

HUNTER VALLEY
OPERATIONS

**MONTHLY
ENVIRONMENTAL
MONITORING REPORT
APRIL 2023**

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[Planned Review Date]

OWNER

Environment and Community Coordinator



1 | Introduction..... 4

2 | Air Quality 4

 2.1 | Meteorological Monitoring..... 4

 2.1.1 | Rainfall 4

 2.1.2 | Wind Speed and Direction 5

 2.2 | Depositional Dust..... 7

 2.3 | Suspended Particles 8

 2.3.1 | HVAS PM₁₀ Results 8

 2.3.2 | HVAS PM_{2.5} Results 10

 2.3.3 | TSP Results 12

 2.3.4 | Real Time PM₁₀ Results 12

 2.3.5 | Real Time Alarms for Air Quality 14

3 | Water Quality..... 15

 3.1 | Surface Water 15

 3.1.1 | Surface Water Trigger Tracking 17

 3.2 | Site Water Use..... 17

 3.3 | HRSTS Discharge..... 17

 3.4 | Groundwater Monitoring Results..... 17

 3.4.1 | Groundwater Trigger Tracking 19

4 | Blasting..... 20

 4.1 | Blast Monitoring Results 21

5 | Noise 24

 5.1 | Attended Noise Monitoring Results..... 24

 5.2 | Low Frequency Assessment..... 27

 5.3 | Real Time Noise Monitoring..... 29

6 | Operational Downtime 31

7 | Rehabilitation..... 32

8 | Complaints 33

9 | Environmental Incidents 35



Appendix A: Meteorological Data 36

Table of Figures

Figure 1 - Rainfall Summary 2023 4
Figure 2 - HVO Corporate Wind Rose for the Reporting Period 5
Figure 3 - HVO Cheshunt Wind Rose for the Reporting Period 5
Figure 4 - Air Quality Monitoring Location Plan 6
Figure 5 - Depositional Dust Results for the Reporting Period 7
Figure 6 - Individual PM10 Results for the Reporting Period 8
Figure 7 - Year to Date Average PM10 as at end of the Reporting Period 9
Figure 8 - Results for the Reporting Period 10
Figure 9 - Year to Date Average PM2.5 as at end of the Reporting Period 11
Figure 10 - Year to Date Average Total Suspended Particulates as at end of the Reporting Period 12
Figure 11 - Real Time PM10 24hr for the Reporting Period 13
Figure 12 - Real Time PM10 Annual Average for the Reporting Period 14
Figure 13 - HVO Surface Water Monitoring Locations 16
Figure 14 - Groundwater Monitoring Locations at HVO 18
Figure 15 - Blast Monitoring Location Plan 23
Figure 16 - Noise Monitoring Location Plan 30
Figure 17 - Operational Downtime by Equipment Type for the Reporting Period 31
Figure 18 - Rehabilitation YTD February 2023 32
Table 1 - Rainfall data for the reporting period 4
Table 2 - Blasting Criteria 20
Table 3 - Overpressure Blast Monitoring Results for the reporting period 21
Table 4 - Ground Vibration Blast Monitoring Results for the reporting period 22
Table 5 - LAeq,15minute and 1minute HVO North Against Impact Assessment Criteria for the Reporting Period 25
Table 6 - LAeq,15minute and 1minute HVO South Against Impact Assessment Criteria for the Reporting Period 26
Table 7 - Modifying Factor Assessment HVO North for the Reporting Period 27
Table 8 - Modifying Factor Assessment HVO South for the Reporting Period 28



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 1st to 30th April 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 - Rainfall Summary 2023.

Table 1 - Rainfall data for the reporting period

2023	Monthly Rainfall (mm)	Cumulative Rainfall (mm)
April	33.6	238.40

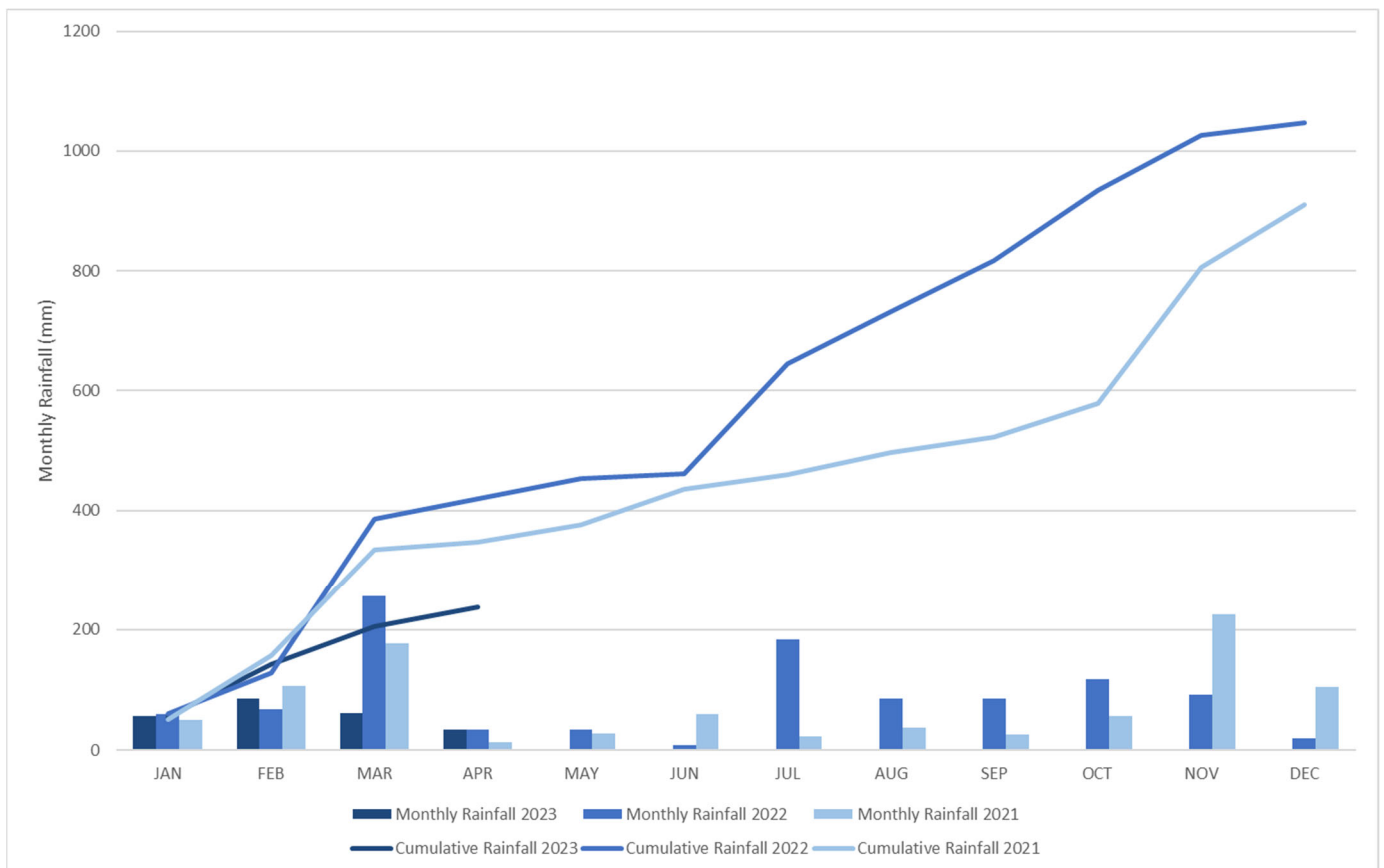


Figure 1 - Rainfall Summary 2023



2.1.2 | WIND SPEED AND DIRECTION

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

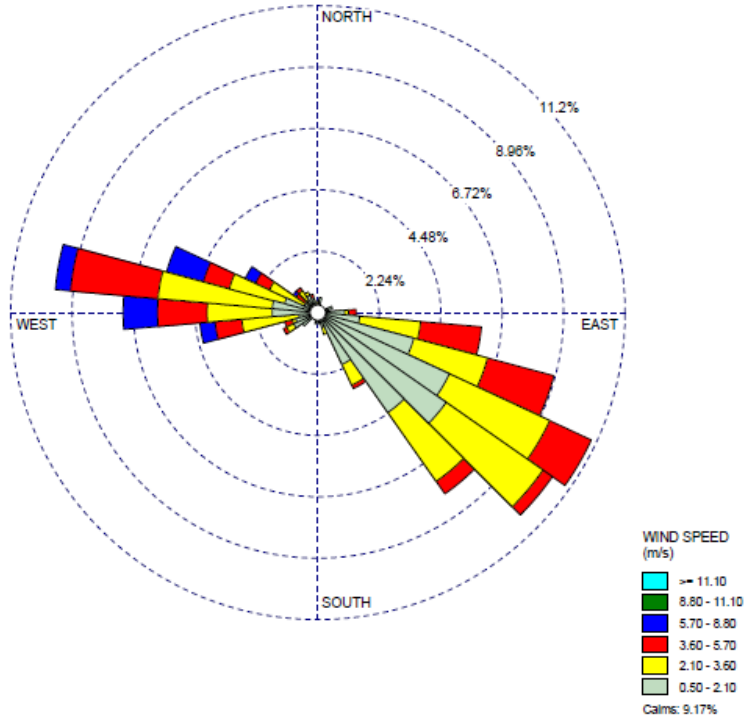


Figure 2 – HVO Corporate Wind Rose for the Reporting Period

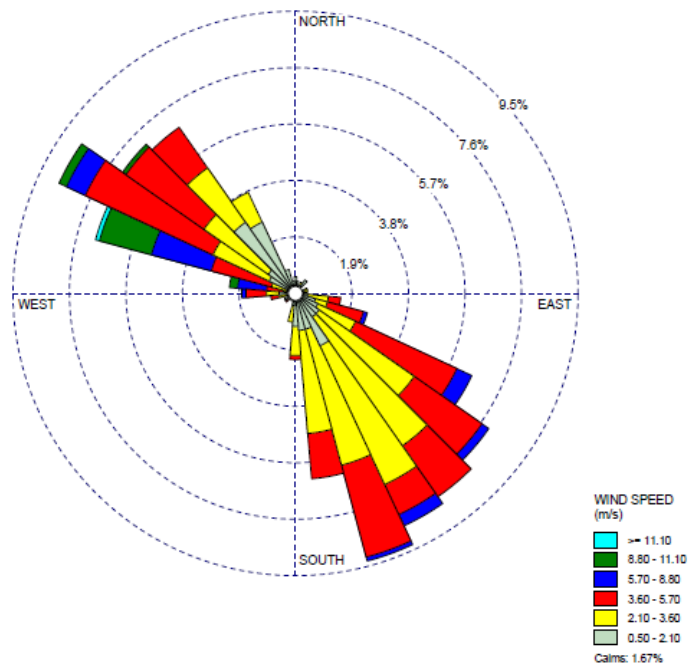


Figure 3 – HVO Cheshunt Wind Rose for the Reporting Period

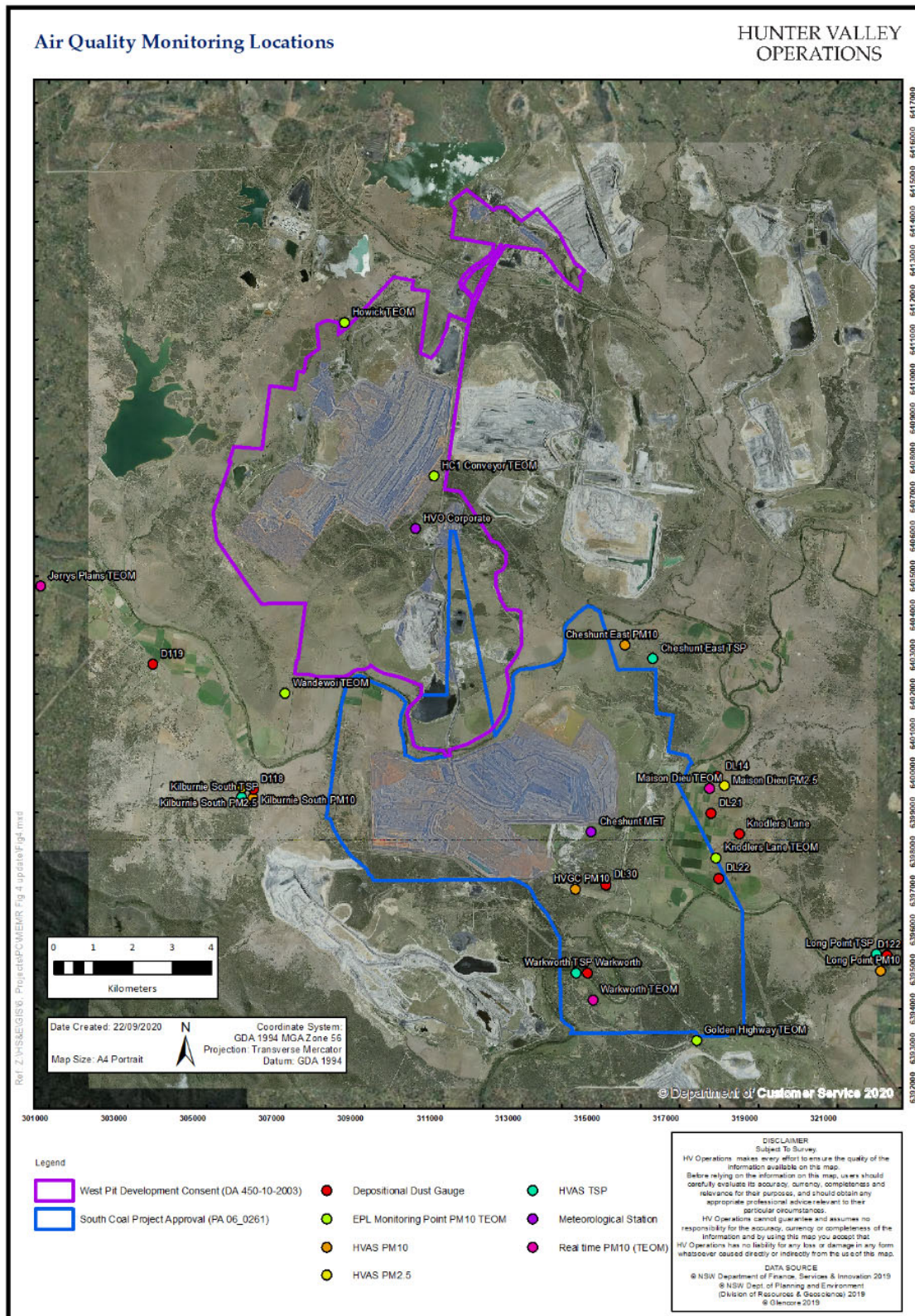


Figure 4 – Air Quality Monitoring Location Plan

Number: HVOOC-1797567310-4661
Owner: Environment and Community Coordinator

Status: Approved
Version: 1.0

Effective: 06/06/2023
Review: [Planned Review Date]



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.

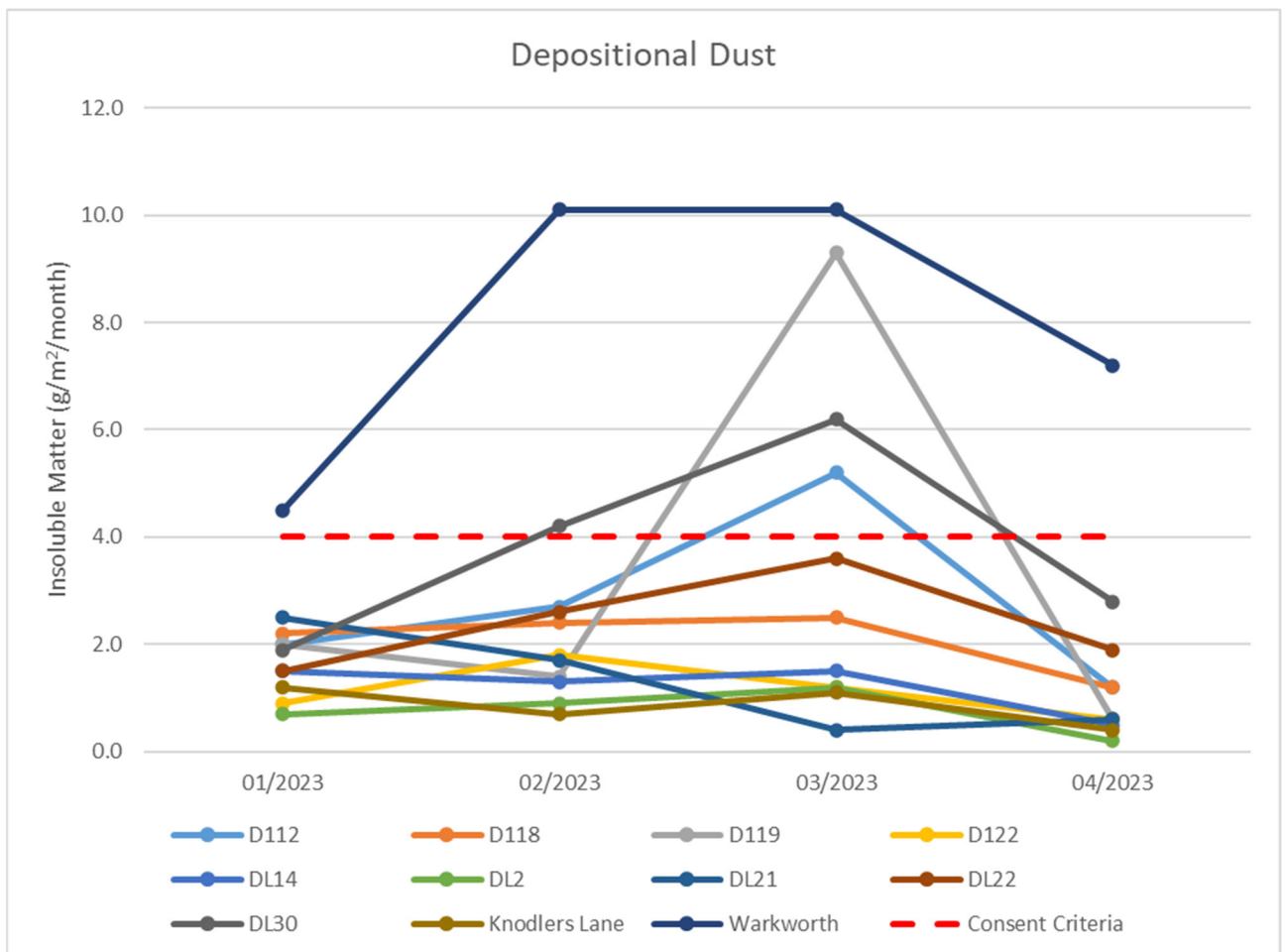


Figure 5 - Depositional Dust Results for the Reporting Period

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 PM₁₀ RESULTS

2.3.1.1 | PERFORMANCE AGAINST SHORT TERM IMPACT ASSESSMENT CRITERIA

Figure 6 shows individual PM₁₀ results at each monitoring station against the short-term impact assessment criteria of 50µg/m³.

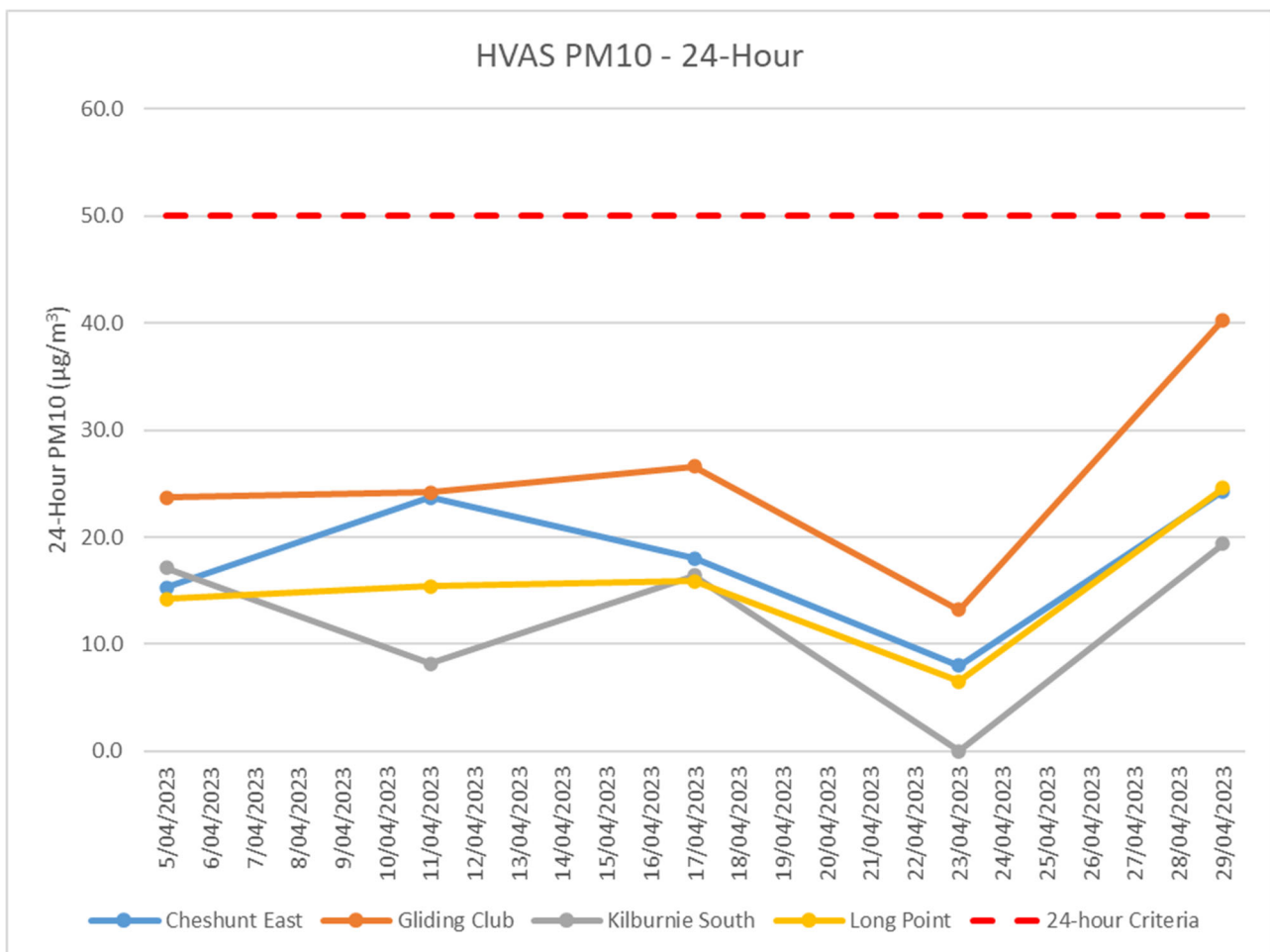


Figure 6 – Individual PM₁₀ Results for the Reporting Period



2.3.1.2 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA

Figure 7 shows the year-to-date annual average PM₁₀ 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.

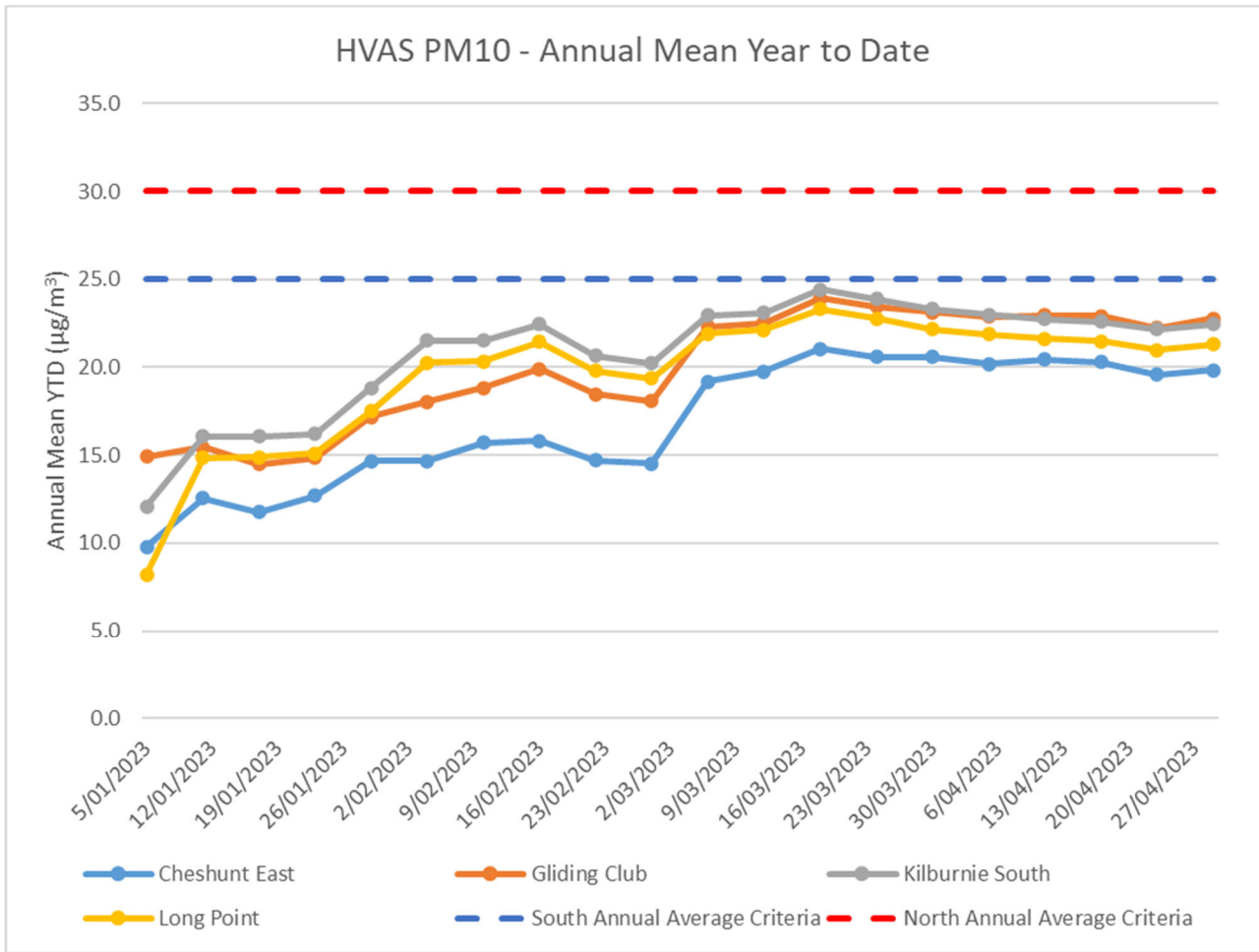


Figure 7 – Year to Date Average PM₁₀ as at end of the Reporting Period

2.3.2 | HVAS PM_{2.5} RESULTS

HVO monitors PM_{2.5} at two HVAS locations, Kilburnie South and Maison Dieu.

2.3.2.1 | HVAS PM_{2.5} RESULTS

Figure 8 shows individual PM_{2.5} results at each monitoring station against the HVO South short-term impact assessment criteria of 25µg/m³. 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.

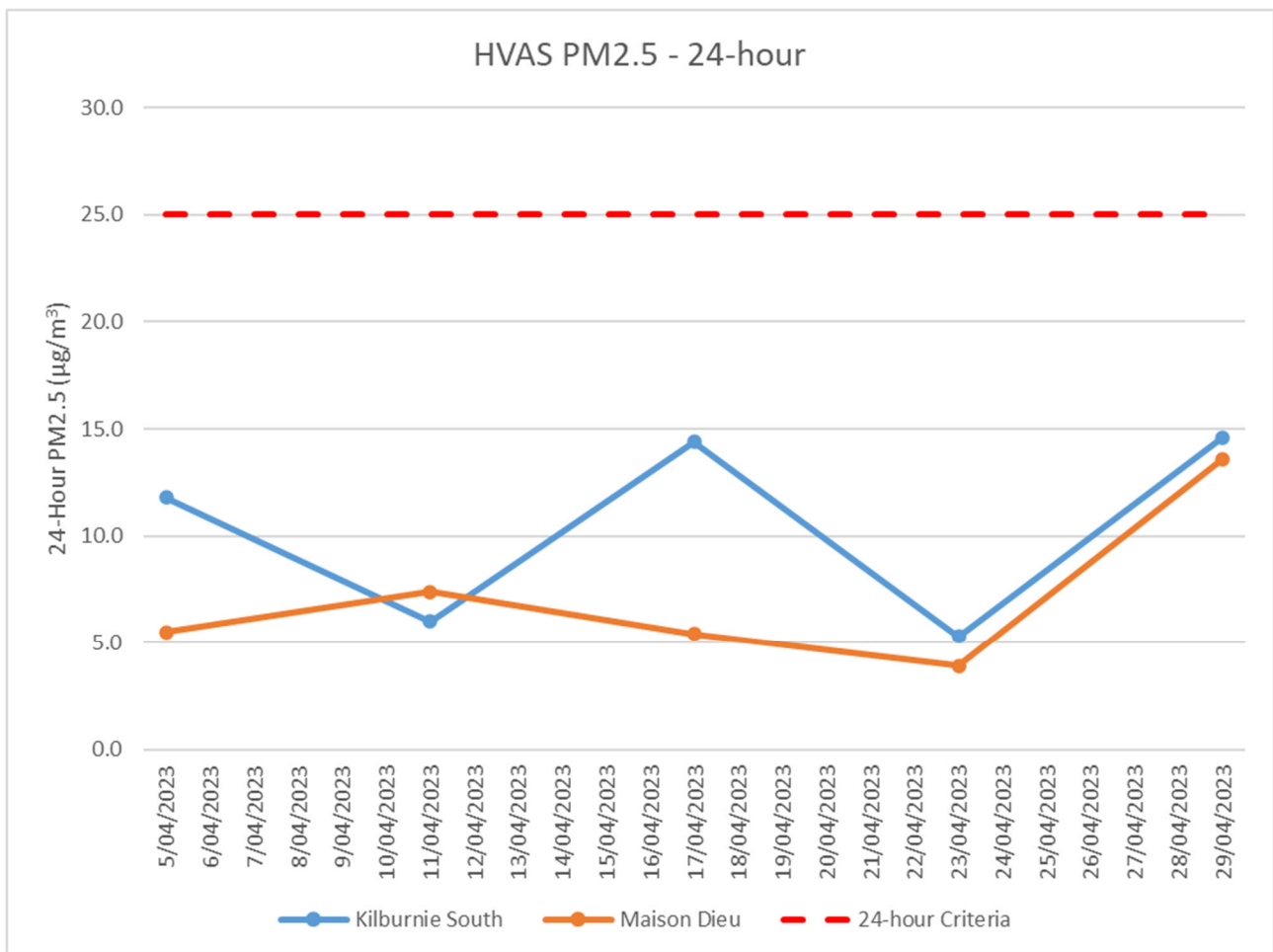


Figure 8 - Results for the Reporting Period



2.3.2.2 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA

Figure 9 shows the year-to-date annual average PM_{2.5} results. During the reporting period, the Maison Dieu monitor and Kilburnie South monitor annual average year to date were above the PM_{2.5} Annual Rolling Mean criteria of 8µg/m³.

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

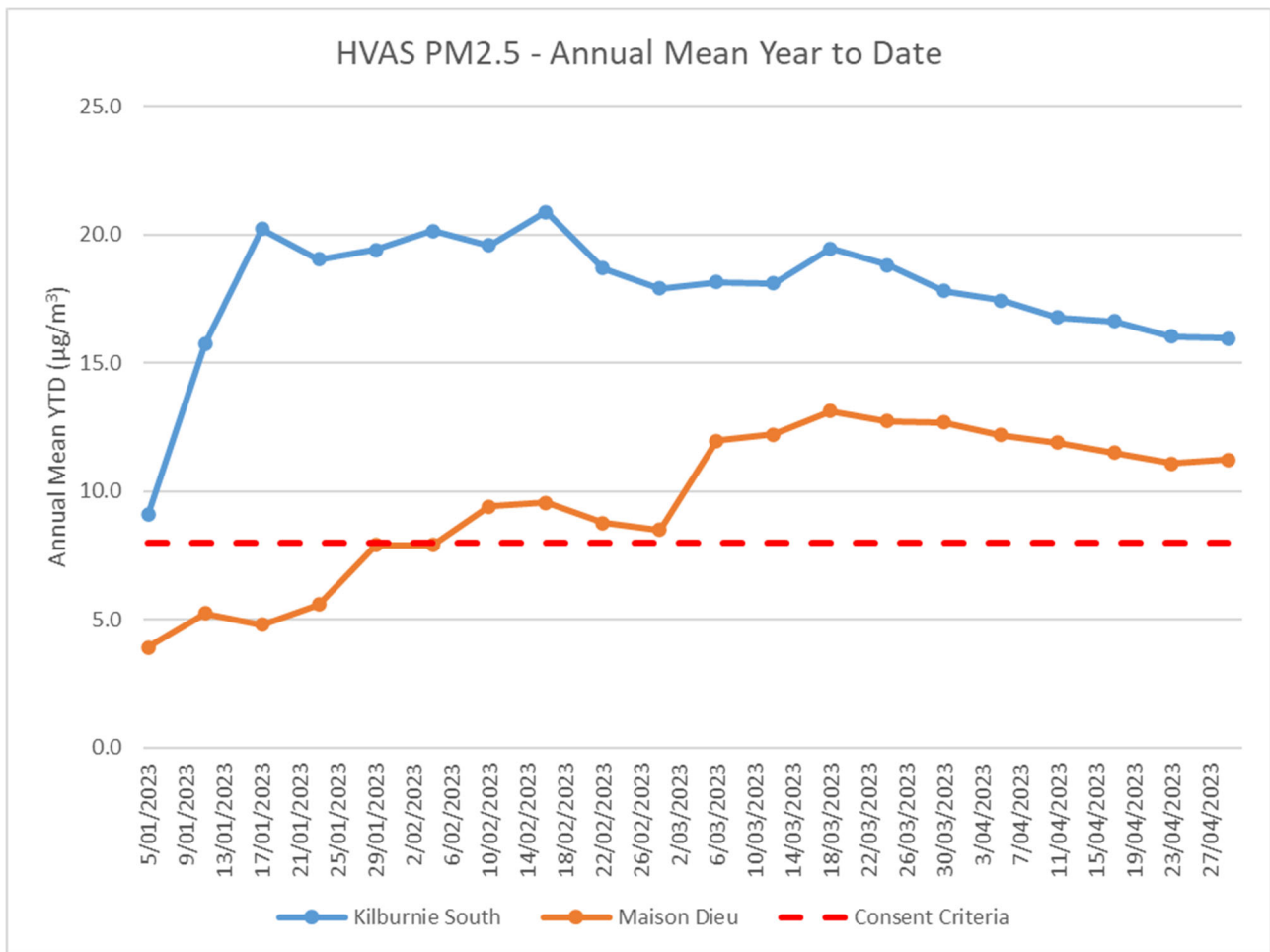


Figure 9 - Year to Date Average PM_{2.5} as at end of the Reporting Period



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 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.

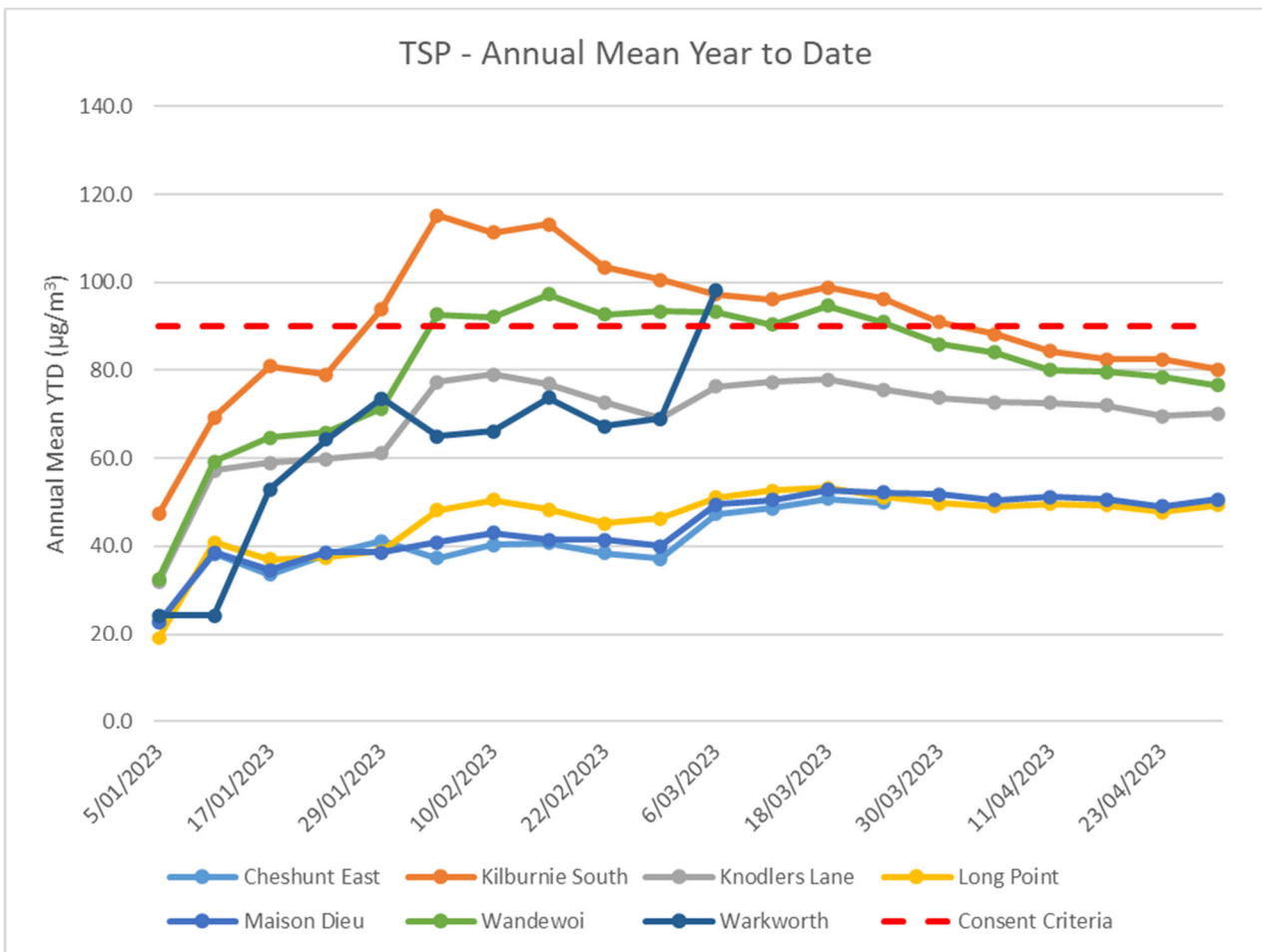


Figure 10 - Year to Date Average Total Suspended Particulates as at end of the Reporting Period

2.3.4 | REAL TIME PM10 RESULTS

HVO maintains a network of real time PM10 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 PM10 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 PM10 result from the real time monitoring sites which shows no exceedances for the reporting period.



The year to date annual averages for each monitoring site are shown in Figure 12.

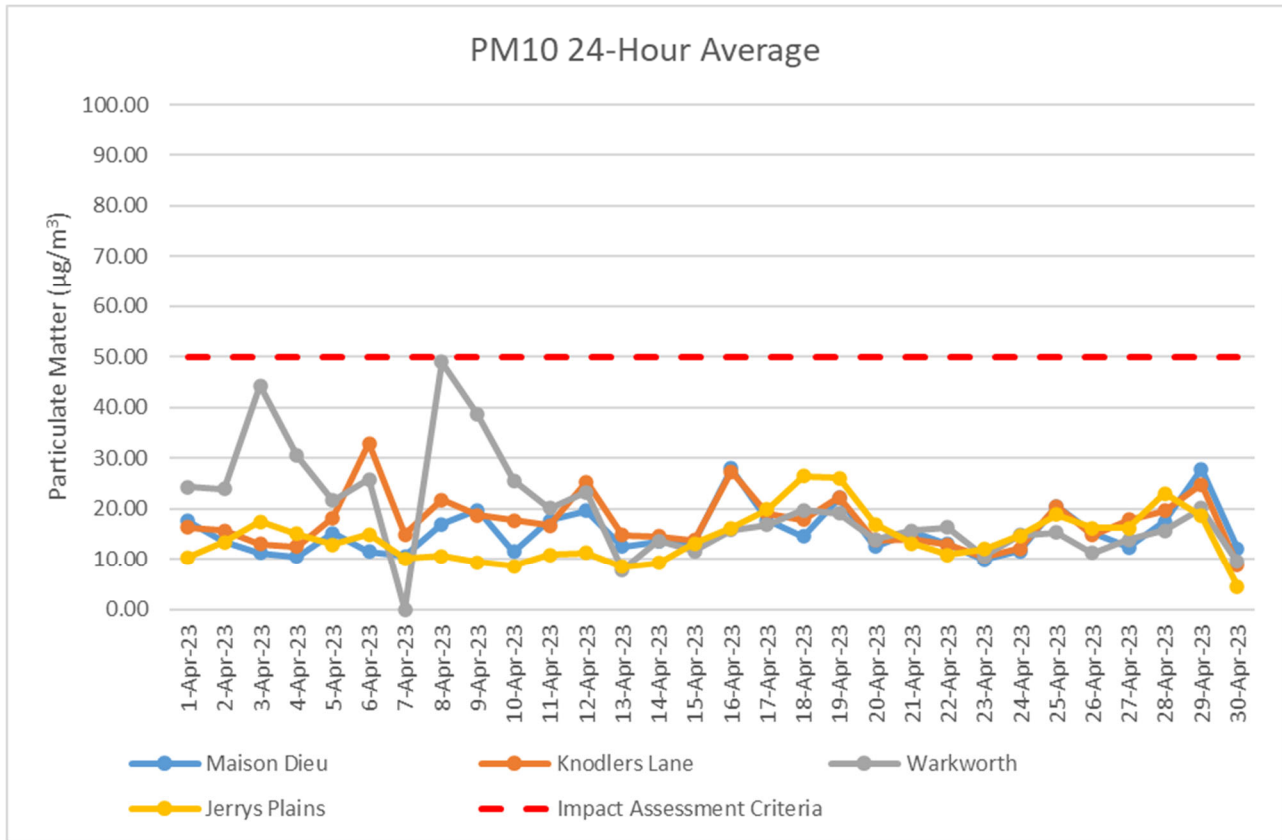


Figure 11 – Real Time PM₁₀ 24hr for the Reporting Period

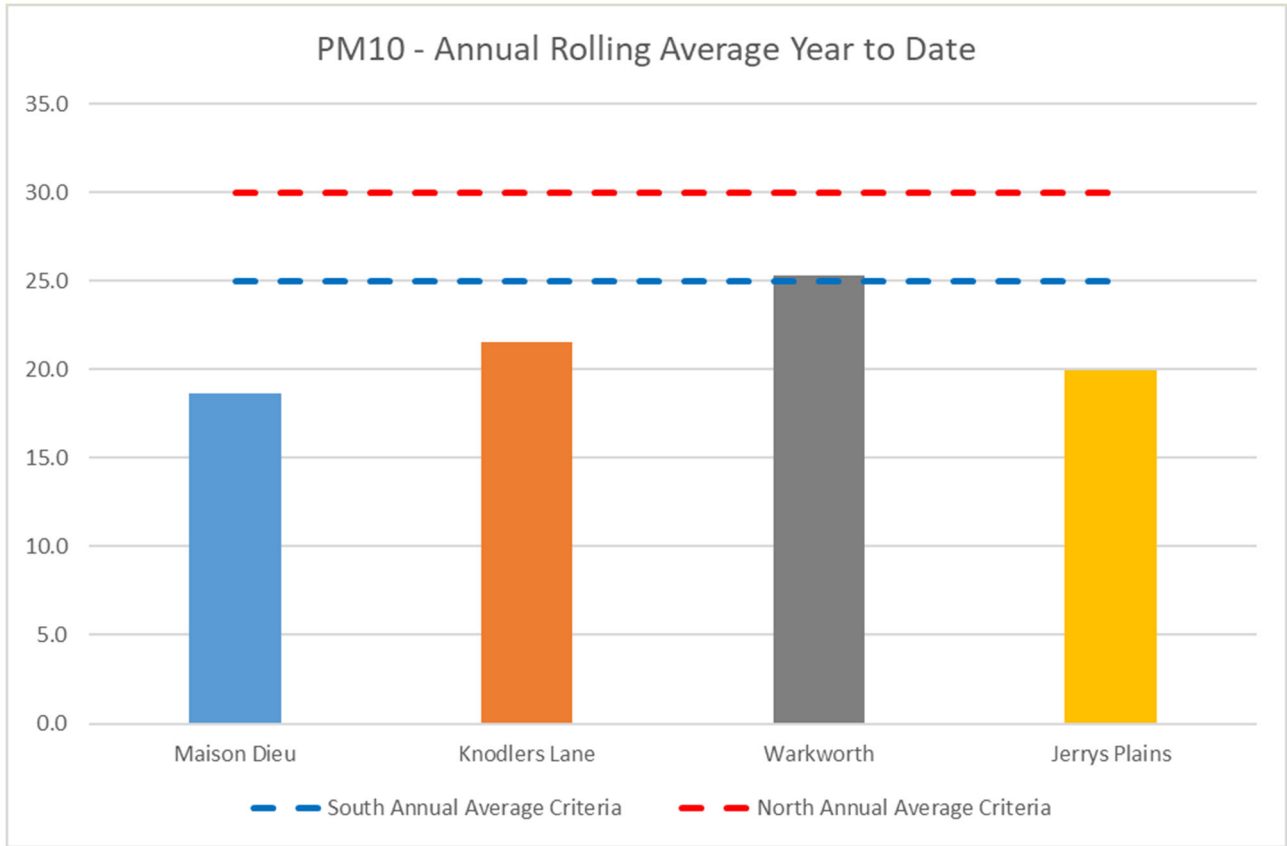


Figure 12 – Real Time PM₁₀ Annual Average for the Reporting Period.

2.3.5 | REAL TIME ALARMS FOR AIR QUALITY

The real time monitoring system generated 64 automated air quality related alarms during the reporting period. 24 alarms related to adverse weather conditions and 40 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.

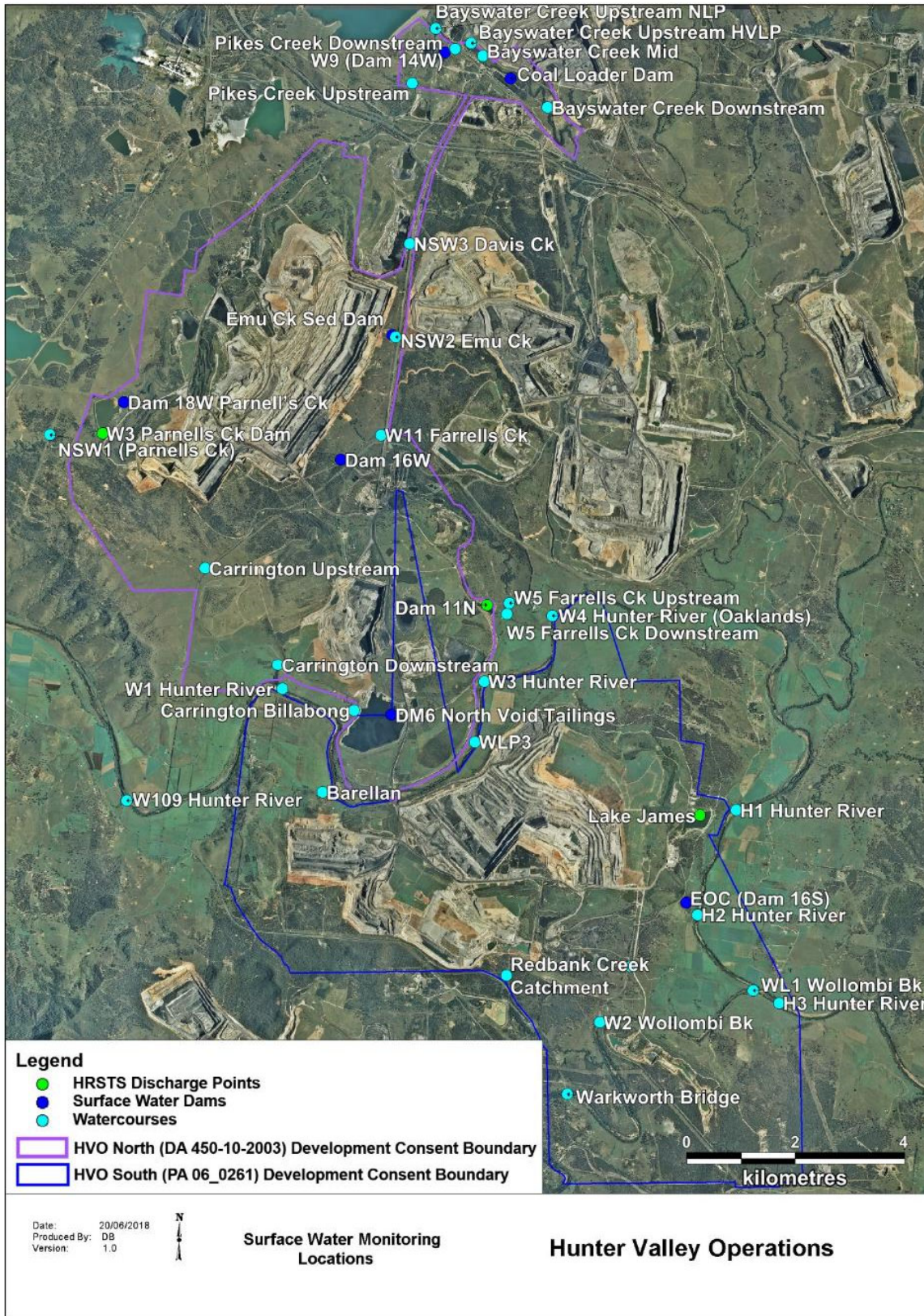


Figure 13 – HVO Surface Water Monitoring Locations



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.

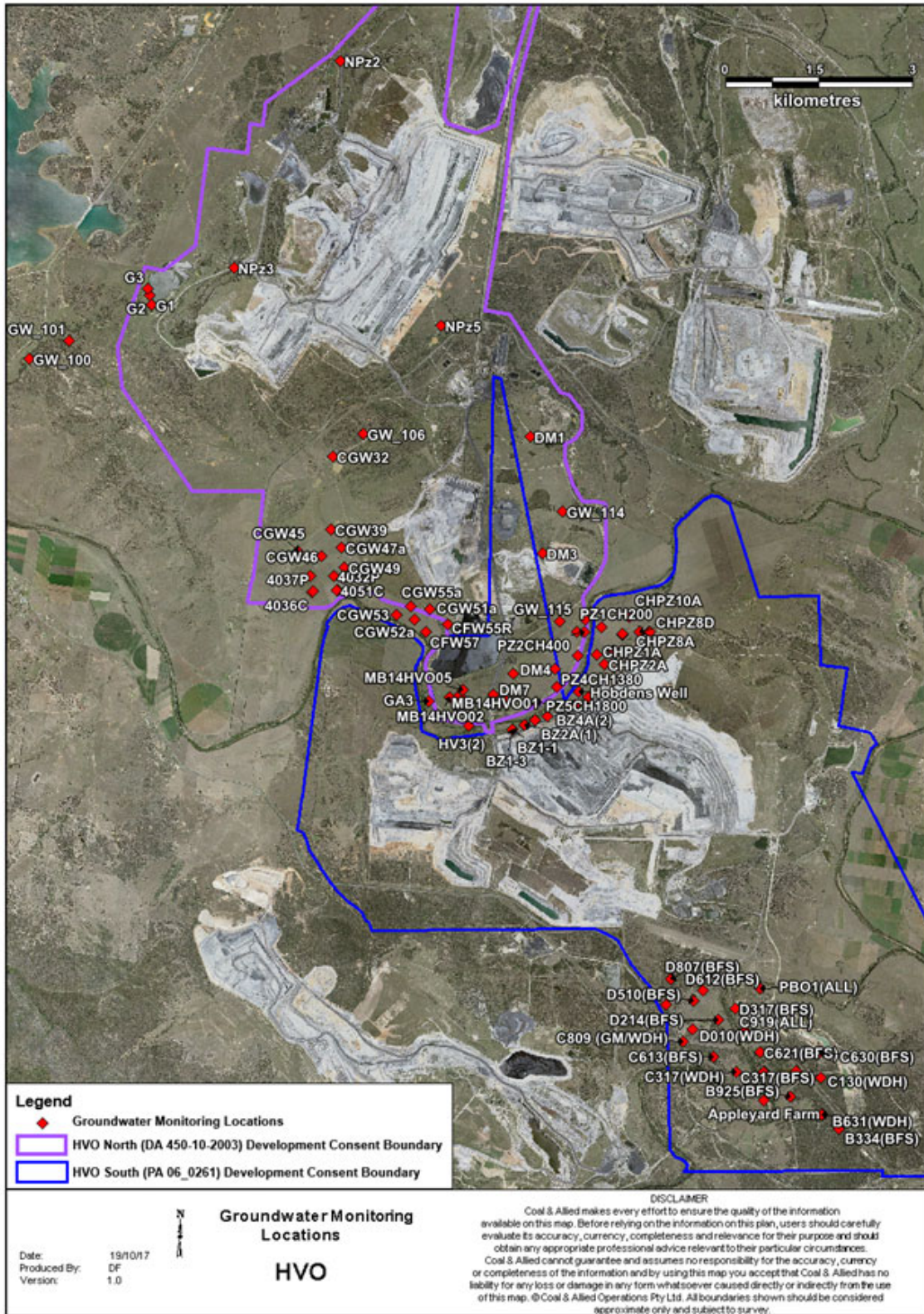


Figure 14 - Groundwater Monitoring Locations at HVO



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

Nineteen (19) 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)
1/04/2023 12:55	82.37	87.61	87.16	84.62	89.01
3/04/2023 12:57	98.39	112.19	97.67	81.86	96.29
6/04/2023 12:10	86.18	95.37	87.42	90.42	95.56
11/04/2023 14:12	95.61	98.14	96.99	94.57	98.13
11/04/2023 15:19	89.26	102.85	97.98	96.4	96.85
13/04/2023 14:00	97.64	91.81	101.78	93.67	97.00
14/04/2023 13:10	91.14	97.92	87.05	92.39	98.24
15/04/2023 13:06	93.08	93.11	88.04	91.84	85.09
17/04/2023 12:56	99.84	99.88	96.96	100.70	97.69
19/04/2023 13:03	84.28	85.22	86.03	91.45	83.92
21/04/2023 9:54	97.54	98.20	96.76	88.88	99.79
22/04/2023 13:03	95.65	96.95	98.46	94.18	93.79
22/04/2023 15:03	97.54	103.28	94.91	90.69	93.15
24/04/2023 13:00	103.29	103.51	97.06	87.47	96.38
27/04/2023 13:18	90.81	92.78	84.96	82.19	81.68
27/04/2023 13:20	84.34	93.38	86.59	95.07	83.70
29/04/2023 13:30	86.55	87.01	97.35	96.99	96.19
29/04/2023 16:00	96.67	100.32	95.51	98.60	94.44



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)
1/04/2023 12:55	0.18	0.06	0.33	0.35	0.20
3/04/2023 12:57	0.29	0.07	0.06	0.10	0.11
6/04/2023 12:10	0.21	0.14	0.15	0.72	0.09
11/04/2023 14:12	0.26	0.12	0.91	1.72	0.98
11/04/2023 15:19	0.19	0.10	0.39	0.87	0.45
13/04/2023 14:00	0.25	0.09	0.33	0.88	0.32
14/04/2023 13:10	0.14	0.09	0.05	0.71	0.08
15/04/2023 13:06	0.14	0.07	0.03	0.18	0.08
17/04/2023 12:56	0.14	0.05	0.18	0.66	0.21
19/04/2023 13:03	0.14	0.06	0.05	0.49	0.08
21/04/2023 9:54	0.41	0.08	0.08	0.59	0.18
22/04/2023 13:03	0.15	0.08	0.42	0.68	0.35
22/04/2023 15:03	0.18	0.24	0.06	0.16	0.11
24/04/2023 13:00	0.12	0.03	0.05	0.24	0.12
27/04/2023 13:18	0.13	0.10	0.07	0.26	0.09
27/04/2023 13:20	0.15	0.08	0.07	0.81	0.08
29/04/2023 13:30	0.16	0.07	0.27	0.63	0.26
29/04/2023 16:00	0.10	0.03	0.04	0.14	0.20

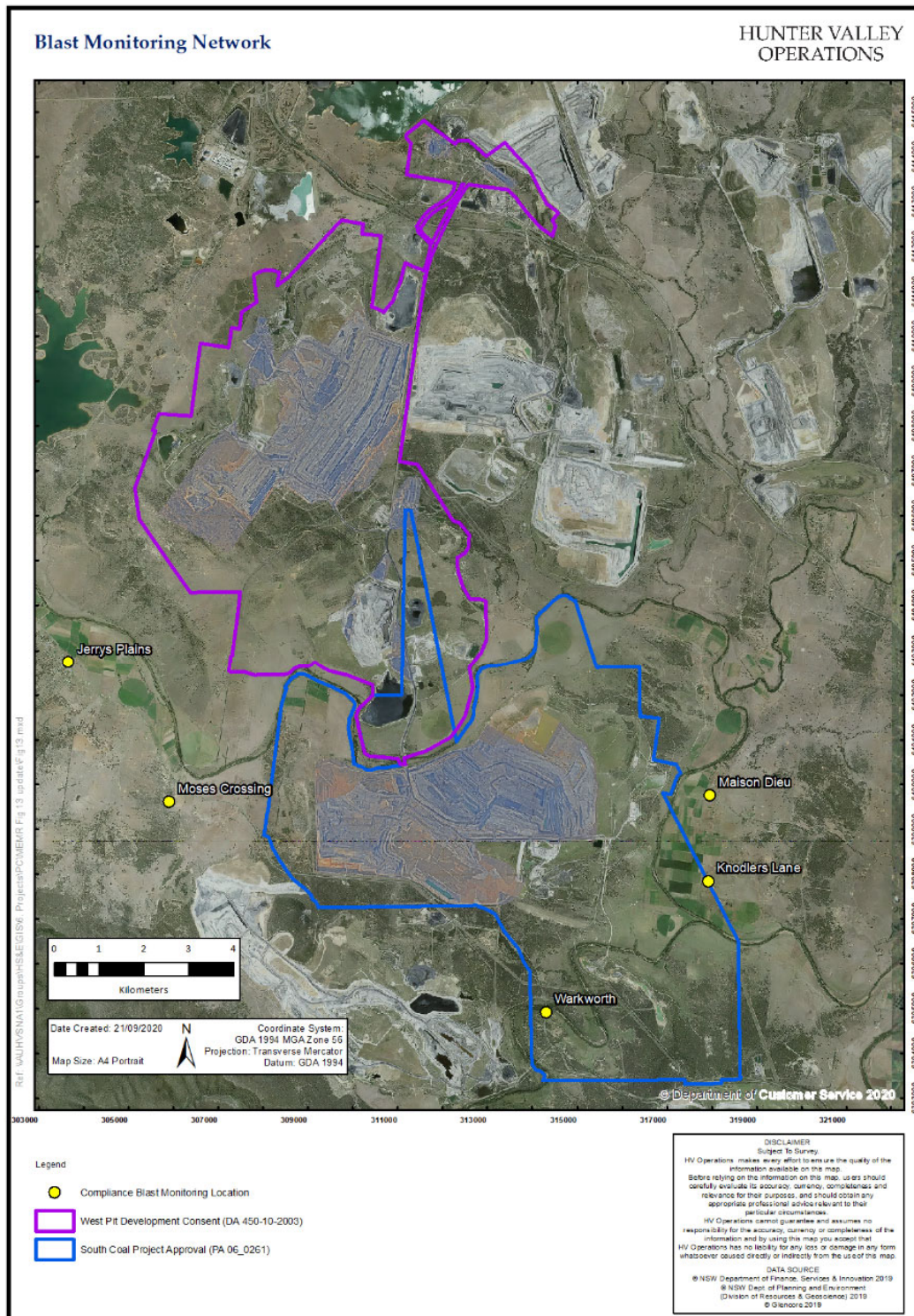


Figure 15 - Blast Monitoring Location Plan



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 - Noise Monitoring Location Plan Figure 16.

5.1 | ATTENDED NOISE MONITORING RESULTS

Attended monitoring was conducted at receiver locations around HVO on the night of the 18th of April 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.

REPORT | MONTHLY ENVIRONMENTAL MONITORING REPORT

APRIL 2023

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? ¹	HVO North limits, dB ¹		HVO North levels, dB		Exceedances, dB	
		Speed m/s	Direction ³			LAeq,15minute	LA1,1min	LAeq,15minute ²	LA1,1min	LAeq,15minute	LA1,1min
Shearers Lane	18/04/2023 21:03	2.3	132	E	Yes	35	46	IA	IA	Nil	Nil
Knodlers Lane	18/04/2023 21:45	1.9	124	E	Yes	35	46	IA	IA	Nil	Nil
Maison Dieu	18/04/2023 21:25	2.1	126	E	Yes	35	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	18/04/2023 22:34	1.9	132	E	No	35	46	IA	IA	Nil	Nil
Kilburnie South	18/04/2023 23:24	1.4	130	E	No	39	46	30	33	Nil	Nil
Jerrys Plains East	18/04/2023 22:58	1.7	125	E	No	39	46	33	36	Nil	Nil
Jerrys Plains Village	18/04/2023 21:00	2.3	132	E	Yes	40	46	32	38	Nil	Nil
Jerrys Plains West	18/04/2023 21:24	2.1	126	E	Yes	40	46	28	34	Nil	Nil

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

REPORT | MONTHLY ENVIRONMENTAL MONITORING REPORT

APRIL 2023

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? ¹	HVO South limits, dB ¹		HVO South levels, dB		Exceedances, dB	
		Speed m/s	Direction ³			LAeq,15minute	LA1,1min	LAeq,15minute ²	LA1,1min	LAeq,15minute	LA1,1min
Shearers Lane	27/02/2023 21:09	3.9	144	E	Yes	46	50	<25	<25	Nil	Nil
Knodlers Lane	27/02/2023 21:58	4.4	144	E	Yes	45	50	IA	IA	Nil	Nil
Maison Dieu	27/02/2023 21:33	4.6	145	E	Yes	44	50	IA	IA	Nil	Nil
Long Point (Dights Crossing)	27/02/2023 22:54	4.5	143	D	Yes	42	50	IA	IA	Nil	Nil
Kilburnie South	27/02/2023 23:38	3.5	135	D	Yes	44	50	IA	IA	Nil	Nil
Jerrys Plains East	27/02/2023 23:15	4.1	137	D	Yes	43	50	IA	IA	Nil	Nil
Jerrys Plains Village	27/02/2023 21:34	4.6	145	E	Yes	40	50	IA	IA	Nil	Nil
Jerrys Plains West	27/02/2023 21:10	3.9	144	E	Yes	40	50	IA	IA	Nil	Nil
HVGC	28/02/2023 00:10	3.5	140	E	Yes	60	NA	IA	IA	Nil	Nil

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

Number: HVOOC-1797567310-4661
Owner: Environment and Community Coordinator

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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_{Aeq} dB	Very enhancing? ¹	Intermittency modifying factor?	Tonality modifying factor?	Frequency of tonality	Low-frequency modifying factor? ^{1,2}	Exceedance of reference spectrum ^{2,3}	Total penalty dB ^{2,3}
Shearers Lane	18/04/2023 21:03	IA	Yes	No	No	NA	No	NA	Nil
Knodlers Lane	18/04/2023 21:45	IA	Yes	No	No	NA	No	NA	Nil
Maison Dieu	18/04/2023 21:25	IA	Yes	No	No	NA	No	NA	Nil
Long Point (Dights Crossing)	18/04/2023 22:34	IA	No	No	No	NA	No	NA	Nil
Kilburnie South	18/04/2023 23:24	30	No	No	No	NA	No	NA	Nil
Jerrys Plains East	18/04/2023 22:58	33	No	No	No	NA	No	NA	Nil
Jerrys Plains Village	18/04/2023 21:00	32	Yes	No	No	NA	No	NA	Nil
Jerrys Plains West	18/04/2023 21:24	28	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.



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

Location	Start date and time	Measured HVO South LAeq dB	Very enhancing? !	Intermittency modifying factor?	Tonality modifying factor?	Frequency of tonality	Low-frequency modifying factor? 1,2	Exceedance of reference spectrum 2,3	Total penalty dB 2,3
Shearers Lane	18/04/2023 21:03	IA	Yes	No	No	NA	NA	NA	Nil
Knodlers Lane	18/04/2023 21:45	IA	Yes	No	No	NA	NA	NA	Nil
Maison Dieu	18/04/2023 21:25	IA	Yes	No	No	NA	NA	NA	Nil
Long Point (Dights Crossing)	18/04/2023 22:34	IA	No	No	No	NA	No	NA	Nil
Kilburnie South	18/04/2023 23:24	IA	No	No	No	NA	No	NA	Nil
Jerrys Plains East	18/04/2023 22:58	IA	No	No	No	NA	No	NA	Nil
Jerrys Plains Village	18/04/2023 21:00	IA	Yes	No	No	NA	NA	NA	Nil
Jerrys Plains West	18/04/2023 21:24	IA	Yes	No	No	NA	NA	NA	Nil
HVGC	18/04/2023 23:54	IA	Yes	No	No	NA	NA	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 Monitoring Location Plan. 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 | Attended Noise Monitoring Results. Real time monitoring data includes non-mine noise sources such as animals, road traffic and weather.

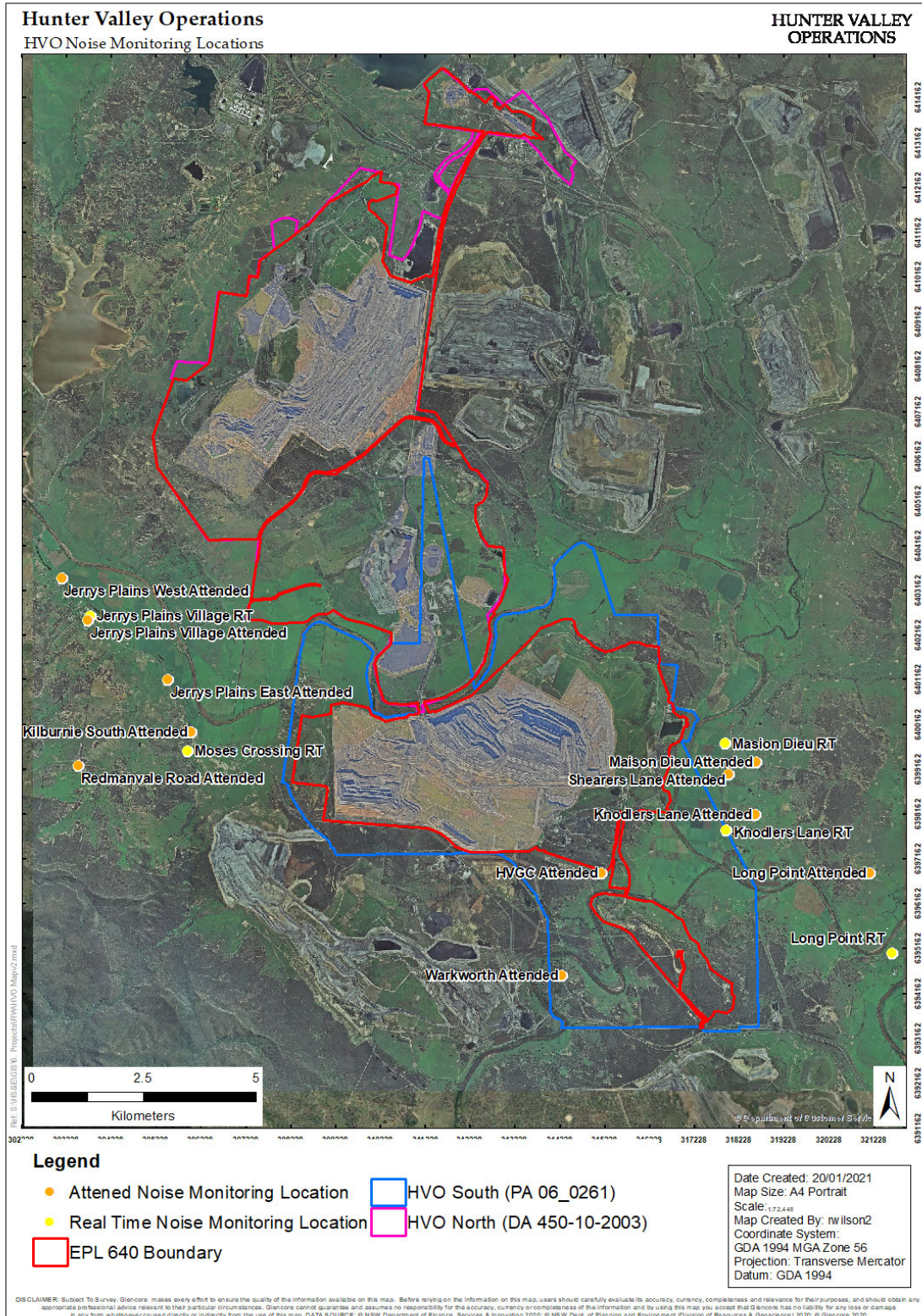


Figure 16 - Noise Monitoring Location Plan

Number: HVOOC-1797567310-4661
Owner: Environment and Community Coordinator

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Review: [Planned Review Date]

6 | OPERATIONAL DOWNTIME

A total of 30.5 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 show 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).

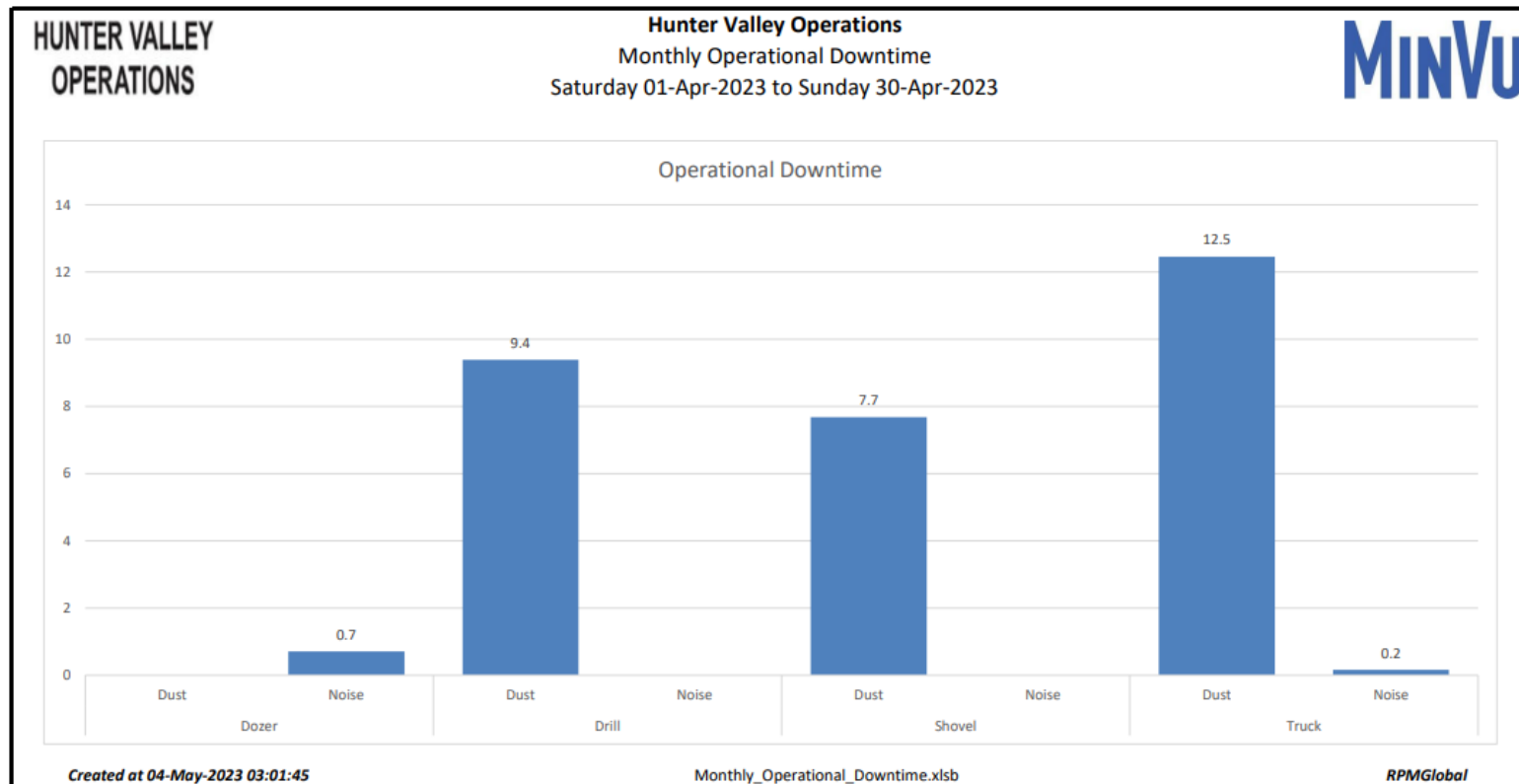


Figure 17 - Operational Downtime by Equipment Type for the Reporting Period



7 | REHABILITATION

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

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

Year to date progress is shown in Figure 18.

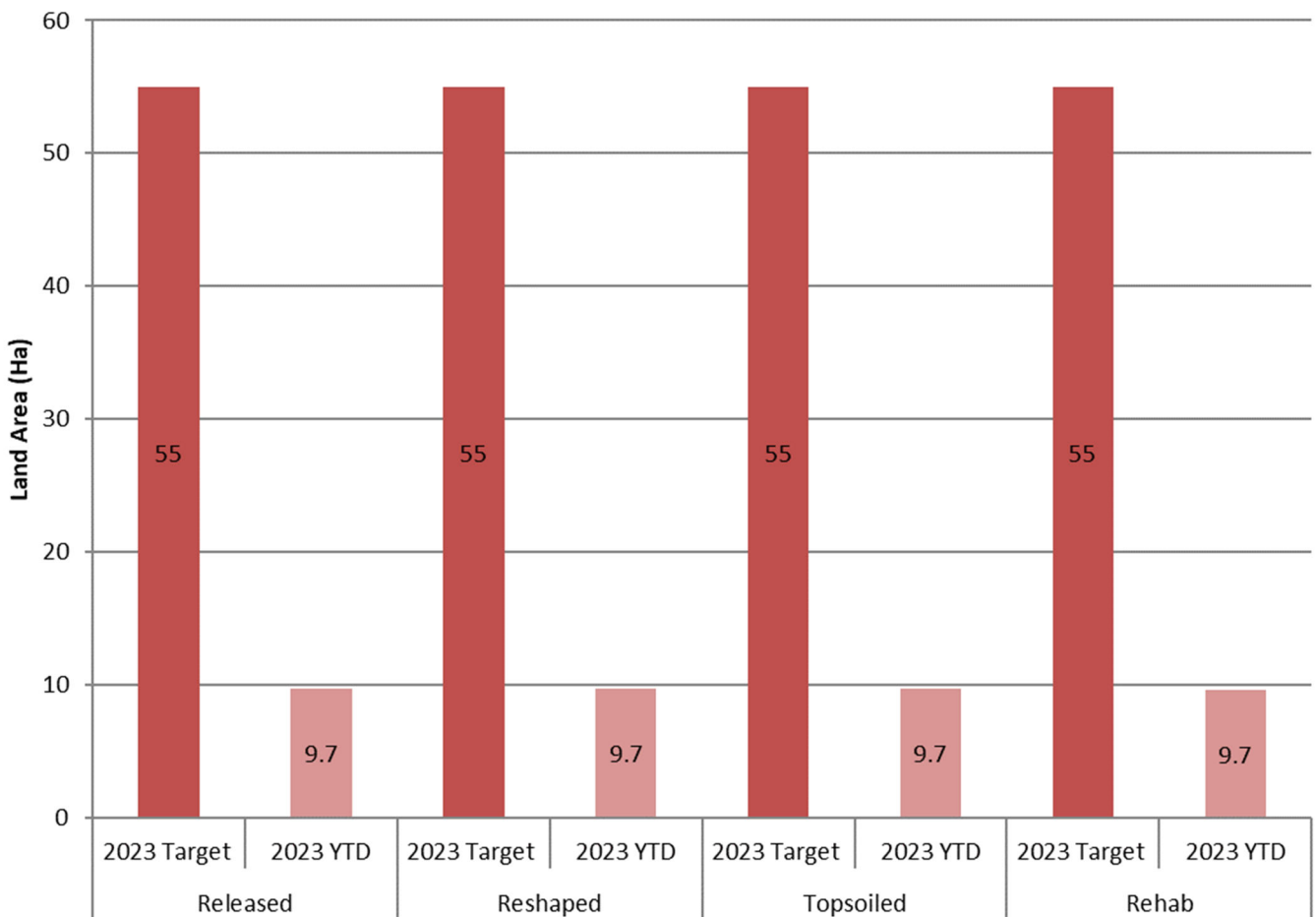


Figure 18 - Rehabilitation YTD April 2023

8 | COMPLAINTS

There were two 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"> 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”. 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. 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.
No community complaints were received in March.						



REPORT | MONTHLY ENVIRONMENTAL MONITORING REPORT APRIL 2023

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"> 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. 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. 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.
3	29 April	1:40pm	1	Dust	Community Hotline	<ul style="list-style-type: none"> A complainant from Long Point made a complaint about dust following a blast fired at 1.30 pm from HVO. 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. 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.

Number: HVOOC-1797567310-4661

Owner: Environment and Community Coordinator

Status: Approved

Version: 1.0

Effective: 06/06/2023

Review: [Planned Review Date]



9 | ENVIRONMENTAL INCIDENTS

There were four reportable environmental incidents during the reporting period:

5/4/2023 – Warkworth TSP HVAS run failure

HVO were notified by the monitoring contractor that the Warkworth TSP HVAS failed to run for the full monitoring period on 5 April 2023. It was identified that the power supply tripped at the Residual Current Device (RCD). Once power was restored the HVAS monitor programme indicated it had run for 16 hours. An inspection of the unit set up, power supply and further testing was completed with no issues being detected. Following the previous mis capture, HVO had connected the monitor to the other available RCD (RCD1). DPE were notified

11/4/2023 – Warkworth TSP HVAS run failure

HVO were notified by the monitoring contractor that the Warkworth TSP HVAS failed to run for the full monitoring period on 11 April 2023. The unit was inspected, there was no evidence the power supply had tripped and the unit had power at the time of the inspection. The monitor programme indicated it had run for 16 hours. Due to the monitor being subject to multiple recent mis-captures HVO has organised for the unit to be replaced with a hire unit. DPE were notified

17/4/2023 – Warkworth TSP HVAS run failure

HVO were notified by the monitoring contractor on 20 April 2023 that the Warkworth TSP HVAS failed to run for the full monitoring period on 17 April 2023. The unit was inspected, there was no evidence the power supply had tripped, and the unit had power at the time of the inspection. The monitor programme indicated it had run for 15 hours. The monitor has been subject to multiple recent mis-captures and was replaced with a hire unit on 21 April 2023. The monitor has since operated without fault. DPE were notified

26/4/2023 – Kilburnie South TSP and PM10 HVAS run failure

HVO were notified by the monitoring contractor on 27 April 2023 that the Kilburnie TSP and PM10 HVAS failed to run for the full monitoring period on 23 April 2023. It was identified that the TSP and PM10 had a “Filter Blocked” and “Motor drive” error message. The power was reset at the RCD and the monitor programme indicated they had run for 10 minutes and 2 minutes respectively. DPE were notified.



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)
1/04/2023	23.43	12.82	84.0	32.93	990	207.9	2.27	0
2/04/2023	22.98	12.79	87.5	43.32	1107	125.7	2.29	0
3/04/2023	23.91	13.66	95.4	45.05	1174	111.0	2.83	0
4/04/2023	23.40	14.66	91.2	44.52	1238	118.7	2.65	0
5/04/2023	24.87	13.36	93.6	40.09	1140	153.1	1.71	0
6/04/2023	23.61	13.33	95.6	46.86	1119	130.0	1.88	0
7/04/2023	25.53	12.79	94.3	45.88	1222	210.6	1.93	0
8/04/2023	21.58	14.92	79.23	45.54	1114	283.6	5.29	0
9/04/2023	20.72	12.22	60.7	28.96	953	278.2	5.92	0
10/04/2023	20.20	9.06	66.7	31.43	1140	272.2	3.75	0
11/04/2023	21.79	9.14	65.9	30.53	818	278.1	2.45	0
12/04/2023	19.87	10.9	93.8	41.54	1240	252.4	2.60	0
13/04/2023	21.52	11.85	94.3	47.84	1142	198.9	1.56	0
14/04/2023	22.19	12.92	90.5	44.35	1109	134.1	2.07	0
15/04/2023	26.17	10.05	95.5	27.44	854	190.9	1.12	0
16/04/2023	26.26	14.88	77.3	37.62	1128	250.5	3.59	0
17/04/2023	22.98	10.01	85.0	41.28	937	171.3	2.25	0
18/04/2023	22.68	10.63	92.8	41.86	891	114.3	2.17	0
19/04/2023	24.86	10.86	91.6	39.91	855	167.4	1.16	0
20/04/2023	16.35	13.41	95.0	82.40	313	133.8	1.74	0
21/04/2023	20.77	11.69	92.8	51.21	963	125.1	2.11	0
22/04/2023	19.53	11.71	93.0	64.08	1106	133.7	1.49	0
23/04/2023	22.37	11.8	96.6	54.29	1085	138.1	1.66	0
24/04/2023	22.31	13.42	96.2	48.39	1135	113.9	2.85	0
25/04/2023	23.15	12.74	94.5	42.67	883	119.0	1.70	0
26/04/2023	23.03	10.08	95.2	38.79	1140	120.9	1.62	0
27/04/2023	23.33	10.01	94.8	38.83	705	143.7	1.16	0
28/04/2023	27.24	11.02	94.8	30.02	705	223.5	1.39	0
29/04/2023	23.52	12.66	96.1	45.48	858	239.7	1.96	0
30/04/2023	19.21	11.67	95.2	49.38	1102	281.7	3.88	0