WILPINJONG COAL PTY LTD

Environment Protection Licence (EPL) 12425

Link to Environment Protection Licence EPL12425

LICENCE MONITORING DATA
MONTHLY SUMMARY REPORT

for

1 December 2024 to 31 December 2024

Air Monitoring

Air quality surrounding the Wilpinjong Coal Mine is monitored using:

1. tapered element oscillating microbalances (TEOM);
2. high volume air samplers (HV); and
3. dust deposition gauges (DG).

In terms of the above equipment:
1. the TEOM and HVAS measure fine dust particles up to 10 microns in diameter (i.e. PM10); and
2. the DG measure the total dust deposited in the gauge during the sample period.

All are influenced by mining as well as non-mining activities in the local area.

The location of the above monitoring equipment in relation to Wilpinjong Coal Mine is shown in **Figures 6** and **8**.

A summary of the monitoring results for the month is provided in **Table 1** and the yearly trends are also shown in **Figures 1** to **3**.

For comparison with **Figures 2** and **3**, **Figure 4** displays the Regional 24Hr PM10 Average. PM10 dust levels for the month have been recorded in Bathurst and Merriwa by NSW EPA.

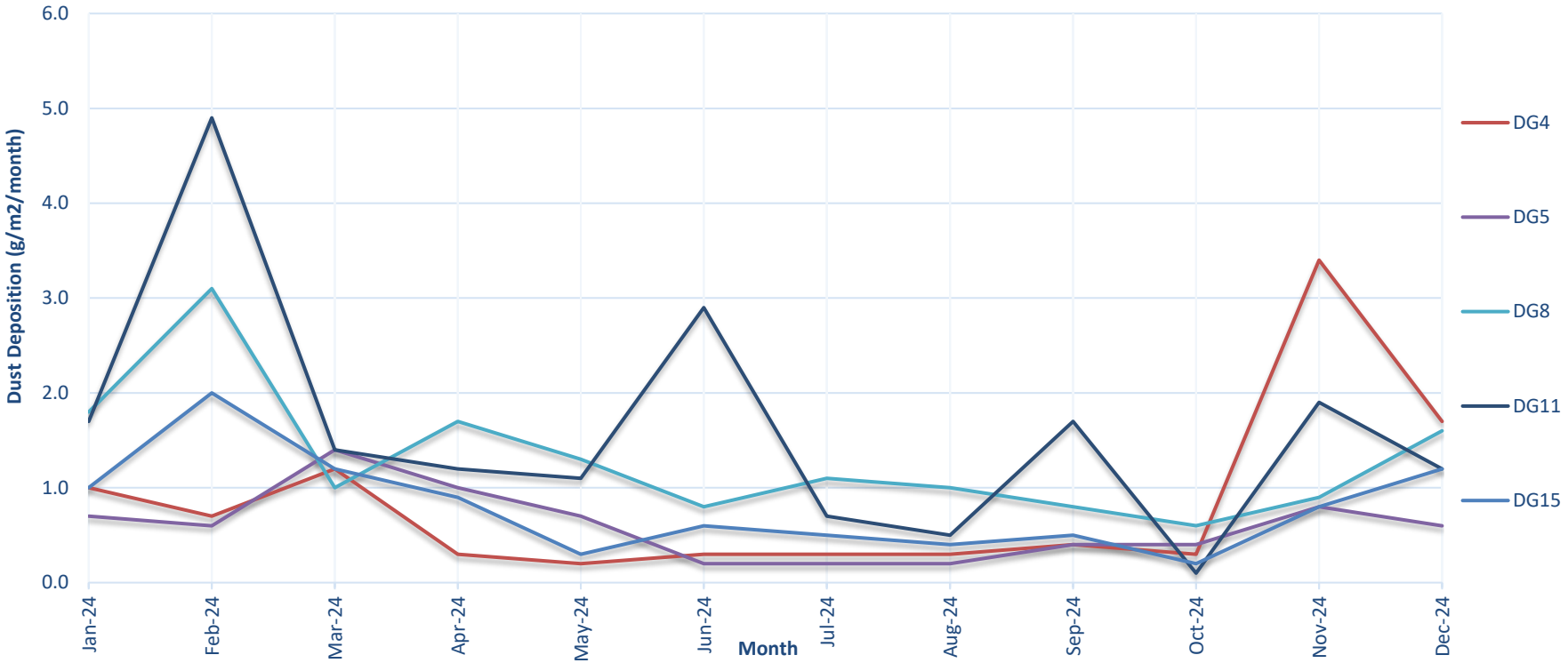
Table 1 - Air Monitoring

EPL ID No.	Monitoring Point ID.	Pollutant	Unit of Measure	Monitoring Frequency required by EPL	No. of times measured during month	Min. Value	Max. Value	Mean Value	Measurement	Annual Average	Limit	Exceed* (yes/no)	Date Last Sampled	Date Reported
3	DG4	Particulates - TIM	grams per square metre per month	Monthly	1				1.7				24/12/24	20/01/25
4	DG5	Particulates - TIM	grams per square metre per month	Monthly	1				0.6	0.6	4.0	No	24/12/24	20/01/25
6	DG8	Particulates - TIM	grams per square metre per month	Monthly	1				0.7				24/12/24	20/01/25
9	DG11	Particulates - TIM	grams per square metre per month	Monthly	1				1.2				24/12/24	20/01/25
17	DG15	Particulates - TIM	grams per square metre per month	Monthly	1				1.2				24/12/24	20/01/25
13	HV1	PM10	micrograms per cubic metre	Every 6 days	6	10.4	24.0	16.6			50	No	31/12/24	20/01/25
19	HV4	PM10	micrograms per cubic metre	Every 6 days	6	12.6	27.4	20.0			50		31/12/24	20/01/25
20	HV5	PM10	micrograms per cubic metre	Every 6 days	6	12.5	25.2	17.8			50		31/12/24	20/01/25
22	TEOM3	PM10	micrograms per cubic metre	Continuous (24 Hr Average)	96.8%	6.0	18.3	11.2			50	No		
23	TEOM4	PM10	micrograms per cubic metre	Continuous (24 Hr Average)	96.8%	9.5	26.0	16.4			50			

Notes:

1. Limits specified in the above table are from Development Consent SSD-6764.

Figure 1a. DG Results - 12 Month Trend



1. Limit of 4 g/m2/month (annual average) applies to DG5 (Wollar Village) - refer Figure 1b.
2. An invalid result was taken at DG_11 during the February 2024 monitoring period due to the funnel not being situated correctly in the bottle.
3. During the June 2024 sampling period, DG12 recorded a result of 4.2 g/m2/month. 50% of this result was attributed to insects.

Figure 1b. DG 5 Results - Annual Average

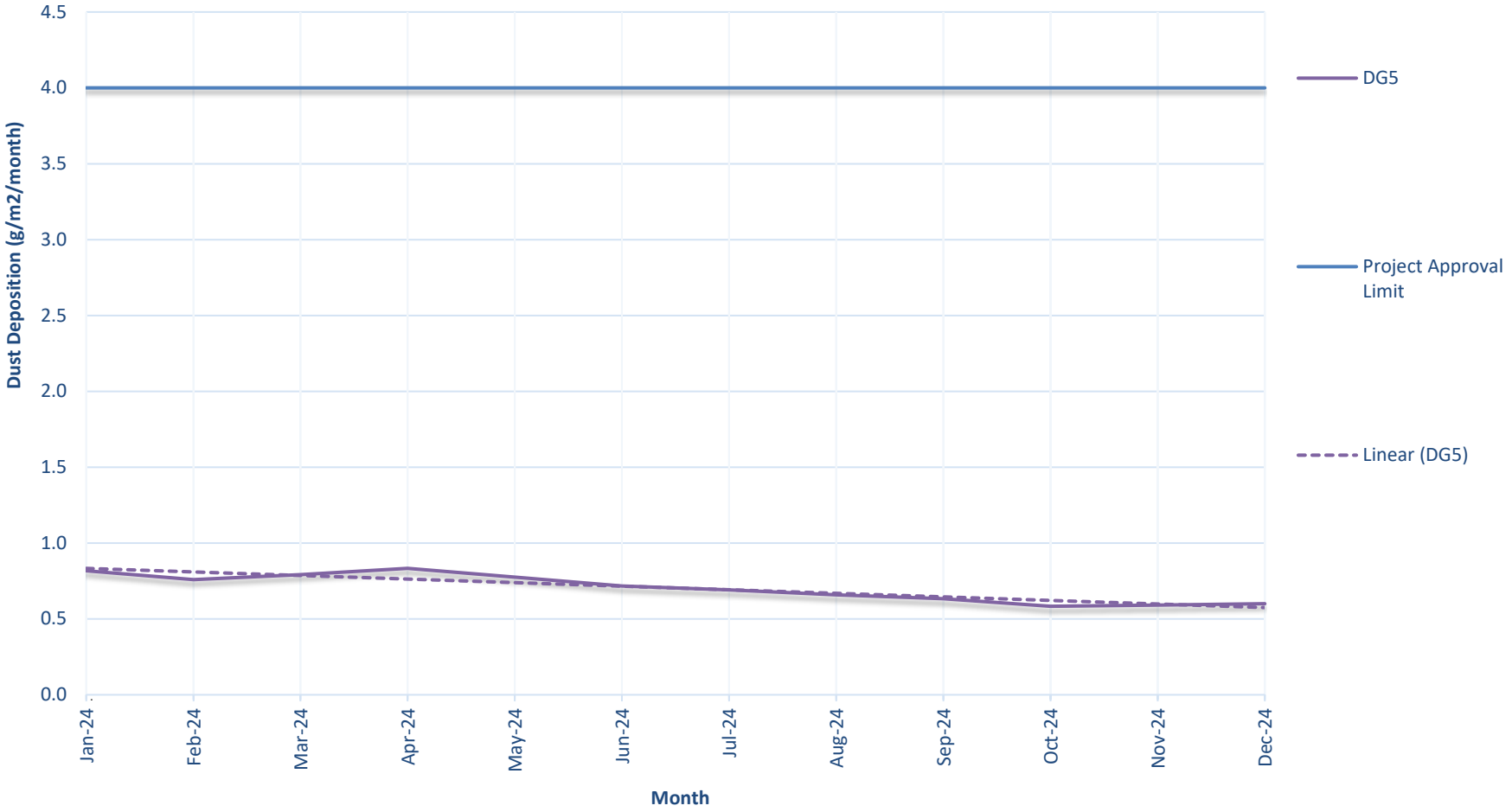
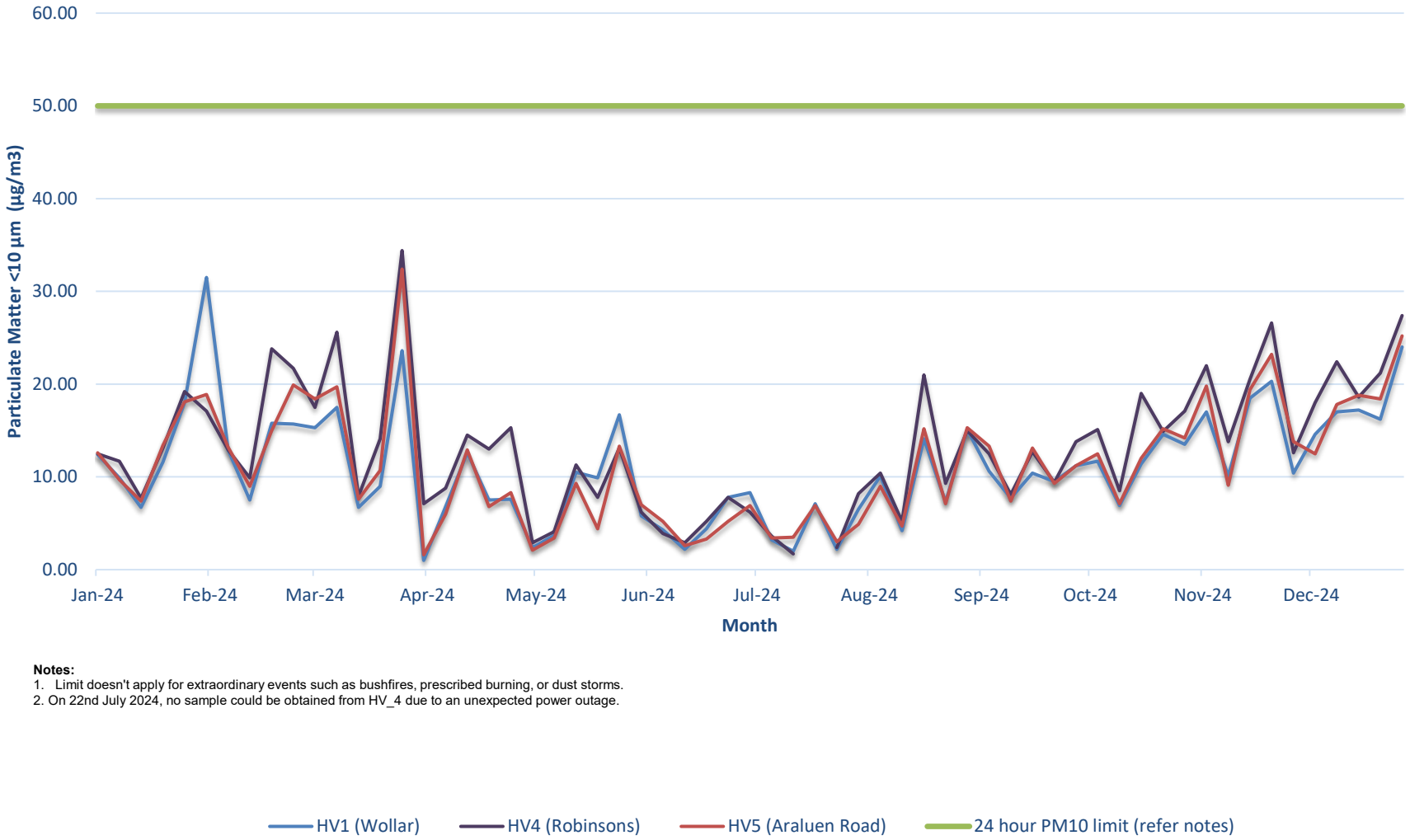
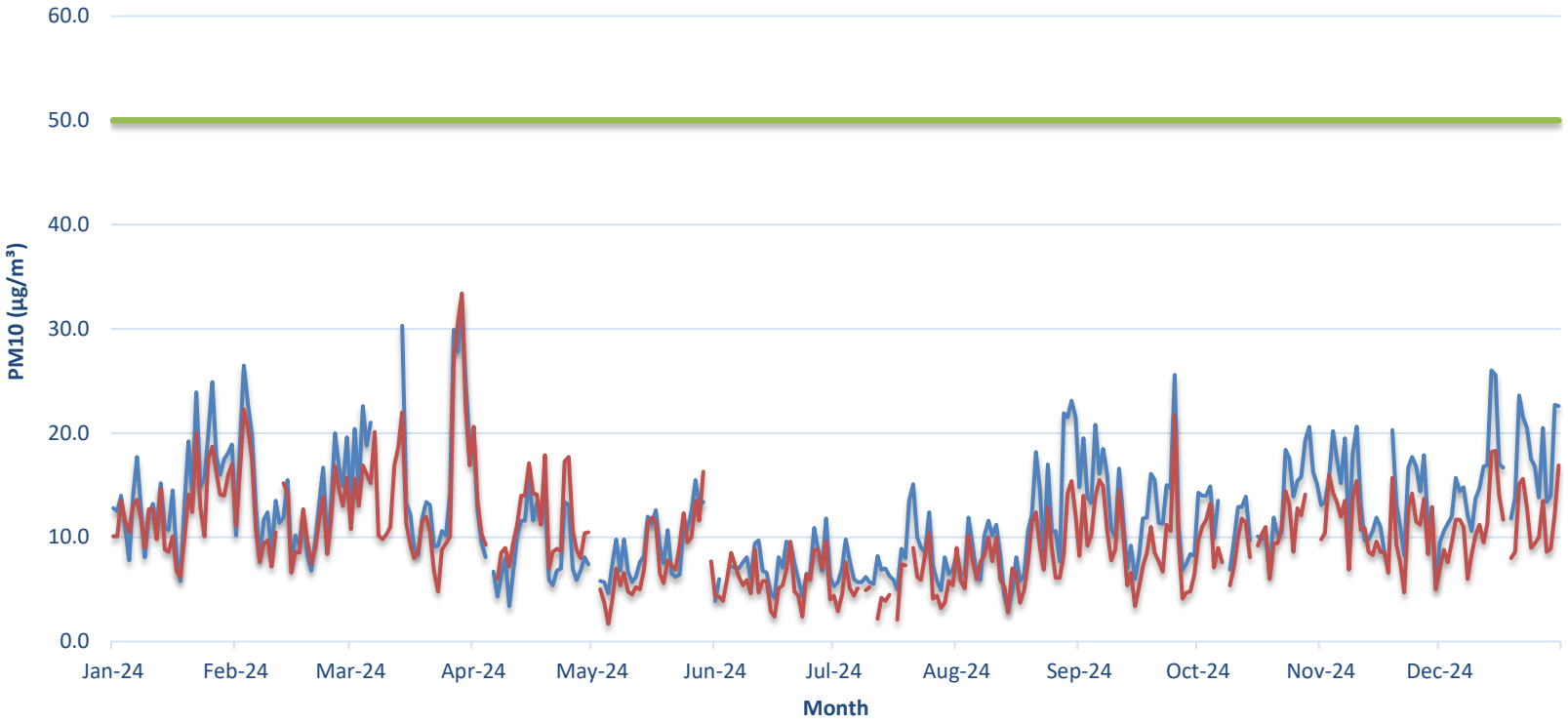


Figure 2. HV (PM10) Results - 12 Month Trend



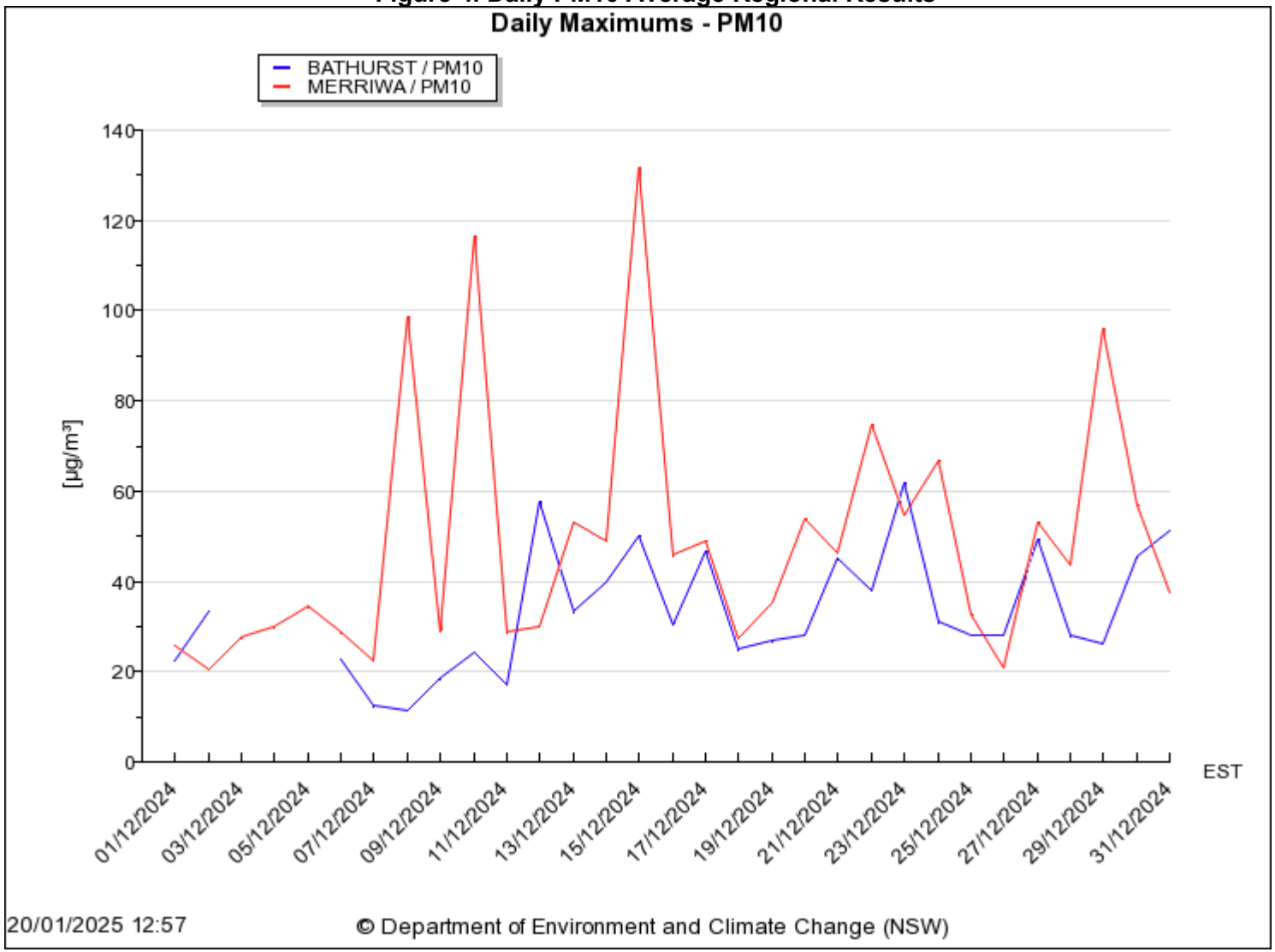
Notes:
1. Limit doesn't apply for extraordinary events such as bushfires, prescribed burning, or dust storms.
2. On 22nd July 2024, no sample could be obtained from HV_4 due to an unexpected power outage.

Figure 3. TEOM (PM10) Results - 12 Month Trend



Notes:
1. Limit dosen't apply for extraordinary events such as bushfires, prescribed burning or dust storms
2. TEOM 3 experienced a power outage on 12th February 2024.
3. TEOM 4 experienced a pump failure on 7th March 2024. This resulted in a loss of data until 13th March on which day a replacement pump was installed.
4. Both TEOMS experienced a local power outage on 5th April 2024.
5. Local power outages caused periods of unrecorded data betweeen 1st - 2nd, and 30th -31st May 2024.
6. Between 3rd - 4th June 2024, planned maintanence was undertaken at TEOM 4 resulting in a period of no data.
7. During the month of July 2024, there were calibration issues resulting in invalid data for 3 non consecutive days.
8. On 8th October 2024, both TEOM units stopped to manually update clock for DST - no data on this date.
9. An unexplained power outage on 15th October 2024 caused an extended period of no data on this day.
10. A mechanical fault involving the zero noise filter caused an extended period of unit downtime at TEOM 3 between 29th and 31st October 2024.
11. A power outage on 18th November 2024 caused a period of no data at TEOM 4
12. A power outage on 18th December 2024 caused a period of no data at TEOMs 3 & 4

Figure 4. Daily PM10 Average Regional Results



Surface Water Monitoring

Surface water runoff is isolated and diverted around disturbed areas through the construction of water diversion bunds. Runoff from disturbed areas is diverted into on-site water retention dams.

A Reverse Osmosis (RO) Plant treats all water from the retention dams before it is discharged to Wilpinjong Creek. The EPL specifies limits for the quantity and quality of water that may be discharged from the site.

Table 2 - Site Water Discharge Monitoring

EPL ID No.	Monitoring Point ID.	Pollutant	Unit of Measure	Monitoring Frequency required by EPL	No. of times measured during month	Min. Value	Max. Value	Mean Value	Limit	Exceed[n] (yes/no)	Date Last Sampled	Date Reported
24	RO Plant Discharge	Conductivity	microSiemens per centimetre (uS/cm)	Continuous during discharge	100%	224	467	389	500	No		
		Oil and Grease	milligrams per litre (mg/L)	Weekly during any discharge	4	<5	<5	<5	10.0	No	23-Dec-2024	20-Jan-2025
		pH	pH Unit	Continuous during discharge	100%	6.6	8.4	7.3	≥6.5≤8.5	No		
		Total Suspended Solids	milligrams per litre (mg/L)	Weekly during any discharge	4	<1	<1	<1	50	No	23-Dec-2024	20-Jan-2025
		Volume discharged	megalitres per day	Continuous during discharge	100%	1.402	5.409	4.410	6.5	No		
30	Clean Water Dam Discharge	Turbidity	Nephelometric Turbidity Units	Continuous during discharge	100%	*No discharge recorded during the month*			As per EPL 12425	No		

Noise Monitoring

Environmental noise monitoring ("monitoring") is carried out monthly.

The purpose of the monitoring is to assess whether mining operations are consistent with the objectives of the EPL and the development consent conditions.

In terms of this monitoring, it is undertaken:
1. by an independent noise consultant.
2. during the night-time; and
3. at the sites shown in **Figure 7**.

On pages 11 and 12 of this report are the noise levels and findings from the consultant's report.

Table 4.1 Total measured noise levels, dB – December 2024 [1]

Location	Start date and time	L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A50}	L_{A90}	L_{Amin}
N6	9/12/2024 22:47	46	44	42	41	41	38	33
N14	9/12/2024 23:45	68	66	64	61	60	57	51
N15	9/12/2024 23:15	54	48	41	38	34	31	28
N17	9/12/2024 22:22	59	58	58	56	54	53	49
N19	9/12/2024 22:00	56	50	49	48	48	46	43
N20	10/12/2024 00:15	38	35	32	30	29	27	26

Notes: 1. Levels in this table are not necessarily the result of activity at site.

Atmospheric condition data measured by the operator during each measurement using a hand-held weather meter is shown in Table 4.2. The wind speed, direction, and temperature were measured at approximately 1.5 metres above ground. Attended noise monitoring is not done during rain, hail, or wind speeds above 5 m/s at microphone height.

Table 4.2 Measured atmospheric conditions – December 2024

Location	Start date and time	Temperature °C	Wind speed m/s	Wind direction ° Magnetic north [1]	Cloud cover 1/8s
N6	9/12/2024 22:47	23	<0.5	-	6
N14	9/12/2024 23:45	23	<0.5	-	6
N15	9/12/2024 23:15	24	<0.5	-	3
N17	9/12/2024 22:22	24	<0.5	-	8
N19	9/12/2024 22:00	22	1.2	60	8
N20	10/12/2024 00:15	22	<0.5	-	4

Notes: 1. "-" indicates calm conditions at monitoring location.

Table 4.3 Measured low-frequency L_{eq} noise levels, dB(Z) - December 2024 [1,2]

Location	Start date and time	Frequency (Hz)											
		12.5	16	20	25	31.5	40	50	63	80	100	125	160
N6	9/12/2024 22:47	-	-	-	35	31	31	31	27	28	28	25	25
N14	9/12/2024 23:45	-	-	-	37	34	32	33	32	33	35	28	24
N15	9/12/2024 23:15	54	49	53	52	53	49	45	42	37	34	32	32
N17	9/12/2024 22:22	-	-	41	40	42	39	38	35	34	35	32	30
N19	9/12/2024 22:00	54	48	42	45	41	39	39	35	35	36	30	27
N20	10/12/2024 00:15	-	47	41	44	38	33	31	30	30	26	25	25

Notes: 1. Levels in this table are not necessarily the result of activity at site.
2. "-" indicates noise levels were too low to be measured by the sound level meter.

6 Summary

EMM was engaged by Wilpinjong Coal Pty Ltd to conduct a monthly noise survey of operations at WCP. The survey purpose was to quantify the acoustic environment and compare site noise levels against specified limits from the relevant EPL and consent.

Attended environmental noise monitoring described in this report was done during the night period of 9/10 December 2024 at six monitoring locations.

Noise levels from site complied with relevant limits at all monitoring locations during the December 2024 survey.

Wilpinjong Coal received the report from EMM Consulting Pty Ltd on 14th January 2025.

Blasting

Monitoring is carried out near sensitive locations during blasting activities to determine the vibration in the air (overpressure) and earth (ground vibration). A summary of the results of this monitoring, and the limits specified in the EPL, are shown in **Tables 3** and **4**. **Figures 7 & 8** shows the actual overpressure and vibration levels recorded during the month.

Table 3 – Overpressure Monitoring Results

Location	Month	Number of Blasts	Minimum overpressure (dB(L))	Maximum overpressure (dB(L))	Mean overpressure (dB(L))	EPL overpressure Limits (dB(L))	Exceedance (yes/no)
Approx. 50m west of the Wollar Public School	December	7	72.5	99.9	92.3	115dB (95% blasts) 120dB (100% blasts)	no

Table 4 – Vibration Monitoring Results

Location	Month	Number of Blasts	Minimum vibration (mm/sec)	Maximum vibration (mm/sec)	Mean vibration (mm/sec)	EPL vibration Limits (mm/sec)	Exceedance (yes/no)
Approx. 50m west of the Wollar Public School	December	7	0.08	1.97	1.14	5 mm/s (95% blasts) 10 mm/s (100% blasts)	no

Figure 7. Overpressure (dBL) recorded during Month

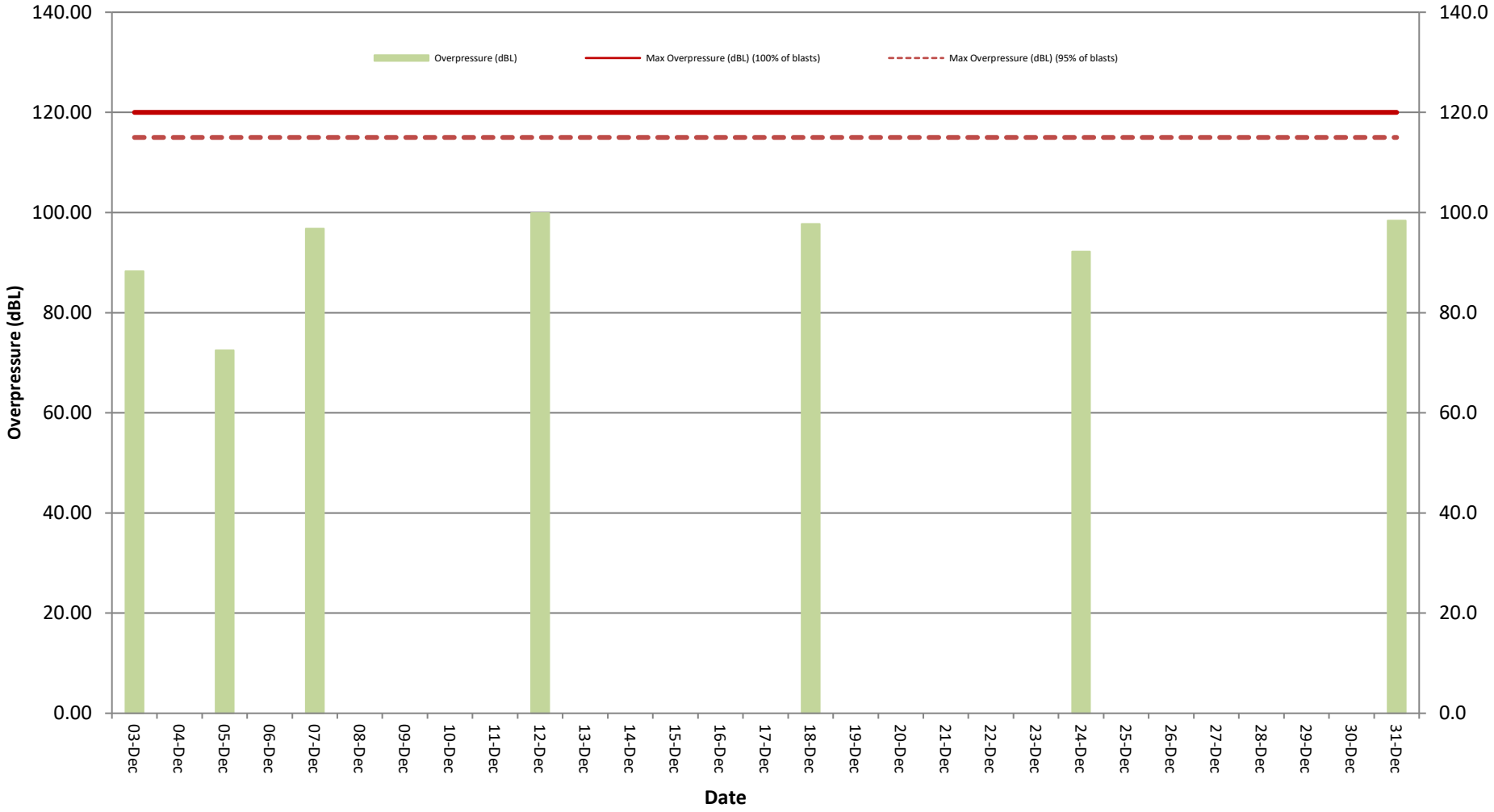
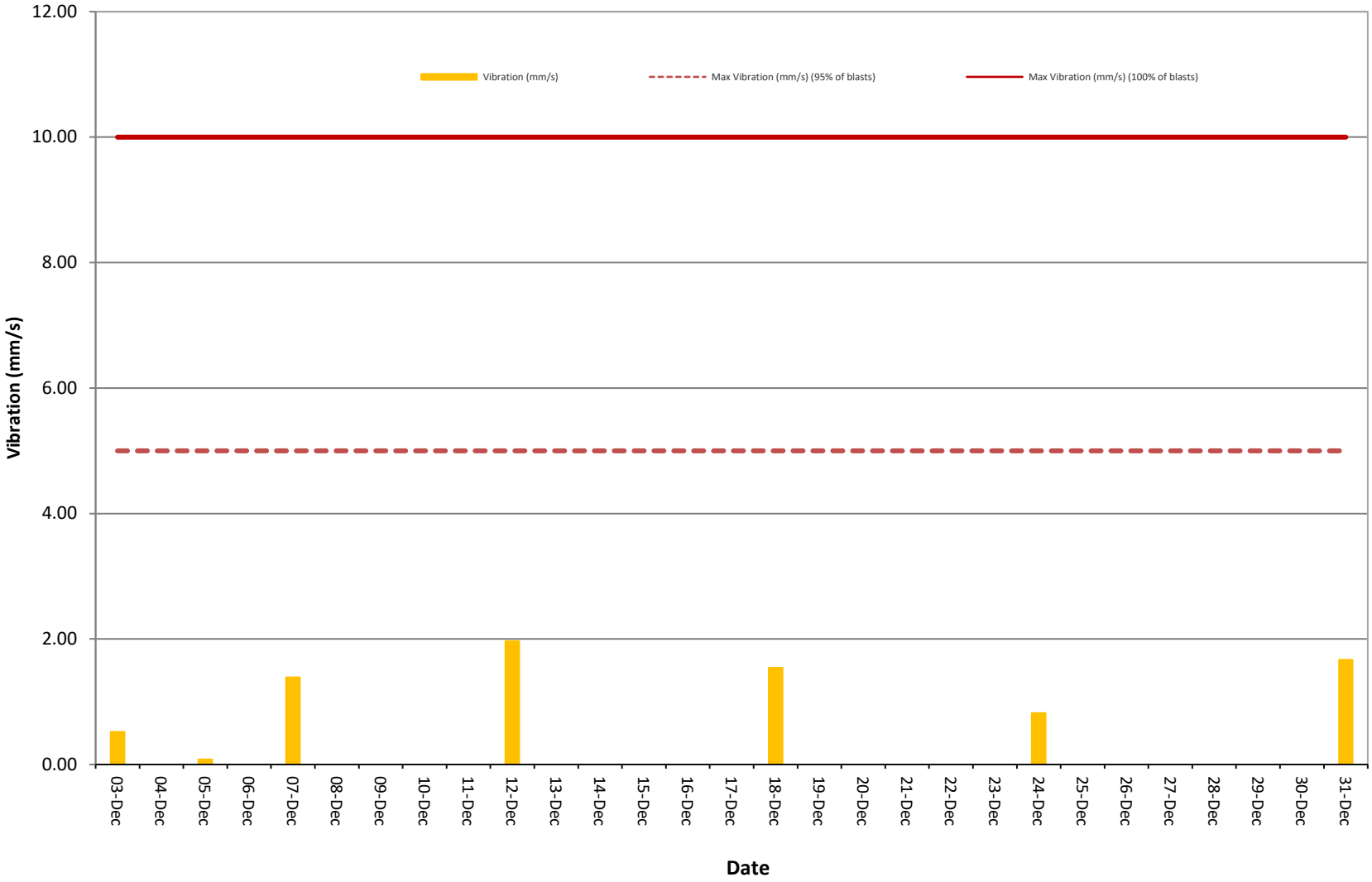


Figure 8. Vibration (mm/s) recorded during Month



Weather Monitoring

Continuous weather monitoring occurs onsite at the location shown on Figures 5 and 6 (**Meteorological Station**). The Meteorological Station continuously monitors for: rainfall; relative humidity; temperature (i.e. at 2m, 10m & 60m), barometric pressure, wind speed, wind direction and temperature lapse rate.

The temperature lapse rate is a measure of stable atmospheric conditions and is determined by measuring air temperature at two elevations 58m apart (i.e. 2m and 60m from ground level) and extrapolating the temperature difference over 58m to determine the lapse rate per ºC/100m.

Table 5 shows the meteorological data recorded during the month.

Table 5 – Monthly Meteorological Data

Date	Temperature (°C)									Humidity (%)			Prevailing Wind				Rain	Bar	Lapse Rate
	2m			10m			60m						Speed			Dir	(mm)	(hPa)	(oC/100m)
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	(Deg)			Max
1/12/2024	23.2	17.8	30.1	23.2	18.4	29.6	22.8	19.4	28.6	71.8	32.2	93.9	1.4	0	7.1	248	0.2	1005.1	4.0
2/12/2024	24.4	14.6	33.1	24.5	15.2	32.2	24.6	15.4	31.3	63.9	30.1	94.4	0.5	0	4.9	295	0	1005.6	8.4
3/12/2024	20.9	17.6	25.9	21.3	18.4	25.9	21.6	19.4	25.3	87.3	66.1	92.2	0.7	0	5.3	267	28.6	1007.5	6.1
4/12/2024	24.1	18.5	30.4	23.9	18.8	29.8	23.4	19	28.7	77.1	52.9	95	1.4	0	5.6	43	0.2	1011.4	1.2
5/12/2024	24.7	19.5	31.8	24.5	19.4	31.2	23.8	18.8	29.8	70.5	47.1	89.3	2.2	0.8	3.5	57	0	1015	1.1
6/12/2024	26.1	20.6	34.7	26	21.1	33	25.5	21	32	72.6	45	90.8	0.1	0	3.8	24	0	1012.9	1.4
7/12/2024	26.3	21.5	31.3	26.3	21.8	30.8	25.9	21.7	29.9	70.5	48.1	92.1	2.4	0	7	250	1.6	1007.9	1.6
8/12/2024	26.3	21.2	32.8	26.2	21.3	32.2	25.5	20.8	31.2	59.8	19.1	90.8	1.9	0.5	6	226	0.2	1006.5	5.8
9/12/2024	22.4	20	27.9	22.3	19.9	26.7	21.4	19.2	25.6	75.4	54.2	84.4	2	0.5	3.8	45	0	1010	0.0
10/12/2024	24.4	18.5	31	24.2	19	30.2	23.5	18.7	29	58.4	22.1	92.2	0.8	0	4.9	162	0	1007.3	1.6
11/12/2024	23	16.3	30.2	22.9	16.6	29.3	22.4	16.2	28.3	53.6	25.8	86	0.7	0	3.5	102	0	1005.9	1.2
12/12/2024	16.3	15.4	17.6	18.1	16.9	19.3	20.4	18.5	22.1	63	57	66.7	0	0	0.9	NaN	0	1006.3	-
13/12/2024	28.1	18.1	33.6	28.6	20.2	32.7	28.7	21.6	31.6	37.4	20.9	73.3	1.5	0	4.3	221	0	1003.5	7.7
14/12/2024	26.7	15.8	35.7	26.9	16.9	35.2	26.7	18.5	33.6	51.2	21.7	82.3	0.8	0	2.7	65	0	1006	6.1
15/12/2024	28.6	18.5	36.6	28.7	19.3	35.8	28.5	20.8	34.8	52	22.8	88.1	0.2	0	4.7	158	0	1006.8	7.5
16/12/2024	27.9	21.1	35.2	27.9	21.4	35	27.2	20.9	33.9	52.5	24.3	79.8	2.8	1.1	5.1	55	0	1008.8	4.0
17/12/2024	28.6	18.5	36.2	28.8	19.5	35.5	28.8	20.6	34.3	51.5	28.5	87.2	1.3	0	5	234	0	1004.9	6.7
18/12/2024	20.5	16.7	27.4	20.4	16.8	28	19.6	16.1	27.7	66.1	43.2	89.4	4.5	2.2	7.5	63	0	1011.4	0.7
19/12/2024	20.3	15.6	26.6	20	15.8	25.9	19.1	15.2	24.8	51.9	31.9	72.4	4.1	2.7	5.9	58	0	1013.5	-0.5
20/12/2024	22.1	11.2	32.1	21.8	12.6	30.9	21.2	13.3	29.8	49.3	20.3	85.1	1	0	4	65	0	1009	5.8
21/12/2024	24.9	13.5	34.4	25.1	14.3	33.4	25	15.8	32.4	46.5	16.8	87.4	0.7	0	4	211	0	1005.1	8.9
22/12/2024	26.3	19.2	35.7	26.3	19.4	34.9	25.8	18.7	33.9	44.1	14	73.8	0.2	0	5.8	106	0	1002.1	10.5
23/12/2024	23.2	14.4	26.6	22.8	17.3	25.3	34.7	18.1	23.9	20.6	10.4	42	2.8	0	7.3	212	0	1002.3	10.4
24/12/2024	21.2	9.7	30.3	21	11.1	28.9	20.6	13.1	28	31.4	15.1	57	1.3	0	4.8	170	0	1008.3	7.4
25/12/2024	23.1	13.8	33.5	22.9	14.3	31.8	22.6	14.6	30.9	45.5	17.4	76	0.9	0	3.2	65	0	1012.6	9.6
26/12/2024	26.4	15.2	35.5	26.4	16.4	34.1	26.2	16.9	32.8	42.2	19.8	77.2	0.6	0	3.6	315	0	1009.2	10.0
27/12/2024	26.9	18.2	35.1	27	18.6	34.6	26.9	18.5	33.5	48.4	23	90.1	2	0	11.4	244	14.2	1002.5	10.4
28/12/2024	24.5	16.5	28.8	24.4	18.3	27.6	24	19.4	26.5	31.4	17.5	58.7	1.9	0	4.8	215	0	1006.3	6.3
29/12/2024	22.9	10.2	32.2	22.8	11.5	31	22.7	12.9	30	37.8	15.1	79	0.7	0	4.5	119	0	1010.8	6.8
30/12/2024	24.4	17.4	32.2	24.3	17.9	31.2	23.7	18	30.2	49.1	26.6	69	2.8	1.1	5.1	66	0	1012.8	2.3
31/12/2024	24	19.3	32.1	23.8	19.9	30.5	23.3	20.1	29.4	61.1	34.5	80.1	1.4	0	8.1	73	0	1010.8	1.8

Figure 6 – Air (Dust) Monitoring Locations

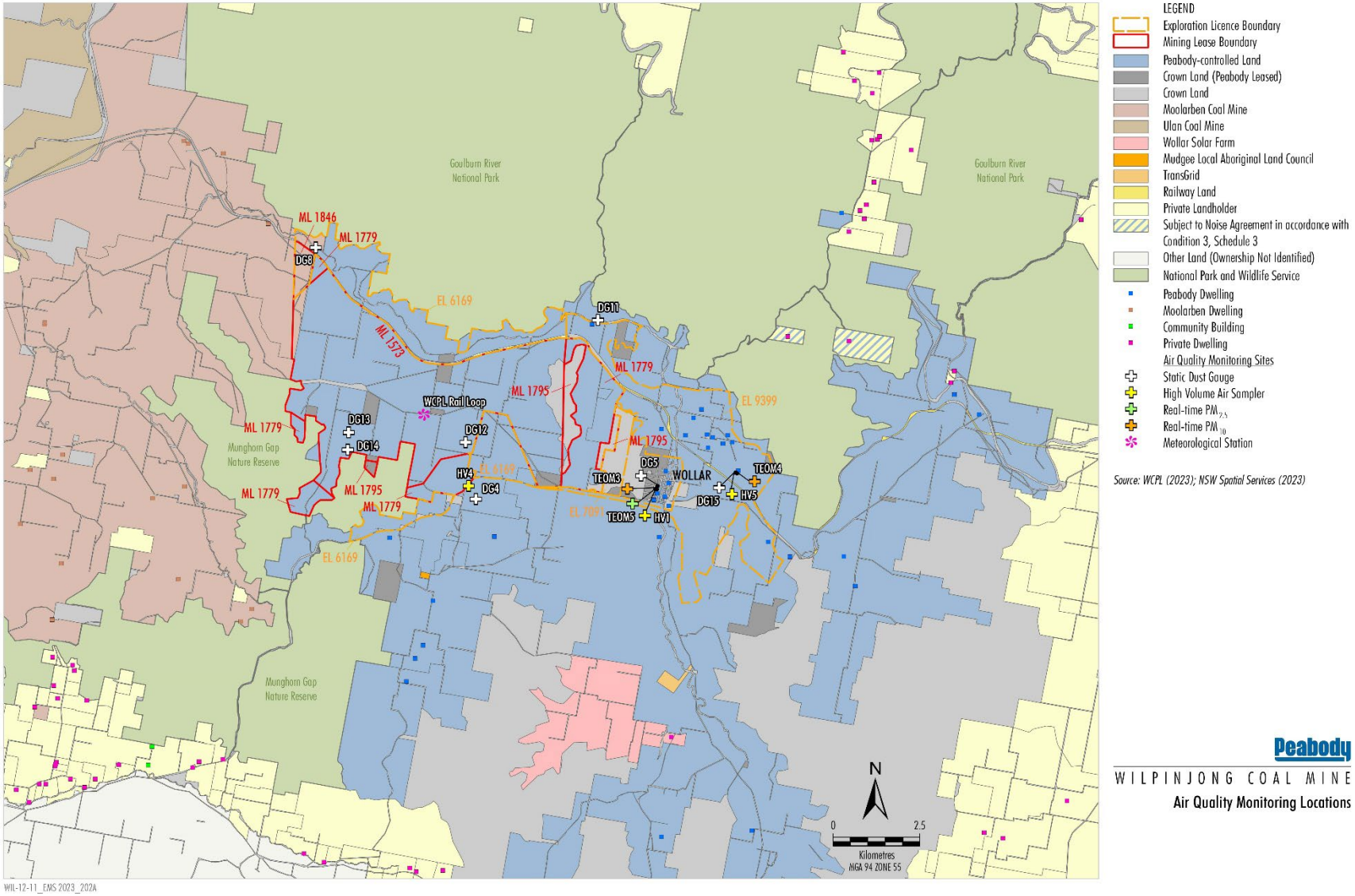


Figure 7 – Attended Noise Monitoring Locations

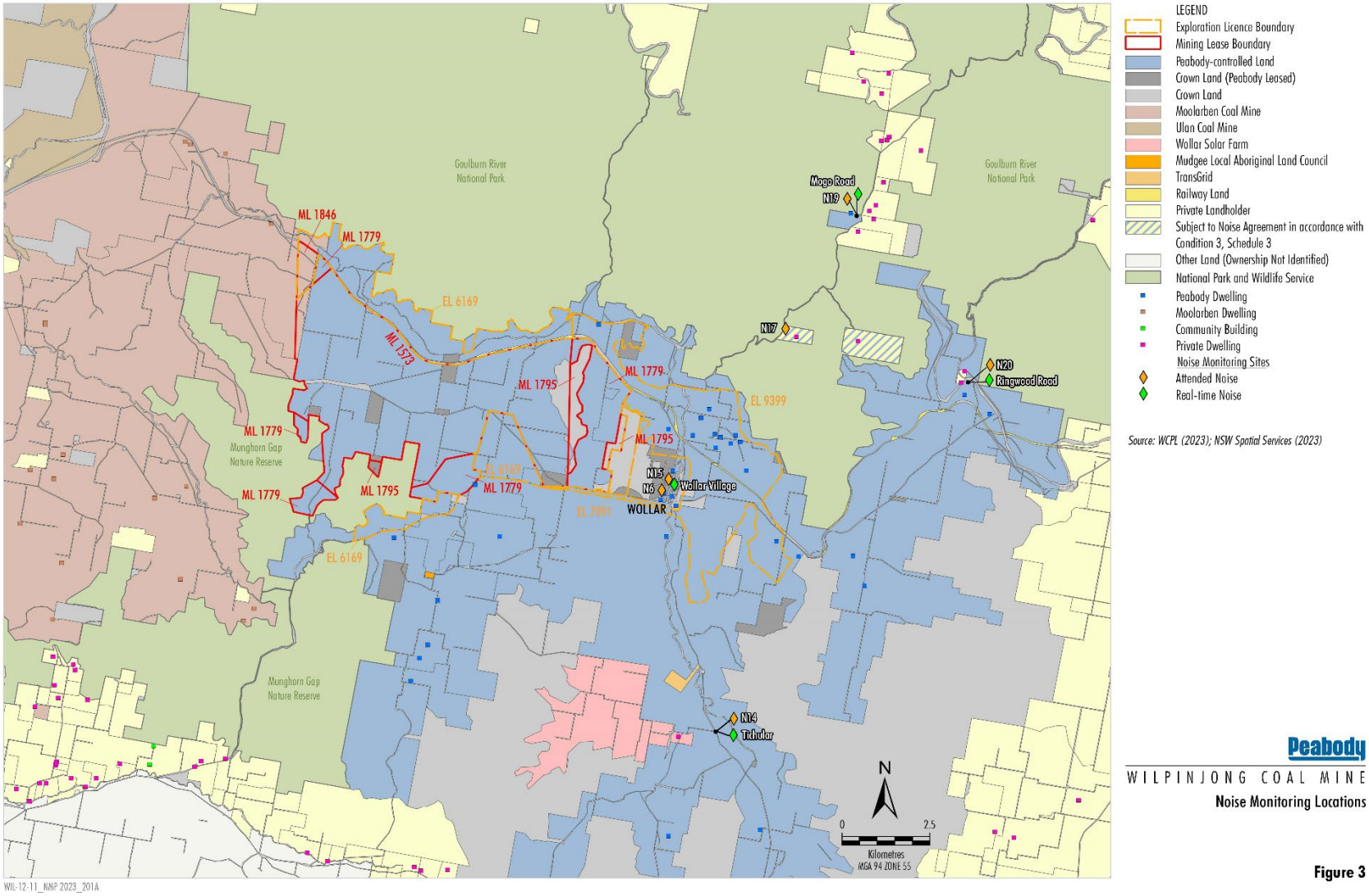


Figure 8 – Wollar Village Environmental Monitoring Sites