



Rasp Mine
Monthly Environmental Monitoring Report
March 2025

INTRODUCTION

Broken Hill Operations Pty Ltd (BHOP) [a wholly owned subsidiary of Broken Hill Mines (BHM)] owns and operates the Rasp Mine (the Mine), which is located centrally within the City of Broken Hill on Consolidated Mine Lease 7 (CML7).

Mining has been undertaken within CML7 since 1885. The existing operations at the Rasp Mine include underground mining operations, a processing plant producing zinc and lead concentrates and a rail siding for concentrate dispatch. These operations are undertaken in accordance with Project Approval 07_0018 under Part3A of the Environmental Planning and Assessment Act 1979 (EP&A Act).

As the holder of an Environmental Protection Licence, 12559, BHOP is required, under Section 66(6) of the NSW *Protection of the Environment Operations Act 1997*, to publish pollution monitoring data. In addition BHOP is required to publish data in accordance with its Project Approval 07_0018 Schedule 4 Condition 9. These documents can be found on the Broken Hill Mines web pages at www.coolabahmetals.com.au/sustainability-1.

TABLE OF CONTENTS

1	AIR QUALITY	3
1.1	HIGH VOLUME AIR SAMPLERS	3
1.2	TAPERED ELEMENT OSCILLATING MICROBALANCE SAMPLING (TEOM).....	10
1.3	DUST DEPOSITION SAMPLING	14
1.4	VENTILATION OUTLETS AND BAG HOUSE MONITORING	16
2	NOISE.....	19
2.1	BLASTING (VIBRATION AND OVERPRESSURE)	19
2.2	NOISE	20
3	WATER.....	21
3.1	GROUNDWATER	21
3.2	SURFACE WATER SAMPLE RECORD	23
4	WEATHER DATA	24
5	DATA LOG	27
6	CORRECTION LOG.....	27
7	APPENDIX 1 – MONITORING LOCATIONS.....	28

1 Air Quality

Table 1 below shows the following pollutants as listed in the Project Approval DA 07_0018 are required to be monitored in EPL 12559:

**Table 1: EPL 12559 monitoring criteria
Long Term Criteria for Particulate Matter**

Pollutant	Averaging Period	Criterion
Total solid particles (TSP)	Annual	90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	25 µg/m ³

Short Term Criterion for Particulate Matter

Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³

Long Term Criteria for Deposited Dust

Pollutant	Averaging Period	Maximum Project Contribution	Maximum Total Deposited Dust Level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

1.1 High Volume Air Samplers

There are four high volume air samplers used to measure ambient air quality at the Rasp Mine – HVAS (EPL10) and HVAS1 (EPL11) are located at the Silver Tank, central and to the south of the mine lease, and HVAS2 (EPL12) and HVAS3 (EPL57) are located adjacent to and north of Blackwood Pit. A map indicating these locations can be found in appendix 1. HVAS and HVAS3 sample for total suspended particulates (TSP) and lead dust, and HVAS1 and HVAS2 sample for particulate matter less than 10 microns (PM₁₀) and lead dust.

TABLE 2: HVAS (EPL10) - Silver Tank (On Site) Results for March 2025

DATE	TSP (µg/m ³)	Lead (µg/m ³)
06-Mar-25	96.5	0.153
12-Mar-25	36.8	0.109
18- Mar-25	55.4	0.112
24- Mar-25	53.7	0.181
30- Mar-25	26.7	0.025

HVAS (EPL10) is located on the southern boundary of Rasp Mine and while limit criteria do not apply at this point, they do apply at the closest residential location.

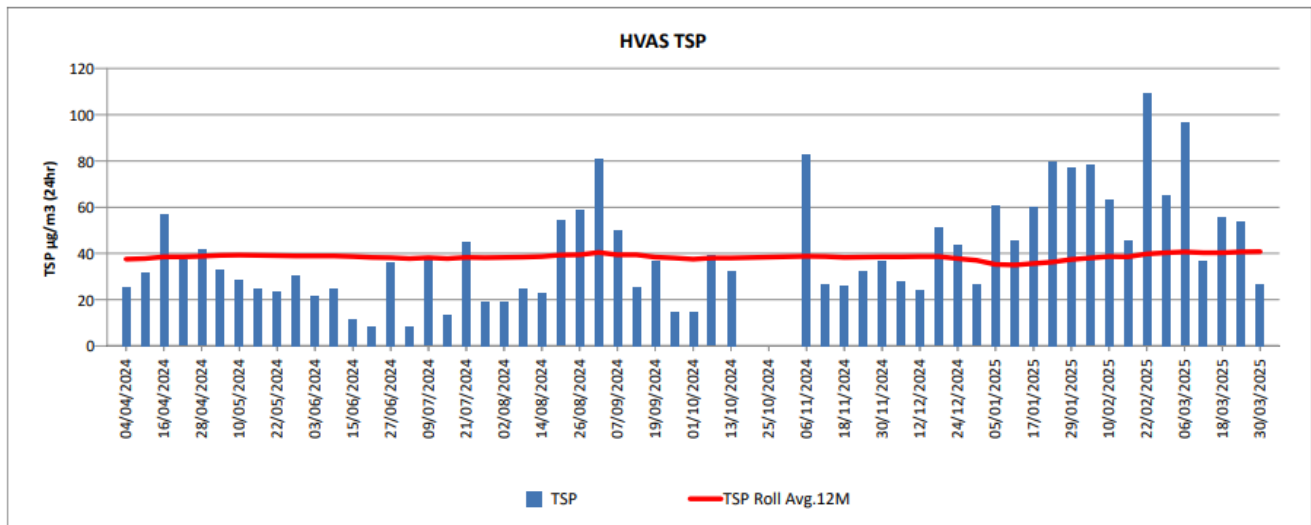


Figure 1: HVAS TSP measurements 12-month overview

TSP dust results at HVAS for the month of March were on average similar than measurements from previous month (see figure 1). The highest TSP result measured at HVAS (EPL10) for March was $96.5 \mu\text{g}/\text{m}^3$ on 6 March. It is the second highest value measured during the last 12 months. The on-site weather station indicated that relatively strong winds (mostly moderate to fresh breeze, reaching strong breeze) were predominantly blowing from the South-SSE as shown in Figure 2 below, implying that the source was external to the mining site. Water carts apply water to site roads daily and dust suppressant is applied to free areas and unsealed roads. The annual rolling average for TSP at this location is $40.8 \mu\text{g}/\text{m}^3$ at the end of March, slightly higher than the average of $37.4 \mu\text{g}/\text{m}^3$ at the beginning of April 2024.

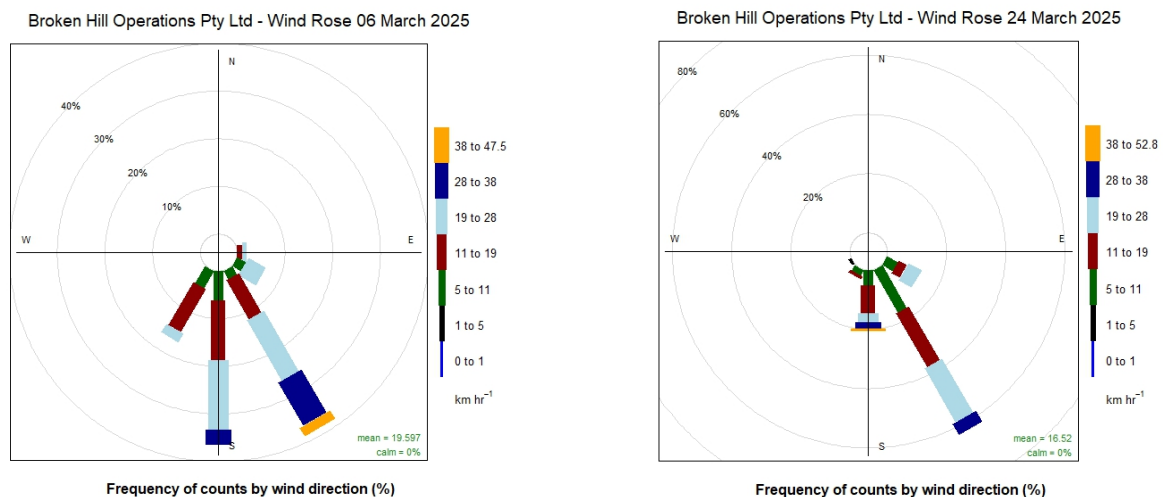


Figure 2: Wind rose for 06 March and 24 March

The annual rolling average for TSP is determined using data with extreme dust events included.

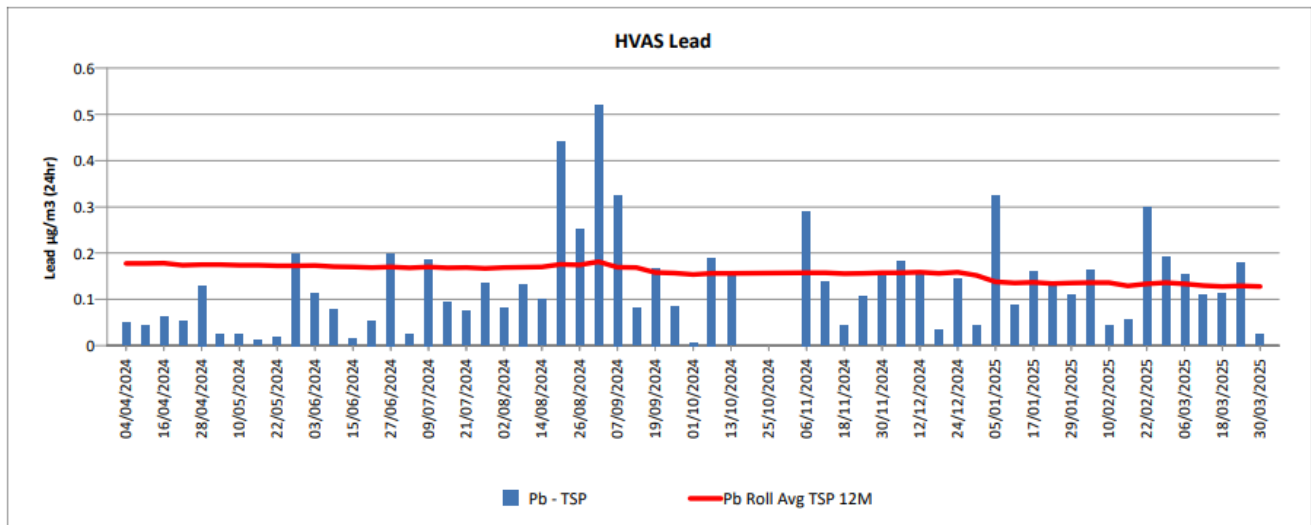


Figure 3: Lead in HVAS TSP measurements 12-month overview

TSP Lead dust results at HVAS for the month of March were on average similar to previous months (see Figure 3 above). The highest TSP Lead level for March was $0.18 \mu\text{g}/\text{m}^3$ on 24 March when strong winds were predominantly from the South-Southeast (see relevant wind rose in Figure 2 above). It is likely that the TSP Lead sampled on 24 March has originated from off-site. Water carts apply water to site roads daily and dust suppressant is applied to free areas and unsealed roads.

The rolling annual average for TSP Lead in March 2025 was $0.13 \mu\text{g}/\text{m}^3$, lower than the rolling annual average of $0.18 \mu\text{g}/\text{m}^3$ for TSP Lead at the end of March 2024.

HVAS1 (EPL11) - Silver Tank (On Site) Results for March 2025

DATE	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM ₁₀ Lead ($\mu\text{g}/\text{m}^3$)
06-Mar-25	34	0.048
12-Mar-25	8.7	0.027
18-Mar-25	15.3	0.010
24-Mar-25	13.8	0.029
30-Mar-25	13.1	<0.007

HVAS1 (EPL11) is located on the southern boundary of Rasp Mine and while limit criteria do not apply at this point, they do apply at the closest residential location.

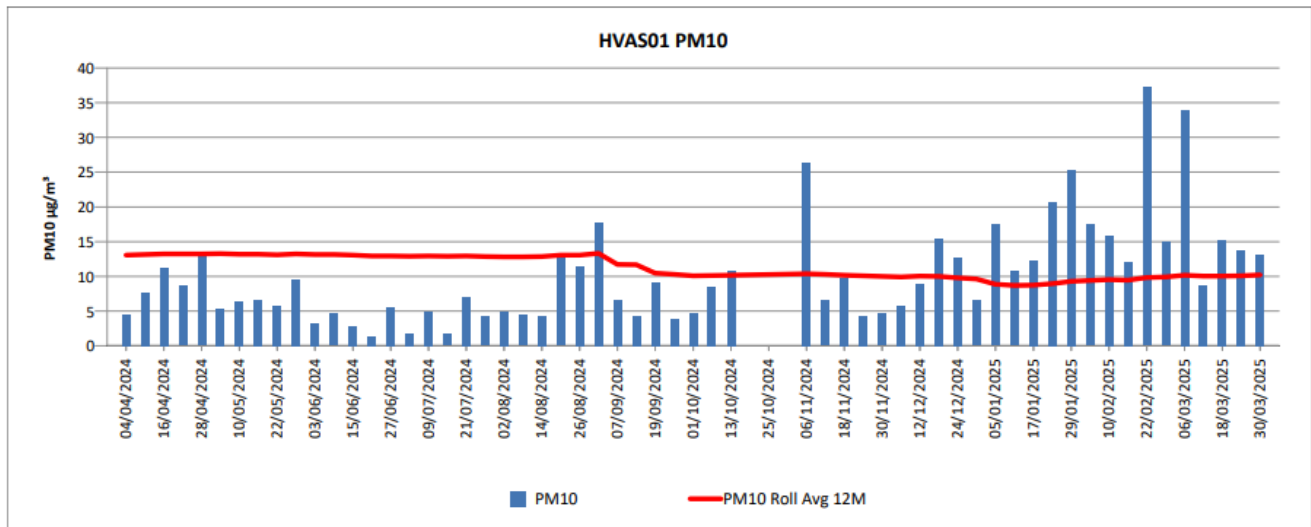


Figure 4: HVAS01 PM10 measurements 12-month overview

PM₁₀ dust results at HVAS1 for the month of March were on average similar than in previous months. The highest PM₁₀ dust level was measured on 6 March (see Figure 4 above) when the dust mass concentration reached 34 µg/m³. The on-site weather station indicated that relatively strong winds (mostly moderate to fresh breeze, reaching strong breeze) were predominantly blowing from the South-SSE on that day (see Figure 2 above), implying that the source was external to the mining site.

Water carts apply water to site roads daily and dust suppressant is applied to free areas and unsealed roads. The annual rolling average for PM₁₀ dust at this location is 10.1 µg/m³ at the end of March 2025, lower than the annual rolling average at the beginning of March 2024 which was 14.4 µg/m³. External and extreme dust events are recorded in measurements.

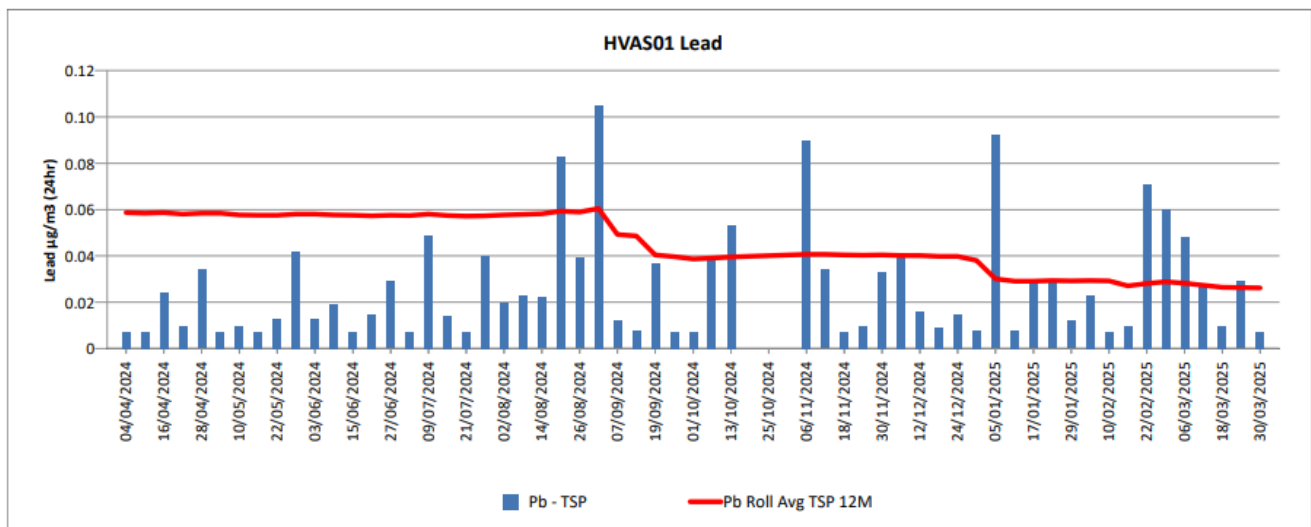


Figure 5: Lead in HVAS01 PM10 measurements 12-month overview

PM₁₀ Lead dust results at HVAS1 in the month of March were heterogenous and low, on average similar to measurements from previous month. The highest Lead PM₁₀ result for February was 0.05 µg/m³ on 6 March when

winds were predominantly from the South-Southeast (see Figure 2 above) suggesting contribution from external site sources. Water carts apply water to site roads daily and dust suppressant is applied to free areas and unsealed roads. The rolling annual average for PM₁₀ Lead in March was 0.03 µg/m³, lower than the average of 0.06 µg/m³ in March 2024.

HVAS 2 (EPL12) – Blackwood Pit (On Site) Results for March 2025

DATE	PM ₁₀ (µg/m ³)	PM ₁₀ Lead (µg/m ³)
06-Mar-25	35.1	0.058
12-Mar-25	11.4	0.013
18-Mar-25	13.2	0.012
24-Mar-25	23.2	0.080
30-Mar-25	15.4	0.122

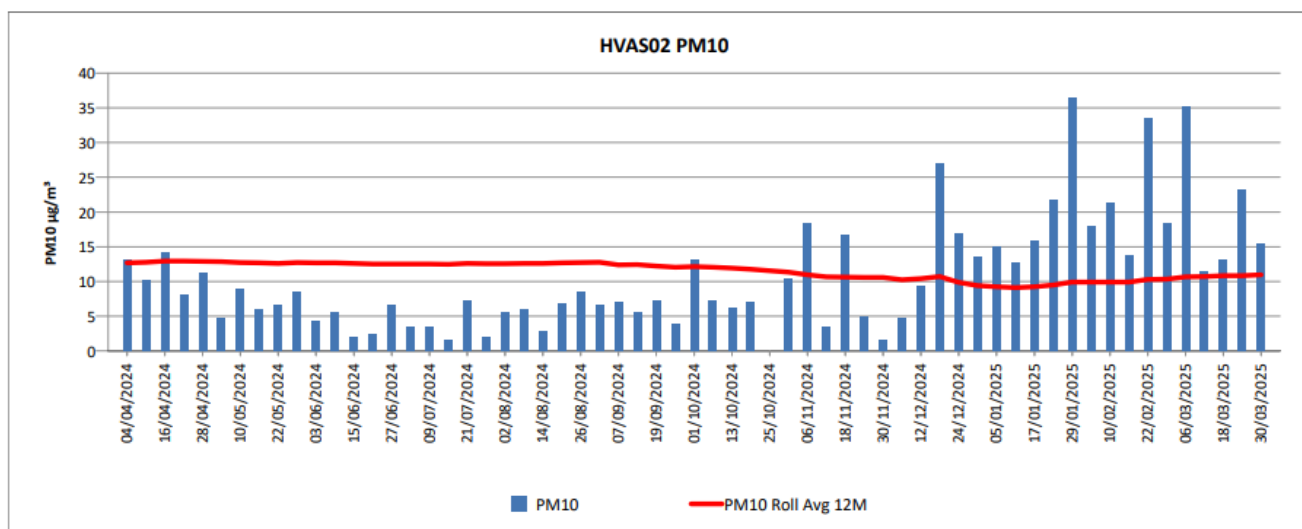


Figure 6: HVAS02 PM10 measurements 12-month overview

HVAS2 (EPL12) is located on the northern boundary of Rasp Mine and while limit criteria do not apply at this point, they do apply at the closest residential location.

HVAS02 PM10 measurements in the month of March were on average similar to measurements from the previous two months. The highest recorded PM₁₀ dust reading for March was 35.1 µg/m³ on 6 March when winds were from the South-Southeast suggesting contribution from on-site sources. The annual rolling average for PM₁₀ dust at this location is 10.7 µg/m³ at the end of March, down from 12.5 µg/m³ in March 2024. The decrease is clearly impacted by the low values measured during the previous two seasons (see Figure 6 above).

The annual rolling average for PM₁₀ dust is determined using data with extreme dust events included.

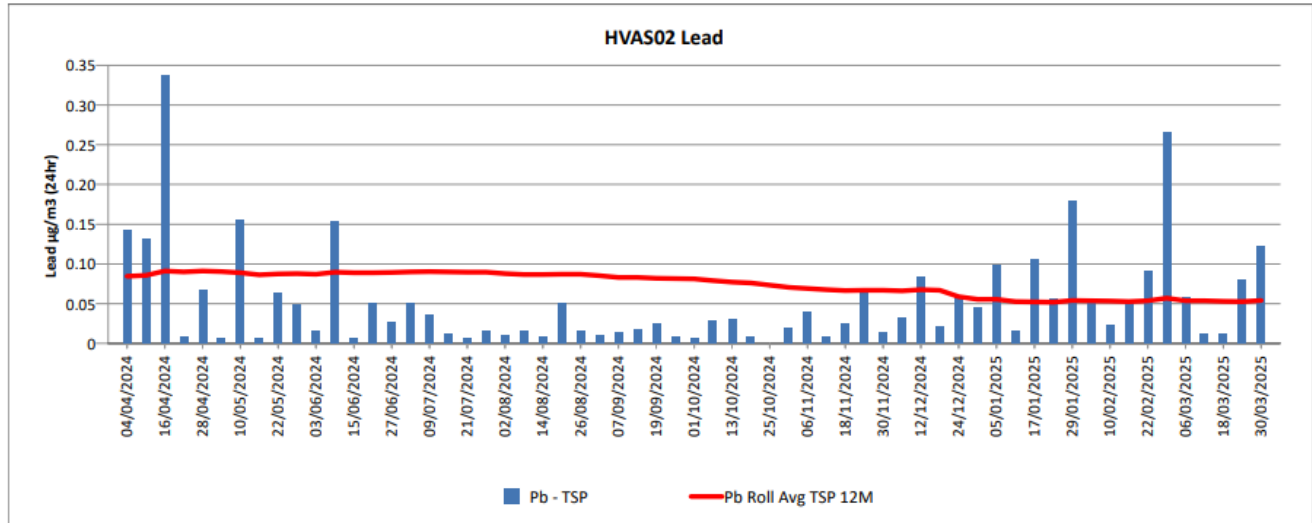


Figure 7: Lead in HVA502 PM₁₀ measurements 12-month overview

PM₁₀ lead levels in March are lower than those from the previous two months but with last two samples significantly higher than those measured during the winter period. The highest recorded PM₁₀ Lead dust reading for March was 0.12 µg/m³ on 30 March when winds were from the South (see Figure 8 below) suggesting contribution from site activities. The surface of Blackwoods TSF2 is treated with dust suppressant and the TSF spray system has been installed and is operational. The rolling annual average for PM₁₀ Lead in March was 0.06 µg/m³, down from 0.09 µg/m³ in March 2024.

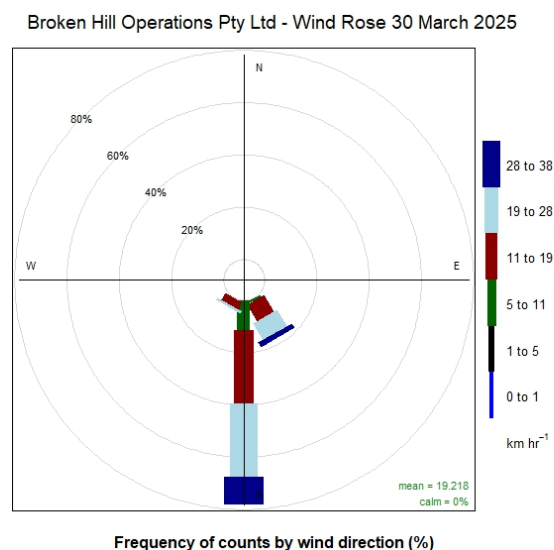


Figure 8: Wind rose for 30 March

HVAS 3 (EPL57) – Blackwood Pit (On Site) Results for March 2025

DATE	TSP ($\mu\text{g}/\text{m}^3$)	Lead ($\mu\text{g}/\text{m}^3$)
06-Mar-25	75.8	0.181
12-Mar-25	32.2	0.076
18-Mar-25	42.0	0.125
24-Mar-25	76.9	0.308
30-Mar-25	49.5	0.791

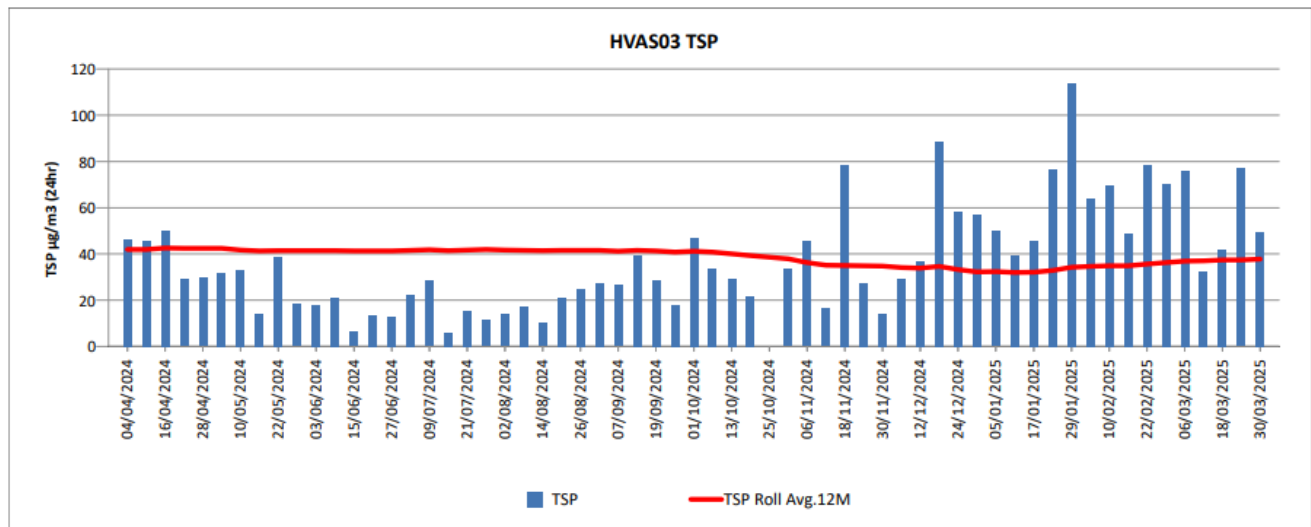


Figure 9: HVAS03 TSP measurements 12-month overview

As shown in Figure 9 above, TSP levels at HVAS3 were highest on 24 March with a result of $76.9 \mu\text{g}/\text{m}^3$ when winds were blowing from the South-Southeast (see Figure 2), implying an on-site source. The surface of Blackwoods TSF2 is treated with dust suppressant and the TSF spray system has been installed and is operational. The annual rolling average for TSP dust at this location is $37.8 \mu\text{g}/\text{m}^3$ at the end of March, slightly down from $40.7 \mu\text{g}/\text{m}^3$ in March 2024.

The annual rolling average for TSP is determined using data with extreme dust events included.

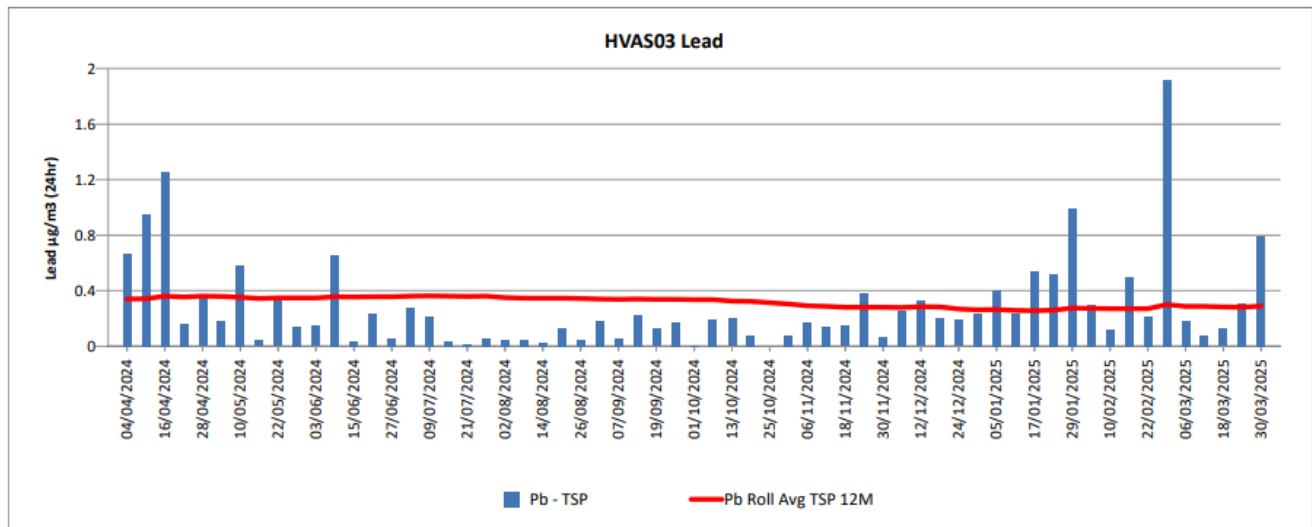


Figure 10: Lead in HVA503 TSP measurements 12-month overview

TSP Lead levels in February were lower than those from previous month (see Figure 10 above). The highest recorded value of $0.8 \mu\text{g}/\text{m}^3$ was on 30 March. It was sampled when winds were from the South (see Figure 8), suggesting contribution from site activities. The rolling annual average for TSP Lead in March was $0.29 \mu\text{g}/\text{m}^3$, slightly down from $0.33 \mu\text{g}/\text{m}^3$ in March 2024. The surface of Blackwoods TSF2 is treated with dust suppressant and the TSF spray system has been installed.

1.2 Tapered Element Oscillating Microbalance Sampling (TEOM)

There are two Tapered Element Oscillating Microbalance (TEOM) monitoring units used to measure ambient air quality at the Rasp Mine – TEOM1 (EPL13) is located off-site within the perimeter fence of Essential Water south of the mine lease, and TEOM2 (EPL14) is located on-site adjacent to Blackwood Pit to the north of the mine lease. A map indicating these locations can be found in Appendix 1. TEOM1 and TEOM2 are designed to operate continuously and monitor concentrations of particulate matter less than 10 microns (PM_{10}) in size with a time resolution of five minutes.

Project Approval 07_0018 criteria apply at TEOM1 and TEOM2, with two criteria listed for PM_{10} , a 24-hour average criteria of $50 \mu\text{g}/\text{m}^3$ and an annual average criteria of $25 \mu\text{g}/\text{m}^3$. Both Project Approval and Environment Protection Licence criteria exclude dust storms and other extraordinary events.

TEOM data is validated by third party NATA-accredited consultants using Australian Standards and internal procedures, and is used to populate the table of TEOM monthly data provided below.

Validated hourly data outputs from both instruments with no correction for extreme/external events are shown in Figure 11 below.

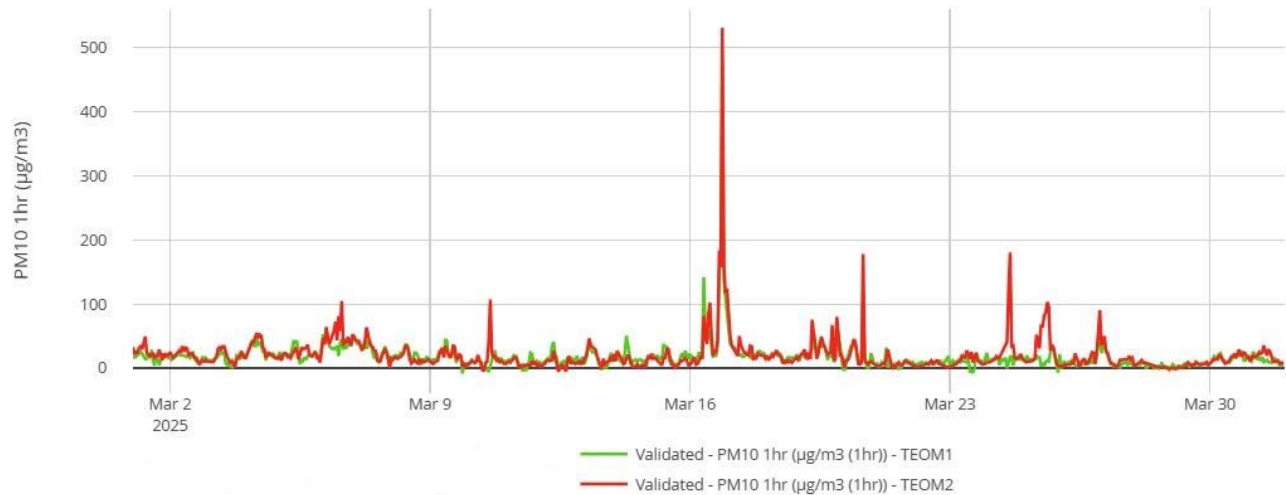


Figure 11: TEOM1 and TEOM2-Raw validated hourly-averaged PM10 concentrations

PM10 concentrations significantly exceeded 100 µg/m³ during three episodes this month: 16-17, 20 and 24 March. Figure 12 shows in greater detail the measurements obtained on 16-17 March. The wind rose displays wind sensor data measured between 18:00 on 16 March and 3:00 on 17 March, during the period when high PM values were recorded at both site 1 and 2, with maximum measured PM10 concentration of 759 µg/m³ at site 2 at 20:15. It clearly shows that the predominant winds blew strongly from the South and brought in dust measured by both TEOM2 and TEOM1 from sources external to the mine facility.

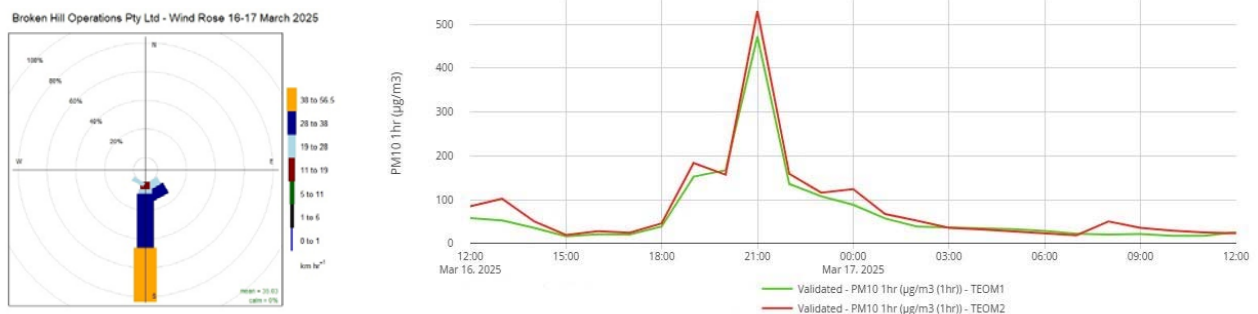


Figure 12: TEOM and wind sensor measurements on 16-17 March

The second high dust episode took place on 20 March. Results from that period are shown in Figure 13. The wind was mainly blowing from the East-East south, mostly with low intensity. Although the predominant wind direction suggests an on-site origin of the dust measured by TEOM2, the high dust levels also detected by TEOM1 indicate that a large part of this dust originated from outside the mine premises.

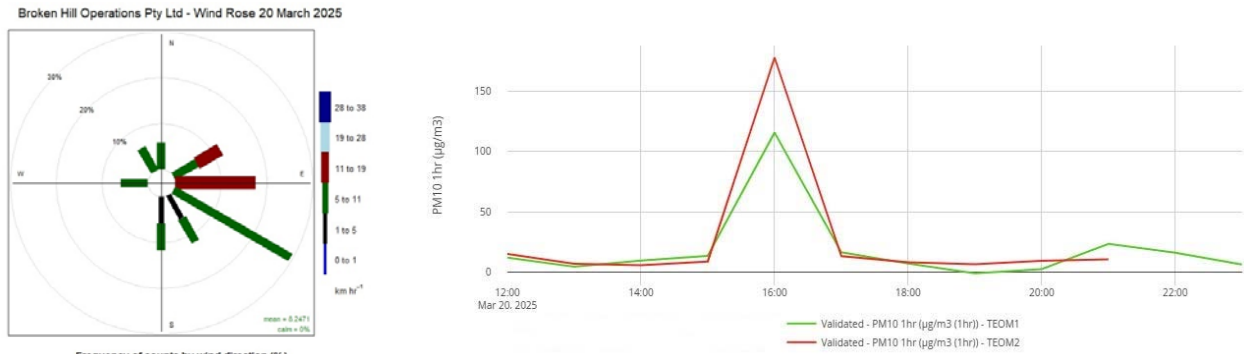


Figure 13: TEOM and wind sensor measurements on 20 March

The last episode of elevated regional dust levels on 24 March has been discussed in section 1.1.

TEOM1 (EPL13) (Off Site) and TEOM2 (EPL14) (On Site) Validated Results for March 2025

Particulate Matter <10 Microns 24Hr Average				
Date	TEOM 1 (µg/m³)	Compliant with 50µg/m³ 24hr average?	TEOM 2 (µg/m³)	Compliant with 50µg/m³ 24hr average?
1/03/2025	17.5	Y	24.5	Y
2/03/2025	16.6	Y	19.2	Y
3/03/2025	14.1	Y	17.5	Y
4/03/2025	20.2	Y	14.5	Y
5/03/2025	18.3	Y	22.5	Y
6/03/2025	17.2	Y	18.0	Y
7/03/2025	13.9	Y	9.1	Y
8/03/2025	19.7	Y	15.5	Y
9/03/2025	17.3	Y	16.1	Y
10/03/2025	10.4	Y	15.7	Y
11/03/2025	9.3	Y	7.3	Y
12/03/2025	13.4	Y	7.8	Y
13/03/2025	14.7	Y	17.2	Y
14/03/2025	16.1	Y	10.9	Y
15/03/2025	17.5	Y	11.1	Y
16/03/2025	16.7	Y	16.5	Y
17/03/2025	23.4	Y	16.1	Y
18/03/2025	17.4	Y	15.5	Y
19/03/2025	25.9	Y	28.0	Y
20/03/2025	15.1	Y	18.5	Y
21/03/2025	8.2	Y	6.9	Y
22/03/2025	8.6	Y	5.5	Y
23/03/2025	9.8	Y	12.5	Y
24/03/2025	13.2	Y	30.7	Y
25/03/2025	13.9	Y	34.4	Y
26/03/2025	9.9	Y	12.6	Y
27/03/2025	12.2	Y	18.5	Y

Particulate Matter <10 Microns 24Hr Average				
28/03/2025	3.5	Y	3.9	Y
29/03/2025	5.1	Y	4.5	Y
30/03/2025	15.7	Y	16.4	Y
31/03/2025	12.2	Y	17.5	Y

NA - sample collected but data invalid; NS – insufficient sample collected

The data capture rate for the TEOM1 and TEOM2 monitors in March were respectively 99.2% and 98.9%, both exceeding the 95% requirement.

The rolling annual average for PM10 at TEOM1 with external dust events and invalid data removed for the period March 2024 to March 2025 is 12.5 µg/m³, lower than the rolling annual average of 13 µg/m³ at the beginning of the annual period.

The rolling annual average for PM10 at TEOM2 with external dust events and invalid data removed for the period March 2024 to March 2025 is 13.3 µg/m³, lower than the rolling annual average of 14.8 µg/m³ at the beginning of the reporting period.

Data collected for the dates of 4 to 7, 9, 16 to 17, and 19 to 20 March have been corrected due to the impact from dust storms and external events.

Six-monthly servicing of TEOMs was conducted from 11 to 12 December. A portable PM₁₀ monitor is located adjacent to TEOM2 to provide real-time dust readings and dust level alerts whilst the TEOM was undergoing servicing and testing.

The PM₁₀ 24-hour rolling annual average for both TEOM sites remain below the annual average criteria of 25 ug/m³.

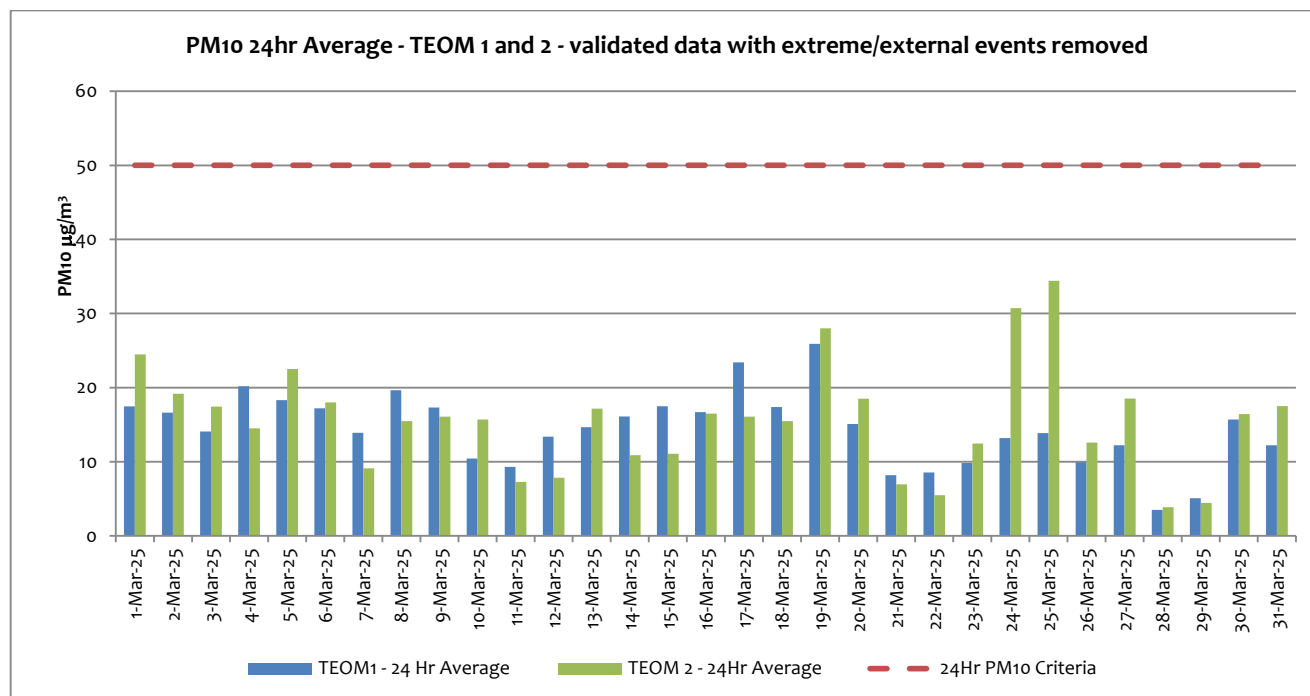


Figure 14: Site 1 and site 2 PM10 24-hour averaged measurements

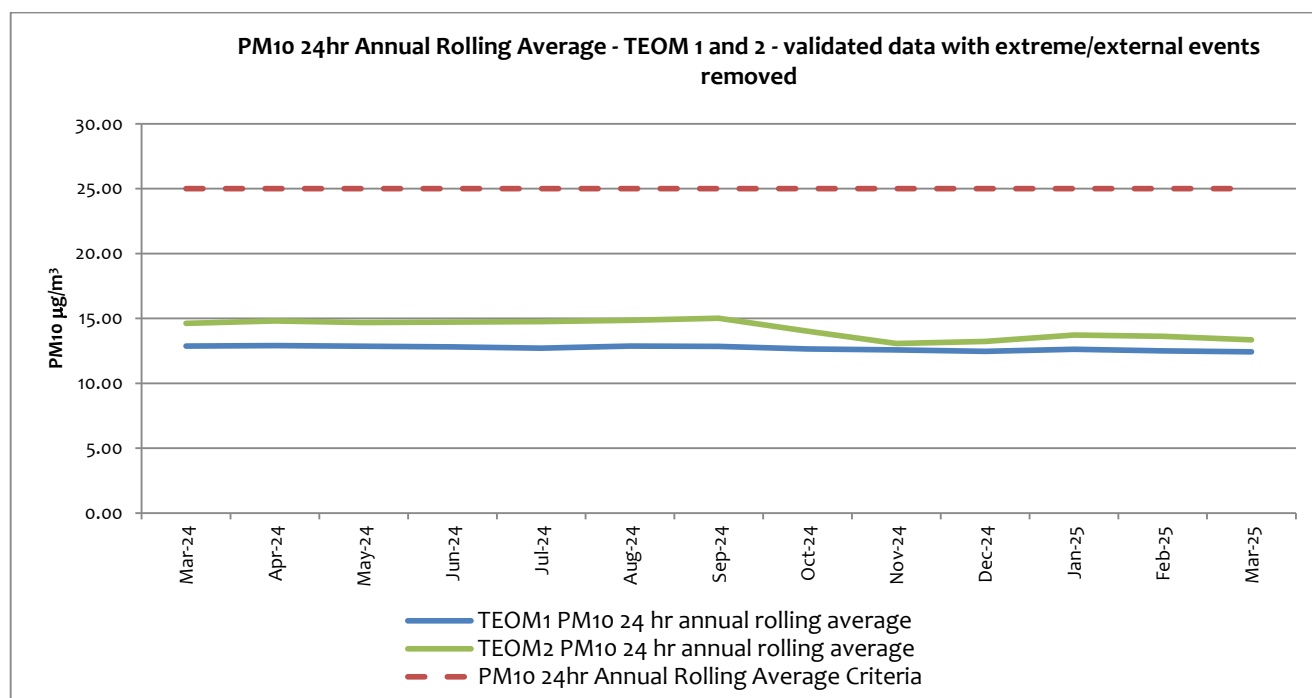


Figure 15: Site 1 & 2 - Annual rolling average PM10 measurements 12-month overview

1.3 Dust Deposition Sampling

There are seven dust deposition gauges to measure ambient air quality at the Rasp Mine – D1 to D7. D1 and D6 are located off-site, D1 near the St Johns training facility north of the Rasp Mine and D6 in Casuarina Avenue south of the Rasp Mine. D2 to D5 and D7 are located on the mine lease in various locations. A map indicating these locations can be found on the Rasp Mine web site. Dust samples are collected monthly and analysed for total deposited dust and deposited lead dust.

Dust Deposition Gauges D1 (EPL3) to D7 (EPL9) – Results for March 2025

Total Deposited Dust (g/m ² .Month)							
Sample Period	D1 (off site)	D2 (off site)	D3 (on site)	D4 (off site)	D5 (on site)	D6 (off site)	D7 (on site)
March 2025	1.6	2.6	1.4	1.5	2.7	2.8	1.7
Annual Rolling Average	0.82	1.02	0.96	2.49	2.80	1.7	0.93
Background (2010)	4.0	3.1	4.3	5.7	-1	5.8	-1

Note: “1”= background not available, N/A = not applicable as dust deposition unit is located on site, NS = No sample

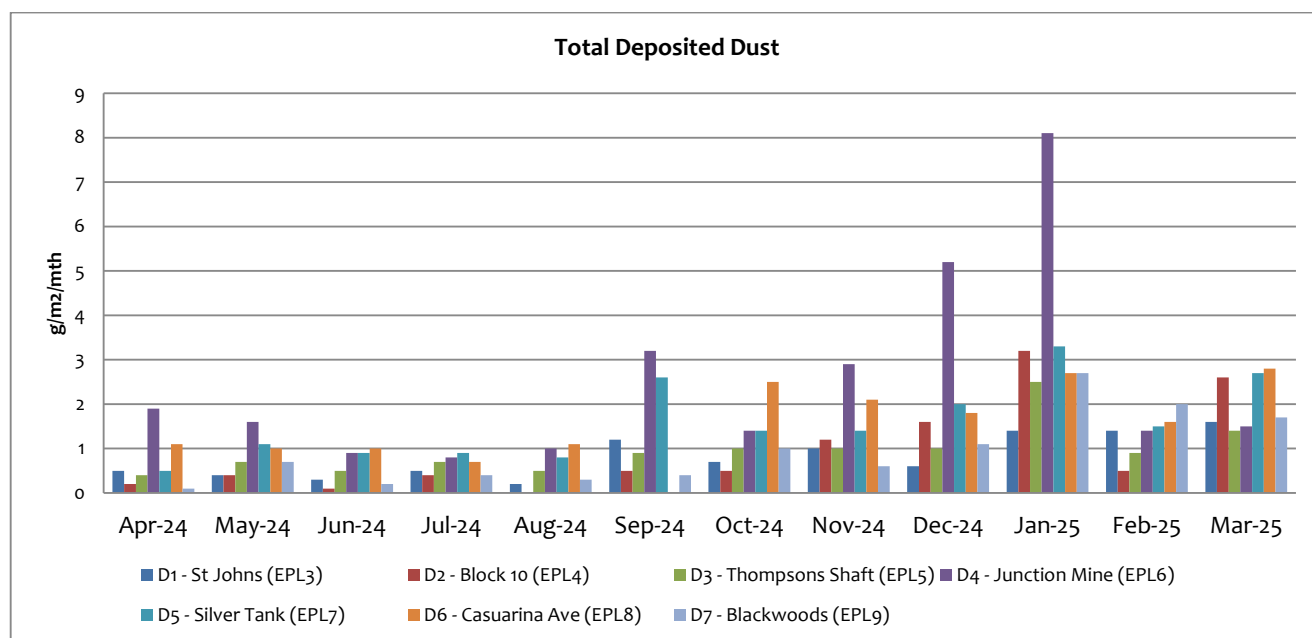


Figure 16: Total deposited dust collected by 7 dust gauges - 12-month overview

Most dust levels recorded in Dust Gauges in March 2025 were comparable to results from the previous month, except for D2 that collected about five times more dust (see Figure 16 above). The highest dust levels in March were recorded in the D6 Casuarina Ave gauge. All results for this month were quite homogeneous and relatively low, below 2 g/m².month for 4 gauges (D1, D3, D4, D7) and below 3 g/m².month for the remainder.

Dust Deposition Gauges that are located off-site must adhere to criteria for annually averaged deposited dust of 4 g/m².month.

Dust suppressant is applied to unsealed areas of the site and roads are frequently watered using water carts in an attempt to control dust emissions. The waste dump adjacent to the rail loadout is treated with dust suppressant to capture any loose dust accumulating on the lower batters and on the upper surface.

Total Deposited Lead (g/m ² .Month)							
Sample Period	D1 (off Site)	D2 (on site)	D3 (on site)	D4 (on site)	D5 (on site)	D6 (off Site)	D7 (on site)
March 2025	0.0015	0.0004	0.0021	0.0016	0.0006	0.0003	0.0021
Background (2010)	0.0034	0.005	0.005	0.006	-1	0.004	-1

Note: "1" = background not available, NS = No sample

There are no guidelines for deposited lead dust. Lead results in March 2025 were low, with a maximum of 0.0021 g/m².month sampled at two sites: D3 and D7.

A high value was recorded at D7 Blackwoods in February. It was removed from the dataset in the previous monthly report, due to doubt regarding sample analysis. The laboratory in charge of chemical sample analysis (ALS) reanalysed the sample and obtained the same results. Hence, the results are shown twice on figure 17 below, with two different scales in order to improve readability. DG7 sampled is located on the edge of an active tailing dam (TSF2) with active sprinklers using mine water. The volume of water sampled at DDG7 was 1.17L, more than twice

the volume sampled at other sites (e.g.: 0.47L at DDG6, 0.49L on average for all other DDGs). The high lead level found in February's DDG7 sample is therefore most likely due to contamination from sprayed mine water.

The predominant wind direction for March was from the South-Southeast as shown in the Wind Rose in Section 4, with 75% of winds coming from 2nd quadrant (i.e. between East and South). Given the locations of D3 and D7 (see appendix 1), the source of Lead for both dust gauges is likely to be on-site

Dust suppressant is applied to unsealed areas of the site and roads are frequently watered using water carts in an attempt to control dust emissions. The waste dump adjacent to the rail loadout is treated with dust suppressant to capture any loose dust accumulating on the lower batters and on the upper surface.

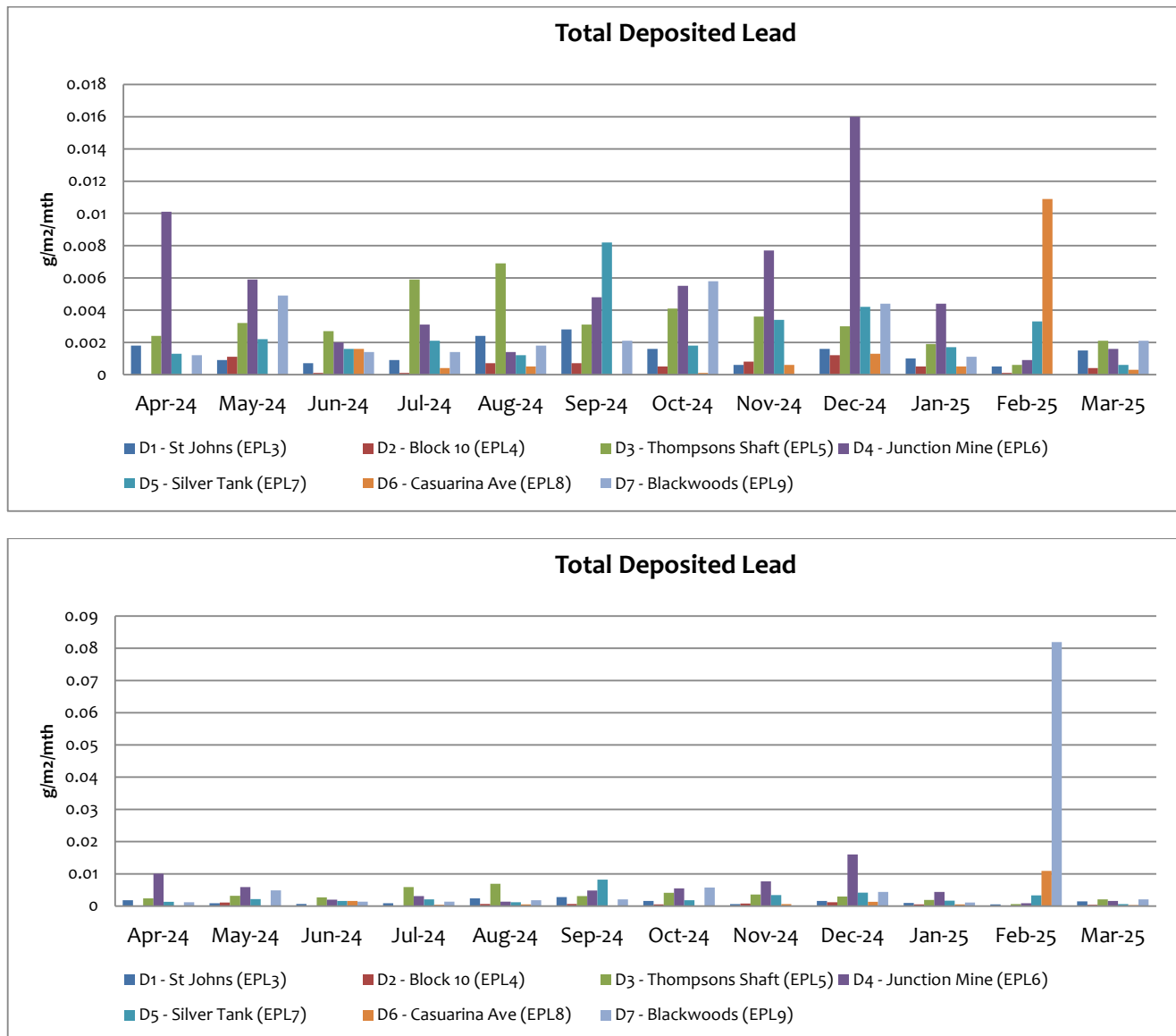


Figure 17: Lead deposited dust collected by 7 dust gauges - 12-month overview

1.4 Ventilation Outlets and Bag House Monitoring

There are two locations to measure pollutants from exhausts or stacks; these include the Primary Ventilation Shaft, measuring pollutants from underground firings, and the Baghouse Stack at the crusher measuring dust. Each are located on site; the Primary Ventilation Shaft is located centrally and to the north of the mine lease and the Primary Crusher Baghouse Stack is located within the area of the processing plant to the east of the lease. Shaft 6 (EPL56) was removed as a monitoring location with the variation of EPL12559 in March 2019 as it became an intake rather than an exhaust in June 2018. A map indicating these locations can be found on the Rasp Mine web site. Samples are collected quarterly and analysed for a number of parameters listed in below. Reference to the item required in the Rasp Mine Environment Protection Licence (EPL) is provided below. Emissions monitoring is conducted quarterly.

The following criteria apply:

Primary Ventilation Shaft (EPL1)

	Unit	Criteria
Nitrogen Oxides	mg/m ³	350
Volatile Organic Compounds	mg/m ³	40

Primary Ventilation Shaft (EPL1) and Crusher Baghouse (EPL2)

	Unit	Criteria
Total Suspended particles (TSP)	mg/m ³	20
Type 1 and Type 2¹	mg/m ³	1

Note 1: "Type 1 substance" means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

"Type 2 substance" means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements.

Primary Vent Shaft (EPL1) and Crusher Baghouse (EPL2) Results for March 2025

The latest round of emissions monitoring was conducted at the Primary Vent Shaft (EPL1) and the Crusher Baghouse (EPL2) on 11 March 2025. Results were within limits and are provided below.

Parameter	Unit	Primary Vent Shaft (EPL1)	Crusher Baghouse (EPL2)
Dry Gas Density	kg/Nm ³	1	1
Moisture	%	2.4	2.2
Molecular weight of stack gases	g/Nm ³	1,288	1,288
Temperature	°C	25.0	35.0
Nitrogen Oxides	mg/Nm ³	<2.05	NA
Volatile Organic Compounds	mg/m ³	<0.44	NA
Total Suspended particles	mg/Nm ³	17.1	12.3
Type 1 and Type 2	mg/Nm ³	0.25	0.20
Velocity	m/sec	11.1	22.9
Volumetric Flowrate	Nm ³ /sec	172	9

2 Noise

2.1 Blasting (Vibration and Overpressure)

There are five compliance vibration monitors at various locations measuring for vibration and overpressure from blast firings. These include V1 to V5 which are located on-site and off-site. A map indicating these locations can be found on the Rasp Mine web site. In addition, there are a number of roving monitors which may be used to monitor vibration and overpressure at particular locations as required. Monitors operate continuously and are automatically triggered to record when a blast occurs. The following conditions apply as listed in the PA 07_0018 and EPL 12559:

Blasting Criteria (Western Mineralisation and Main Lodes excluding Block 7)

Location	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (mm/s)	Allowable Exceedance (for production and development blasts)
Residence on privately owned land (7am-7pm)	115	5	5% of the total number of blasts over a 12-month period ¹
(7am-7pm)	120	10	0%
(7pm-10pm)	105	-	-
(10pm-7am)	95	-	-
Public Infrastructure	-	100	0%

Note 1: Does not apply until completion of Pollution Reduction Program on the EPL at the end of 2018. Applies to EPL criteria in the period for the Annual Return 3 Nov to 2 Nov the following year and to DPE criteria in the reporting period 1 Jul to 30 Jun each year.

Blasting Criteria (Block 7)

Location	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (mm/s)	Allowable Exceedance (for production and development blasts)
Residence on privately owned land (7am-7pm)	115	3 (interim)	5% of the total number of blasts over a 12-month period ¹
(7am-7pm)	120	10	0%
(7pm-10pm)	105	-	-
(10pm-7am)	95	-	-
Broken Hill Bowling Club, Italio (Bocce) Club, Heritage Items within CML7	-	50	0%
Perilya Southern Operations	-	100	0%
Public Infrastructure	-	100	0%

Note 1: Applies to EPL criteria in the period for the Annual Return 3 Nov to 2 Nov the following year and to DPE criteria in the reporting period 1 Jul to 30 Jun each year.

In addition the following conditions also apply:

- Production blasts may occur between 6.45 am and 7.15 pm on any day
- 1 production blast per day, with 6 per week averaged over a calendar year
- 6 development blasts per day, with 42 per week averaged over a calendar year

Blasting Data Summary Results for March 2025 (annual period)

Total Blasts:

- 0 production blasts occurred before 6.45 am or after 7.15 pm
- The number of Production blasts averaged 1.44 per week over the previous calendar year
- The number of Development blasts averaged 5.08 per week over the previous calendar year

Western Mineralisation and Main Lodes (excluding Block 7):

- 0 Blast recorded >5 mm/s
- 0 Blasts recorded >10 mm/s
- 0 development blasts recorded an over pressure level over 95 dBL (10pm to 7am)
- 0 development blasts recorded an over pressure level over 105 dBL (7pm to 10pm)
- 0 Blasts recorded an over pressure level over 115dBL (7am to 7pm)
- 0 Blasts recorded an over pressure level over or 120 dBL at any time
- Percentage of development blasts over 5 mm/sec for the annual period = 0%
- Percentage of production blasts over 5 mm/sec for the annual period = 0%

Block 7:

- 0 Blasts recorded >3 mm/s
- 0 Blasts recorded >10 mm/s
- 0 Blasts recorded >50 mm/s at V6
- 0 development blasts recorded an over pressure level over 95 dBL (10pm to 7am)
- 0 development blasts recorded an over pressure level over 105 dBL (7pm to 10pm)
- 0 Blasts recorded an over pressure level over 115 dBL (7am to 7pm)
- 0 Blasts recorded an over pressure level over or 120 dBL at any time
- Percentage of development blasts over 3mm/sec for the annual period = 0%
- Percentage of production blasts over 3mm/sec for the annual period =100%

There have been no production blasts in the Western Mineralisation and Main Lodes producing vibration at monitors over 5 mm/sec for the 12-month period.

There have been no production blasts in Block 7 for the 12-month period.

2.2 Noise

Noise monitoring is undertaken as per the NSW Noise Policy for Industry at a frequency of once per annum. Attended environmental noise monitoring was done during the night period of 20 and 21 December 2024 at 14 monitoring locations. Noise levels from site complied with relevant limits at all monitoring locations during the December 2024 survey.

3 Water

3.1 Groundwater

There are eighteen sampling locations for groundwater. GW01 (EPL37) to GW16 (EPL52) are piezometers installed at various locations around the mine site and are sampled quarterly. There are also two sampling locations for water pumped from underground mining, Shaft 7 (EPL53) and Kintore Pit (EPL54), which are sampled monthly. A map indicating these locations can be found on the Rasp Mine web site. Groundwater monitoring is scheduled for completion in March, June, September and December. No limits are applied in the EPL to the results from groundwater monitoring. Levels for all parameters are stable.

Ground and Mine Water Monitoring Requirements

EPA Identification Number	Frequency	Parameters to be analysed
Shaft 7 EPL53	Monthly	alkalinity (calcium carbonate (CaCO ₃)), cadmium (Cd), calcium (Ca), chloride (Cl), electrical conductivity (EC), iron (Fe), lead Pb), magnesium (Mg), manganese (Mn), pH, sodium (Na), sulphate (SO ₄), total dissolved solids (TDS) and zinc (Zn)
Kintore Pit (U/G dewatering) EPL54	Monthly	
Piezometers EPL37 (GW01) to EPL52 (GW16)	Quarterly	

Shaft 7 (EPL53) and Kintore Pit (EPL54) Results for March 2025

Sample Point	pH	EC (µS/cm ²)	TDS (mg/l)	Alkalinity (CaCO ₃) (mg/l)	SO ₄ (mg/l)	Cl (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	Cd (mg/l)	Pb (mg/l)	Mn (mg/l)	Zn (mg/l)	Fe (mg/l)
Shaft 7 (EPL53)	No pumping													
Kintore Pit (EPL54)	6.2	13900	14700	4	6020	1750	501	316	1720	2.64	1.98	375	1070	<0.05

Groundwater Bores (EPL37 - EPL52) Results for March 2025

Sample Point	pH	EC ($\mu\text{S}/\text{cm}^2$)	TDS (mg/l)	Alkalinity (CaCO_3) (mg/l)	SO ₄ (mg/l)	Cl (mg/l)	Ca (mg/l)	Mg (mg/l)	Na (mg/l)	Cd (mg/l)	Pb (mg/l)	Mn (mg/l)	Zn (mg/l)	Fe (mg/l)
GW01 (EPL37)	4.52	7740	7240	2	3960	467	195	281	1160	0.101	0.018	188	142	<0.05
GW02 (EPL38)	Bore Dry													
GW03 (EPL39)	5.6	15000	14800	<1	4870	3100	582	332	2060	0.627	3.74	444	343	1.07
GW04 (EPL40)	6.5	14400	13300	268	4820	2700	597	525	2220	0.0332	0.033	28.2	15	0.15
GW05 (EPL41)	5.85	13700	13600	46	4570	2540	587	338	1860	0.835	0.138	247	158	<0.05
GW06 (EPL42)	5.75	14700	13900	49	5170	2740	553	431	2020	1.18	0.052	312	212	<0.05
GW07 (EPL43)	5.74	12600	12000	16	4660	1910	554	299	1680	1.91	1.05	284	299	<0.05
GW08 (EPL44)	5.65	11200	11600	13	3710	2280	611	230	1330	1.71	0.407	287	458	<0.05
GW09 (EPL45)	5.65	11000	9990	112	3980	1610	626	463	1340	0.674	<0.001	56.3	71.3	<0.05
GW10 (EPL46)	6.36	14700	12200	177	4670	3010	588	457	2180	1.41	0.002	85.5	155	<0.05
GW11 (EPL47)	6.31	3080	2580	14	1260	297	303	68	313	1.01	0.41	8.52	53.5	<0.05
GW12 (EPL48)	Bore Dry													
GW13 (EPL49)	Bore Dry													
GW14 (EPL50)	Bore Dry													
GW15 (EPL51)	Bore Dry													
GW16 (EPL52)	Bore Dry													

3.2 Surface Water Sample Record

There are seven sampling locations for surface water, these include surface water basins located on the mine lease to capture and retain rainfall and two locations up and down stream of an ephemeral creek located south of the mine lease boundary. A map indicating these locations can be found in Appendix 1. Based on historical data, sampling is most likely to be undertaken in October (highest rainfall month as recorded by Bureau of Meteorology) and April.

Surface Water Monitoring Requirements

Description	Frequency	Parameters to be Analysed
Federation Way Culvert EPL29/S31-1	2 x per year, six months apart	cadmium (Cd), chloride (Cl), electrical conductivity (EC), lead Pb), manganese (Mn), pH, sodium (Na), sulphate (SO ₄), total dissolved solids (TDS) and zinc (Zn)
Ryan Street Dam EPL31/S49	2 x per year, six months apart	
Adjacent Olive Grove EPL32/S1A	2 x per year, six months apart	
Adjacent Bowls Club EPL33 /S9-B2	2 x per year, six months apart	
Horwood Dam EPL34/S34	2 x per year, six months apart	
Upstream Bonanza St EPL35	2 x per year, six months apart	
Downstream Sydney Rd EPL36	2 x per year, six months apart	

Surface Water Results for March 2025

No surface water samples were collected in March.

4 Weather Data

The weather station continuously monitors the following parameters as per Point 55 of the Environmental Protection Licence.

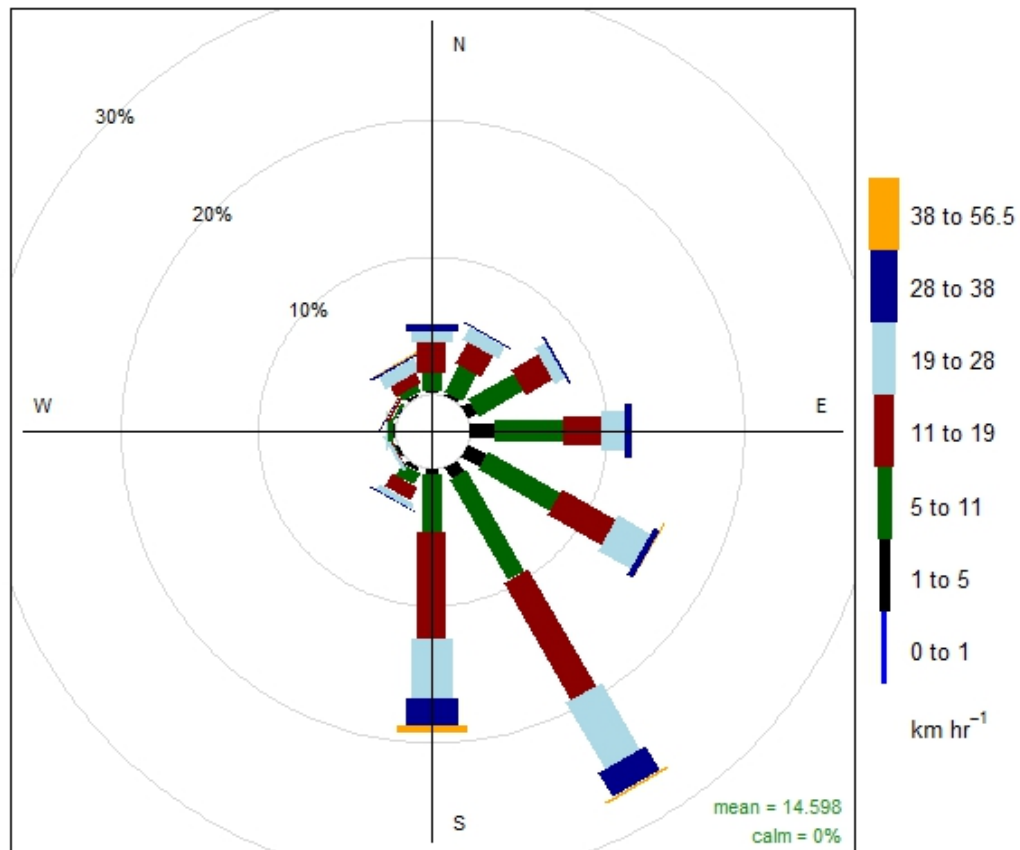
The following parameters are required to be recorded each month as listed in the EPL 12559:

Rasp Mine Weather Station (EPL55) Monitoring Requirements

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Temperature at 10 metres	AM-4	degrees Celsius	15 minutes	Continuous
Wind Direction at 10 metres	AM-4	degrees in a clockwise direction from True North	15 minutes	Continuous
Wind Speed at 10 metres	AM-4	metres per second	15 minutes	Continuous
Rainfall	AM-4	millimetres	1 hour	Continuous
Sigma theta	AM-2 & AM-4	degrees	15 minutes	Continuous

The wind rose provided below indicates that the prominent wind direction for the month of February was from the South, with more than 50% of winds blowing either from the South or from SSE. Strong winds (Near gale, Beaufort level 7) were observed less than 2% of this period, blowing either from the North or from the South

Broken Hill Operations Pty Ltd - Wind Rose March 2025



Frequency of counts by wind direction (%)

Weather Data Summary for March 2025

Date	Temperature @ 10m (°C)		Wind Speed @ 10m (km/hr)		Predominant Wind Direction @ 10m		Rainfall (mm)
	Min	Max	Min	Max	Cardinal	Degree	Total
1-Mar-25	23.4	34.7	1.3	27.1	SSE	160	0
2-Mar-25	17.9	29.1	1	39.1	S	170	0
3-Mar-25	16.5	29	3.4	42.7	SSE	160	0
4-Mar-25	17.9	34.7	0.7	22.1	SSE	149	0.14
5-Mar-25	25.4	35	0.1	35.2	SE	132	0
6-Mar-25	19.4	33.1	0.3	53.1	SSE	165	0.06
7-Mar-25	22.1	32.8	1.4	36	ESE	115	0
8-Mar-25	21.8	32.9	0	30.8	E	86	0.08
9-Mar-25	23.1	31.1	0.5	35.1	ENE	61	0.08
10-Mar-25	20.1	34.2	1.1	30	E	91	0
11-Mar-25	23.6	34.6	0.1	30.2	ESE	115	0
12-Mar-25	25.5	34.9	0.2	30.8	ESE	102	0.14
13-Mar-25	23.1	35.2	0.6	26.3	SSE	152	0
14-Mar-25	27.9	37.3	1.1	26.3	NE	40	0
15-Mar-25	29.2	37.2	1.4	41	N	2	0
16-Mar-25	17.4	34.6	2	62.6	WSW	246	0.01
17-Mar-25	11	21.1	1.4	55.9	SSE	156	0
18-Mar-25	13.1	25.1	1.2	22.5	ESE	122	0.08
19-Mar-25	19.3	32.7	0.6	33.9	N	359	0.09
20-Mar-25	20.8	31.2	1.6	51.9	N	354	4.13
21-Mar-25	19	28.3	0.3	21.8	SSE	155	0
22-Mar-25	17.4	26.9	0.3	26.1	SSE	155	0
23-Mar-25	18.8	28.6	1.3	23.1	SE	143	0
24-Mar-25	17.2	30.4	0.8	56.4	SSE	157	0
25-Mar-25	18.1	30	4.4	39.3	ESE	102	0.26
26-Mar-25	20.3	28.4	0.7	43	ESE	112	0.64
27-Mar-25	19.8	26.7	2.6	38.2	E	99	0.03
28-Mar-25	16.5	22.5	1.8	43.1	ESE	110	0
29-Mar-25	16.9	20	3.6	36.9	SSE	164	0
30-Mar-25	14.1	23.4	5.3	36.7	S	176	0
31-Mar-25	13.7	23.6	2.4	35.7	S	170	0.06

There was a total rainfall of 5.8 mm in March 2025.

5 Data Log

Sample	Result Received
Hi-Volume Samples	29-04-2025
TEOM	28-04-2025
Dust Deposition	16-04-2025
Vents & Bag House	09-04-2025
Noise	09-04-2025
Water	28-03-2025
Blast vibration and overpressure	01-04-2025
Weather	01-04-2025
Date posted to web site	19-05-2025

6 Correction Log

No corrections.

7 Appendix 1 – Monitoring Locations

