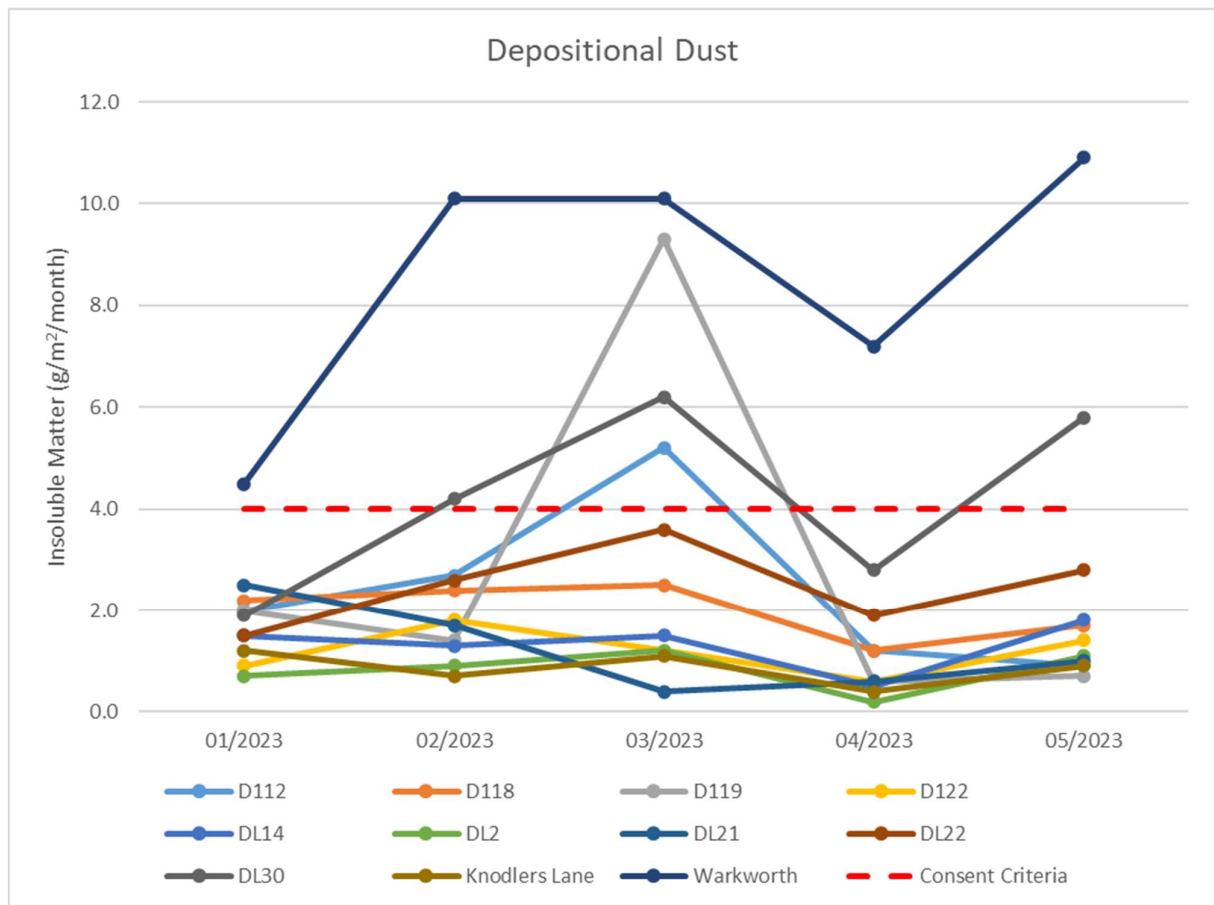


Figure 5 - Depositional Dust Results for the Reporting Period

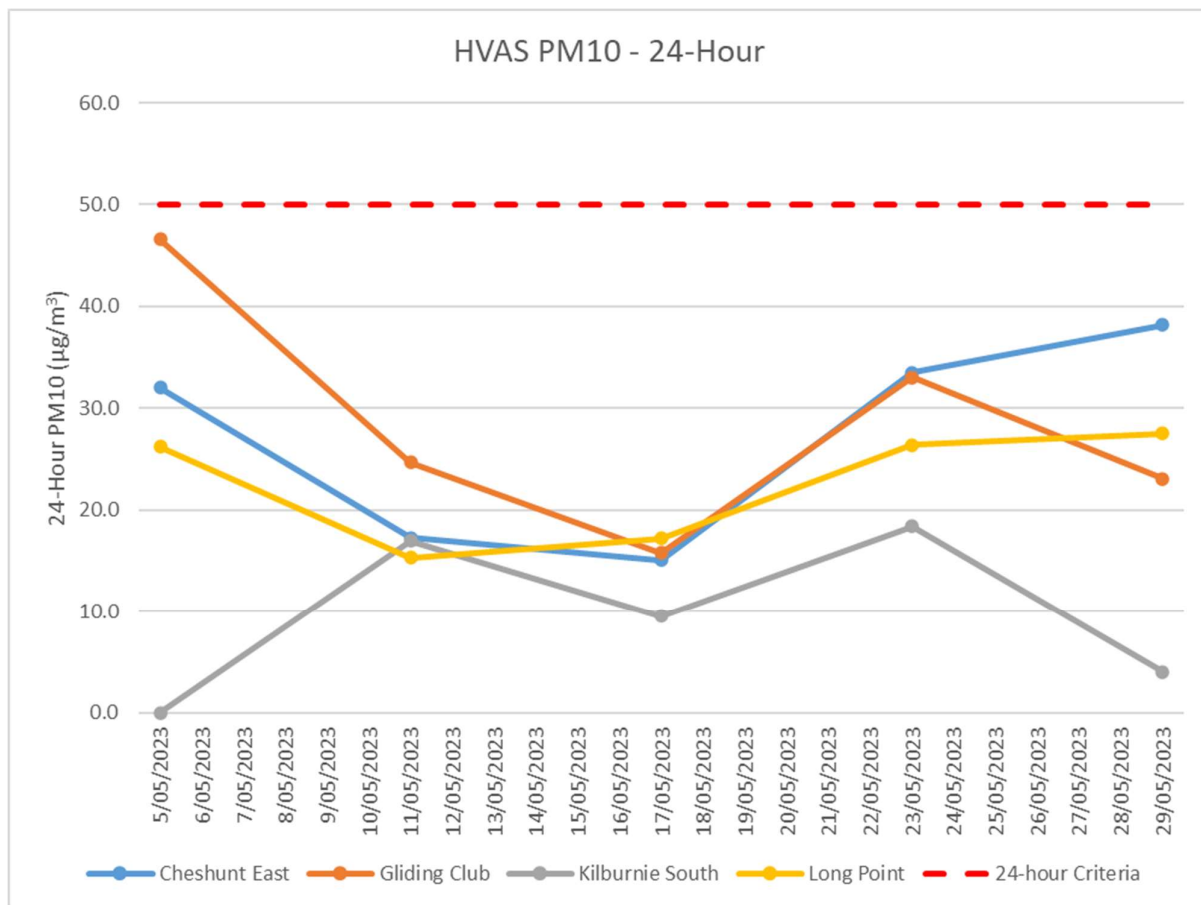
## 2.3 | SUSPENDED PARTICLES

Suspended particles are measured by a network of High Volume Air Samplers (HVAS) measuring Total Suspended Particulates (TSP) and Particulate Matter <10µm (PM10). The Kilburnie South and Maison Dieu HVAS also monitor Particulate Matter <2.5µm (PM2.5). The location of these monitors is presented in **Figure 4**. Each HVAS runs for 24-hours on a six-day cycle.

### 2.3.1 | HVAS PM<sub>10</sub> RESULTS

#### 2.3.1.1 | PERFORMANCE AGAINST SHORT TERM IMPACT ASSESSMENT CRITERIA

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



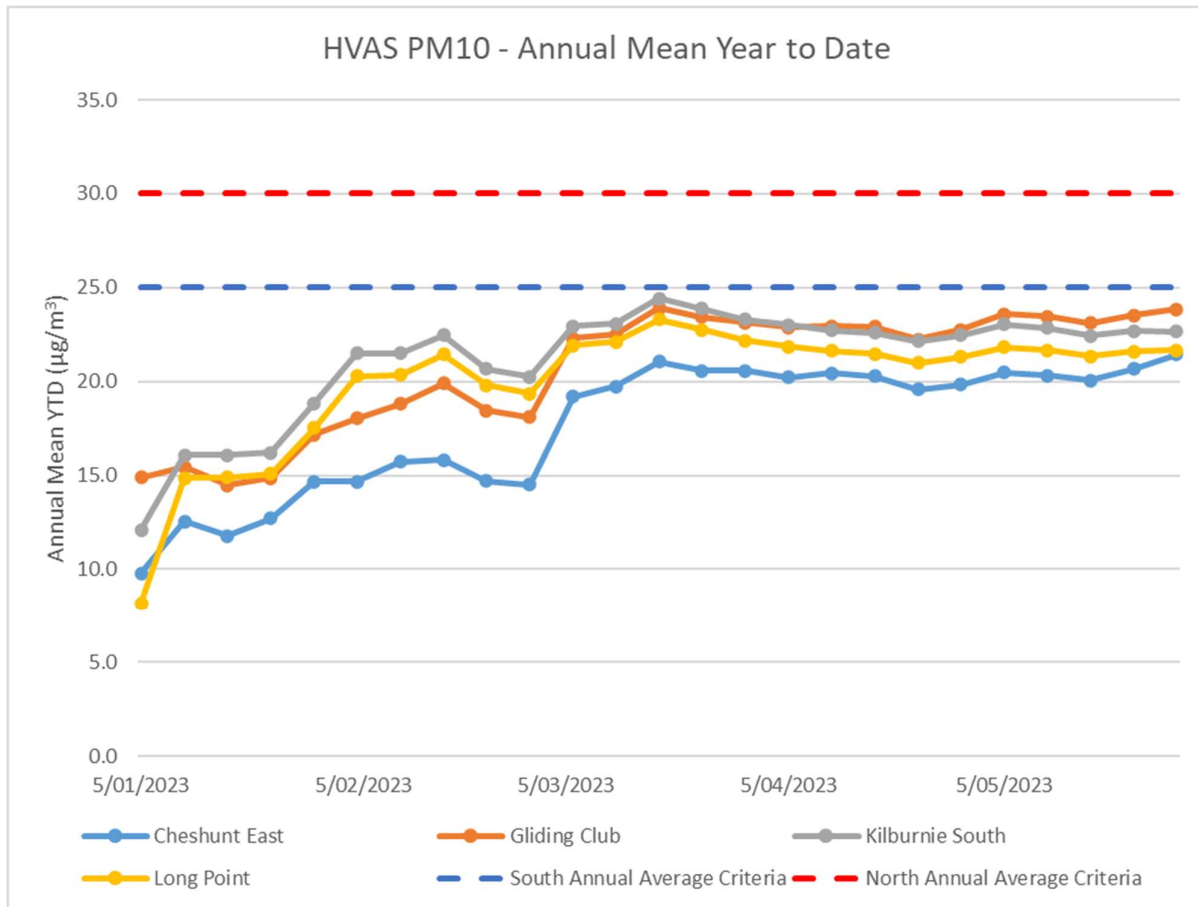
*Figure 6 – Individual PM<sub>10</sub> Results for the Reporting Period*



**2.3.1.2 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA**

**Figure 7** shows the year-to-date annual average PM<sub>10</sub> results. All monitors were below the relevant long term impact assessment criteria during the reporting period.

An assessment of HVO’s contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.



*Figure 7 – Year to Date Average PM<sub>10</sub> as at end of the Reporting Period*

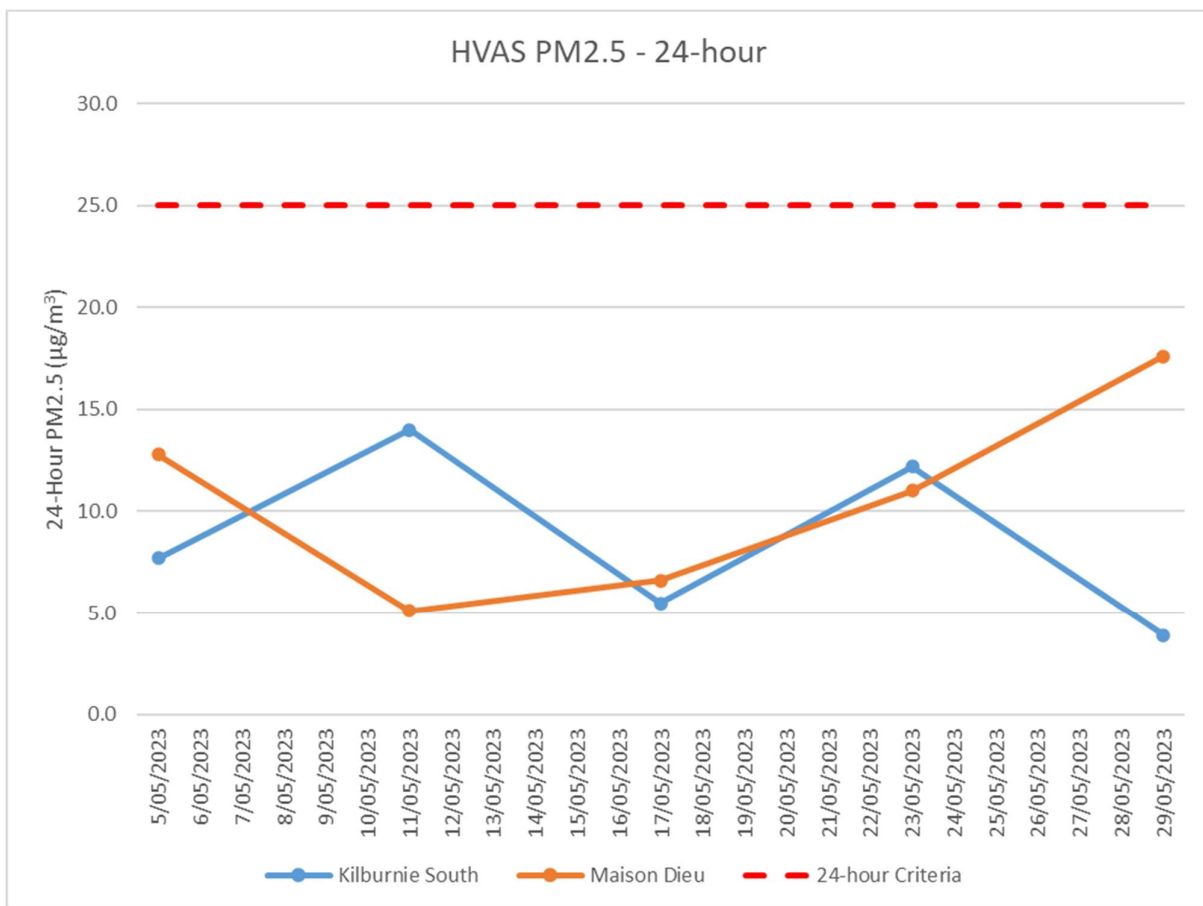
**2.3.2 | HVAS PM<sub>2.5</sub> RESULTS**

HVO monitors PM<sub>2.5</sub> at two HVAS locations, Kilburnie South and Maison Dieu.

**2.3.2.1 | HVAS PM<sub>2.5</sub> RESULTS**

**Figure 8** shows individual PM<sub>2.5</sub> results at each monitoring station against the HVO South short-term impact assessment criteria of 25µg/m<sup>3</sup>. All monitors were below the relevant short-term impact assessment criteria during the reporting period.

An assessment of HVO's contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

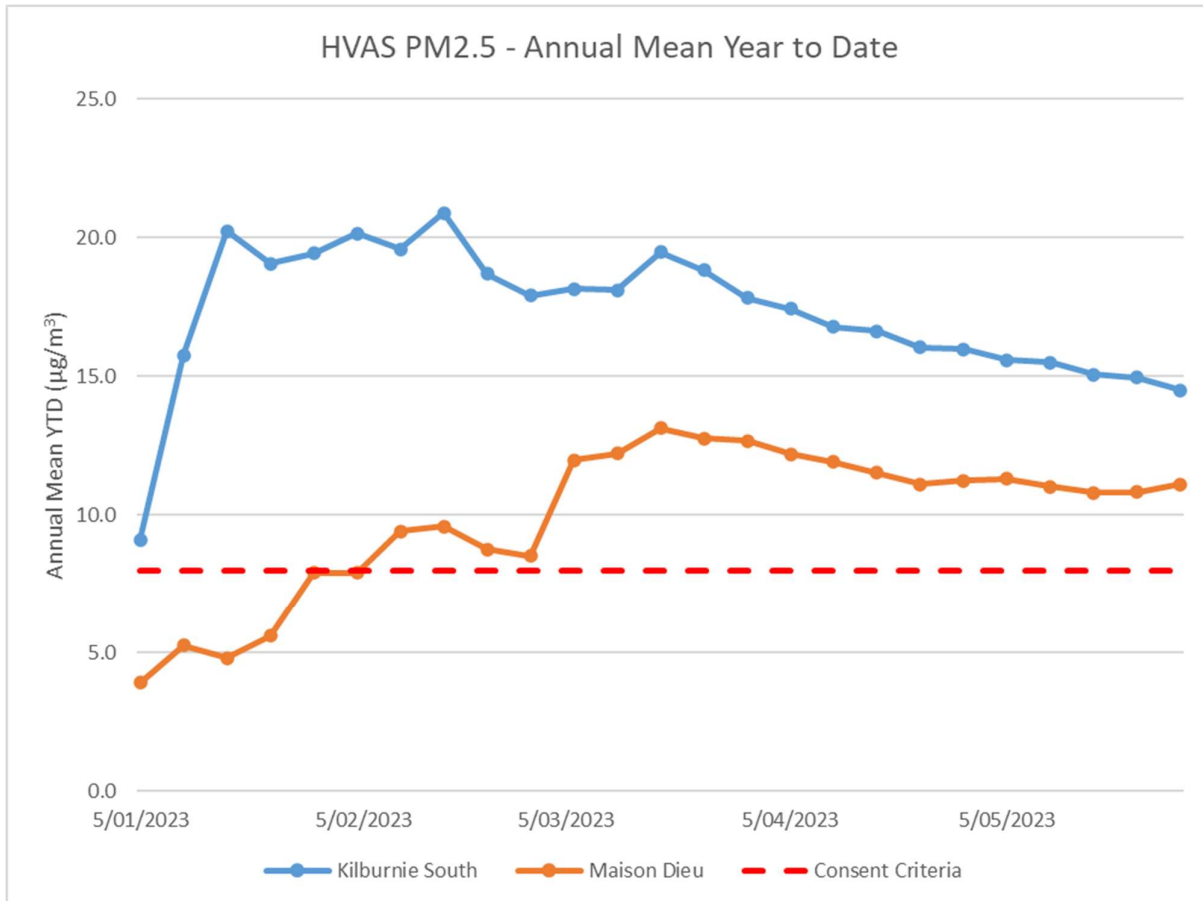


*Figure 8 - Results for the Reporting Period*

**2.3.2.2 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA**

**Figure 9** shows the year-to-date annual average PM<sub>2.5</sub> results. During the reporting period, the Maison Dieu monitor and Kilburnie South monitor annual average year to date were above the PM<sub>2.5</sub> Annual Rolling Mean criteria of 8µg/m<sup>3</sup>.

An assessment of HVO’s contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.



*Figure 9 - Year to Date Average PM<sub>2.5</sub> as at end of the Reporting Period*

**2.3.3 | TSP RESULTS**

**2.3.3.1 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA**

Figure 10 shows the annual average TSP results compared against the long-term impact assessment criteria of 90µg/m3.

All monitors, except for Warkworth, were below the relevant long-term impact assessment criteria during the reporting period.

An assessment of HVO’s contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

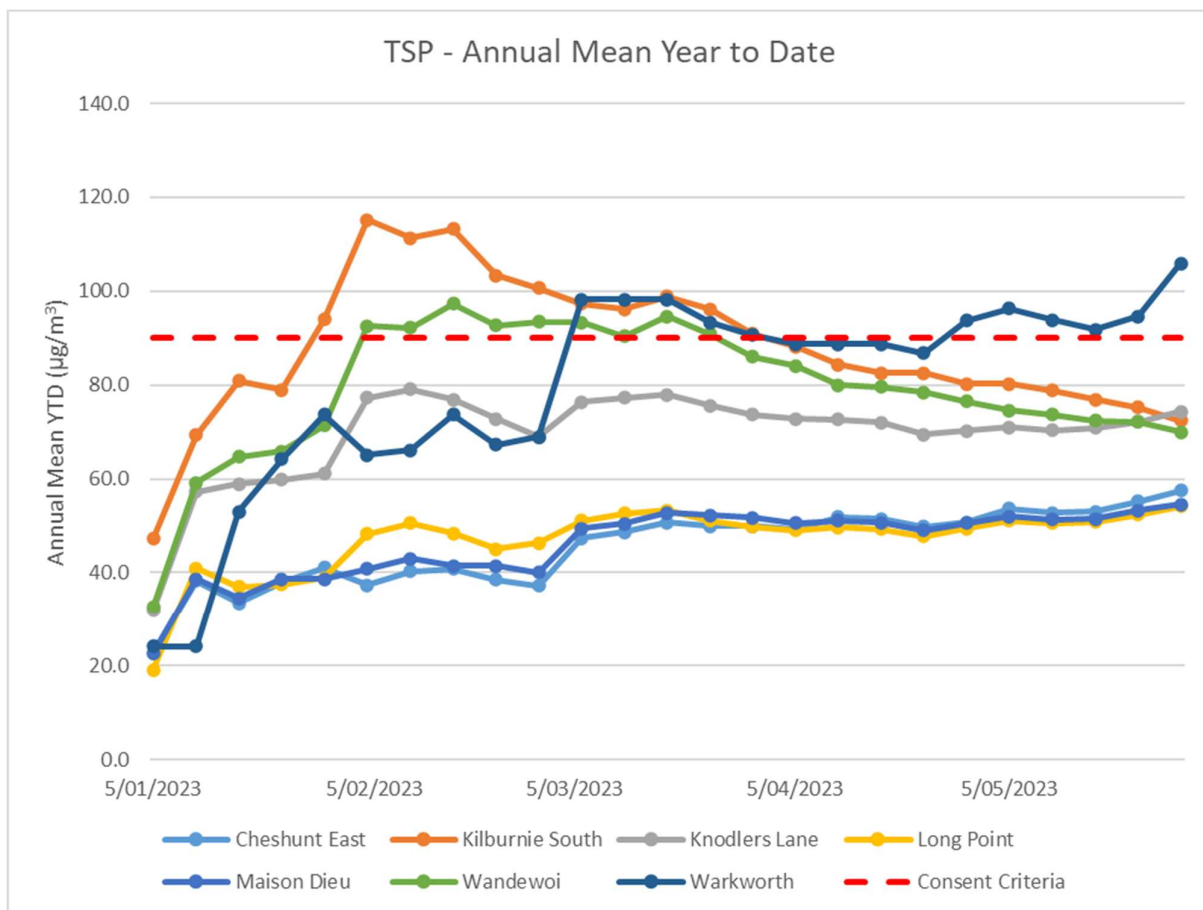
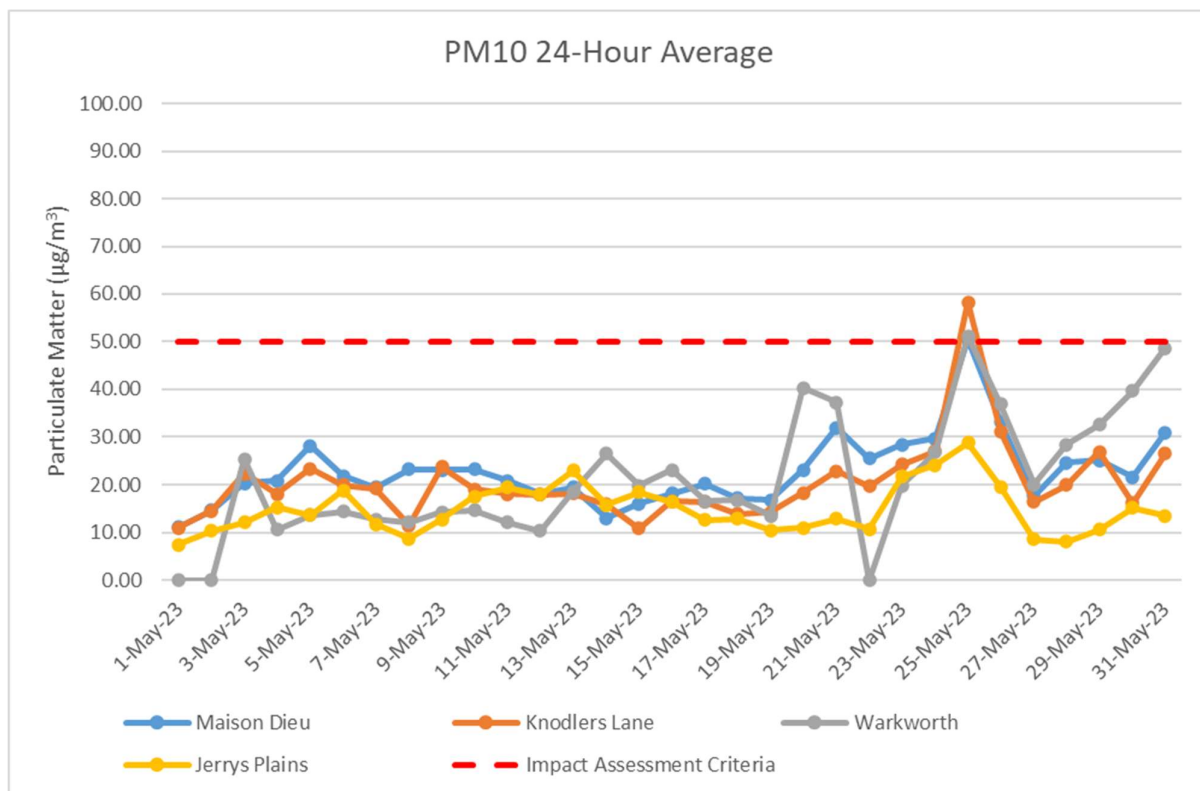


Figure 10 - Year to Date Average Total Suspended Particulates as at end of the Reporting Period

**2.3.4 | REAL TIME PM<sub>10</sub> RESULTS**

HVO maintains a network of real time PM<sub>10</sub> monitors. The real time air quality monitoring stations continuously record information and transmit data to a central database, generating alarms when particulate matter levels exceed internal trigger levels. Results from real time PM<sub>10</sub> monitoring are used as a reactive measure to guide mining operations to help achieve compliance with the relevant conditions of the project approval.

**Figure 11** shows the daily 24-hour average PM<sub>10</sub> result from the real time monitoring sites which shows no exceedances reported for the period. An exceedance was recorded on 25 May at the Knodlers Lane and Warkworth monitors of 59.4µg/m<sup>3</sup> & 54.8 µg/m<sup>3</sup> respectively. The exceedances were investigated and was confirmed that HVO South’s contribution was 0µg/m<sup>3</sup> and 30µg/m<sup>3</sup> respectively.



*Figure 11 – Real Time PM<sub>10</sub> 24hr for the Reporting Period*

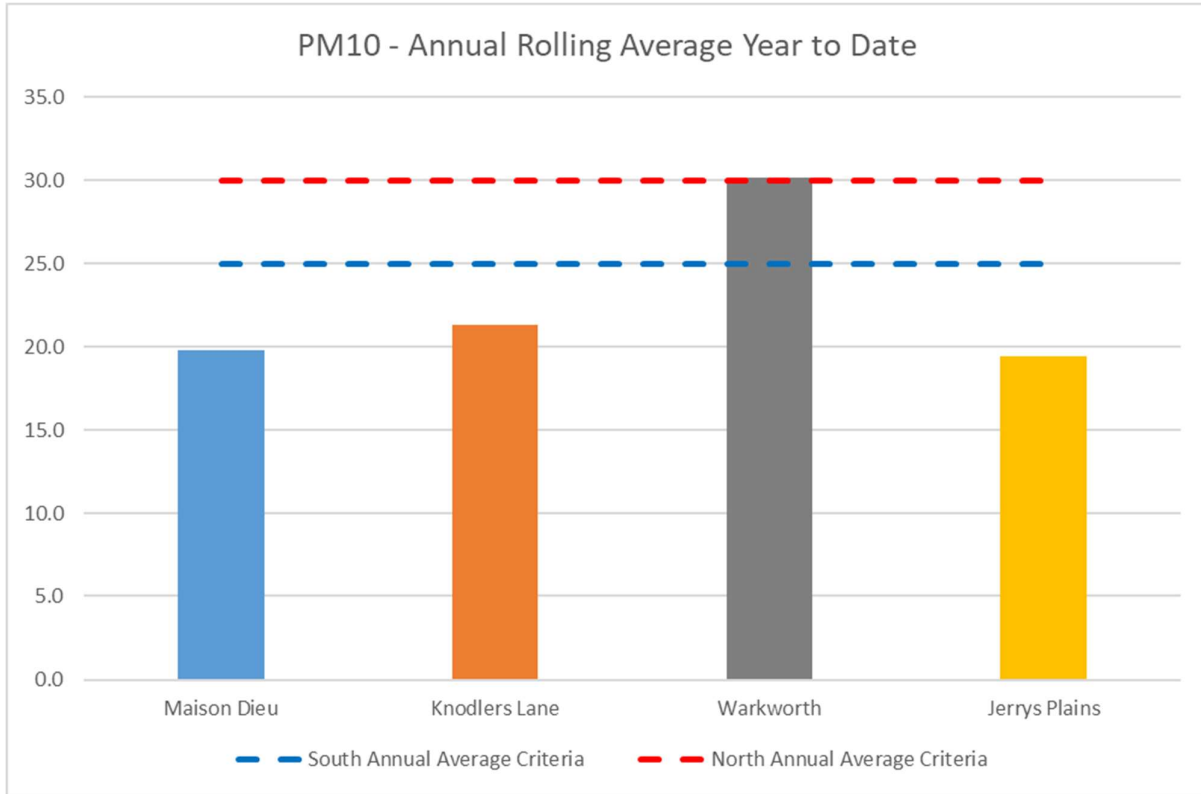


Figure 12 – Real Time PM<sub>10</sub> Annual Average for the Reporting Period.

### 2.3.5 | REAL TIME ALARMS FOR AIR QUALITY

The real time monitoring system generated 85 automated air quality related alarms during the reporting period. 31 alarms related to adverse weather conditions and 54 alarms related to dust conditions.

### 3 | WATER QUALITY

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

#### 3.1 | SURFACE WATER

Surface watercourses are sampled on a quarterly sampling regime. Water quality is assessed through the parameters of pH, electrical conductivity (EC) and Total Suspended Solids (TSS). The location of surface water monitoring points across HVO is shown in **Figure 13**.

Results from monitoring on site dams, the Hunter River and other natural tributaries are provided on a quarterly basis. Results will be provided in the June 2023 Monthly Environmental Monitoring Report.

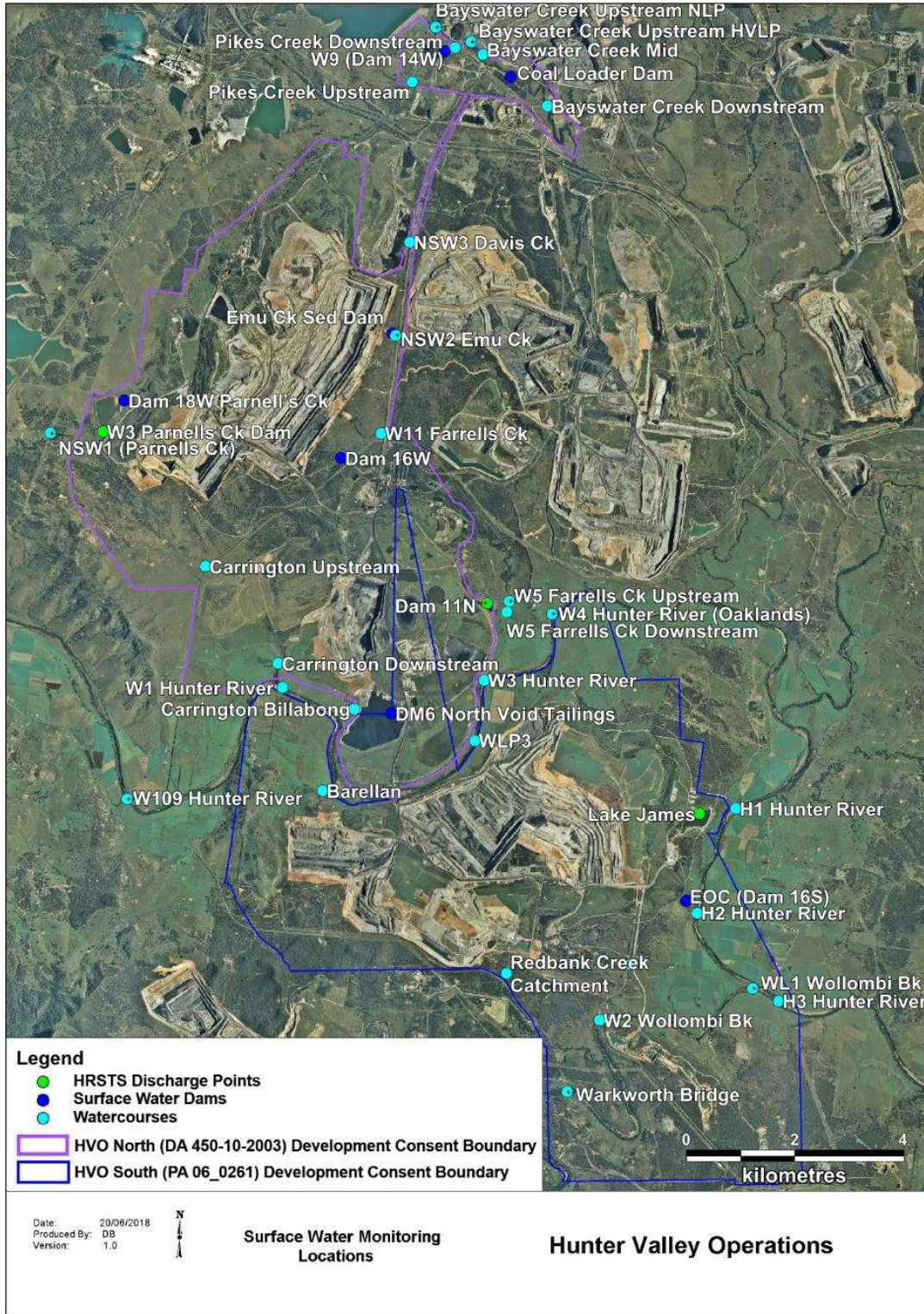


Figure 13 – HVO Surface Water Monitoring Locations



### **3.1.1 | SURFACE WATER TRIGGER TRACKING**

Internal trigger limits have been developed to assess monitoring data on an on-going basis and to highlight potentially adverse surface water impacts. The process for evaluating monitoring results against the internal triggers and subsequent responses are outlined in the [HVO Water Management Plan](#).

Surface water trigger tracking results are provided on a quarterly basis; results will appear in the June 2023 Monthly Environmental Monitoring Report.

### **3.2 | SITE WATER USE**

HVO is permitted to extract water from the Hunter River under water allocation licenses issued by Water NSW.

HVO did not extract water from the Hunter River during the reporting period.

### **3.3 | 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.

HVO did not undertake any HRSTS discharges during the reporting period.

### **3.4 | GROUNDWATER MONITORING RESULTS**

Groundwater monitoring is undertaken on a quarterly basis in accordance with the [HVO Water Management Plan](#) and Groundwater Monitoring Program. The location of groundwater monitoring points across HVO are show in **Figure 14**.

Groundwater monitoring results are provided on a quarterly basis. Results will be provided in the June 2023 Monthly Environmental Monitoring Report.

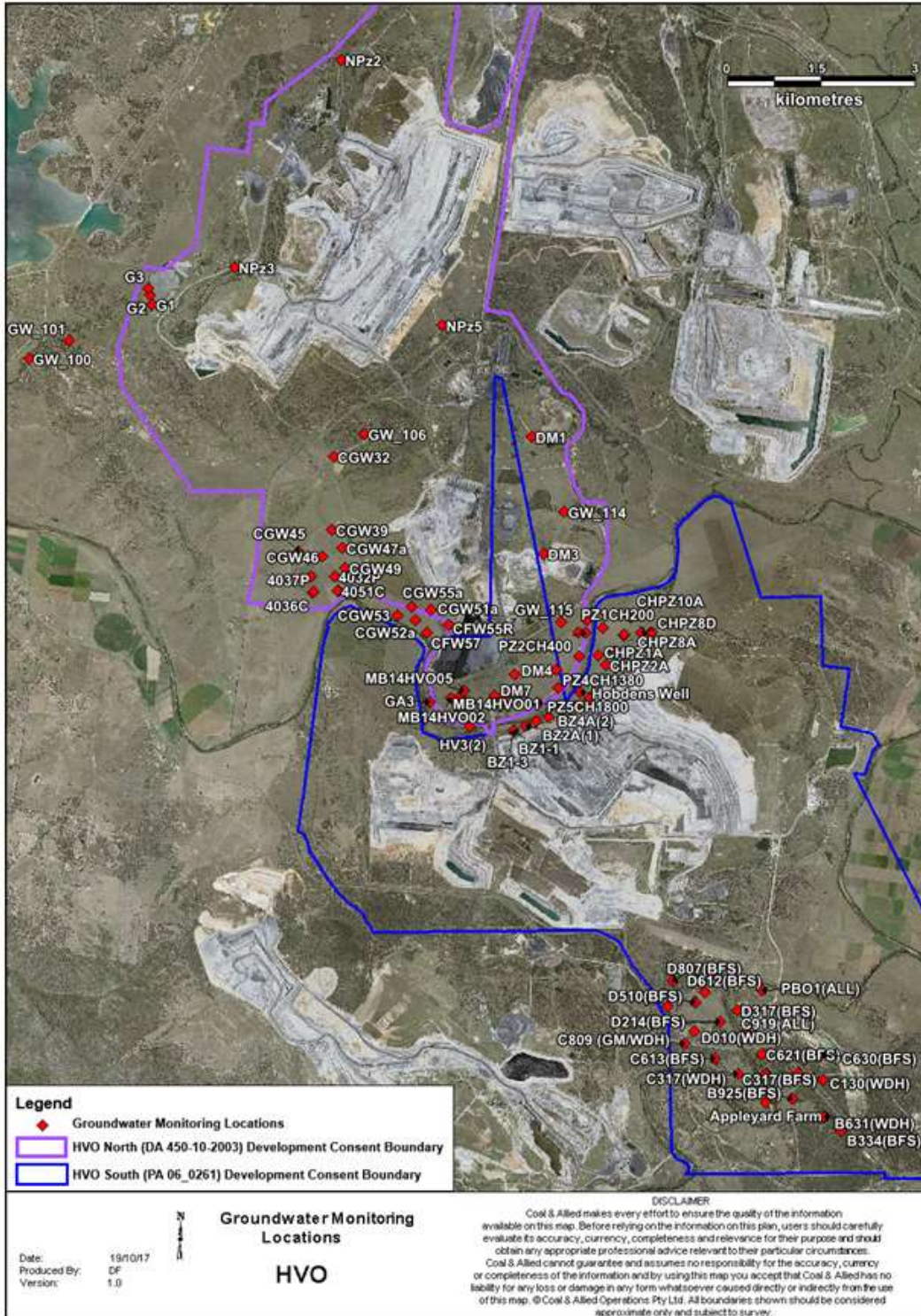


Figure 14 - Groundwater Monitoring Locations at HVO



### 3.4.1 | GROUNDWATER TRIGGER TRACKING

Internal trigger limits have been developed to assess monitoring data on an on-going basis and to highlight potentially adverse groundwater impacts. The process for evaluating monitoring results against the internal triggers and subsequent responses is outlined in the [HVO Water Management Plan](#).

Groundwater trigger tracking results are provided on a quarterly basis. Results will be provided in the June 2023 Monthly Environmental Monitoring Report.



## 4 | BLASTING

HVO maintains a network of blast monitoring units 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 for HVO are summarised in **Table 2**.

*Table 2 – Blasting Criteria*

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



#### 4.1 | BLAST MONITORING RESULTS

Twenty Four (24) blasts were initiated at HVO during the reporting period. Blast monitoring results for the period are shown in **Table 3** and **Table 4**.

*Table 3 – Overpressure Blast Monitoring Results for the reporting period*

Date and Time	Moses Crossing (dBL)	Jerrys Plains Village (dBL)	Maison Dieu (dBL)	Warkworth (dBL)	Knodlers Lane (dBL)
1/05/2023 13:26	84.17	113.32	101.98	96.87	113.14
2/05/2023 13:08	97.62	104.55	105.15	100.53	108.34
4/05/2023 13:03	89.88	89.64	85.89	93.64	92.57
5/05/2023 13:05	92.43	84.20	90.04	92.74	92.31
5/05/2023 14:44	93.26	105.26	85.47	88.69	84.27
6/05/2023 14:32	93.30	94.62	98.25	95.29	104.95
9/05/2023 13:52	87.44	88.91	97.41	95.33	96.77
10/05/2023 13:30	86.56	92.62	80.98	98.73	78.72
10/05/2023 13:33	90.12	93.11	93.11	83.22	82.14
11/05/2023 12:56	102.09	96.02	84.78	89.93	91.45
13/05/2023 15:00	91.93	97.79	96.42	89.70	94.61
15/05/2023 13:24	92.20	88.66	79.85	95.89	84.33
15/05/2023 13:25	89.44	96.56	87.51	91.31	84.73
18/05/2023 13:19	85.44	88.21	88.43	82.38	85.55
20/05/2023 13:05	98.82	103.75	97.60	104.09	99.21
20/05/2023 14:38	91.28	105.47	105.31	99.13	112.06
20/05/2023 15:58	84.51	93.99	98.31	91.27	103.73
24/05/2023 11:04	97.11	97.67	96.00	89.61	97.72
24/05/2023 13:18	93.84	97.14	101.71	109.83	106.95
25/05/2023 13:10	96.00	97.67	96.60	94.34	106.08
27/05/2023 16:04	83.94	96.38	95.96	91.59	101.65
30/05/2023 13:26	99.98	109.07	97.50	96.36	99.67



Date and Time	Moses Crossing (dBL)	Jerrys Plains Village (dBL)	Maison Dieu (dBL)	Warkworth (dBL)	Knodlers Lane (dBL)
30/05/2023 13:28	91.43	106.51	97.08	100.22	102.64
31/05/2023 13:21	95.87	109.08	110.87	108.82	106.77



*Table 4 – Ground Vibration Blast Monitoring Results for the reporting period*

Date and Time	Moses Crossing (mm/s)	Jerrys Plains Village (mm/s)	Maison Dieu (mm/s)	Warkworth (mm/s)	Knodlers Lane (mm/s)
1/05/2023 13:26	0.15	0.07	0.28	0.87	0.29
2/05/2023 13:08	0.12	0.07	0.08	0.67	0.11
4/05/2023 13:03	0.12	0.06	0.09	1.11	0.11
5/05/2023 13:05	0.25	0.08	0.10	0.16	0.15
5/05/2023 14:44	0.17	0.16	0.08	0.09	0.13
6/05/2023 14:32	0.11	0.05	0.07	0.09	0.12
9/05/2023 13:52	0.31	0.11	0.44	1.29	0.5
10/05/2023 13:30	0.13	0.11	0.11	0.77	0.12
10/05/2023 13:33	0.13	0.10	0.09	0.12	0.12
11/05/2023 12:56	0.11	0.04	0.06	0.36	0.11
13/05/2023 15:00	0.15	0.08	0.08	0.18	0.12
15/05/2023 13:24	0.12	0.13	0.09	1.12	0.14
15/05/2023 13:25	0.12	0.09	0.07	0.68	0.12
18/05/2023 13:19	0.17	0.05	0.09	0.1	0.11
20/05/2023 13:05	0.10	0.04	0.05	0.18	0.11
20/05/2023 14:38	0.15	0.05	0.41	0.98	0.51
20/05/2023 15:58	0.10	0.04	0.05	0.11	0.11
24/05/2023 11:04	0.13	0.13	0.07	0.42	0.14
24/05/2023 13:18	0.16	0.07	0.38	0.66	0.54
25/05/2023 13:10	0.10	0.07	0.05	0.70	0.11
27/05/2023 16:04	0.16	0.21	0.09	0.11	0.12
30/05/2023 13:26	0.08	0.03	0.15	0.88	0.16
30/05/2023 13:28	0.13	0.06	0.34	0.86	0.34
31/05/2023 13:21	0.27	0.08	0.08	0.24	0.16

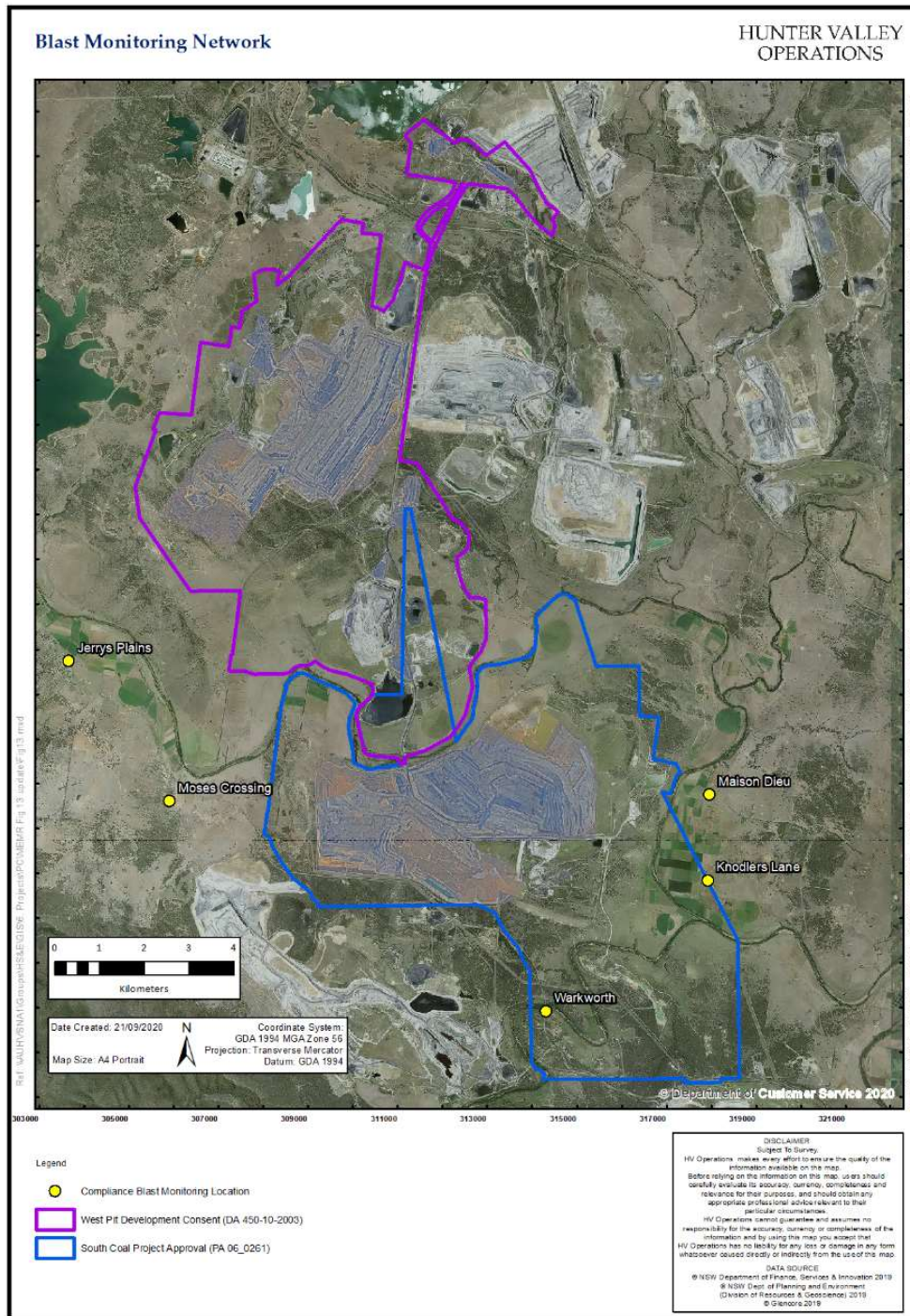


Figure 15 - Blast Monitoring Location Plan



## 5 | NOISE

Routine attended noise monitoring occurs at defined locations around HVO, as described in the HVO Noise Monitoring Program. The noise monitoring aims to quantify and describe the acoustic environment around the site and compare results with specified limits. The attended noise monitoring locations are displayed in **Figure 16**.

### 5.1 | ATTENDED NOISE MONITORING RESULTS

Attended monitoring was conducted at receiver locations around HVO during the night periods of the 17<sup>th</sup> of May 2023.

Compliance with the HVO noise impact limits ensures compliance with the land acquisition criteria. Therefore, since no noise impact exceedances occurred for the reporting period the land acquisition assessment has not been presented. These will only be reported in instances of noise impact exceedances.

Monitoring results are detailed in **Table 5** and **Table 6**.

Table 5 - LAeq,15minute and 1minute HVO North Against Impact Assessment Criteria for the Reporting Period

Location	Start date and time	Wind		Stability class	Very enhancing? <sup>1</sup>	HVO North limits, dB <sup>1</sup>		HVO North levels, dB		Exceedances, dB	
		Speed m/s	Direction <sup>3</sup>			L <sub>Aeq,15minute</sub>	L <sub>A1,1min</sub>	L <sub>Aeq,15minute</sub> <sup>2</sup>	L <sub>A1,1min</sub>	L <sub>Aeq,15minute</sub>	L <sub>A1,1min</sub>
Shearers Lane	17/05/2023 21:06	1.7	139	F	Yes	35	46	IA	IA	Nil	Nil
Knodlers Lane	17/05/2023 21:45	0.2	157	E	Yes	35	46	IA	IA	Nil	Nil
Maison Dieu	17/05/2023 21:26	1.0	147	D	Yes	35	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	17/05/2023 22:32	1.1	193	E	No	35	46	IA	IA	Nil	Nil
Kilburnie South	17/05/2023 23:20	0.2	300	D	No	39	46	IA	IA	Nil	Nil
Jerrys Plains East	17/05/2023 22:57	0.6	351	F	No	39	46	IA	IA	Nil	Nil
Jerrys Plains Village	17/05/2023 21:23	1.0	147	D	Yes	40	46	IA	IA	Nil	Nil
Jerrys Plains West	17/05/2023 21:00	1.7	139	F	Yes	40	46	IA	IA	Nil	Nil
*Kilburnie South	04/05/2023 21:01	1.2	131	D	Yes	39	46	NM	NM	Nil	Nil
*Jerrys Plains East	04/05/2023 21:22	1.0	134	D	Yes	39	46	IA	IA	Nil	Nil
*Jerrys Plains Village	04/05/2023 21:43	1.4	150	D	Yes	40	46	<30	33	Nil	Nil

- Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfl.
- Site-only LAeq,15minute, includes modifying factor penalties if applicable.
- Degrees magnetic north, "-" indicates calm conditions.

\* Condition 10.(e) of the HVO North consent requires a minimum of four days of attended monitoring per quarter. An additional round of monitoring occurs once per quarter at the Jerrys Plains East, Jerrys Plains Village, and Kilburnie South monitoring locations to satisfy this requirement.

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**Owner:** Environment and Community Officer

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Table 6 - LAeq,15minute and 1minute HVO South Against Impact Assessment Criteria for the Reporting Period

Location	Start date and time	Wind		Stability class	Very enhancing? <sup>1</sup>	HVO South limits, dB <sup>1</sup>		HVO South levels, dB		Exceedances, dB	
		Speed m/s	Direction <sup>3</sup>			LAeq,15minute	LA1,1min	LAeq,15minute <sup>2</sup>	LA1,1min	LAeq,15minute	LA1,1min
Shearers Lane	17/05/2023 21:06	3.3	144	D	No	41	45	<30	30	NA	NA
Knodlers Lane	17/05/2023 21:45	2.5	160	D	No	40	45	<25	30	NA	NA
Maison Dieu	17/05/2023 21:26	3.2	163	E	No	39	45	<30	35	NA	NA
Long Point (Dights Crossing)	17/05/2023 22:32	1.5	166	E	Yes	37	45	IA	IA	Nil	Nil
Kilburnie South	17/05/2023 23:20	0.8	149	F	Yes	39	45	IA	IA	Nil	Nil
Jerrys Plains East	17/05/2023 22:57	0.7	203	E	Yes	38	45	IA	IA	Nil	Nil
Jerrys Plains Village	17/05/2023 21:23	3.2	163	E	No	35	45	IA	IA	NA	NA
Jerrys Plains West	17/05/2023 21:00	3.3	144	D	No	35	45	IA	IA	NA	NA
HVGC	17/05/2023 23:50	0.8	23	F	Yes	55	NA	<35	46	Nil	NA

- Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfl.
- Site-only LAeq,15minute, includes modifying factor penalties if applicable.
- Degrees magnetic north, "-" indicates calm conditions.

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## 5.2 | 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. No penalties were applied for monitoring undertaken through the reporting period. The assessments for the low frequency noise are shown in **Table 7** and **Table 8**.

*Table 7 - Modifying Factor Assessment HVO North for the Reporting Period*

Location	Start date and time	Measured HVO South L <sub>Aeq</sub> dB	Very enhancing? <sup>1</sup>	Intermittency modifying factor?	Tonality modifying factor?	Frequency of tonality	Low-frequency modifying factor? <sup>1,2</sup>	Exceedance of reference spectrum <sup>2,3</sup>	Total penalty dB <sup>2,3</sup>
Shearers Lane	17/05/2023 21:06	IA	Yes	No	No	NA	No	NA	Nil
Knodlers Lane	17/05/2023 21:45	IA	Yes	No	No	NA	No	NA	Nil
Maison Dieu	17/05/2023 21:26	IA	Yes	No	No	NA	No	NA	Nil
Long Point (Dights Crossing)	17/05/2023 22:32	IA	Yes	No	No	NA	No	NA	Nil
Kilburnie South	17/05/2023 23:20	IA	Yes	No	No	NA	No	NA	Nil
Jerrys Plains East	17/05/2023 22:57	IA	Yes	No	No	NA	No	NA	Nil
Jerrys Plains Village	17/05/2023 21:23	IA	Yes	No	No	NA	No	NA	Nil
Jerrys Plains West	17/05/2023 21:00	IA	Yes	No	No	NA	No	NA	Nil
*Kilburnie South	04/05/2023 21:43	NM	Yes	No	No	NA	No	NA	Nil
*Jerrys Plains East	04/05/2023 21:22	IA	Yes	No	No	NA	No	NA	Nil
*Jerrys Plains Village	04/05/2023 21:01	<30	Yes	No	No	NA	No	NA	Nil

1. Low-frequency modifying factors are not applicable during 'very noise-enhancing meteorological conditions' in accordance with the NPfI.

2. NA denotes 'not applicable'.

3. Bold results indicate that application of NPfI modifying factor(s) is required.

\* Condition 10.(e) of the HVO North consent requires a minimum of four days of attended monitoring per quarter. An additional round of monitoring occurs once per quarter at the Jerrys Plains East, Jerrys Plains Village, and Kilburnie South monitoring locations to satisfy this requirement



Table 8 - Modifying Factor Assessment HVO South for the Reporting Period

Location	Start date and time	Measured HVO South LAeq dB	Very enhancing? <sup>1</sup>	Intermittency modifying factor?	Tonality modifying factor?	Frequency of tonality	Low-frequency modifying factor? <sup>1,2</sup>	Exceedance of reference spectrum <sup>2,3</sup>	Total penalty dB <sup>2,3</sup>
Shearers Lane	17/05/2023 21:06	IA	No	No	No	NA	NA	NA	Nil
Knodlers Lane	17/05/2023 21:45	IA	Yes	No	No	NA	No	NA	Nil
Maison Dieu	17/05/2023 21:26	IA	No	No	No	NA	NA	NA	Nil
Long Point (Dights Crossing)	17/05/2023 22:32	IA	Yes	No	No	NA	No	NA	Nil
Kilburnie South	17/05/2023 23:20	IA	Yes	No	No	NA	No	NA	Nil
Jerrys Plains East	17/05/2023 22:57	IA	Yes	No	No	NA	No	NA	Nil
Jerrys Plains Village	17/05/2023 21:23	IA	No	No	No	NA	NA	NA	Nil
Jerrys Plains West	17/05/2023 21:00	IA	No	No	No	NA	NA	NA	Nil
HVGC	17/05/2023 23:50	<35	Yes	No	No	NA	No	NA	Nil

1. NA denotes 'not applicable'; and

2. Bold results indicate that application of NPfl modifying factor/s is required

### 5.3 | REAL TIME NOISE MONITORING

HVO utilises a network of real-time directional noise monitors to manage noise impacts on a continuous basis, shown in **Figure 16**. 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 that require investigation.

HVO investigates and responds to noise alarms with appropriate modification to operations. Changes in response to a noise alarm can include replacing equipment with alternative units, changing or relocating tasks, or shutting down equipment. It should be noted that this assessment does not compliment or conflict with attended noise monitoring detailed in **Section 5.1**]. Real time monitoring data includes non-mine noise sources such as animals, road traffic and weather.

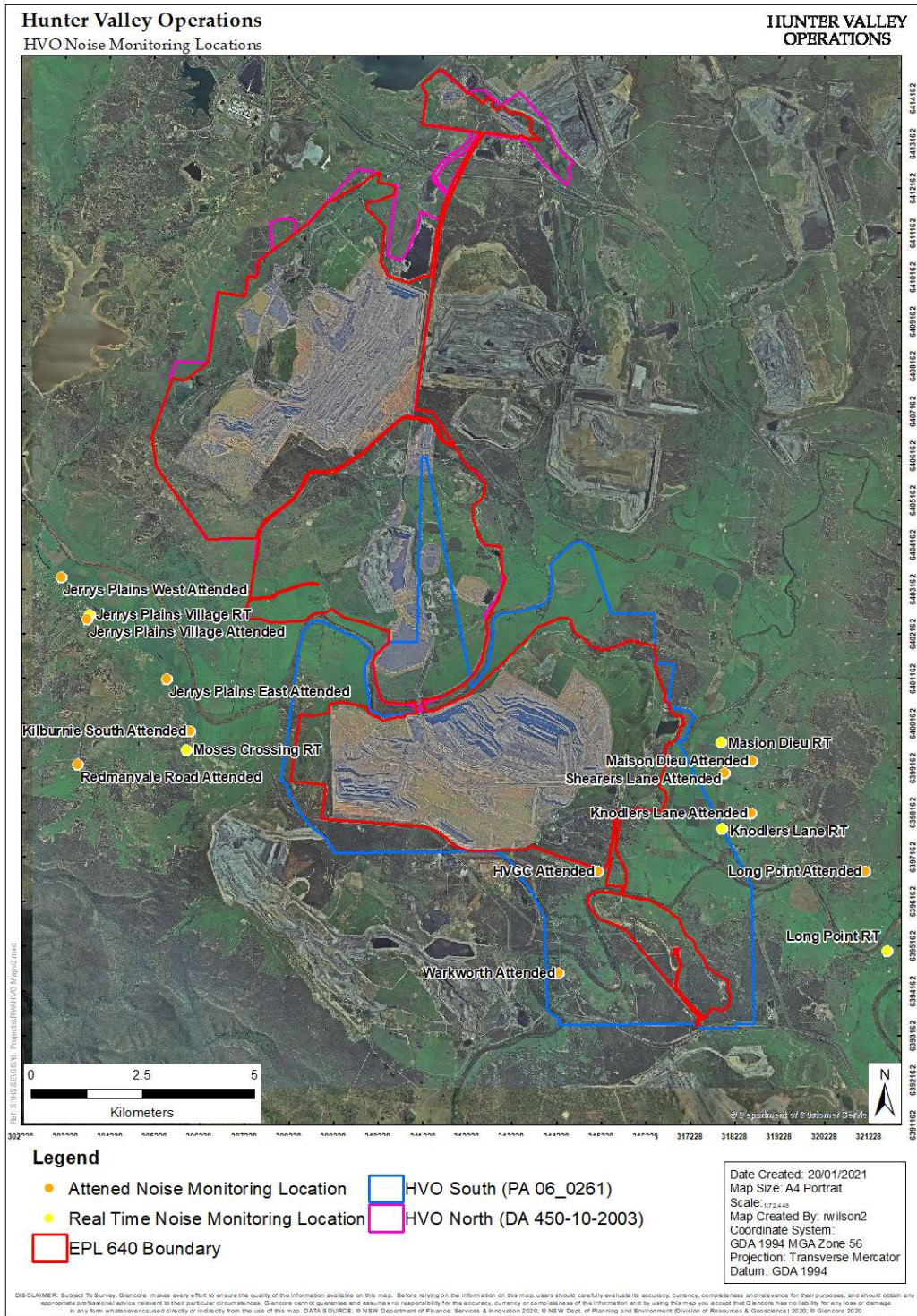


Figure 16 - Noise Monitoring Location Plan

## 6 | OPERATIONAL DOWNTIME

A total of 799 hours of equipment downtime was logged in response to real time monitoring and inspections for environmental factors such as noise and dust during the reporting period. Operational downtime by equipment type is shown in **Figure 17**. Note that these delays are instances where operations were completely stopped and does not include occasions where operations were changed/modified but not stopped (e.g. changed from exposed dump to in-pit dump).

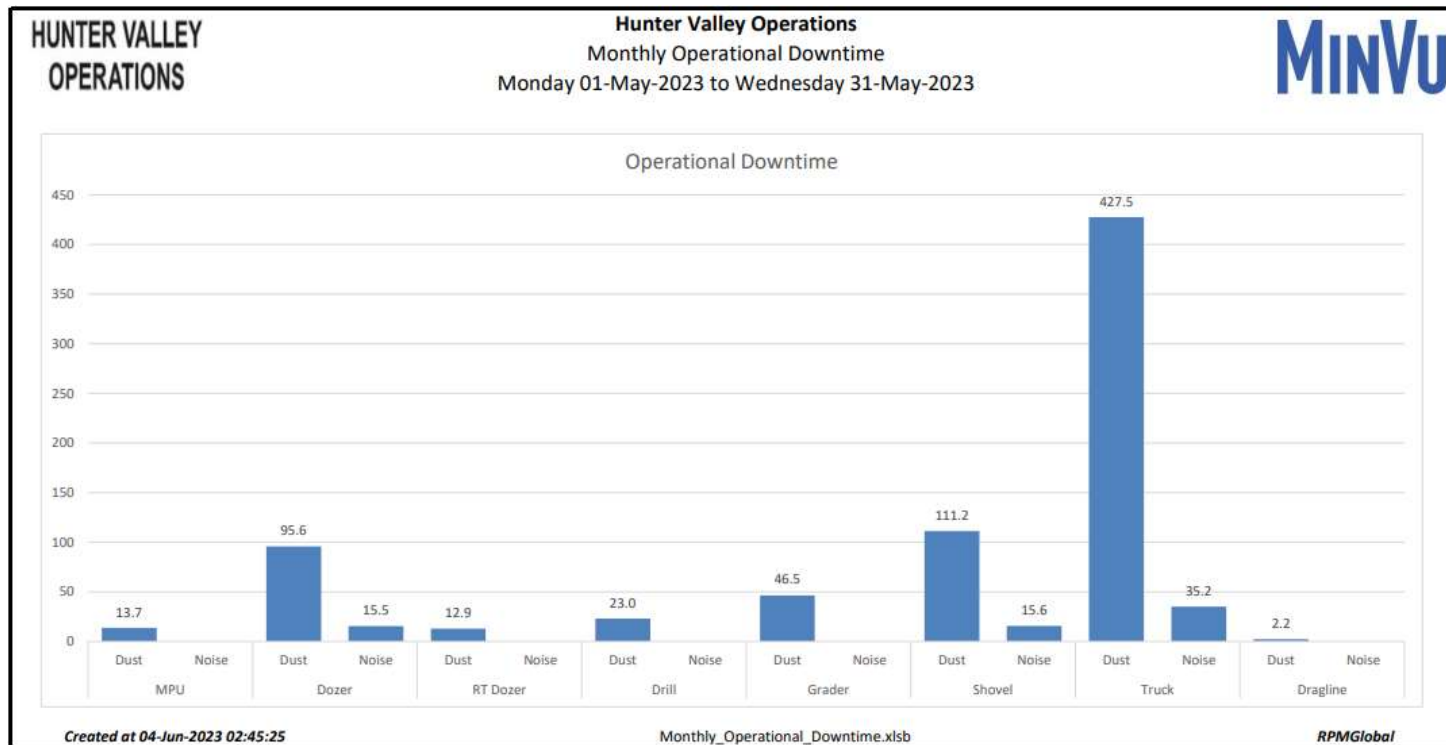


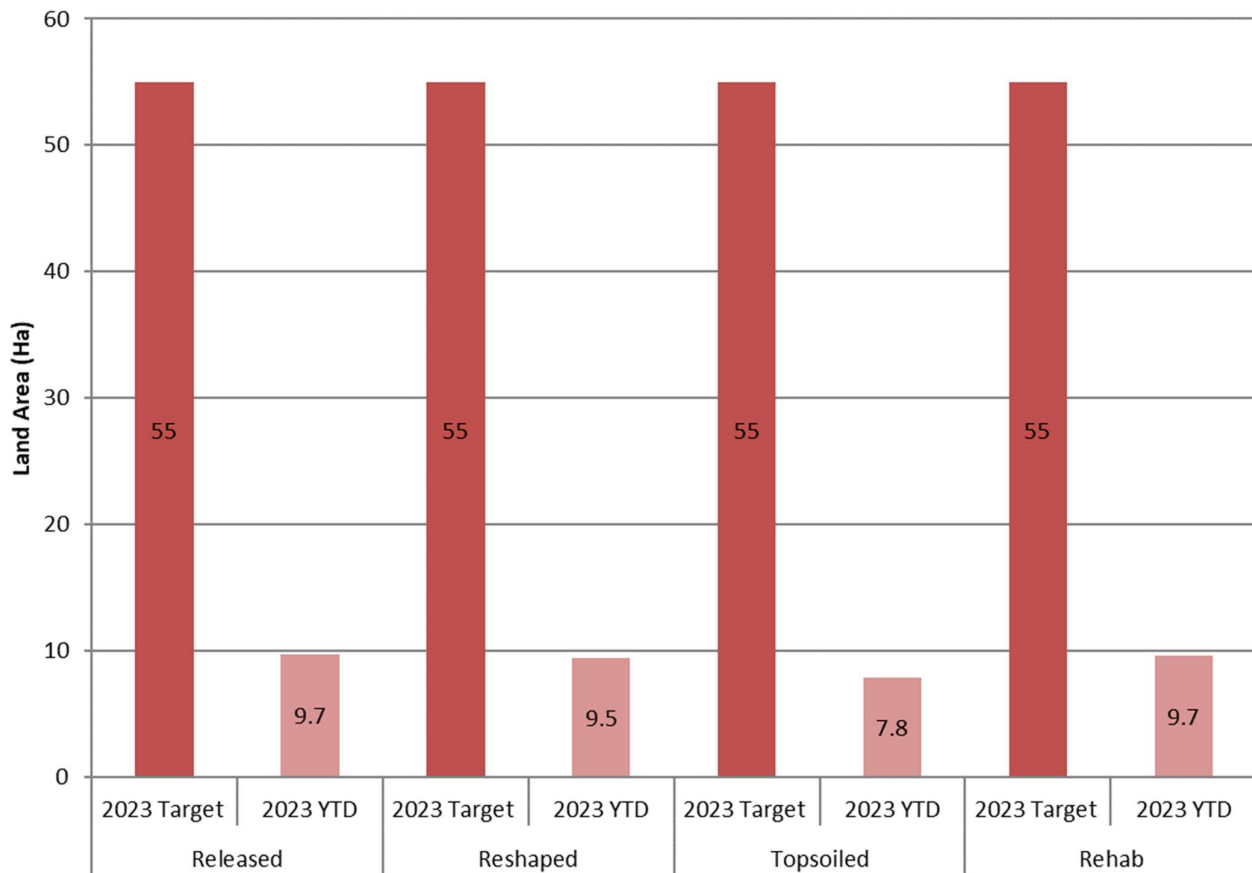
Figure 17 - Operational Downtime by Equipment Type for the Reporting Period

## 7 | REHABILITATION

The following activities related to rehabilitation were completed during the reporting period:

- 1.65 Ha of land was reshaped
- 1.65 Ha of land was released (became available for the application of topsoil)
- 0.00 Ha of land was topsoiled
- 0.00 Ha of land was rehabilitated

Year to date progress is shown in **Figure 18**.



*Figure 18 - Rehabilitation YTD May 2023*



## 8 | COMPLAINTS

There were no complaints during the reporting period.

Details of complaints received from 2023 are shown in **Table 9**.

*Table 9 - Complaints Summary 2023*

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
No community complaints were received in January.						
1	1 February	12:06am	1	Lighting	Community Hotline	<ul style="list-style-type: none"> <li>A complainant of Long Point called the Community Complaints Hotline at 12.06am regarding a lighting complaint, commenting that "light from HVO was shining directly into their house keeping their family awake".</li> <li>The OCE contacted the complainant at 12:27am and shutdown the lighting plant identified to be causing the disturbance. This was verified by the complainant.</li> <li>An internal investigation conducted following the complaint found that the light from the lighting plant was likely to be visible from the complainant's location. Process changes have been made as a result of the complaint to close the identified gap in operational practices.</li> </ul>
No community complaints were received in March.						

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
2	11 April	7:11am	2	Traffic	Community Hotline	<ul style="list-style-type: none"> <li>A member of the public was driving east along Golden Highway near the entrance to HVO South, when a train of four cars pulled out in front of them.</li> <li>The complainant reported that the last car to pull out failed to give way to them which forced them to take evasive action to prevent a collision.</li> <li>An internal investigation conducted following the complaint identified the driver of the vehicle. The employees supervisor notified them of the complaint and the importance of safe driving practices when travelling to and from site. A sitewide communications went out to HVO employees stating the importance of safe driving practices.</li> </ul>
3	29 April	1:40pm	1	Dust	Community Hotline	<ul style="list-style-type: none"> <li>A complainant from Long Point made a complaint about dust following a blast fired at 1.30 pm from HVO.</li> <li>The OCE contacted the complainant who asked what was going on to create the dust he saw, the OCE advised that a blast had just taken place.</li> <li>The blast was fired in accordance with HVO blasting permissions. The wind direction and wind speed at the time of the blast was 2.7m/s and 268 degrees respectively.</li> </ul>
No community complaints were received in May.						

## **9 | ENVIRONMENTAL INCIDENTS**

There was one reportable environmental incident during the reporting period:

- **5/5/2023 – Kilburnie South TSP and PM10 HVAS run failure**

It was identified that the Kilburnie South TSP and PM10 HVAS failed to run for the full monitoring period on 5 May 2023. During the monitoring period, a technician visited the sites to check the operating status of the two units. It was identified that the TSP and PM10 monitors both displayed a “Filter blocked” and “Motor drive” error message. The technician restarted the monitors where they ran without issue for the remainder of the monitoring period. The monitor programmes indicated they had both run for a total 9 hours during the monitoring period.

An inspection of the unit set up and power supply was completed with no issues being detected. The units were reset ready to run for the next scheduled run day. Due to the ongoing issues at this location HVO engaged an alternate electrician to assess the power supply. The monitors have successfully operated on subsequent run days in May.



**APPENDIX A: METEOROLOGICAL DATA**

Date	Air Temp Max (°C)	Air Temp Min (°C)	Relative Humidity (Max %)	Relative Humidity (Min %)	Solar Radiation Maximum (W/Sq. M)	Average Wind Direction (°)	Average Wind Speed (m/sec)	Rainfall (mm)
1/05/2023	17.15	8.78	82.6	45.89	883.0	280.9	4.04	0
2/05/2023	20.91	10.63	80.5	39.11	964.0	283.9	3.88	0
3/05/2023	22.25	11.24	84.8	32.87	909.0	279.1	5.12	0
4/05/2023	20.37	9.53	69.3	24.75	704.6	220.2	1.81	0
5/05/2023	21.20	5.93	84.1	28.61	753.6	235.7	1.07	0
6/05/2023	21.43	7.29	72.6	23.85	684.2	265.9	2.10	0
7/05/2023	16.16	7.06	77.5	26.34	910.0	277.0	4.24	0
8/05/2023	16.27	5.63	67.6	30.11	662.8	286.0	4.64	0
9/05/2023	19.15	5.45	69.9	36.84	664.7	231.5	2.30	0
10/05/2023	19.08	6.25	83.3	36.37	653.0	185.9	1.48	0
11/05/2023	19.71	6.43	91.8	47.66	639.1	172.3	1.34	0
12/05/2023	23.14	7.53	95.5	28.8	708.5	214.1	1.08	0
13/05/2023	20.47	7.90	92.3	38.42	848.0	143.8	1.45	0
14/05/2023	19.86	9.40	93.8	52.73	880.0	121.3	1.68	0
15/05/2023	18.62	10.71	95.3	59.82	878.0	130.8	0.88	0
16/05/2023	20.66	9.80	96.3	33.64	609.6	188.4	1.23	0
17/05/2023	16.09	8.13	90.2	51.85	810.0	147.8	1.89	0.2
18/05/2023	17.61	7.36	85.1	45.77	785.2	194.9	1.16	0.2
19/05/2023	17.30	5.86	92.1	31.61	729.9	285.0	2.24	0
20/05/2023	17.39	4.62	71.6	36.36	571.0	285.3	3.34	0
21/05/2023	17.48	9.83	64.7	34.92	731.6	281.3	4.65	0
22/05/2023	19.54	6.71	76.8	25.3	580.1	283.1	2.36	0
23/05/2023	22.04	6.45	80.8	13.47	594.0	227.5	1.76	0
24/05/2023	22.63	5.06	84.5	11.62	619.5	279.0	2.50	0
25/05/2023	23.60	6.86	47.1	13.79	811.0	287.4	3.73	0
26/05/2023	18.60	7.98	88.9	21.26	741.3	245.8	3.28	0.8
27/05/2023	16.76	4.97	83.2	26.05	577.2	278.8	3.08	0
28/05/2023	15.05	3.62	74.0	39.11	763.5	290.7	3.31	0
29/05/2023	19.45	8.04	64.3	33.57	837	287.8	3.38	0
30/05/2023	20.16	7.86	81.0	34.63	613.4	279.9	3.45	0
31/05/2023	19.90	8.67	75.8	42.77	663.5	285.6	3.47	0