

HUNTER VALLEY OPERATIONS

MONTHLY ENVIRONMENTAL MONITORING REPORT NOVEMBER 2024

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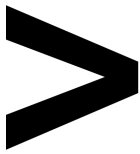
01/01/2025

REVIEW

[Planned Review Date]

OWNER

Superintendent - Environment and Community



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 13

 2.3.5 | Real Time Alarms for Air Quality 15

3 | Water Quality..... 16

 3.1 | Surface Water 16

 3.1.1 | Surface Water Trigger Tracking 18

 3.2 | Site Water Use..... 18

 3.3 | HRSTS Discharge..... 18

 3.4 | Groundwater Monitoring Results..... 18

 3.4.1 | Groundwater Trigger Tracking 20

4 | Blasting..... 21

 4.1 | Blast Monitoring Results 22

5 | Noise 25

 5.1 | Attended Noise Monitoring Results..... 25

 5.2 | Low Frequency Assessment..... 28

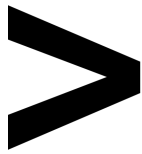
 5.3 | Real Time Noise Monitoring..... 29

6 | Operational Downtime 31

7 | Rehabilitation..... 32

8 | Complaints 33

9 | Environmental Incidents 38



Appendix A: Meteorological Data (HVO Corporate)..... 39

Table of Figures

Figure 1 - Rainfall Summary 2022 – 2024 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 – YTD Depositional Dust Results as at end of the Reporting Period 7
Figure 6 – Individual PM10 Results for the Reporting Period 9
Figure 7 – Year to Date Average PM10 as at end of the Reporting Period 10
Figure 8 - Results for the Reporting Period..... 11
Figure 9 - Year to Date Average PM2.5 as at end of the Reporting Period 12
Figure 10 - Year to Date Average Total Suspended Particulates as at end of the Reporting Period 13
Figure 11 – Real Time PM10 24hr for the Reporting Period 14
Figure 12 – Real Time PM10 Annual Average for the Reporting Period..... 15
Figure 13 – HVO Surface Water Monitoring Locations 17
Figure 14 - Groundwater Monitoring Locations at HVO 19
Figure 15 - Blast Monitoring Location Plan 24
Figure 16 - Noise Monitoring Location Plan 30
Figure 17 - Operational Downtime by Equipment Type for the Reporting Period 31
Figure 18 - Rehabilitation YTD November 2024 32
Table 1 - Rainfall data for the reporting period..... 4
Table 2 – Blasting Criteria 21
Table 3 – Overpressure Blast Monitoring Results for the reporting period 22
Table 4 – Ground Vibration Blast Monitoring Results for the reporting period..... 23
Table 5 - LAeq,15minute and 1minute HVO North Against Impact Assessment Criteria for the Reporting Period..... 26
Table 6 - LAeq,15minute and 1minute HVO South Against Impact Assessment Criteria for the Reporting Period..... 27
Table 7 - Modifying Factor Assessment HVO North for the Reporting Period 28
Table 8 - Modifying Factor Assessment HVO South for the Reporting Period..... 29
Table 9 - Complaints Summary 2024..... 33



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 – 30 November 2024 (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 recorded at the HVO Corporate weather station during the period is summarised in **Table 1**. The 2022, 2023 and 2024 trends are shown in **Figure 1**.

Table 1 - Rainfall data for the reporting period

2024	Monthly Rainfall (mm)	Cumulative Rainfall (mm)
November	40.2	630.6

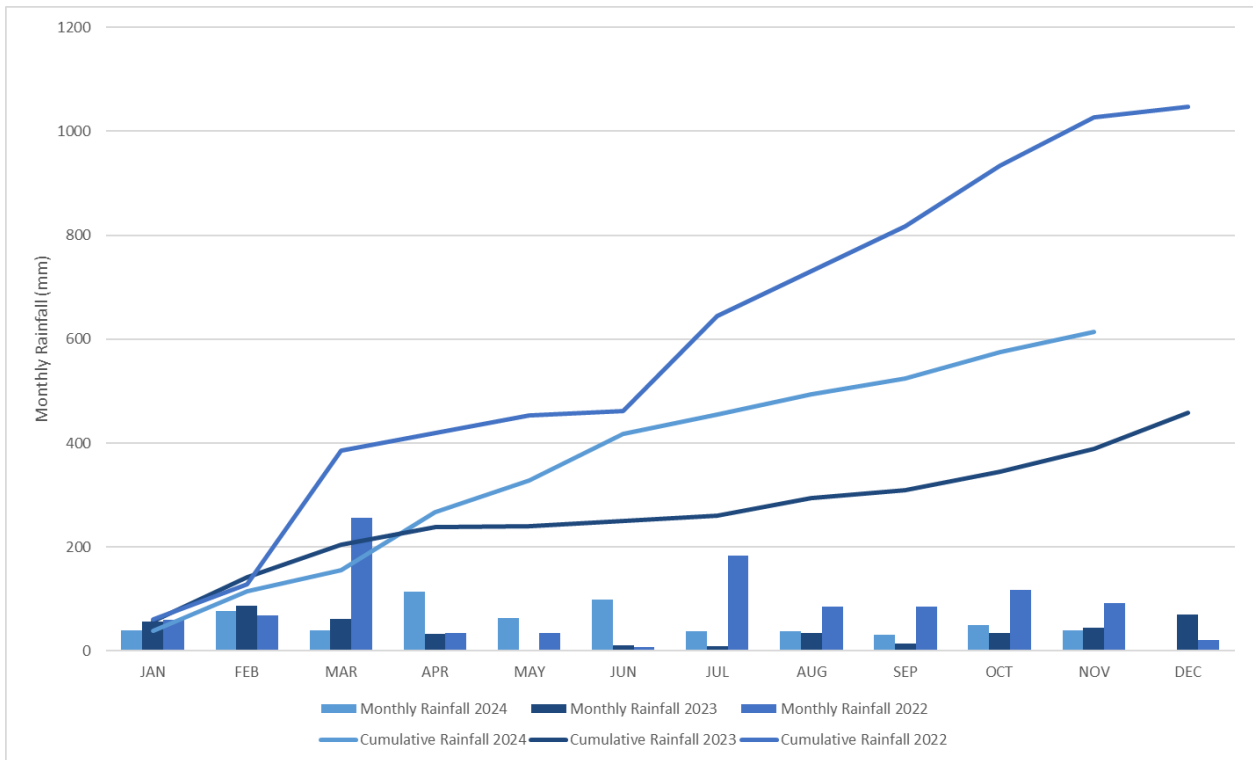


Figure 1 - Rainfall Summary 2022 – 2024



2.1.2 | WIND SPEED AND DIRECTION

Figures 2 and 3 wind roses show wind speeds and directions during the reporting period at HVO Corporate and Cheshunt meteorological stations. South easterly winds were prevailing at both the HVO Corporate and HVO Cheshunt weather stations during the reporting period.

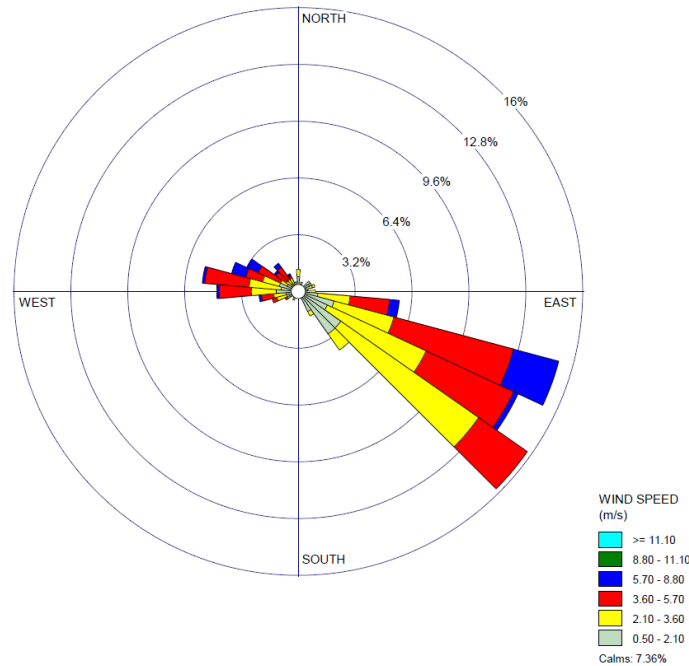


Figure 2 – HVO Corporate Wind Rose for the Reporting Period

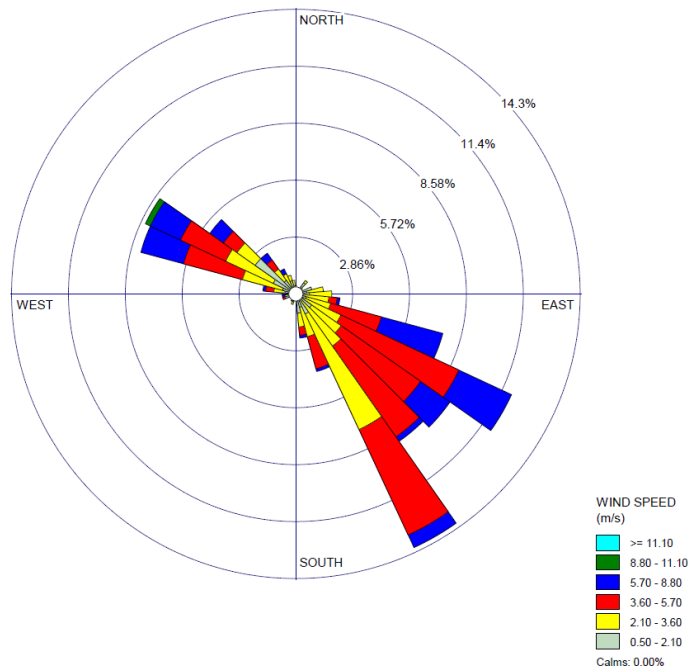


Figure 3 – HVO Cheshunt Wind Rose for the Reporting Period

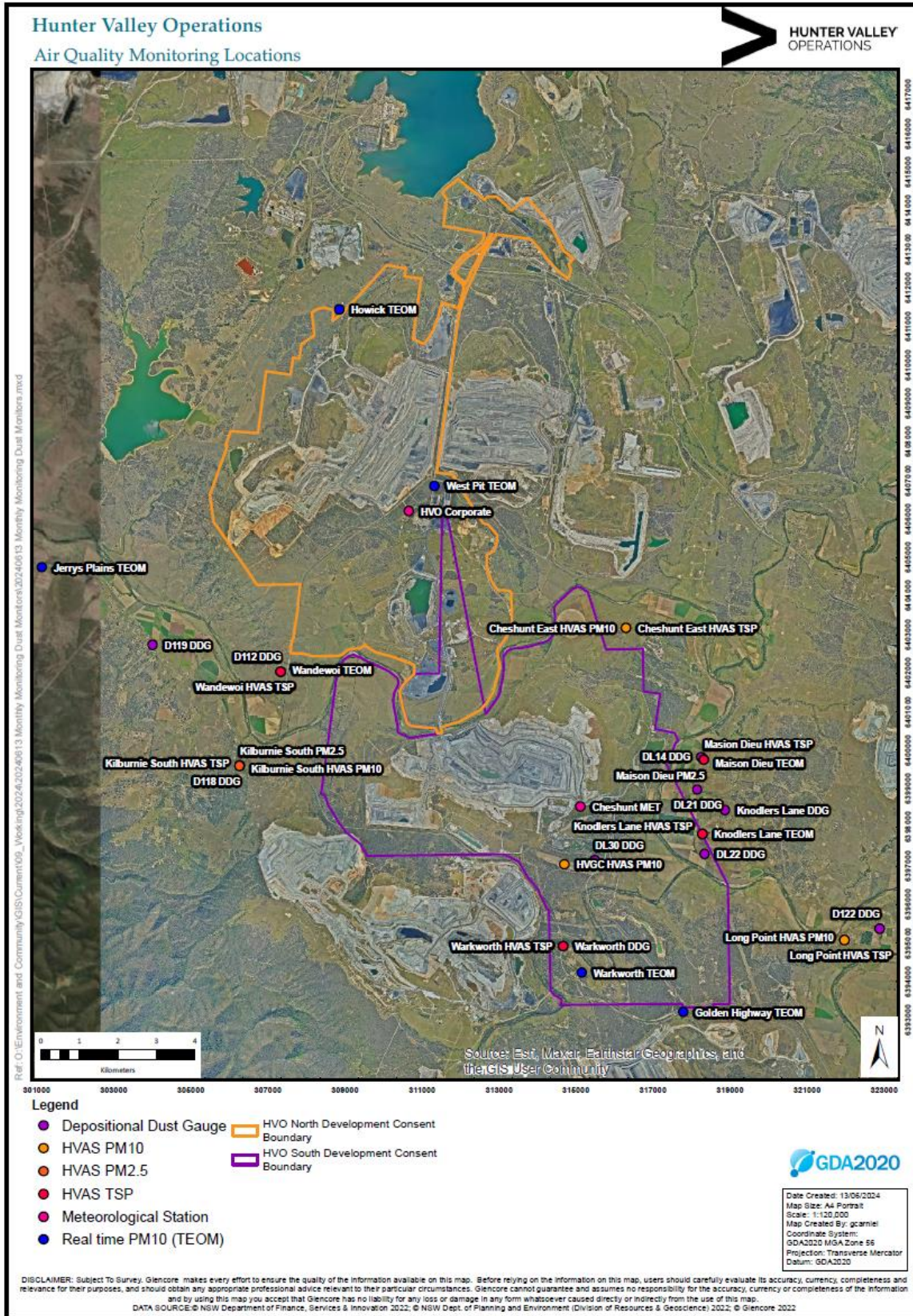
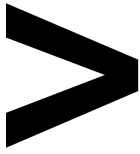


Figure 4 – Air Quality Monitoring Location Plan

Number: HVOOC-1797567310-5099
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2.2 | DEPOSITIONAL DUST

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

Figure 5 displays year-to-date (YTD) 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 2024 Annual Review.

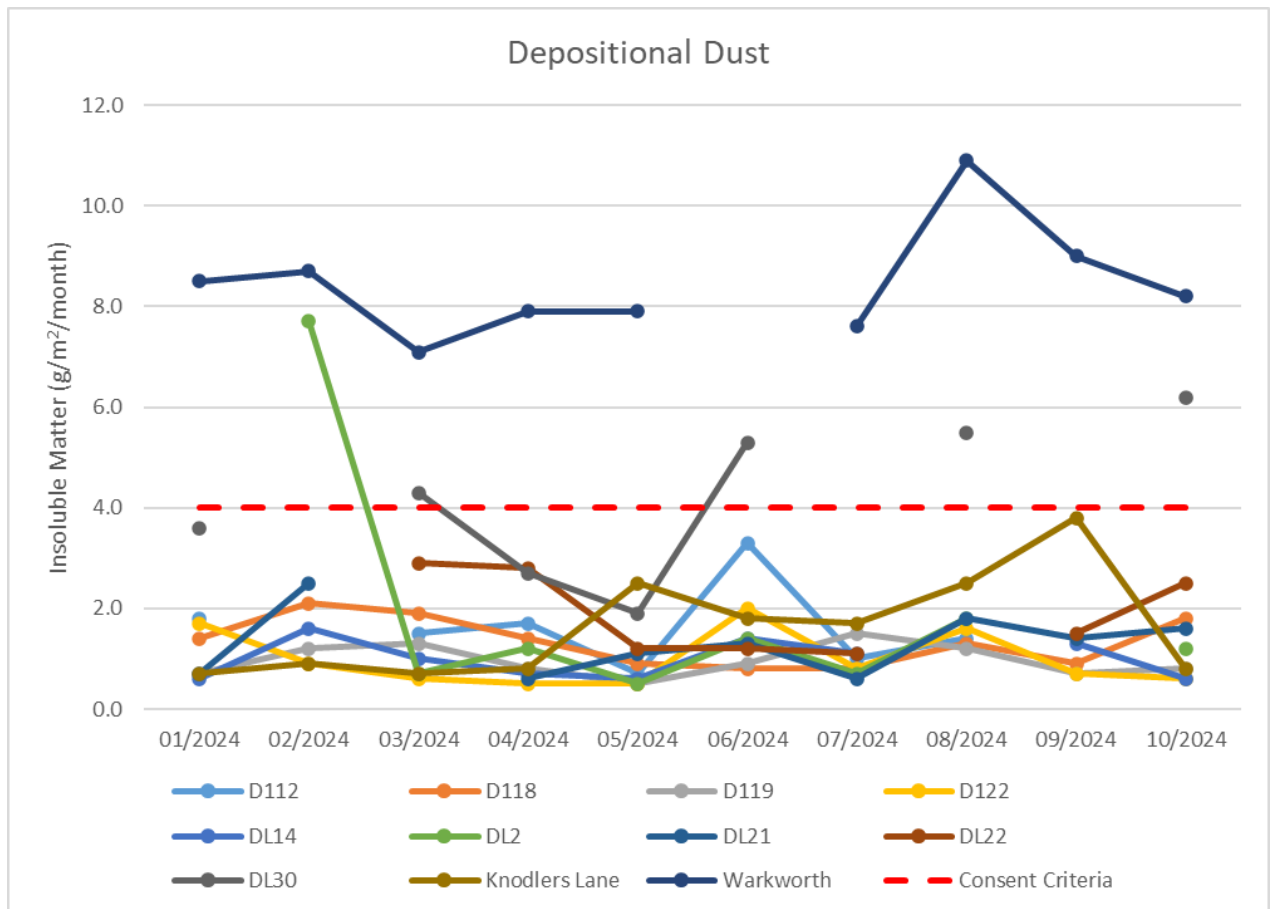
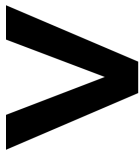


Figure 5 – YTD Depositional Dust Results as at end of the Reporting Period



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 (PM_{2.5}). 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 for the reporting period. All monitors were below the short-term impact assessment criteria during the reporting period, with the exception of:

- Cheshunt East on 7 November; and
- Gliding Club on 7 November.

HVO internally investigated these potential exceedances and found that the maximum calculated HVO contribution was below the compliance limit.

Kilburnie South monitor did not report a result on 13 November due to a mis-capture event and therefore is not displayed for that date.

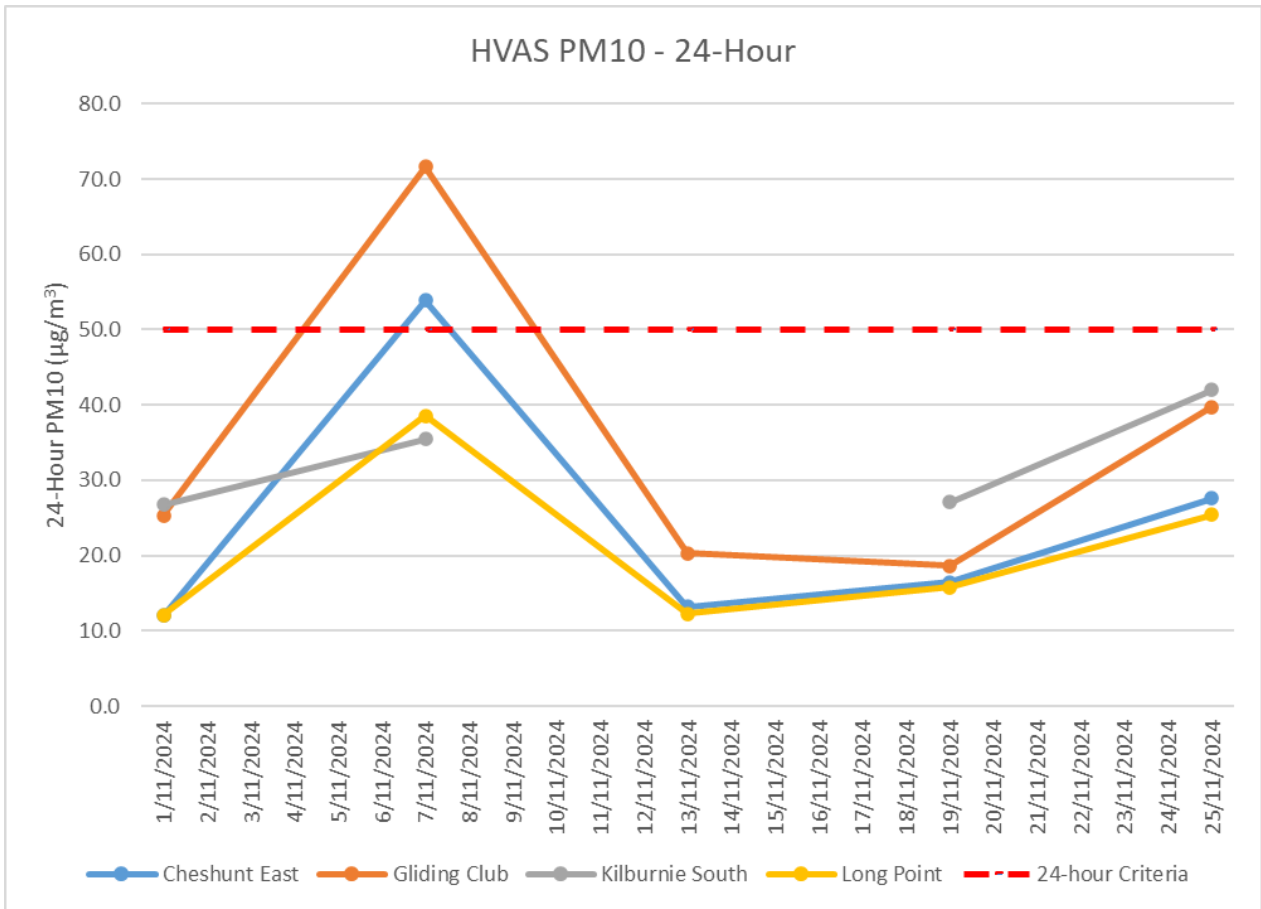


Figure 6 – Individual PM₁₀ Results for the Reporting Period

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 2024 Annual Review.

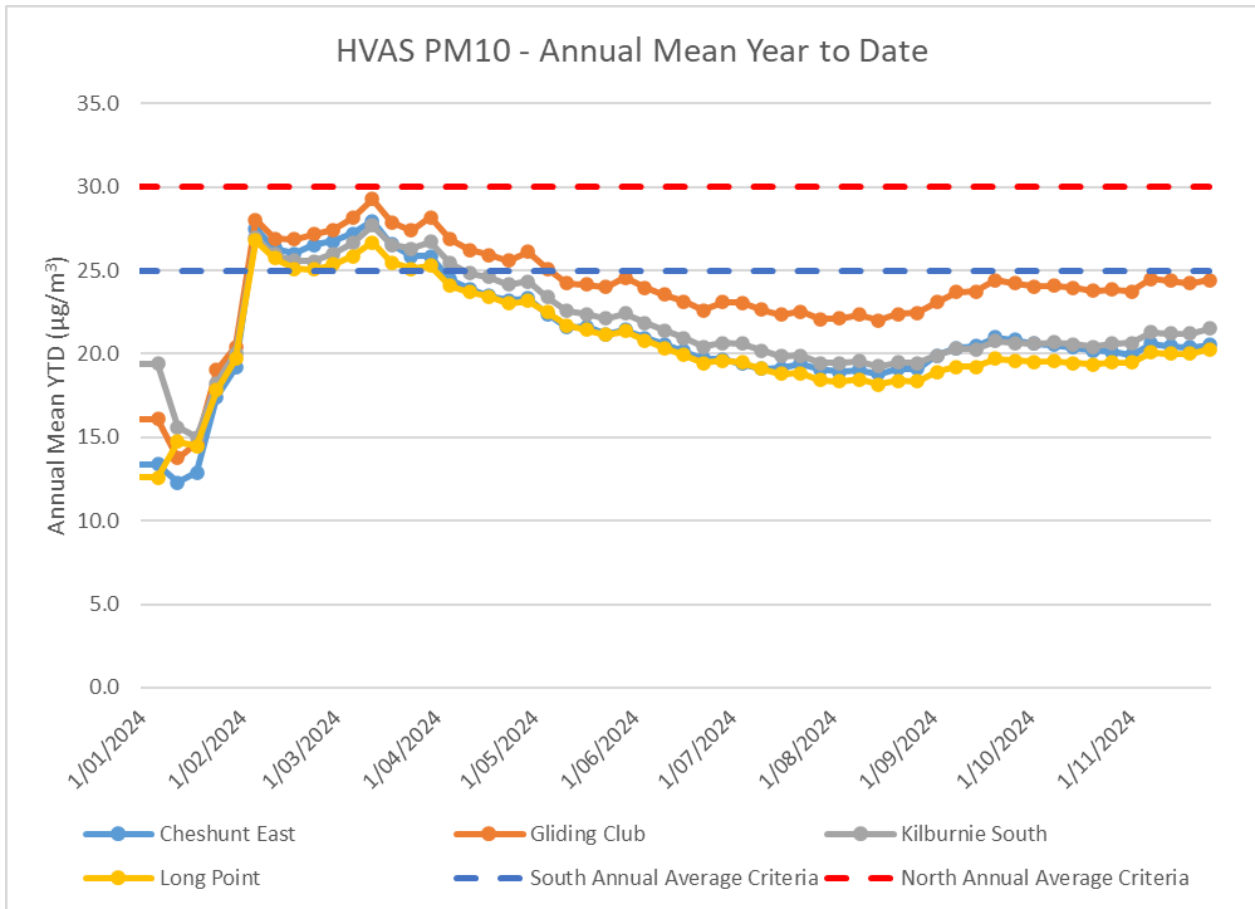
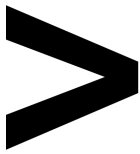


Figure 7 – Year to Date Average PM₁₀ as at end of the Reporting Period

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 for the reporting period. Both monitors were below the relevant short-term impact assessment criteria during the reporting period, with the exception of:

- Kilburnie South on 7 and 25 November; and
- Maison Dieu on 7 November.

HVO internally investigated these potential exceedances and found that the maximum calculated HVO contribution was below the compliance limit.

An assessment of HVO’s contribution against the long-term impact assessment criteria will be provided in the 2024 Annual Review.

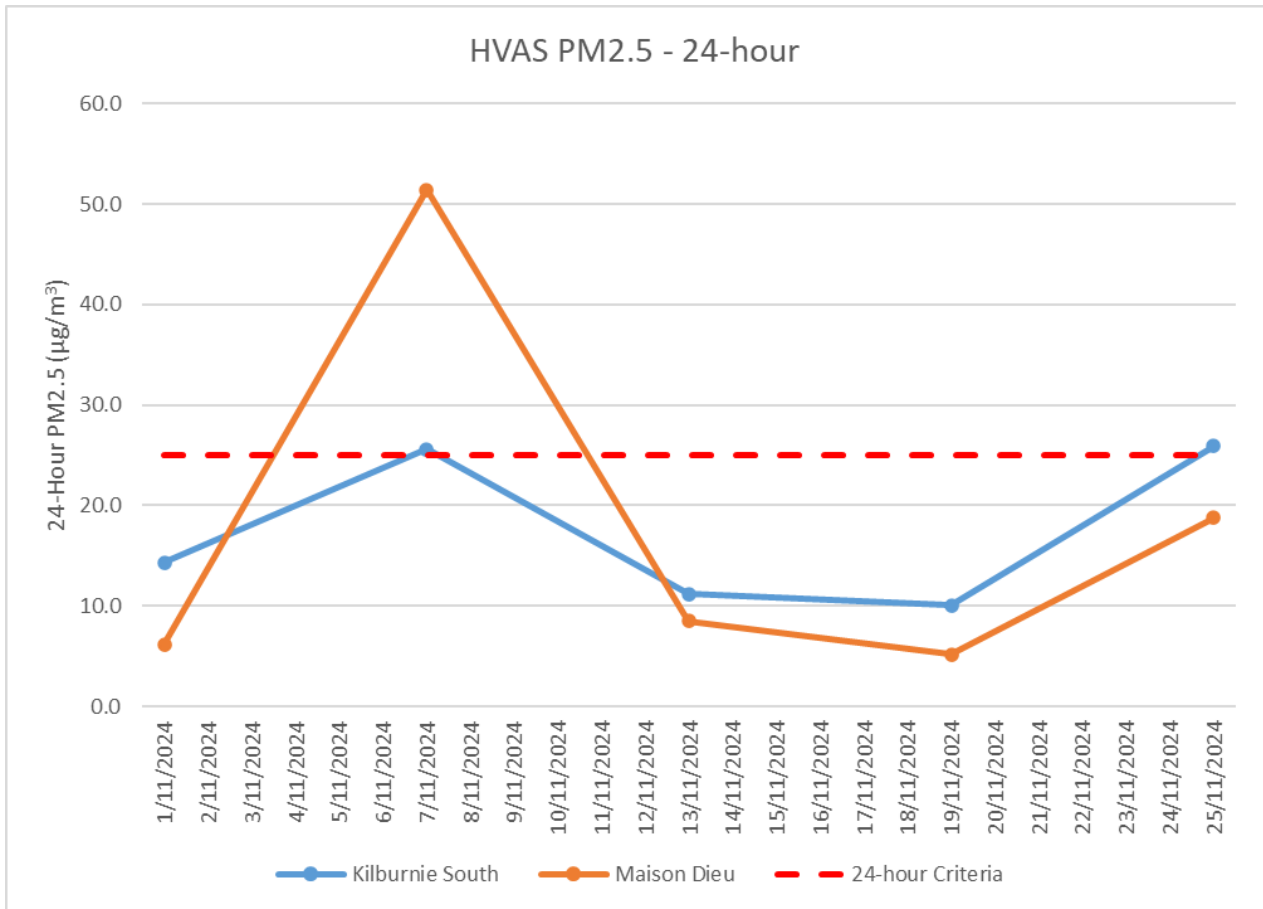


Figure 8 - Results for the Reporting Period

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 annual average year to date results of both monitors 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 2024 Annual Review.

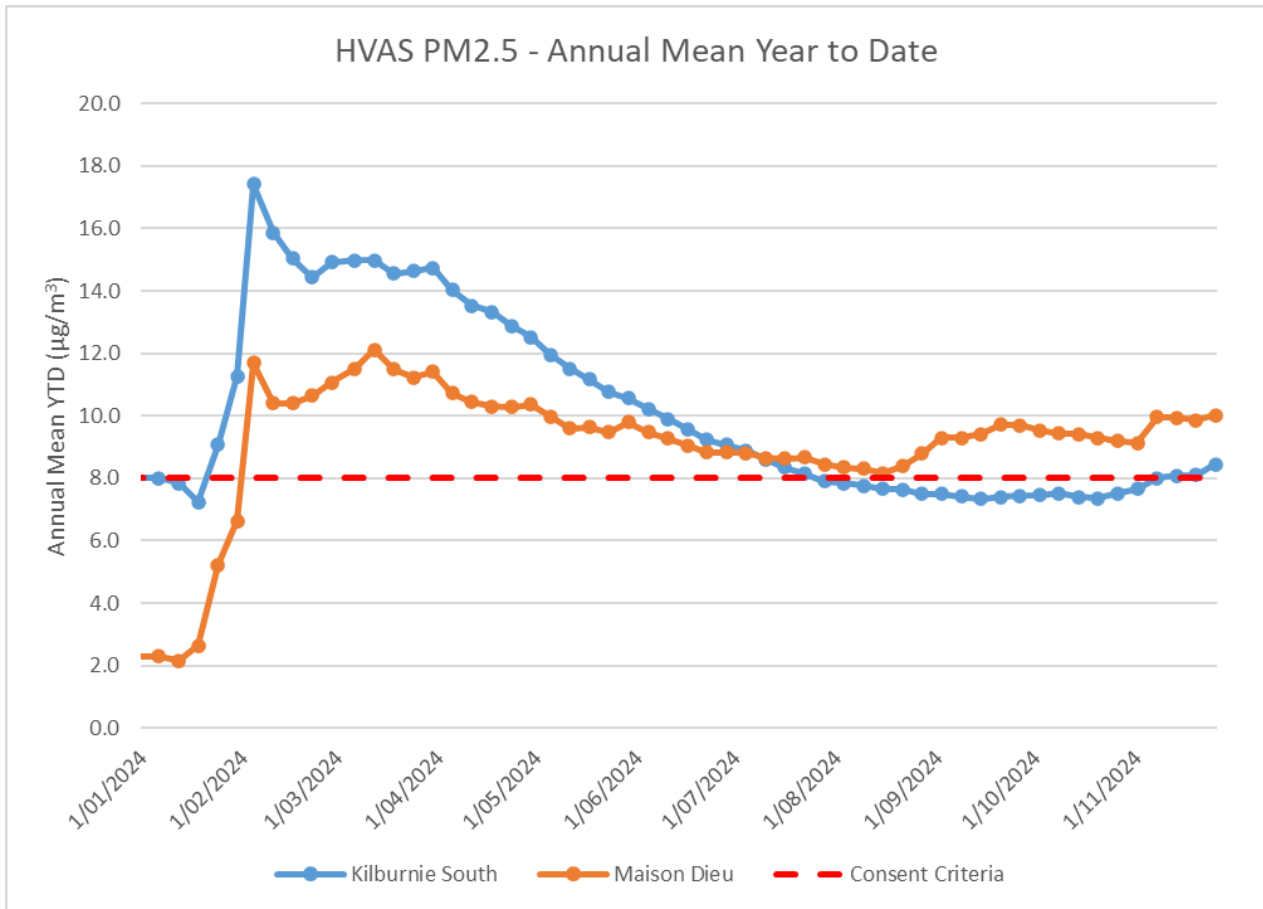
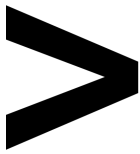


Figure 9 - Year to Date Average PM_{2.5} as at end of the Reporting Period

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, 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 2024 Annual Review.

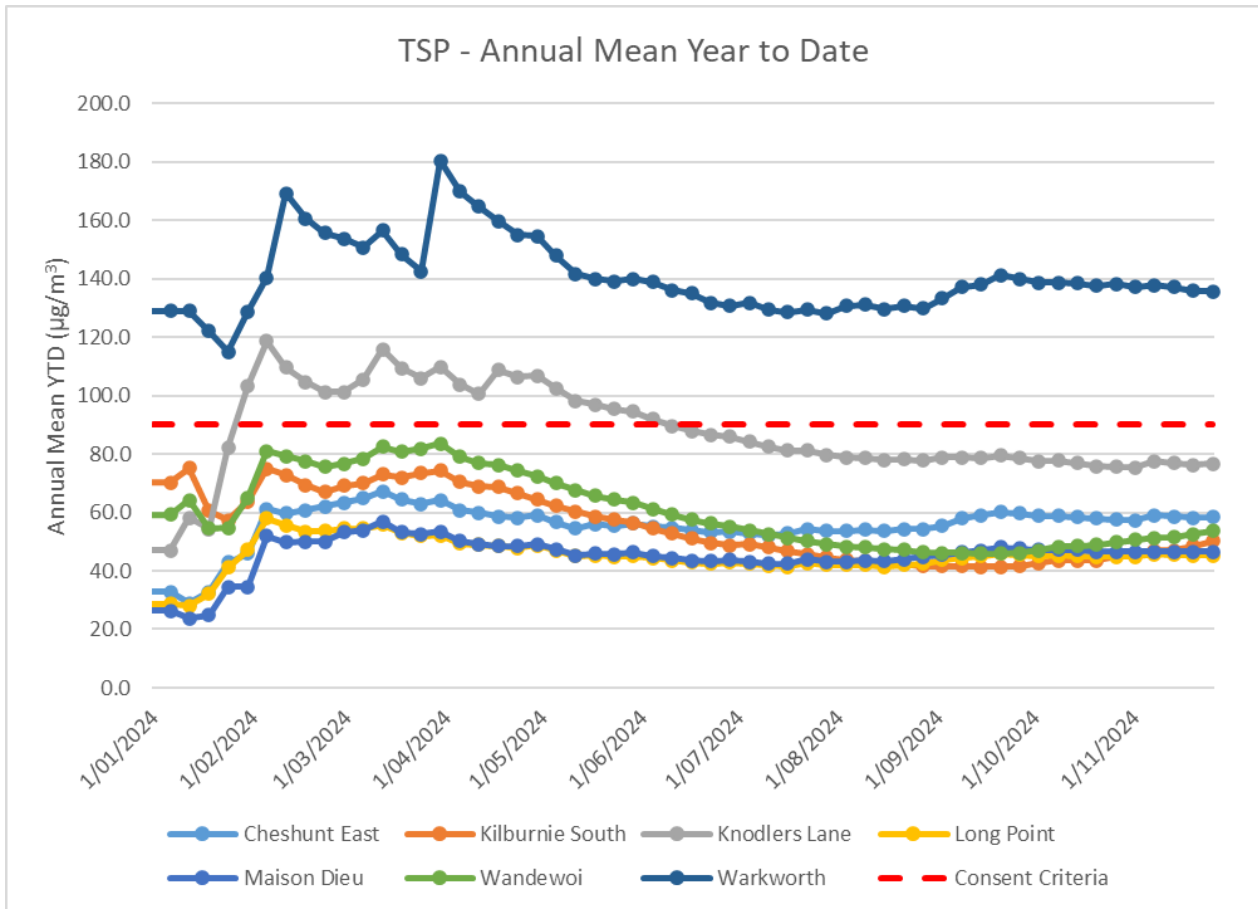


Figure 10 - Year to Date Average Total Suspended Particulates as at end of the Reporting Period

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 HVO 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 results from the real time monitoring sites. During the reporting period, daily results were below the 24-hr average criteria of 50µg/m³ with the exception of:

- Warkworth and Jerrys Plains monitors on 4 November.

The Warkworth exceedance was investigated internally by HVO, and it was found that the maximum calculated HVO contribution was below the compliance limit.

The Jerrys Plains exceedance was investigated by a third-party air quality consultant, who determined HVO's maximum possible contribution to be 1.2µg/m³. Refer to Section 9 of this report.

The below listed monitors reported data capture rates of less than 75% on the respective dates, therefore these results are not displayed on **Figure 11**.



- Jerrys Plains on 25 and 26 November;
- Maison Dieu on 11 November; and
- Warkworth on 2, 3, 7 and 8 November.

Figure 12 shows the annual rolling average PM₁₀ results from the real time monitoring sites. All monitoring results were below the annual average for the relevant long-term impact assessment criteria during the reporting period, with the exception of Warkworth.

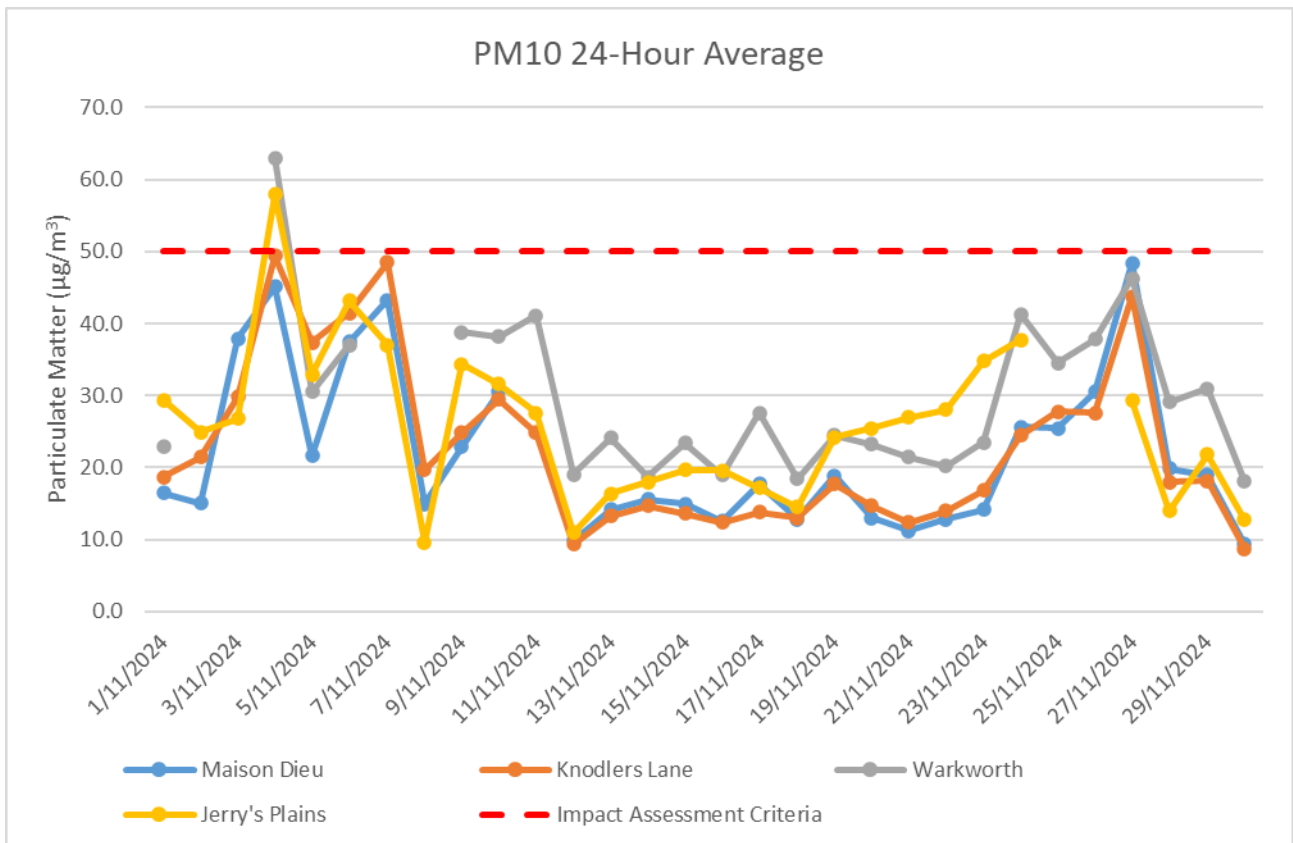


Figure 11 – Real Time PM₁₀ 24hr for the Reporting Period

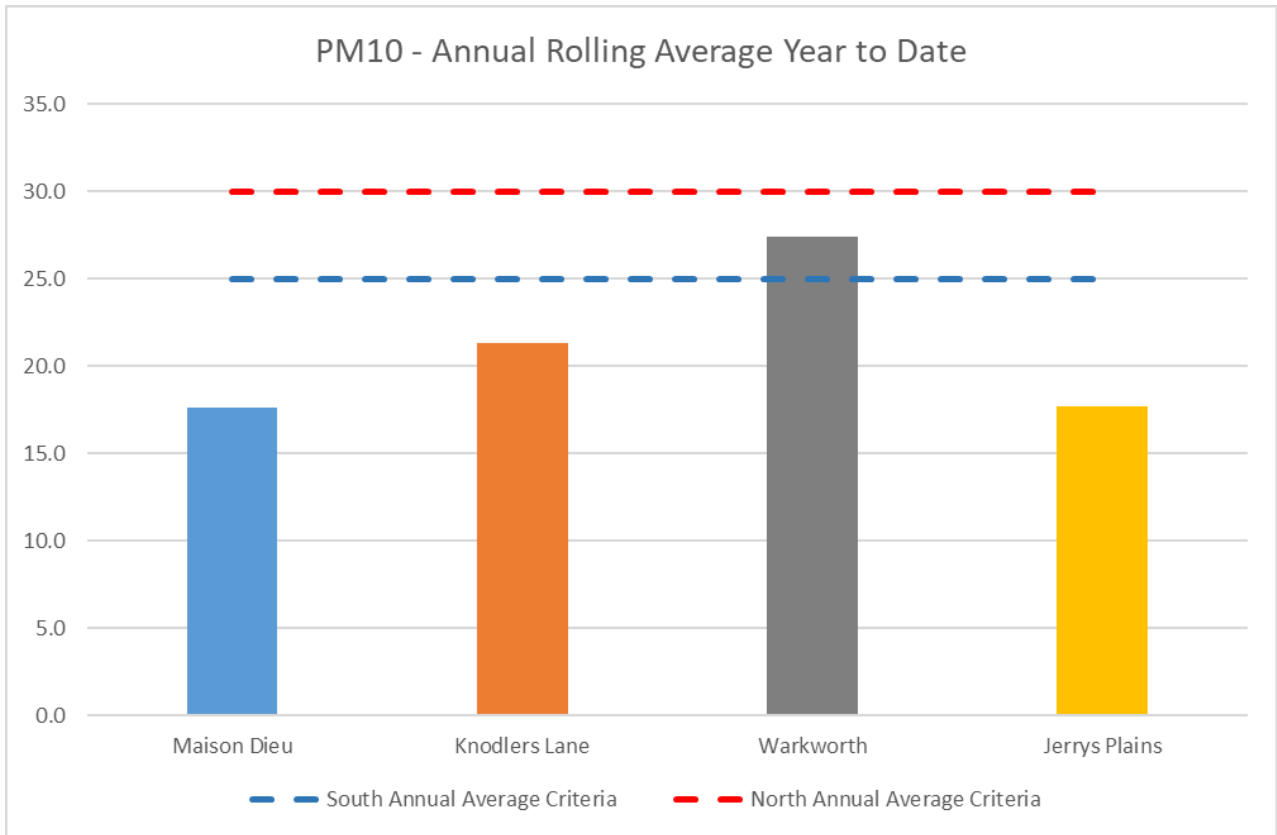
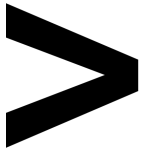


Figure 12 – Real Time PM₁₀ Annual Average for the Reporting Period

2.3.5 | REAL TIME ALARMS FOR AIR QUALITY

The real time monitoring system generated one hundred and sixty-one (161) automated air quality related alarms during the reporting period. Nineteen (19) alarms related to adverse weather conditions (wind or rain) and one hundred and forty-two (142) 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 December 2024 Monthly Environmental Monitoring Report.

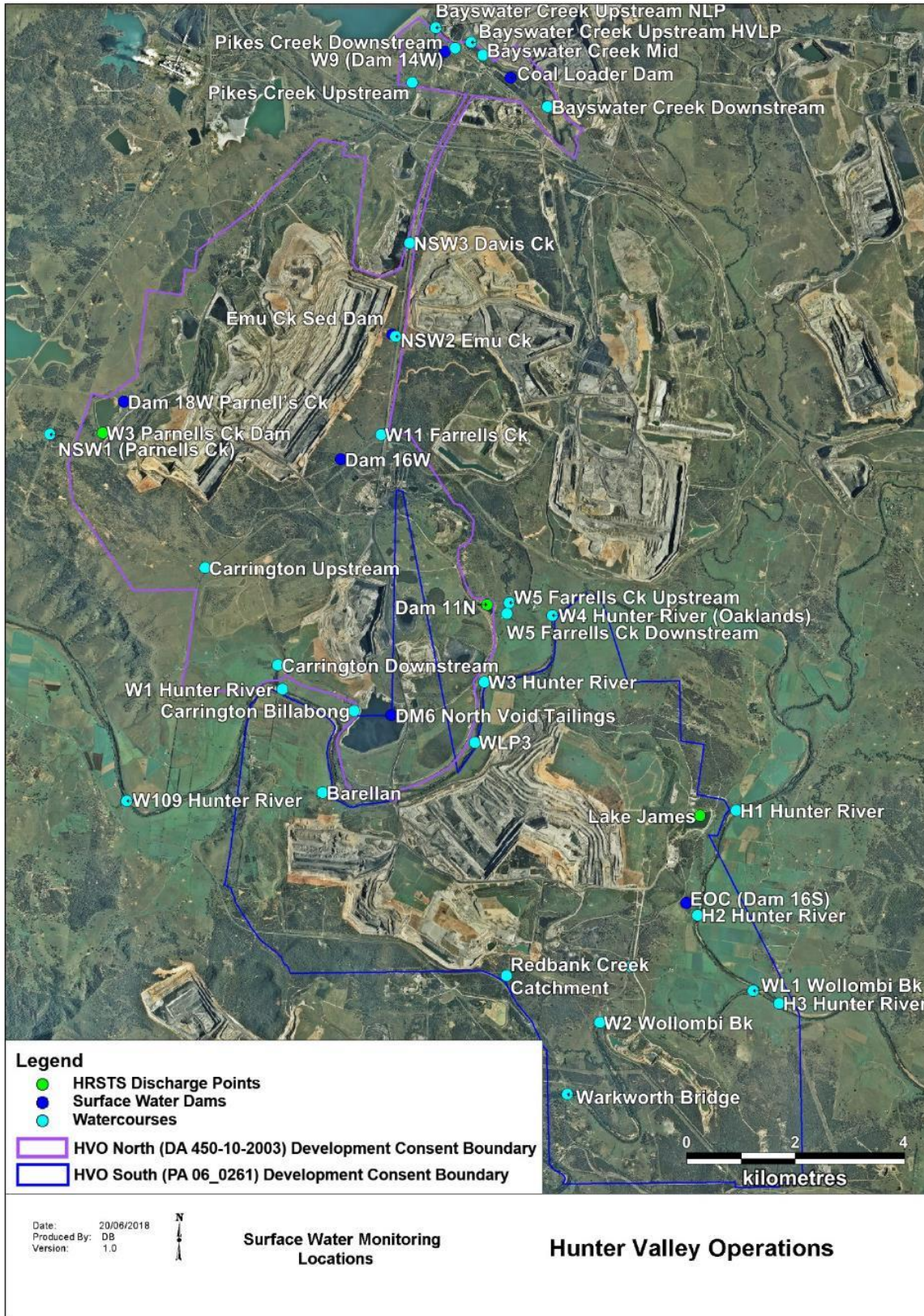
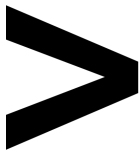


Figure 13 – HVO Surface Water Monitoring Locations



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 be reported in the December 2024 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 Programme. 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 December 2024 Monthly Environmental Monitoring Report.

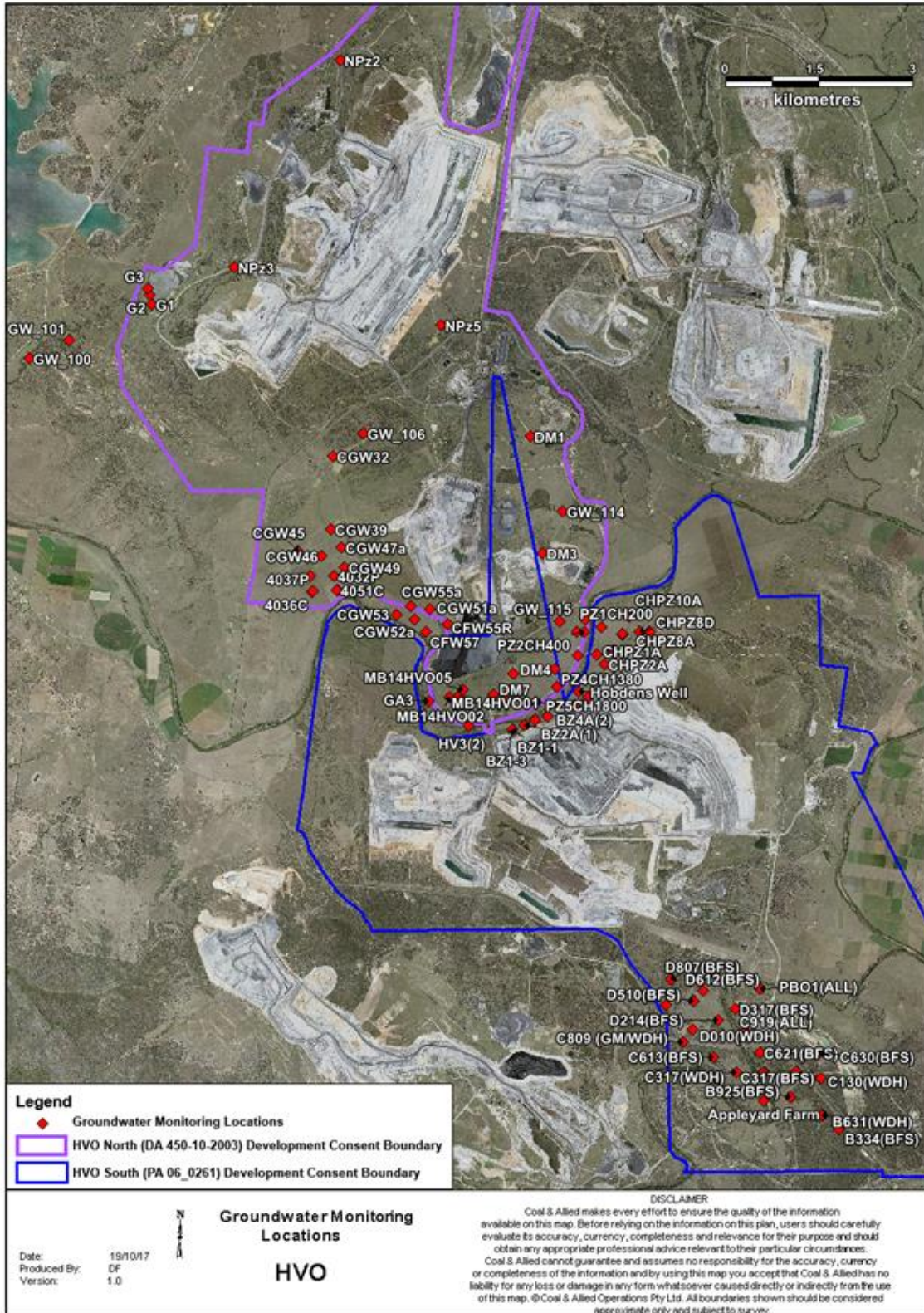
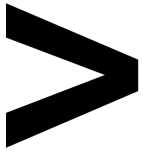


Figure 14 - Groundwater Monitoring Locations at HVO



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 December 2024 Monthly Environmental Monitoring Report.

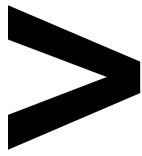


4 | BLASTING

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 (20) 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)
2/11/2024 13:23	98.25	96.94	100.32	99.24	106.94
4/11/2024 13:19	101.64	91.53	93.64	94.76	100.78
7/11/2024 13:11	111.43	101.98	95.45	88.88	95.93
9/11/2024 13:16	90.66	93.48	94.23	90.92	90.36
9/11/2024 13:21	92.44	88.99	101.33	89.74	82.71
11/11/2024 13:15	96.81	94.60	97.00	100.40	92.48
13/11/2024 13:15	93.63	88.98	95.44	92.69	95.59
15/11/2024 13:24	99.02	94.61	100.48	94.03	94.97
16/11/2024 16:13	98.23	105.99	107.19	90.65	102.29
18/11/2024 16:16	88.07	101.49	99.59	98.49	94.77
21/11/2024 13:28	93.30	111.61	94.86	95.45	86.44
22/11/2024 13:20	94.63	96.32	92.58	84.14	82.85
23/11/2024 13:35	87.11	87.89	90.63	89.78	86.19
23/11/2024 13:36	89.01	87.70	93.12	89.60	97.30
26/11/2024 11:19	89.05	96.94	108.24	98.58	99.82
26/11/2024 13:39	89.59	108.02	94.81	103.51	99.44
28/11/2024 16:52	88.22	78.08	97.11	109.09	96.21
28/11/2024 16:53	85.76	80.89	83.45	99.10	78.06
29/11/2024 13:09	98.10	97.58	84.17	91.04	85.82
30/11/2024 13:05	88.77	86.23	94.18	102.07	97.82



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)
2/11/2024 13:23	0.07	0.08	0.19	0.67	0.18
4/11/2024 13:19	0.12	0.28	0.07	0.07	0.05
7/11/2024 13:11	0.16	0.21	0.16	0.10	0.06
9/11/2024 13:16	0.28	0.17	0.25	0.12	0.12
9/11/2024 13:21	0.16	0.22	0.10	0.10	0.05
11/11/2024 13:15	0.10	0.07	0.11	0.25	0.06
13/11/2024 13:15	0.06	0.04	0.11	0.28	0.05
15/11/2024 13:24	0.11	0.14	0.13	0.14	0.05
16/11/2024 16:13	0.16	0.08	0.20	0.38	0.11
18/11/2024 16:16	0.05	0.07	0.06	0.08	0.03
21/11/2024 13:28	0.03	0.04	0.08	0.31	0.05
22/11/2024 13:20	0.12	0.10	0.23	0.11	0.09
23/11/2024 13:35	0.04	0.03	0.09	0.12	0.03
23/11/2024 13:36	0.08	0.07	0.13	0.18	0.06
26/11/2024 11:19	0.16	0.10	0.25	0.61	0.16
26/11/2024 13:39	0.04	0.05	0.09	0.43	0.03
28/11/2024 16:52	0.20	0.14	0.14	0.46	0.07
28/11/2024 16:53	0.03	0.06	0.03	0.46	0.01
29/11/2024 13:09	0.05	0.08	0.05	0.09	0.02
30/11/2024 13:05	0.05	0.07	0.09	0.05	0.02

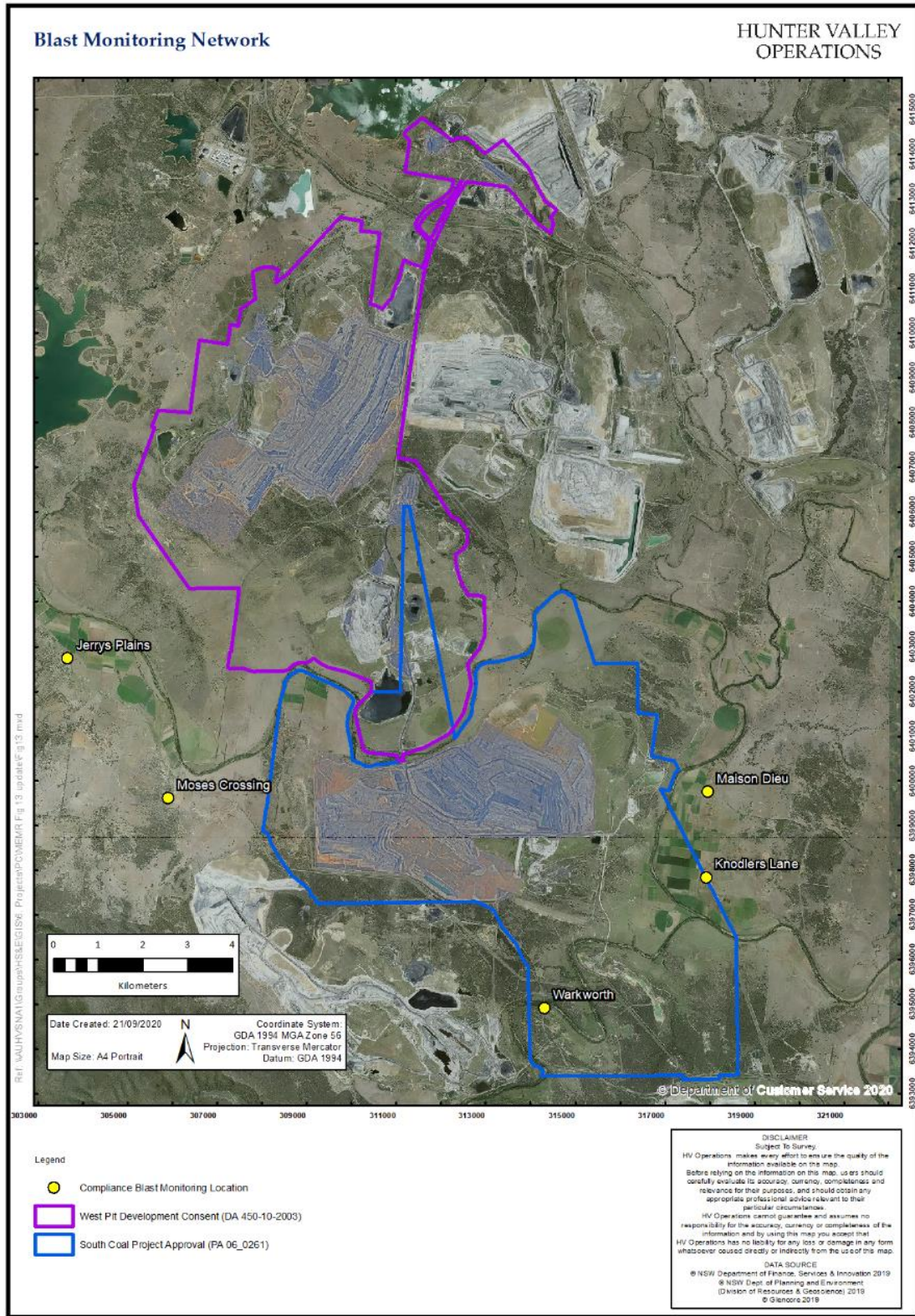
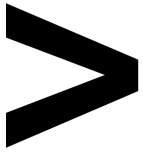


Figure 15 - Blast Monitoring Location Plan



5 | NOISE

Routine attended noise monitoring occurs at defined locations around HVO, as described in the HVO Noise Monitoring Programme. 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 period of 19 November 2024.

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? 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	19/11/2024 21:00	3.9	113	D	No	35	46	IA	IA	N/A	N/A
Knodlers Lane	19/11/2024 21:46	3.2	121	D	No	35	46	IA	IA	N/A	N/A
Maison Dieu	19/11/2024 21:24	3.7	116	D	No	35	46	IA	IA	N/A	N/A
Long Point (Dights Crossing)	19/11/2024 22:38	3.7	128	D	No	35	46	IA	IA	N/A	N/A
Kilburnie South	19/11/2024 23:09	4.2	121	D	No	39	46	NM	NM	N/A	N/A
Jerrys Plains East	19/11/2024 22:48	3.7	128	D	No	39	46	<20	<25	N/A	N/A
Jerrys Plains Village	19/11/2024 21:19	4.4	107	D	No	40	46	<25	28	N/A	N/A
Jerrys Plains West	19/11/2024 21:00	3.9	113	D	No	40	46	NM	NM	N/A	N/A

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

Number: HVOOC-1797567310-5099

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Page 26 of 39

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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? ¹	HVO South limits, dB ¹		HVO South levels, dB		Exceedances, dB	
		Speed m/s	Direction ³			L _{Aeq,15minute}	L _{A1,1min}	L _{Aeq,15minute} ²	L _{A1,1min}	L _{Aeq,15minute}	L _{A1,1min}
Shearers Lane	19/11/2024 21:00	4.2	123	D	No	41	45	IA	IA	N/A	N/A
Knodlers Lane	19/11/2024 21:46	4.1	137	E	No	40	45	IA	IA	N/A	N/A
Maison Dieu	19/11/2024 21:24	4.2	128	D	No	39	45	IA	IA	N/A	N/A
Long Point (Dights Crossing)	19/11/2024 22:38	3.7	149	D	No	37	45	IA	IA	N/A	N/A
Kilburnie South	19/11/2024 23:09	4.2	141	E	No	39	45	<30	40	N/A	N/A
Jerrys Plains East	19/11/2024 22:48	3.7	149	D	No	38	45	<20	<25	N/A	N/A
Jerrys Plains Village	19/11/2024 21:19	4.5	121	D	No	35	45	IA	IA	N/A	N/A
Jerrys Plains West	19/11/2024 21:00	4.2	123	D	No	35	45	IA	IA	N/A	N/A
HVGC	19/11/2024 23:36	4.1	135	D	No	55	--	IA	IA	N/A	N/A

- 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.
- NM = Not Measurable

Number: HVOOC-1797567310-5099

Status: Approved

Effective: 01/01/2025

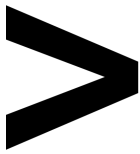
Page 27 of 39

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

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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	19/11/2024 21:00	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Knodlers Lane	19/11/2024 21:46	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Maison Dieu	19/11/2024 21:24	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Long Point (Dights Crossing)	19/11/2024 22:38	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Kilburnie South	19/11/2024 23:09	NM	No	N/A	N/A	N/A	N/A	N/A	N/A
Jerrys Plains East	19/11/2024 22:48	<20	No	N/A	N/A	N/A	N/A	N/A	N/A
Jerrys Plains Village	19/11/2024 21:19	<25	No	N/A	N/A	N/A	N/A	N/A	N/A
Jerrys Plains West	19/11/2024 21:00	NM	No	N/A	N/A	N/A	N/A	N/A	N/A

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? 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	19/11/2024 21:00	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Knodlers Lane	19/11/2024 21:46	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Maison Dieu	19/11/2024 21:24	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Long Point (Dights Crossing)	19/11/2024 22:38	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Kilburnie South	19/11/2024 23:09	<30	No	N/A	N/A	N/A	N/A	N/A	N/A
Jerrys Plains East	19/11/2024 22:48	<20	No	N/A	N/A	N/A	N/A	N/A	N/A
Jerrys Plains Village	19/11/2024 21:19	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
Jerrys Plains West	19/11/2024 21:00	IA	No	N/A	N/A	N/A	N/A	N/A	N/A
HVGC	19/11/2024 23:36	IA	No	N/A	N/A	N/A	N/A	N/A	N/A

1. NA denotes 'not applicable'

2. NM denotes 'not measurable'

3. Bold results indicate that application of NPfI 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.

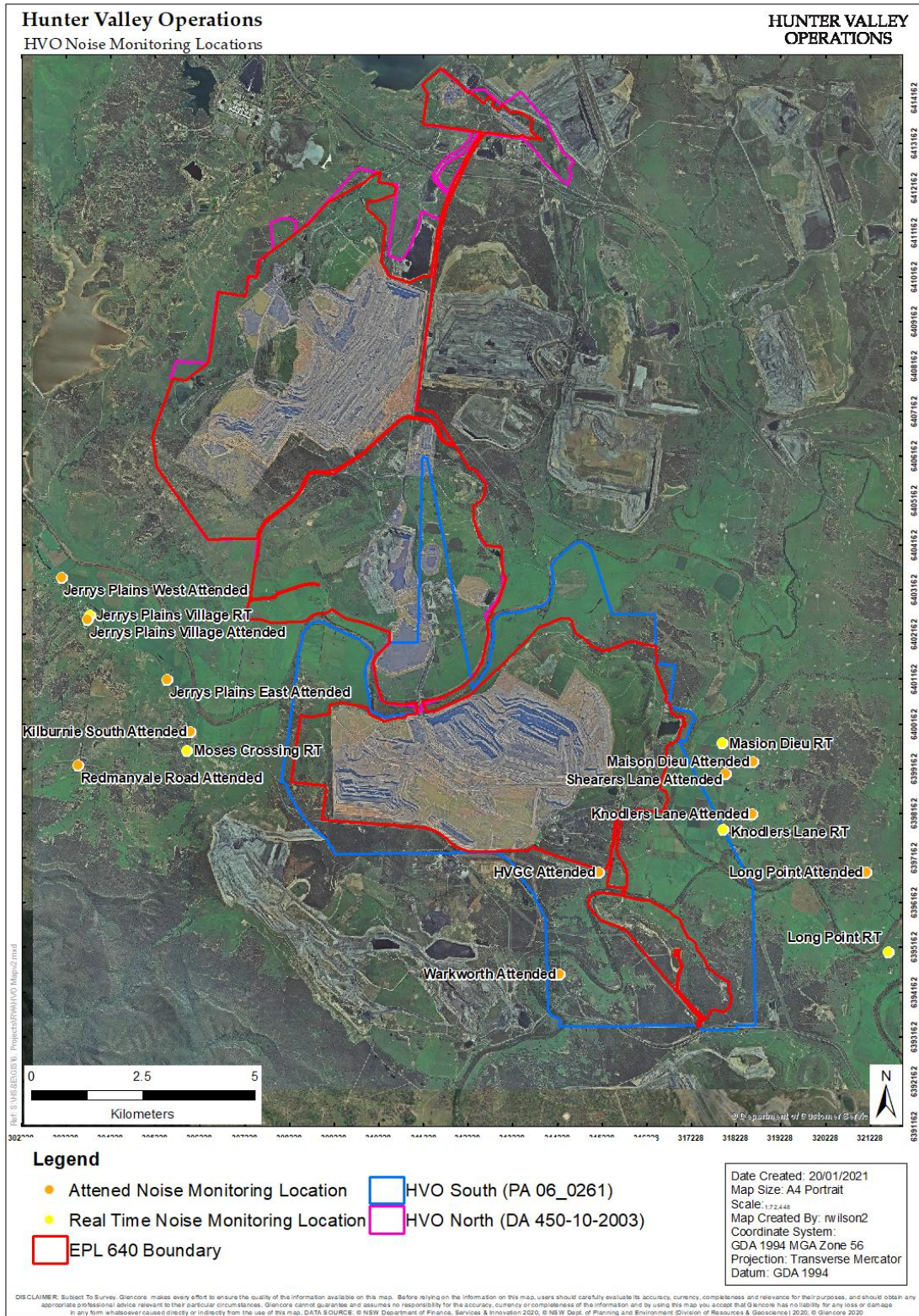
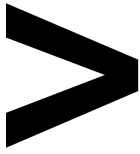


Figure 16 - Noise Monitoring Location Plan

Number: HVOOC-1797567310-5099
Owner: Superintendent - Environment and Community

Status: Approved
Version: 1.0

Effective: 01/01/2025
Review: [Planned Review Date]

6 | OPERATIONAL DOWNTIME

A total of seven hundred and seventy-nine (779) 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).

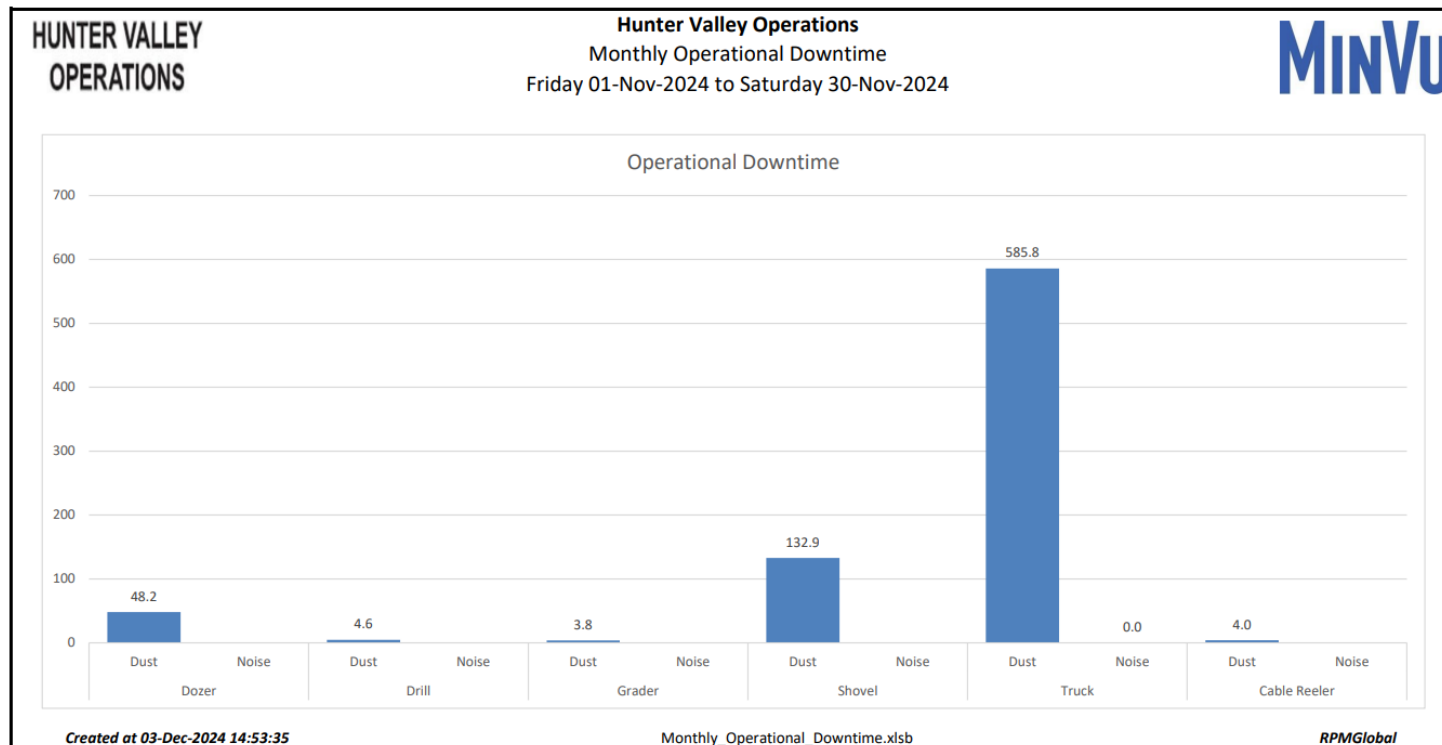
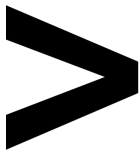


Figure 17 - Operational Downtime by Equipment Type for the Reporting Period



7 | REHABILITATION

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

- 9.73ha of land was reshaped;
- 9.73ha of land was released (became available for the application of topsoil);
- 17.59ha of land was topsoiled; and
- 18.50ha of land was rehabilitated.

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

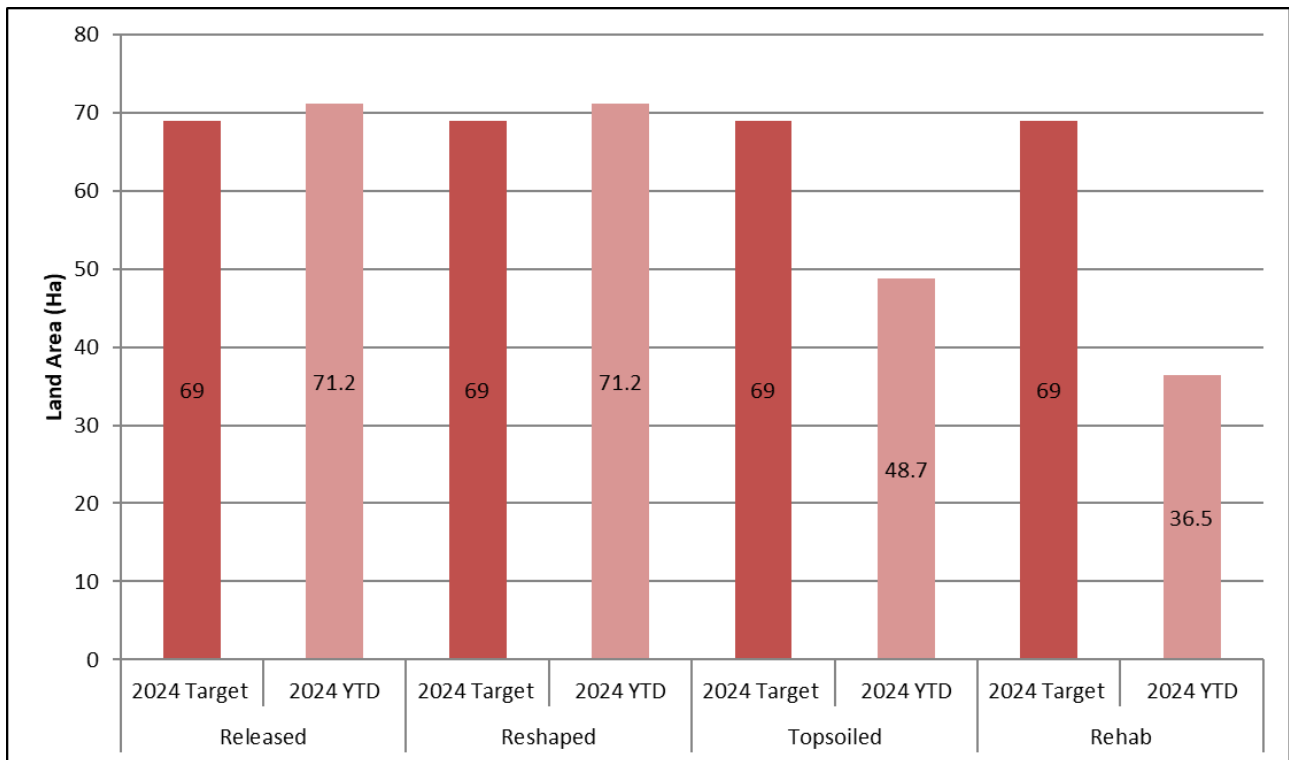


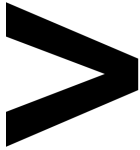
Figure 18 - Rehabilitation YTD November 2024

8 | COMPLAINTS

There was one (1) complaint received during the reporting period. Details of these and other complaints received during 2024 are shown in **Table 9**.

Table 9 - Complaints Summary 2024

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
No community complaints were received during January						
No community complaints were received during February						
1	12 March	8:59pm	1	Noise	Community Hotline	<ul style="list-style-type: none"> A resident of Jerrys Plains called the Community Complaints Hotline at 8:59pm regarding noise, commenting that “noise is pretty loud tonight” as well as equipment horns could be heard. The OCE on duty in South Pit contacted the resident at 9:02pm and subsequently notified the OCE on duty in West Pit. Following communication between West Pit OCE and relevant equipment operators, horn blasting and dumping practices – thought to be the causes of the disturbance – were altered and/or stopped. An internal investigation conducted following the complaint found that no noise alarms had triggered within one hour of the complaint. Horn noise was audible from noise recordings at the Jerrys Plains noise monitor.
2	2 April	1:31pm	2	Blast	Community Hotline	<ul style="list-style-type: none"> A resident of Jerrys Plains called the United Wambo Joint Venture (UWJV) Community Complaints Hotline at 1:31pm regarding noise and vibration from a blast. This was relayed to HVO given they did not have a blast at that time.



REPORT | MONTHLY ENVIRONMENTAL MONITORING REPORT NOVEMBER 2024

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						<ul style="list-style-type: none"> A member of the HVO Environment and Community team contacted the resident to advise a blast had been fired in the Mitchell Pit at 1:29pm. The closest monitor to the resident recorded overpressure of 105.5 dBL against a criteria of 120 dBL and ground vibration of 0.11mm/s against a criteria of 10mm/s.
3	4 April	12:30pm	3	Traffic	Community Hotline	<ul style="list-style-type: none"> A resident of Jerrys Plains called the Community Complaints Hotline at 12:30pm regarding traffic incidents at HVO North entry off Lemington Road. The resident reported that a vehicle exiting HVO North on the afternoon of 3 April failed to stop at the stop sign and almost collided with his wives vehicle. They have witnessed other vehicles failing to stop at the same location within the past two months. An internal investigation following the complaint resulted in a site-wide presentation about the importance of road safety whilst travelling to and from HVO delivered at daily HCOMs. Vegetation maintenance will be performed to increase visibility at the intersection.
4	3 May	7:40am	3	Traffic	Direct call to Environment and Community Officer	<ul style="list-style-type: none"> A resident of Jerrys Plains called the Environment and Community Officer directly regarding a traffic incident at HVO North's intersection with Lemington Road. The resident reported that a vehicle (small truck) exiting HVO North at approximately 7:40am on 3 May failed to stop at the stop sign and almost collided with his wives vehicle. Following an internal investigation into the complaint, a site-wide communication about road safety and the 100km/h speed limit along Lemington Road was delivered at daily HCOMs. In

Number: HVOOC-1797567310-5099

Status: Approved

Effective: 01/01/2025

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						addition, road marking, signs and the surveillance camera near the intersection will be upgraded.
No community complaints were received during June						
No community complaints were received during July						
5	30 August	10:05am	4	Blast	Direct call to Environment and Community Officer	<ul style="list-style-type: none"> A resident of Jerrys Plains contacted the HVO Environment and Community officer directly via telephone at 10:05am describing two loud blasts in succession as well as floor movement and house shudder. The Environment and Community Officer communicated to the resident advising that a blast had been fired in the HVO Mitchell Pit at 10:04am. The closest monitor to the resident recorded overpressure of 100.18 dBL against a criteria of 120 dBL and ground vibration of 0.06mm/s against a criteria of 10mm/s.
6	30 August	10:13am	5	Blast	Community Hotline	<ul style="list-style-type: none"> A resident of Jerrys Plains contacted the HVO Community Complaints Hotline at 10:13am describing their house rattling as well as two loud bangs. The Environment and Community Officer communicated to the resident via telephone shortly after the call to advise a blast had been fired in the HVO Mitchell Pit at 10:04am. The closest monitors to the resident – Jerrys Plains and Moses Crossing – recorded overpressure results of 100.18 dBL and 112.37 dBL respectively against a criteria of 120dBL and ground vibration results of 0.06mm/s and 0.21mm/s respectively against a criteria of 10mm/s. HVO conducted an internal investigation into the blast and as requested provided the outcomes to the resident via email.
7	30 August	10:19am	1	Blast	Community Hotline	<ul style="list-style-type: none"> A resident of Jerrys Plains contacted the HVO Community Complaints Hotline at 10:19am describing ground movement

Number: HVOOC-1797567310-5099

Status: Approved

Effective: 01/01/2025

Page 35 of 39

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						<p>worse than a recent earthquake. The Environment and Community Officer communicated to the resident via telephone shortly after the call to advise a blast had been fired in the HVO Mitchell Pit at 10:04am.</p> <ul style="list-style-type: none"> The closest monitors to the resident – Jerrys Plains and Moses Crossing – recorded overpressure results of 100.18 dBL and 112.37 dBL respectively against a criteria of 120dBL and ground vibration results of 0.06mm/s and 0.21mm/s respectively against a criteria of 10mm/s. HVO conducted an internal investigation into the blast and as requested provided the outcomes to the resident via email.
8	24 September	1:50pm	6	Blast	Community Hotline	<ul style="list-style-type: none"> A resident of Maison Dieu contacted the HVO Community Complaints Hotline at 1:50pm describing a blast that occurred at 1.30pm that shook their house and left dust over their cars. The HVO Environment and Community Officer communicated to the resident via telephone shortly after the call to advise a blast had been fired in the HVO Cheshunt Pit at 1:29pm. The closest monitors to the resident, Maison Dieu and Knodlers Lane, recorded blasting levels below relevant criteria. These monitors recorded overpressures of 112.74 and 114.6dBL respectively against a criteria of 120dBL and ground vibration of 0.33 and 0.26mm/s respectively against a criteria of 10mm/s. HVO conducted an internal investigation into the blast and as requested, and provided the outcomes to the resident.
9	21 October	6:33am	7	Traffic	Community Hotline	<ul style="list-style-type: none"> A member of the community called the HVO Community Complaints Hotline at 6:33am on 22 November regarding a traffic hazard at the intersection of the HVO South access road and Golden Highway.

Number: HVOOC-1797567310-5099

Status: Approved

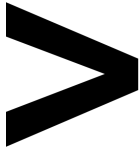
Effective: 01/01/2025

Page 36 of 39

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]



REPORT | MONTHLY ENVIRONMENTAL MONITORING REPORT NOVEMBER 2024

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						<ul style="list-style-type: none"> The community member reported that a vehicle exiting HVO South on the afternoon of 21 November failed to give way causing them to brake sharply to avoid a collision with the offending vehicle. A communication about the importance of providing an adequate gap at this intersection was provided to Mine and Maintenance teams at HVO South.
10	30 October	1:50pm	8	Air quality	Community Hotline	<ul style="list-style-type: none"> A resident of Putty Road, Mt Thorley contacted the HVO community complaints hotline at 1.50pm on 30 November 2024 regarding poor air quality. The resident was not able to attribute the dusty conditions to a blast event or any other event or location related to HVO. The residence is approximately 13km from HVO's nearest active mining area. The daily 24-hr results from the two closest real-time PM₁₀ monitors (Knodlers Lane and Maison Dieu) were below the compliance limits.
11	4 November	9:27am	8	Air quality	Direct call to Environment and Community Officer	<ul style="list-style-type: none"> A resident of Putty Road, Mt Thorley contacted HVO regarding poor air quality. The resident attributed dusty conditions to HVO South. Representatives from HVO's Environment and Community team attended the residence to discuss the residents concerns. The daily 24-hr results from the two closest real-time PM₁₀ monitors (Knodlers Lane and Maison Dieu) were below the compliance limits. The residence is approximately 13km from HVO's nearest active mining area.

Number: HVOOC-1797567310-5099

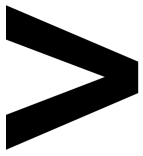
Status: Approved

Effective: 01/01/2025

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]



9 | ENVIRONMENTAL INCIDENTS

Three (3) reportable environmental incidents occurred during the reporting period. A summary of this incident is provided below:

4/11/2024 – TEOM PM₁₀ dust exceedance – Jerrys Plains

Monitoring results indicate that on 4 November 2024, the Jerrys Plains Tapered Element Oscillating Microbalance (TEOM) recorded a total result of 57.9µg/m³ for the 24-hour averaging period for PM₁₀, exceeding the relevant criteria of 50ug/m³. A third-party air quality consultant was engaged to investigate the result and determined HVO’s maximum possible contribution to be 1.2ug/m³. HVO implemented operational controls on 7 November to comply with the HVO Air Quality and Greenhouse Gas Management Plan. The Department of Planning Housing and Infrastructure (DPHI) were advised of this exceedance on 5 November and an incident report was submitted on 12 November. No further follow up has been requested from DPHI at this time.

7/11/2024 – HVAS PM₁₀ dust exceedance – Cheshunt East

Monitoring results indicate that on 7 November 2024, the Cheshunt East High Volume Air Sampler (HVAS) recorded a total result of 53.9µg/m³ for the 24-hour averaging period for PM₁₀, exceeding the relevant criteria of 50ug/m³. A third-party air quality consultant was engaged to investigate the result and determined HVO’s maximum possible contribution to be 11.1ug/m³. HVO implemented operational controls on 7 November to comply with the HVO Air Quality and Greenhouse Gas Management Plan. The DPHI were advised of this exceedance on 18 November and an incident report submitted. Affected residents will be notified of the exceedance as per Schedule 4, Condition 3 of the HVO North Development Consent.

22/11/2024 – Post blast fume event (Level 4B)

After firing the WS49ARU302B shot at 1:20pm in West Pit on 22 November 2024, post blast fume was observed across the blast surface. The blast was ranked Level 4B in accordance with the AEISG rating scale. Fume and dust from the blast travelled from the initiation point in a westerly direction and dispersed within the blast exclusion zone. No community complaints were received relating to the blast. The blast was fired in accordance with blasting permissions for wind speed and direction. An external investigation was undertaken to determine the likely causes of the fume event. An incident report was submitted to the DPHI on 6 December 2024. No further follow up has been requested from DPHI at this time.



APPENDIX A: METEOROLOGICAL DATA (HVO CORPORATE)

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)
1/11/2024	25.13	15.26	89.50	38.56	1271	116.70	3.63	0.4
2/11/2024	25.55	15.09	84.00	39.29	1468	122.10	3.83	0.0
3/11/2024	32.31	13.26	89.40	26.93	1111	254.40	3.38	0.0
4/11/2024	31.63	16.92	85.70	24.66	1418	238.40	3.62	0.0
5/11/2024	23.75	16.93	85.60	58.07	1396	116.40	4.17	0.0
6/11/2024	35.00	16.65	88.90	22.35	1531	160.30	1.36	0.0
7/11/2024	38.19	18.56	89.00	20.70	1403	219.20	2.80	4.2
8/11/2024	29.38	15.66	88.90	17.36	1101	261.50	3.68	0.2
9/11/2024	28.68	13.75	78.61	24.94	1152	121.40	2.52	0.0
10/11/2024	30.89	16.07	85.50	31.34	1149	143.40	3.01	0.0
11/11/2024	21.22	15.84	94.90	60.48	1056	124.70	2.70	8.8
12/11/2024	21.47	15.47	95.60	67.26	1612	122.20	2.47	1.4
13/11/2024	27.18	14.52	93.60	46.61	1407	154.30	1.56	5.8
14/11/2024	25.36	13.45	94.40	47.46	1488	154.30	2.89	0.0
15/11/2024	20.20	15.93	87.90	68.45	338	117.30	3.98	0.0
16/11/2024	27.05	16.10	91.50	49.63	1542	120.30	3.79	0.0
17/11/2024	33.26	16.48	92.90	27.06	1231	238.60	3.15	6.8
18/11/2024	24.83	16.84	92.00	45.68	1376	249.90	3.48	3.4
19/11/2024	24.98	14.99	85.20	40.67	1499	114.00	4.30	0.0
20/11/2024	26.42	12.65	91.30	35.93	1402	117.70	3.08	0.0
21/11/2024	26.57	11.91	91.40	28.71	1539	113.20	3.63	0.0
22/11/2024	28.92	13.32	88.50	29.69	1133	123.20	1.90	0.0
23/11/2024	31.57	14.93	87.70	18.76	1099	136.40	1.68	0.0
24/11/2024	34.35	16.05	83.60	14.23	1070	144.70	1.74	0.0
25/11/2024	35.11	16.21	88.90	20.53	1074	155.10	2.06	0.0
26/11/2024	36.15	17.69	85.00	20.96	1057	218.10	2.40	0.0
27/11/2024	35.50	22.32	66.59	17.70	1232	270.60	3.72	0.0
28/11/2024	24.40	20.86	91.10	58.16	422	242.70	2.07	2.4
29/11/2024	24.19	19.24	95.40	68.99	555	122.40	2.25	2.8
30/11/2024	22.46	18.83	95.80	81.60	250	138.50	1.16	4.0