



Rasp Mine
Monthly Environmental Monitoring Report
September 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).....	11
1.3	DUST DEPOSITION SAMPLING	16
1.4	VENTILATION OUTLETS AND BAG HOUSE MONITORING	18
2	NOISE.....	20
2.1	BLASTING (VIBRATION AND OVERPRESSURE)	20
2.2	NOISE	21
3	WATER.....	22
3.1	GROUNDWATER.....	22
3.2	SURFACE WATER SAMPLE RECORD	23
4	WEATHER DATA	25
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 September 2025

DATE	TSP (µg/m ³)	Lead (µg/m ³)
02-September-25	38.10	0.246
08-September-25	50.90	0.147
14-September-25	18.30	0.096
20-September-25	27.70	0.222
26-September-25	55.7	0.335

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.

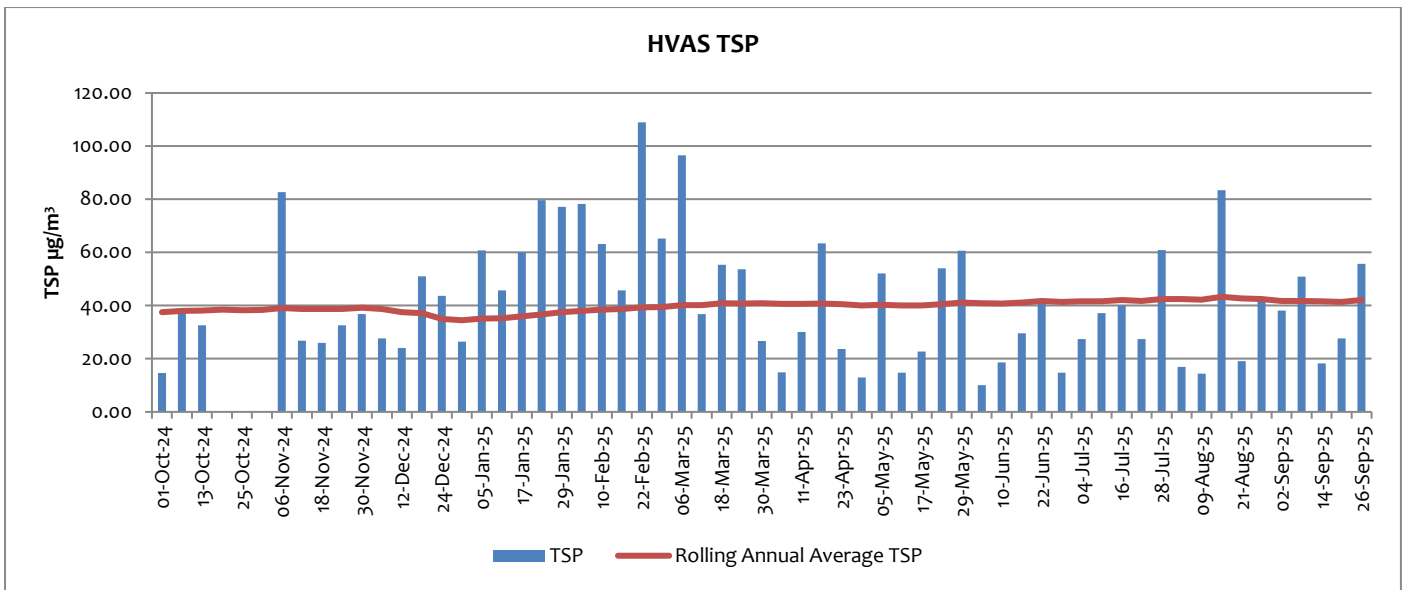


Figure 1: HVAS TSP measurements 12-month overview

TSP dust results at HVAS for the month of September were on average similar to measurements from previous months (see figure 1). The highest TSP result measured at HVAS (EPL10) for September was 55.7 $\mu\text{g}/\text{m}^3$ sampled on the 26 September. The wind sensor from the on-site weather station indicated that winds were blowing from a variety of directions within the 4th wind rose quadrant (W to N), as shown in figure 2 below, implying that the source was potentially internal to the mining site. The predominant wind direction on that day was from the NW. 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 42.1 $\mu\text{g}/\text{m}^3$ at the end of September, slightly higher than the average of 37.5 $\mu\text{g}/\text{m}^3$ at the beginning of October 2024.

Broken Hill Operations Pty Ltd - Wind Rose 20 Sep. 2025 Broken Hill Operations Pty Ltd - Wind Rose 26 Sep. 2025

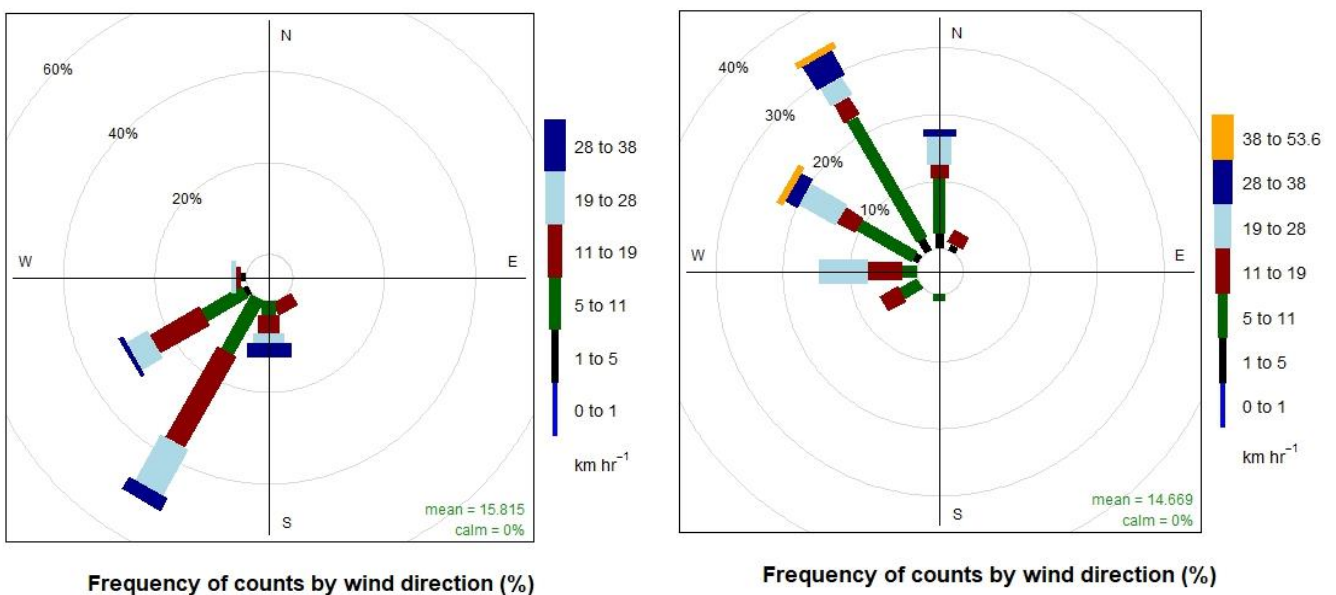


Figure 2: Wind rose for 20 and 26 September

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

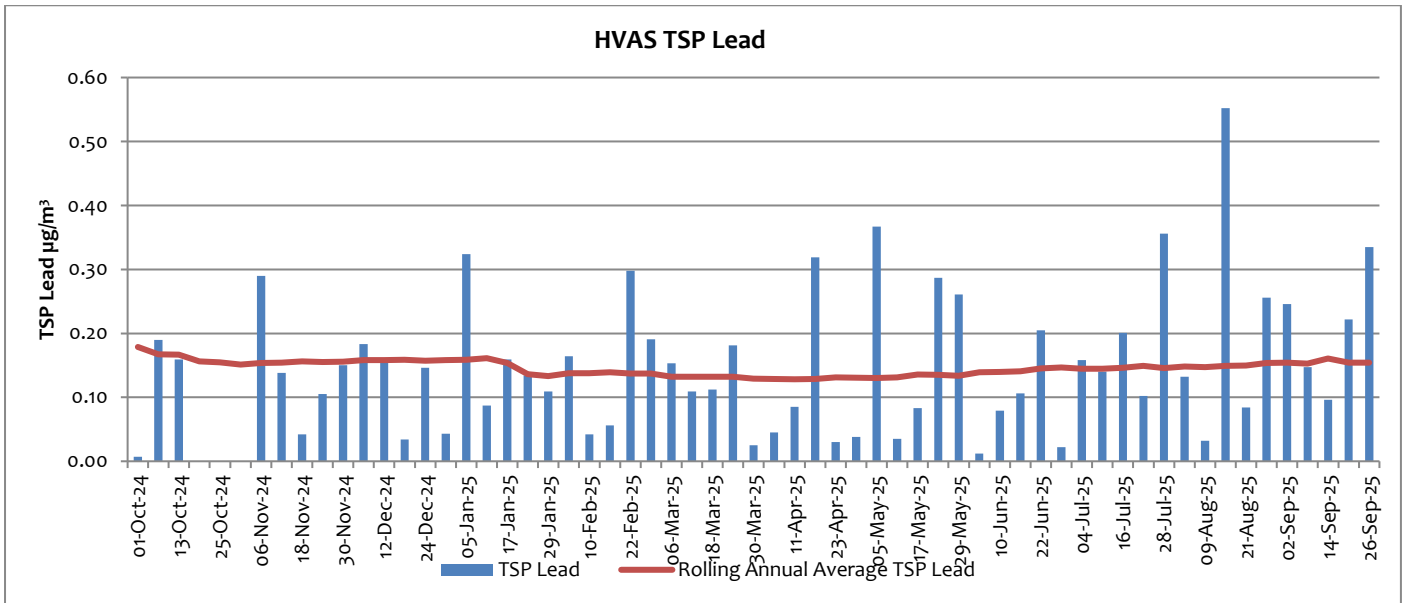


Figure 3: Lead in HVAS TSP measurements 12-month overview

TSP Lead dust results at HVAS for the month of September were on average similar to previous months (see figure 3 above). The highest TSP Lead level for September was 0.34 µg/m³ on 26 September. As noted above (see wind rose in figure 2), wind directions were predominantly blowing from NW, suggesting that the Lead potentially originated from on-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 TSP Lead in September 2025 was 0.15 µg/m³, identical to the rolling annual average of 0.15 µg/m³ for TSP Lead at the beginning of October 2024.

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

DATE	PM₁₀ (µg/m³)	PM₁₀ Lead (µg/m³)
02-September-25	4.6	0.030
08-September-25	11.0	0.017
14-September-25	3.1	0.027
20-September-25	9.5	0.064
26-September-25	11.0	0.062

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.

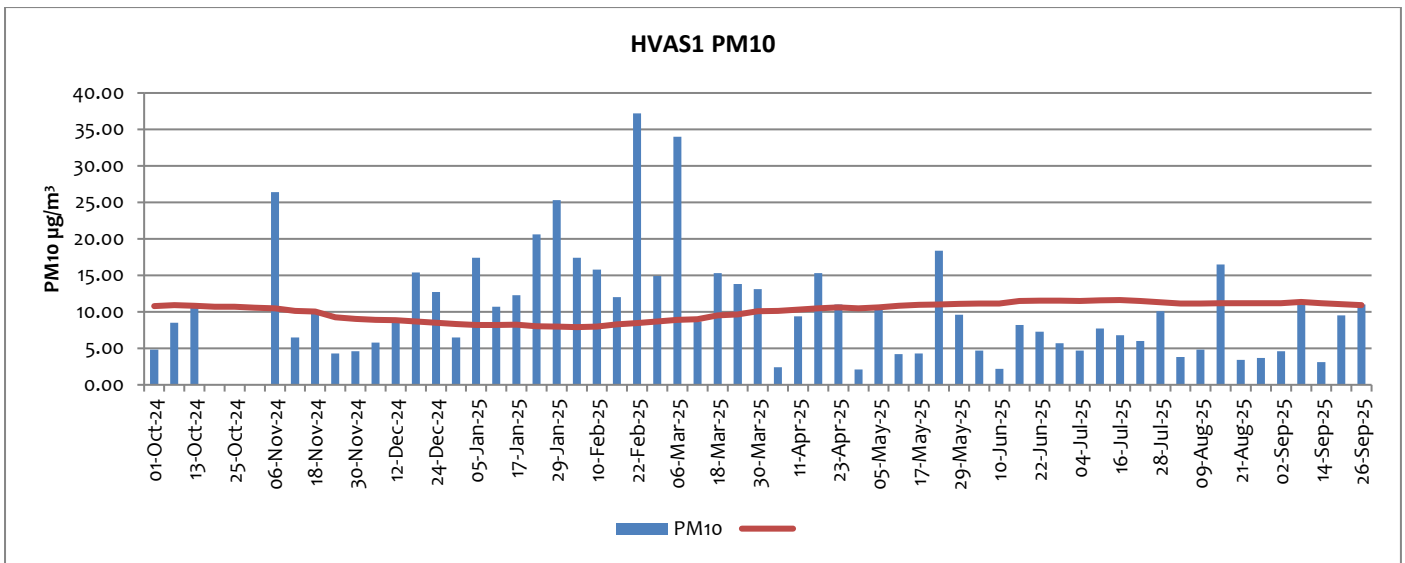


Figure 4: HVAS01 PM10 measurements 12-month overview

PM₁₀ dust results at HVAS1 for the month of September were on slightly higher than those in the previous month. All measured values were relatively low, below the 12-month rolling average. The highest PM₁₀ dust level for September was also measured on two different days: 08 and 26 September (see figure 4 above). The dust mass concentration reached 11.0 µg/m³ for these samples. The wind sensor from the on-site weather station indicated that relatively weak winds—mostly gentle to moderate breezes—were blowing from southerly to easterly directions on 8 September, as shown in figure 8 below, and on 26 September the predominant wind direction was from the NW, implying that the source was potentially internal to the mining site on both days.

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 11.0 µg/m³ at the end of September 2025, similar to the annual rolling average at the end of September 2024 which was 10.9 µg/m³. External and extreme dust events are recorded in measurements.

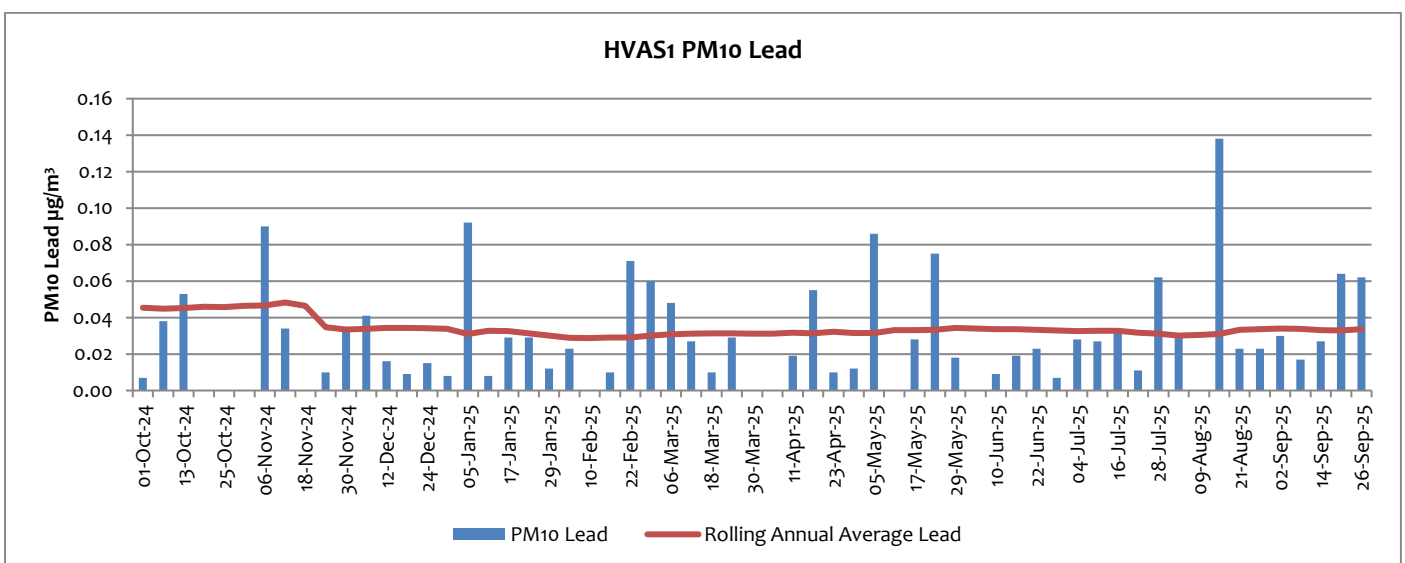


Figure 5: Lead in HVAS01 PM10 measurements 12-month overview

PM₁₀ Lead dust results at HVAS1 in the month of September were heterogenous and on average slightly lower than measurements from previous month. The highest Lead PM₁₀ result for September was 0.06 µg/m³ on 20 September when winds were blowing predominantly from SW (see figure 2 above), suggesting contribution from external 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 September was 0.03 µg/m³, lower than the average of 0.05 µg/m³ in September 2024.

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

DATE	PM ₁₀ (µg/m ³)	PM ₁₀ Lead (µg/m ³)
02-September-25	9.9	0.268
08-September-25	12.5	0.022
14-September-25	4.1	0.011
20-September-25	11.1	0.064
26-September-25	9.9	0.016

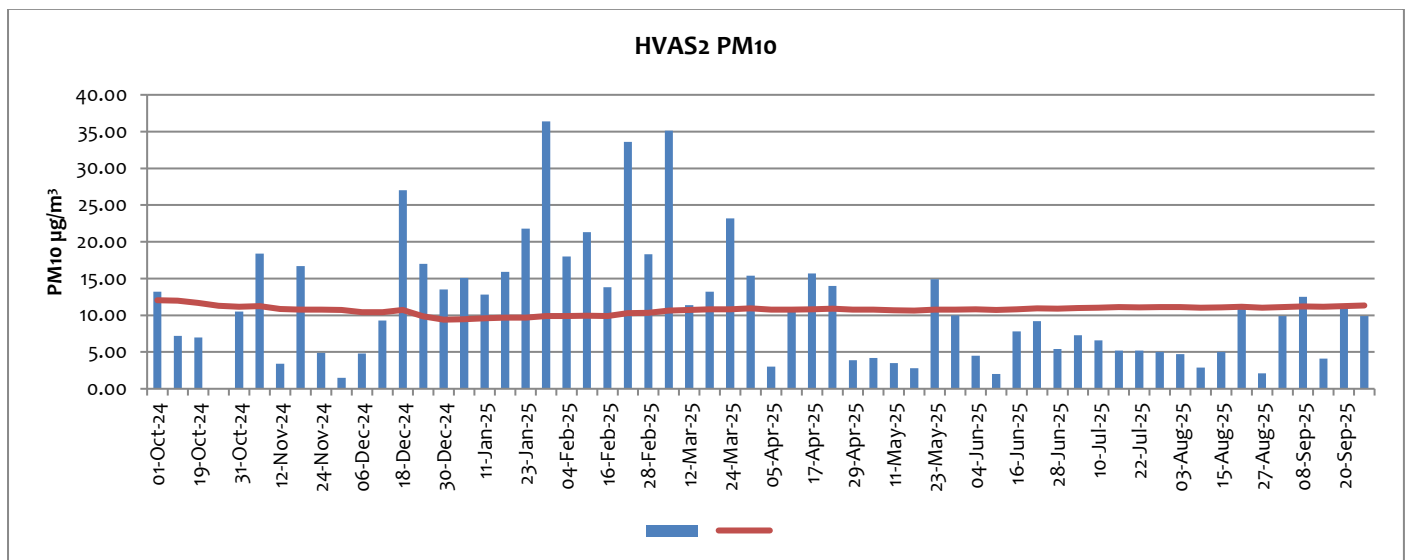


Figure 6: HVAS02 PM10 measurements 12-month overview

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 September were on average higher than those measurements from the previous three months, but significantly lower than levels measured during the summer season. The highest

recorded PM₁₀ dust reading for September was 12.5 µg/m³ on 8 September when winds were blowing predominantly from SSE (see figure 8 below), suggesting contribution from on-site sources. The annual rolling average for PM₁₀ dust at this location is 11.3 µg/m³ at the end of September, down from 12.0 µg/m³ in September 2024.

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

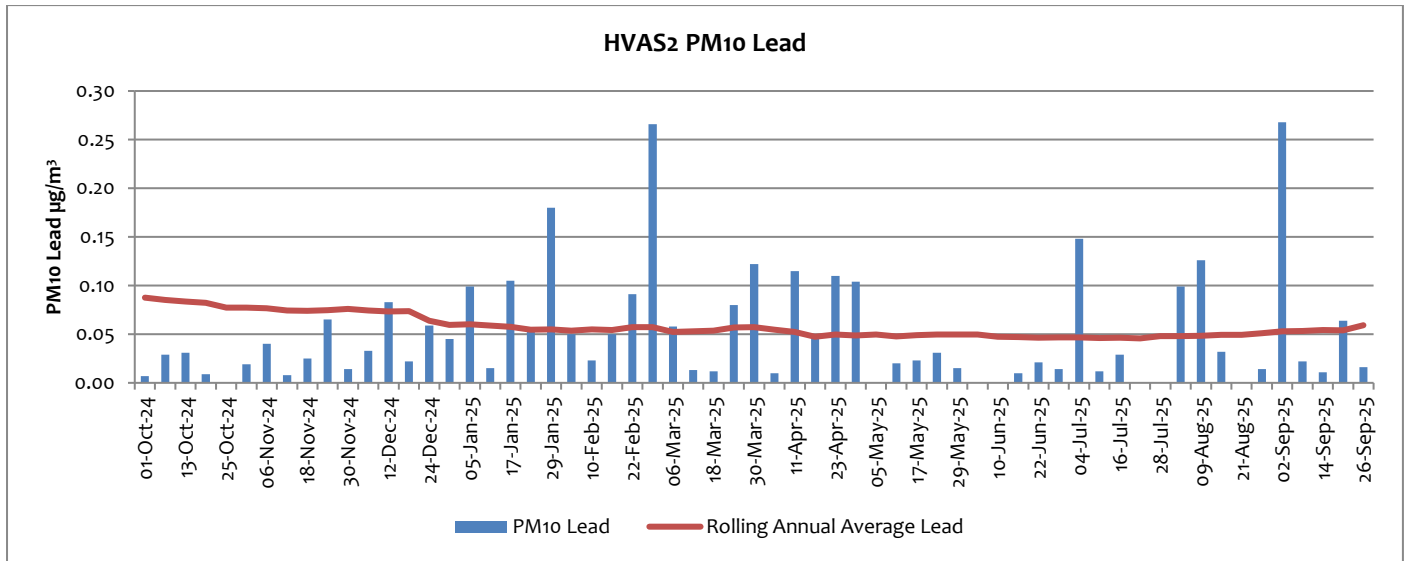
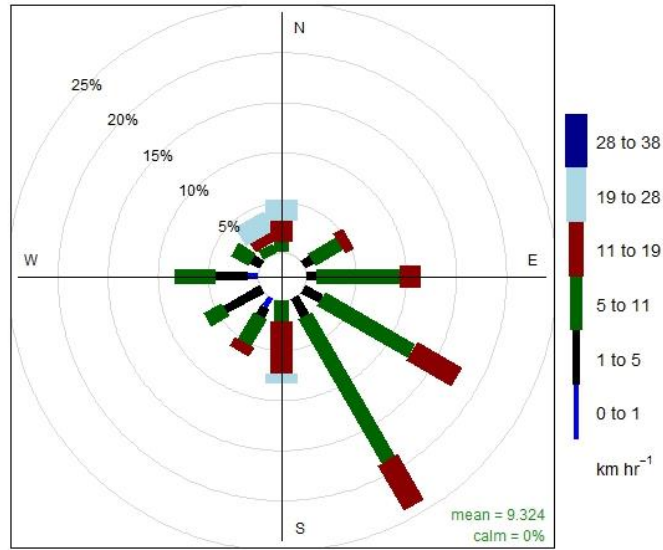


Figure 7: Lead in HVAS2 PM10 measurements 12-month overview

PM₁₀ lead levels in September were slightly higher than those recorded over the past two months. One sample stood out as significantly elevated—three times greater than the 12-month rolling average. This high PM₁₀ lead dust reading is not only the highest recorded in September but also the highest in the past twelve months, matching the peak value recorded on 28 February. The concentration of 0.27 µg/m³ was measured on 2 September, when prevailing winds were blowing from northerly directions with moderate strength (gentle to moderate breeze; see Figure 11 below), suggesting a possible contribution from external sources. 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 September was 0.06 µg/m³, down from 0.09 µg/m³ in September 2024.

Broken Hill Operations Pty Ltd - Wind Rose 08 Sep. 2025



Frequency of counts by wind direction (%)

Figure 8: Wind rose for 8 September

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

DATE	TSP ($\mu\text{g}/\text{m}^3$)	Lead ($\mu\text{g}/\text{m}^3$)
02-September-25	29.1	0.575
08-September-25	42	0.072
14-September-25	21.7	0.080
20-September-25	26.9	0.213
26-September-25	29.3	0.109

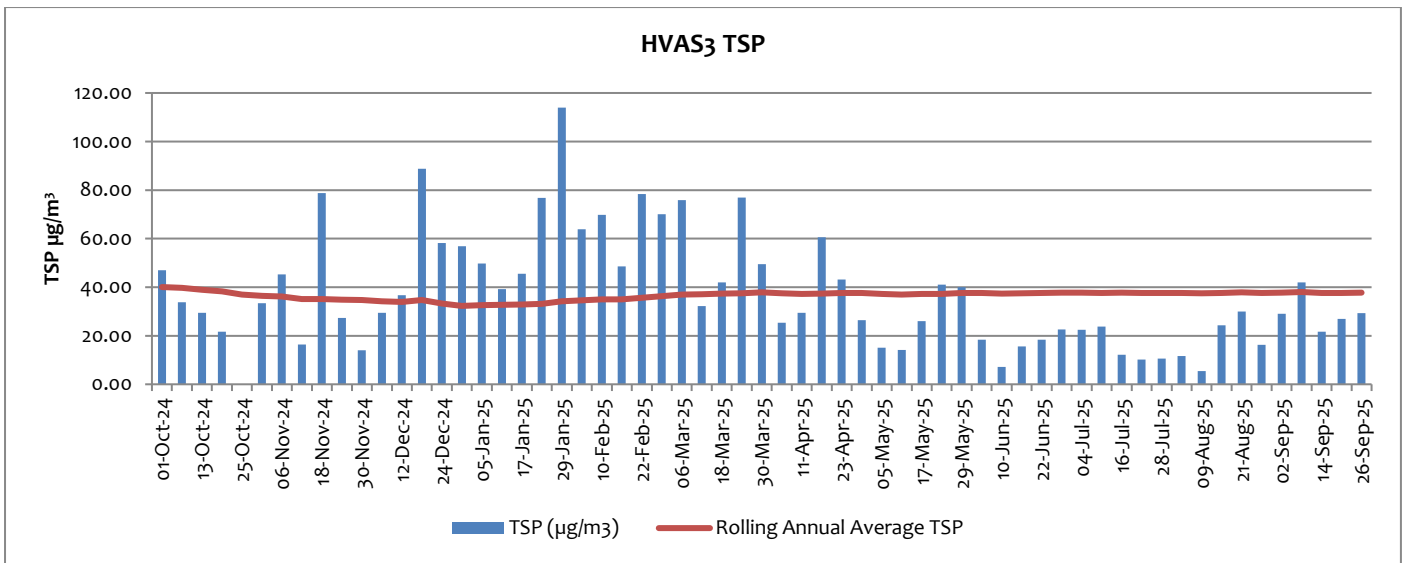


Figure 9: HVAS03 TSP measurements 12-month overview

As it can be seen on figure 9 above, TSP levels at HVAS3 were highest on 8 September with a result of 42.0 µg/m³. Most measurements were higher than those from the previous month, with most values significantly below the 12-month rolling average. The wind sensor from the on-site weather station indicated that relatively weak winds—mostly light to gentle breezes—were blowing from southerly to easterly directions, as shown in figure 8 above, implying that the source was internal to the mining site. Some stronger winds (moderate breeze) also blew occasionally from NW and N on that day. The predominant wind direction on that day was from SSE. 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 µg/m³ at the end of September, slightly down from 40.8 µg/m³ in September 2024.

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

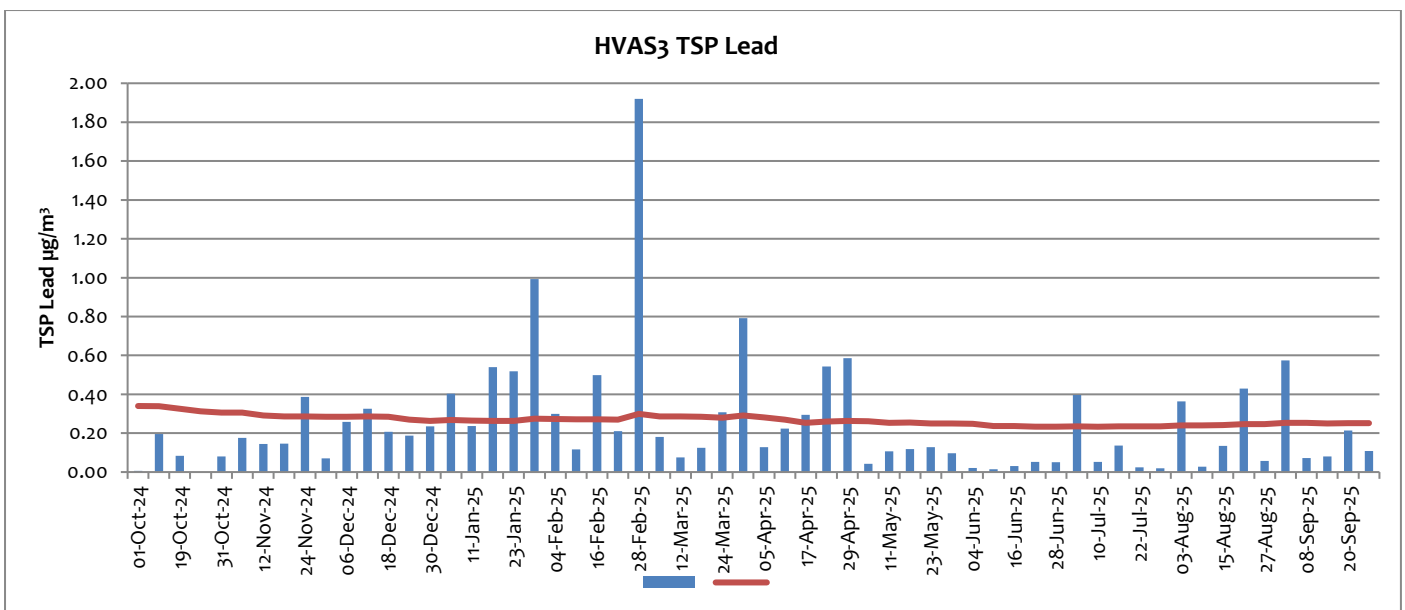
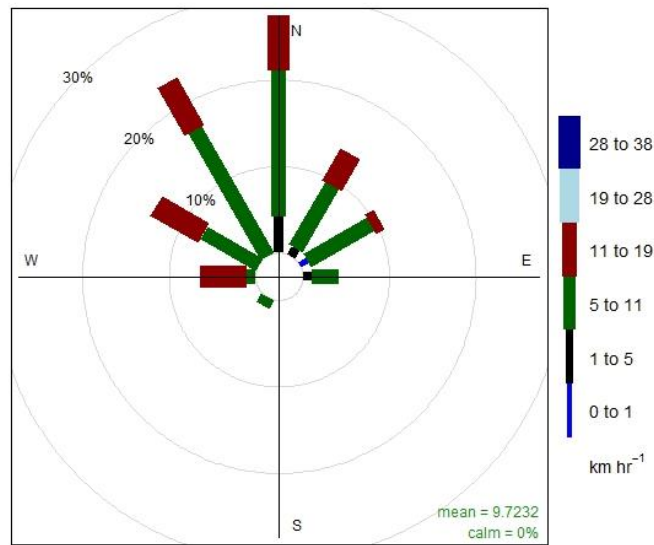


Figure 10: Lead in HVAS03 TSP measurements 12-month overview

TSP Lead levels in September were higher than those from previous month (see figure 10 above). Considering results from the previous three months, the high lead concentration of $0.58 \mu\text{g}/\text{m}^3$ recorded on 2 September stands out as an outlier, being the highest value observed during this period. It was sampled when winds were predominantly blowing from the North (see figure 11 below), suggesting contribution from off-site sources. The rolling annual average for TSP Lead in September was $0.25 \mu\text{g}/\text{m}^3$, slightly down from $0.36 \mu\text{g}/\text{m}^3$ in September 2024. The surface of Blackwoods TSF2 is treated with dust suppressant and the TSF spray system has been installed.

Broken Hill Operations Pty Ltd - Wind Rose 02 Sep. 2025



Frequency of counts by wind direction (%)

Figure 11: Wind rose for 2 September

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 appendix 1. TEOM1 and TEOM2 are designed to operate continuously and monitor concentrations of particulate matter less than 10 microns (PM₁₀) in size with a time resolution of five minutes.

Project Approval 07_0018 criteria apply at TEOM1 and TEOM2, with two criteria listed for PM₁₀, 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 12 below.

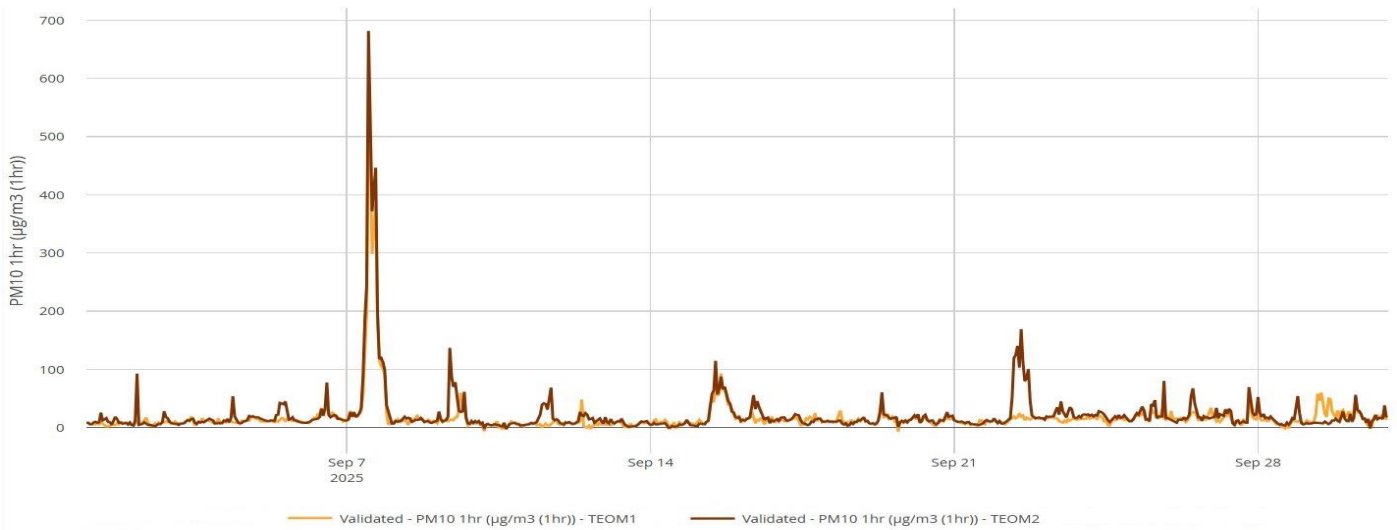


Figure 12: TEOM1 and TEOM2-Raw validated hourly-averaged PM10 concentrations

PM10 concentrations exceeded 100 µg/m³ during four episodes in this month: on 7, 9, 15 and 22. On 7 September, PM monitors from both sites measured extreme PM10 concentrations, reaching a maximum of 681.4 µg/m³ at Site 2 at 12:00am. Figure 13a shows in more details the measurements obtained on that day. The wind rose shows wind sensor data measured during that day, with winds blowing predominantly and strongly from the North. Windspeeds measured by the onsite weather station registered a maximum hourly wind speed of 69.1km/h at 10:00AM. Both sites were impacted by this regional event.

Broken Hill Operations Pty Ltd - Wind Rose 7 Sep. 2025

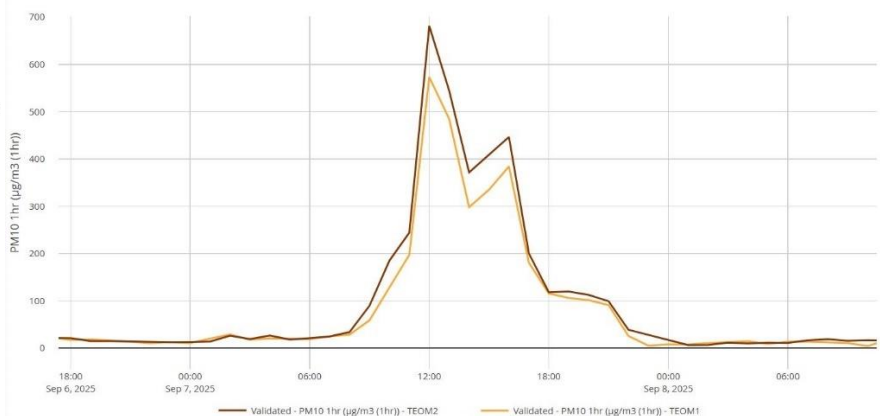
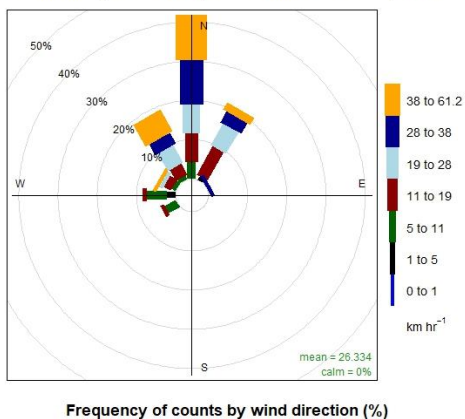


Figure 13a: TEOM and wind sensor measurements on 07 September

A similar episode also triggered by northerly wind took place on 15 September. However, the lower windspeed lead to far lower detected PM concentration, as shown on figure 13b below. The maximum measured PM10 concentration was 114.5µg/m³ at Site 2 at 12:00am.

Broken Hill Operations Pty Ltd - Wind Rose 15 Sep. 2025

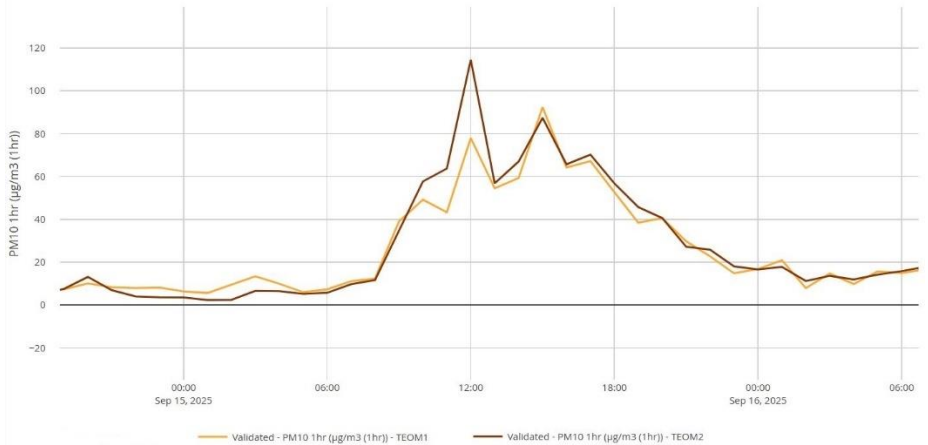
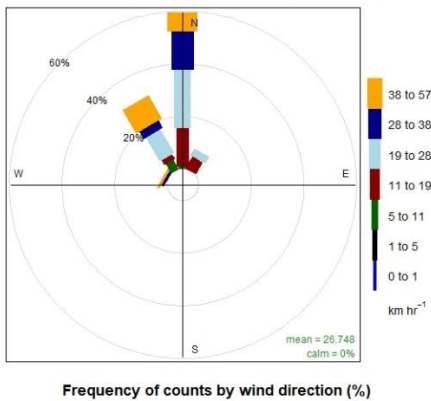


Figure 13b: TEOM and wind sensor measurements on 15 September

As seen on figure 14 below, the episode on 22 September occurred while winds were predominantly blowing from the south. Site 2 recorded elevated PM10 concentrations during most business hours, indicating a potential onsite origin of the dust. However, there was no activity at TSF2 at that time. It is possible dust came from sources to the south of TSF2.

Broken Hill Operations Pty Ltd - Wind Rose 22 Sep. 2025

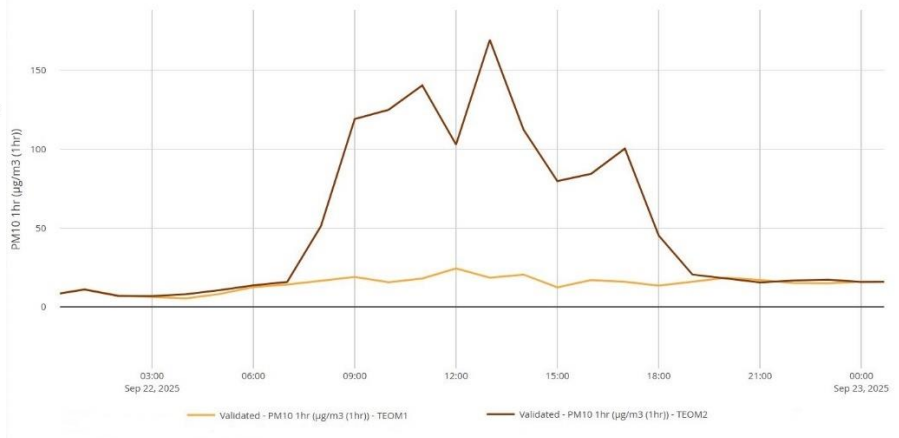
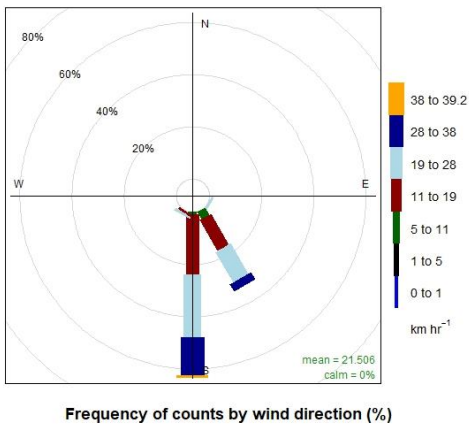


Figure 14: TEOM and wind sensor measurements on 22 September

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

Particulate Matter <10 Microns 24Hr Average				
Date	TEOM 1 (µg/m ³)	Compliant with 50µg/m ³ 24hr average?	TEOM 2 (µg/m ³)	Compliant with 50µg/m ³ 24hr average?
1/09/2025	5.9	Y	10.1	Y
2/09/2025	7.5	Y	11.3	Y
3/09/2025	9.8	Y	9.8	Y
4/09/2025	11.5	Y	14.9	Y
5/09/2025	11.5	Y	18.8	Y
6/09/2025	18.4	Y	19.4	Y
7/09/2025	16.3	Y	17.8	Y
8/09/2025	12.1	Y	11.9	Y
9/09/2025	12.0	Y	17.5	Y
10/09/2025	4.4	Y	4.8	Y
11/09/2025	5.9	Y	18.0	Y
12/09/2025	7.0	Y	13.2	Y
13/09/2025	5.8	Y	7.1	Y
14/09/2025	7.3	Y	4.7	Y
15/09/2025	10.8	Y	8.9	Y
16/09/2025	13.2	Y	20.3	Y
17/09/2025	12.8	Y	13.0	Y
18/09/2025	11.6	Y	9.7	Y
19/09/2025	13.3	Y	14.9	Y
20/09/2025	12.5	Y	14.9	Y
21/09/2025	8.2	Y	8.7	Y
22/09/2025	14.8	Y	13.0	Y
23/09/2025	14.0	Y	22.8	Y
24/09/2025	14.3	Y	19.0	Y
25/09/2025	19.4	Y	23.8	Y
26/09/2025	17.5	Y	20.7	Y
27/09/2025	15.1	Y	22.5	Y
28/09/2025	8.7	Y	15.2	Y
29/09/2025	25.8	Y	9.8	Y
30/09/2025	19.2	Y	18.3	Y

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

The data capture rate for the TEOM1 and TEOM2 monitors in September were respectively 99.6% and 98.8%. Both instruments went through an annual maintenance in July that includes a 72hr zero-filter test. No dust data was collected at these units during this period of maintenance.

The rolling annual average for PM₁₀ at TEOM1 with external dust events and invalid data removed for the period September 2024 to September 2025 is 13.1 µg/m³, slightly higher than the rolling annual average of 12.9 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 September 2024 to September 2025 is 13.9 µg/m³, lower than the rolling annual average of 15.1 µg/m³ at the beginning of the reporting period.

Data collected for the 7, 9, 15 and 22 September have been corrected due to the impact from dust storms and external events, with limited impact on final dataset.

As mentioned above, annual servicing took place between 8 July and 11 July. 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. Three-monthly maintenance took place on 21 March and 4 April.

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

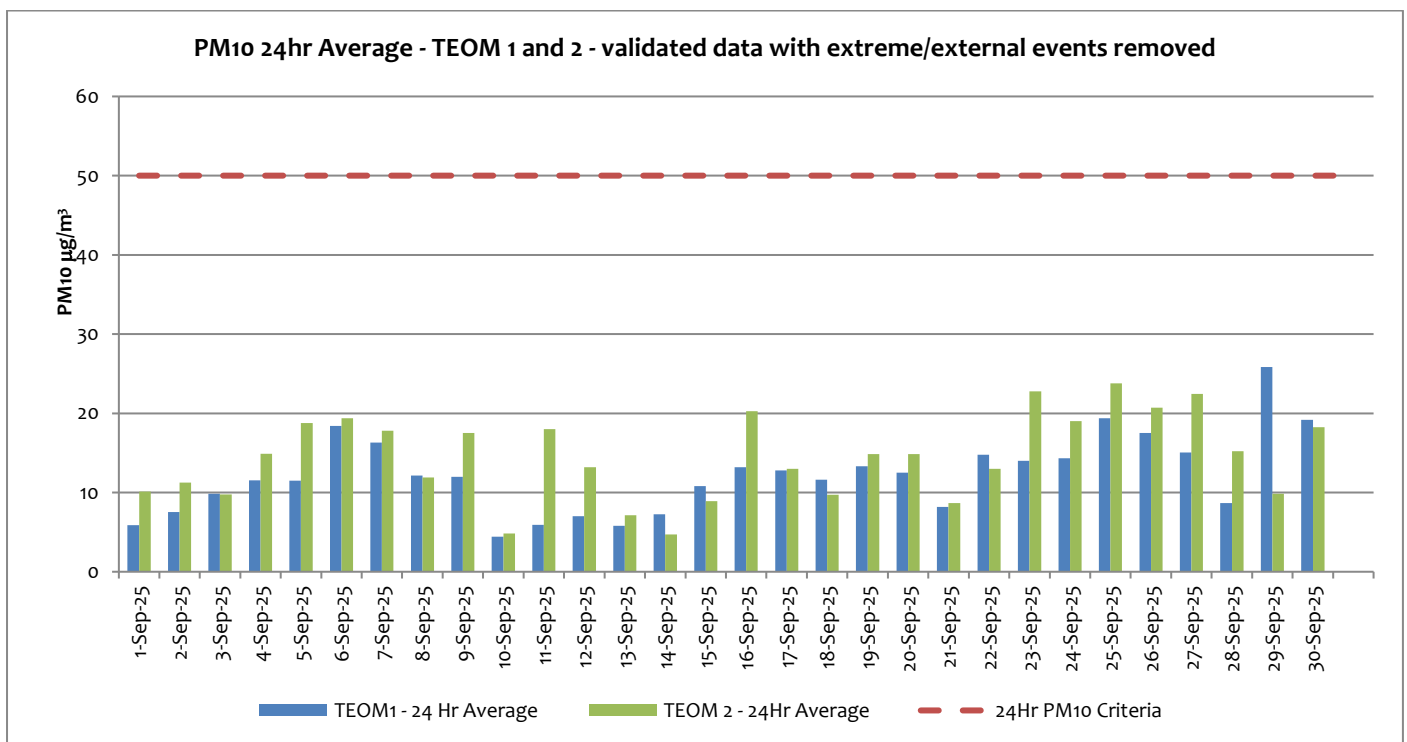


Figure 15: Site 1 and site 2 PM10 24-hour averaged measurements

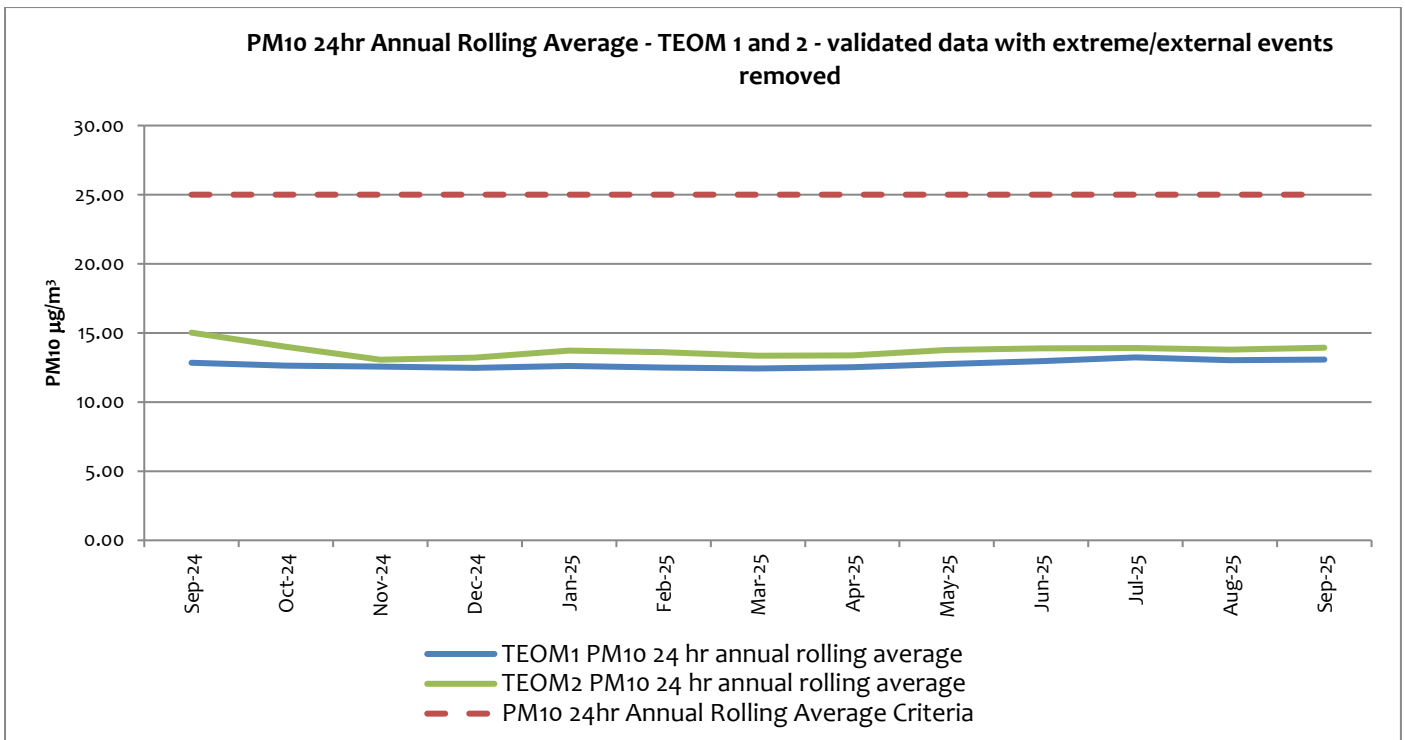


Figure 16: Sites 1 & 2 - Annual rolling average PM10 measurements 12-month overview

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 in the Appendix. 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 September 2025

Total Deposited Dust (g/m².Month)							
Sample Period	D1 (off site)	D2 (off site)	D3 (on site)	D4 (off site)	D5 (on site)	D6 (off site)	D7 (on site)
September 2025	0.7	2.3	0.8	4.1	5.7	1.0	0.5
Annual Rolling Average	0.89	1.33	1.09	2.64	2.59	1.88	0.98
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

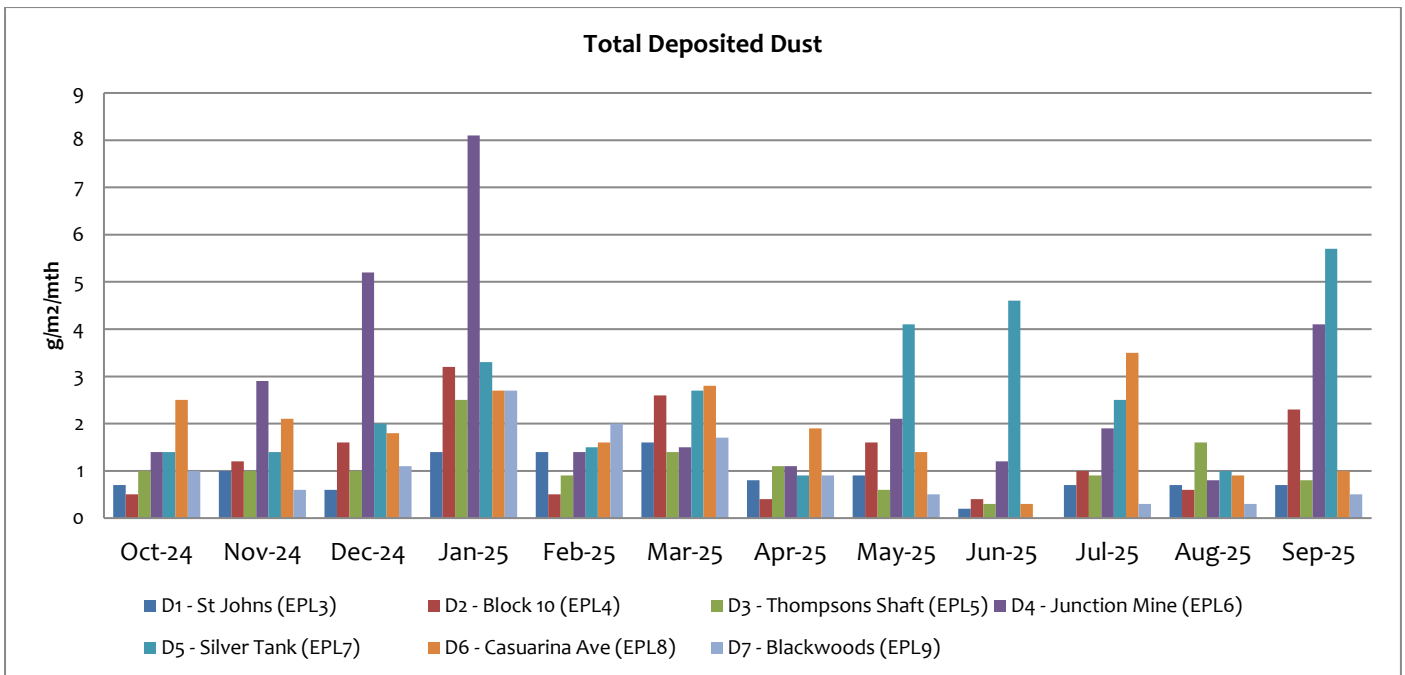


Figure 17: Total deposited dust collected by 7 dust gauges - 12-month overview

All dust levels recorded by the Dust Gauges in September 2025 were higher compared to the results from the previous month, except for D3 Thompson shaft and D1 St John. The highest dust levels in September were recorded in the D5 Silver Tank gauge. Results from D2, D4 and D5 stand out with noticeably higher values, exceeding their respective 12-month rolling averages, whereas the remaining sites recorded concentrations below these averages. All other gauges collected monthly surface dust concentrations below or equal to 1 g/m².month.

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)
September 2025	0.0019	0.0019	0.0034	0.0032	0.0100	<0.0001	<0.0001
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. As shown in Figure 18 below, lead levels in September 2025 increased slightly compared to the previous month but remained significantly below the background levels recorded in 2010. D5 Silver Tank exhibited a significant increase in Lead measured by comparison to previous month. It sampled the maximum value for this month, with monthly surface concentration of 0.010 g/m².month. D5 has consistently collected significantly more lead than the other gauges over the past four months, with the exception of August, when D3 recorded the highest value.

The confirmed high value recorded at D7 Blackwoods in February (0.0819 g/m².month) is not displayed properly on figure 18 below due to the choice of y-axis scale, more suitable for the dataset.

As shown in the Wind Rose in Section 4 (figure 19), winds blew most frequently from northerly or southerly directions. The strongest winds blew from NNW and N directions. Given the locations of D5 (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.

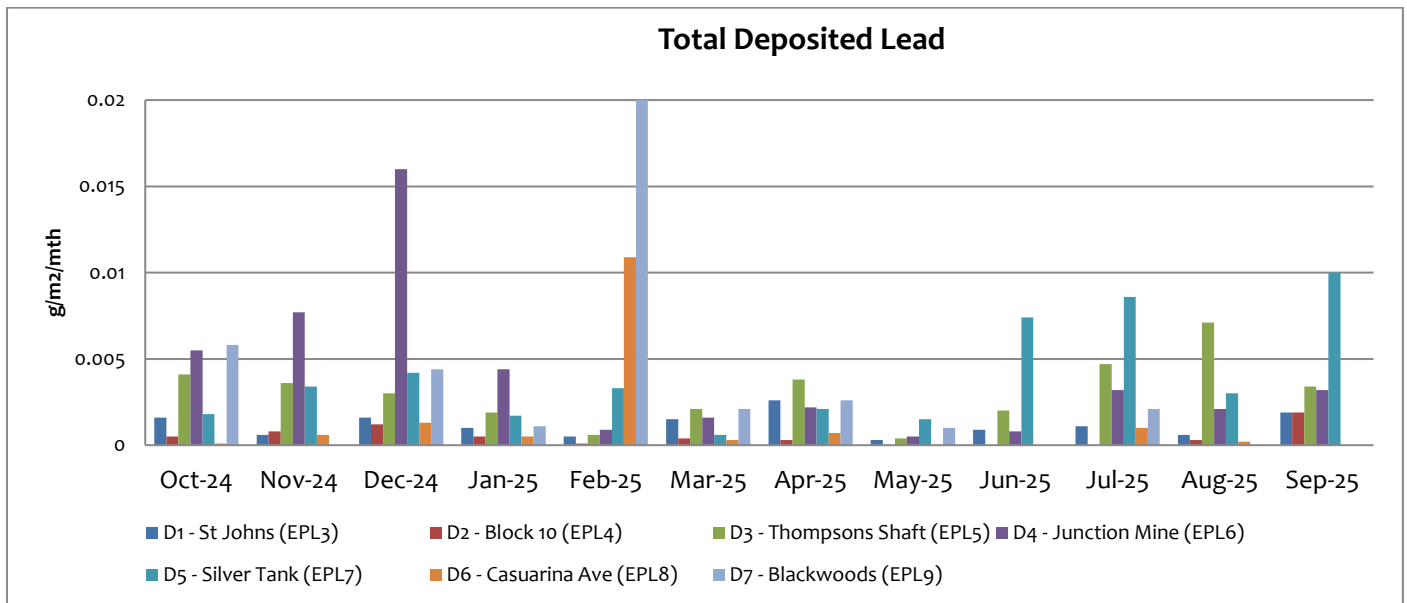


Figure 18: Lead deposited dust collected by 7 dust gauges - 12-month overview

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 September 2025

The latest round of quarterly emissions monitoring was conducted at the Primary Vent Shaft (EPL1) and the Crusher Baghouse (EPL2) on 23 and 24 September 2025. Results were within limits and are provided below.

Parameter	Unit	Primary Vent Shaft (EPL1)	Crusher Baghouse (EPL2)
Dry Gas Density	kg/Nm ³	1.3	1.3
Moisture	%	1.5	1.8
Molecular weight of stack gases	g/Nm ³	1,288	1,288
Temperature	°C	24.0	15.0
Nitrogen Oxides	mg/Nm ³	<2.05	N.A
Volatile Organic Compounds	mg/m ³	<0.43	NA
Total Suspended particles	mg/Nm ³	2.78	13.8
Type 1 and Type 2	mg/Nm ³	0.04	0.47
Velocity	m/sec	12.1	22.2
Volumetric Flowrate	Nm ³ /sec	227	11

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, Italo (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 September 2025 (annual period)

Total Blasts:

- 0 production blasts occurred before 6.45 am or after 7.15 pm
- The number of Production blasts averaged 1.1 per week over the previous calendar year
- The number of Development blasts averaged 16.3 per week over the previous calendar year

Western Mineralisation and Main Lodes (excluding Block 7):

- 3 Blasts 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 = 3%

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 = 5%

There have been three 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 September 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)	6.13	12900	13900	4	5560	1890	485	319	1820	2.88	1.18	358	912	<0.05

Groundwater Bores (EPL37 - EPL52) Results for September 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)
GW01 (EPL37)	4.48	7710	7540	1	3970	594	195	297	1220	0.112	0.035	212	146	<0.05
GW02 (EPL38)	Bore Dry													
GW03 (EPL39)	5.63	14500	12800	<1	5510	3100	549	338	2100	0.571	1.88	443	334	<0.05
GW04 (EPL40)	6.68	14200	11800	292	6050	2770	576	524	2280	0.0180	0.035	16.8	10.8	<0.05
GW05 (EPL41)	6.12	12800	11400	28	4880	2750	533	353	1970	0.893	0.096	266	172	<0.05

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)
GW06 (EPL42)	5.92	14100	13300	45	5170	2800	523	432	2220	2.04	0.026	447	273	<0.05
GW07 (EPL43)	5.92	11900	11400	31	4740	2180	525	316	1810	2.45	0.304	309	349	<0.05
GW08 (EPL44)	5.89	10800	10200	12	4060	2270	565	257	1430	2.08	0.284	278	436	<0.05
GW09 (EPL45)	6.77	10700	9270	254	3660	2290	663	455	1410	0.248	0.003	19.0	25.7	<0.05
GW10 (EPL46)	6.04	18400	16000	85	5580	4580	597	678	3020	6.06	0.043	214	369	<0.05
GW11 (EPL47)	6.15	3120	2730	12	1470	365	292	68	323	1.21	0.205	8.20	49.2	<0.05
GW12 (EPL48)	Bore Dry													
GW13 (EPL49)	Bore Dry													
GW14 (EPL50)	Bore Dry													
GW15 (EPL51)	N.A													
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 September 2025

No surface water samples were collected in September.

4 Weather Data

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

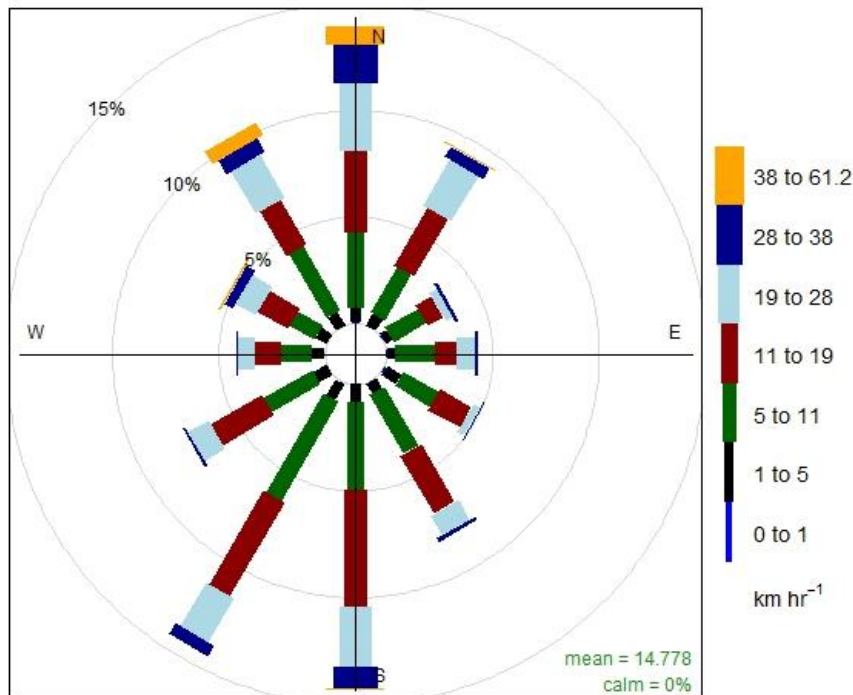
The following parameters are required to be recorded each month as listed in the EPL 12559:

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 wind direction for the month of September was mostly from the SSW/S and N. Strongest winds were observed less than 2% of this period, blowing from northerly directions (NNW and N). The maximum wind speed measured by the onsite wind sensor was 74.1 km/h on 15 September.

Broken Hill Operations Pty Ltd - Wind Rose September 2025



Frequency of counts by wind direction (%)

Figure 19: Wind rose for September 2025

Weather Data Summary for September 2025

Date	Temperature @ 10m (°C)		Wind Speed @ 10m (km/hr)		Predominant Wind Direction @ 10m		Rainfall (mm)
	Min	Max	Min	Max	Cardinal	Degree	Total
1-Sep-25	6.6	15	2.1	19.4	SSE	157	0
2-Sep-25	9.2	18.5	0.4	21.1	NNW	346	0
3-Sep-25	11.8	20.9	0.2	35.3	NNW	339	0.02
4-Sep-25	13.7	21.9	0.2	28.3	W	266	0
5-Sep-25	9.8	21.2	2.4	37.6	E	98	0
6-Sep-25	14.3	29.3	3	45.7	NNE	26	0
7-Sep-25	19.2	28.1	1.7	69.1	N	356	0.33
8-Sep-25	13.9	26.2	0.3	25.2	SE	140	0
9-Sep-25	12.3	22.3	2	48.2	ESE	120	4.67
10-Sep-25	9.2	12.5	0.8	38.4	SW	218	0.45
11-Sep-25	7.1	14	3.3	39.6	S	190	0
12-Sep-25	6.1	14.5	2.7	28.7	S	186	0
13-Sep-25	8.5	17.6	0.4	18.4	E	93	0
14-Sep-25	11	21	1	36.6	N	359	0
15-Sep-25	15	26	3.3	74.1	N	353	0
16-Sep-25	12.8	22.7	0.2	32.9	SW	231	0
17-Sep-25	8.1	18.6	0.1	19.1	SSW	200	0
18-Sep-25	12.1	22.3	0.8	22.6	NNE	12	0
19-Sep-25	14.6	24.1	1.5	70.3	NNW	330	0
20-Sep-25	9.3	16.6	1.2	34.8	SSW	213	0
21-Sep-25	9.4	19.9	0.8	25.9	SW	230	0.06
22-Sep-25	9	16.7	2.7	43.9	S	171	0
23-Sep-25	6.5	17.4	0.3	28.4	S	178	0
24-Sep-25	8.1	22.3	2	23.9	SSW	206	0
25-Sep-25	11.7	25	0.3	49.4	WNW	303	0
26-Sep-25	17.1	29	0.9	57.6	NW	315	0
27-Sep-25	15.5	28.5	0.8	40.2	W	273	0
28-Sep-25	9.9	21.3	0.5	32	S	172	0
29-Sep-25	14.5	26.8	1.5	43	NNE	17	0
30-Sep-25	14.2	23.3	0.5	40.3	W	268	0.02

There was a total rainfall of 5.55 mm in September 2025.

5 Data Log

Sample	Result Received
Hi-Volume Samples	17-10-2025
TEOM	28-10-2025
Dust Deposition	17-10-2025
Vents & Bag House	27-10-2025
Noise	09-04-2025
Water	25-09-2025
Blast vibration and overpressure	01-10-2025
Weather	01-10-2025
Date posted to web site	17-11-2025

6 Correction Log

No corrections.

7 Appendix 1 – Monitoring Locations

