

**Mount Pleasant Operation
Monthly Environmental Monitoring Report**

March 2025

1. Introduction

The Mount Pleasant Operation (MPO) is located within Upper Hunter Valley of New South Wales, approximately three kilometres (km) north-west of Muswellbrook and approximately 50 km north-west of Singleton. The villages of Aberdeen and Kayuga are located 12 km north-northeast and 3 km north of the operations, respectively.

The purpose of this report is to provide a monthly update of monitoring data in accordance with the requirements of NSW Environmental Protection Licence (EPL) 20850, Section 66(6) of the *Protection of the Environment Operations Act 1997 (POEO Act)*, the MPO Development Approval (DA 92/97) and the MPO Development Consent (SSD 10418).

Table 1-1 – Mount Pleasant Operation

Name of Operation	Mount Pleasant Operation
Name of Licensee	MACH Energy Australia Pty Ltd
Environmental Protection Licence	20850
Project Approval	DA 92/97 and SSD 10418
Reporting Period Start Date	1 March 2025
Reporting Period End Date	31 March 2025
Date All Data Received	13 April 2025M

Links to three key regulatory documents are provided here:

- [Mount Pleasant Operation Development Application Approval DA 92/97; and](#)
- [Mount Pleasant Operation Development Consent SSD 10418.](#)

2. Monitoring Requirements

The MPO EPL 20850 specifically requires the monitoring of:

- 2 x Palas Fidas Air Quality Monitoring sites.
- Noise monitoring.
- Blast monitoring; and
- Meteorological monitoring.

Monitoring of sites not required by the EPL are conducted in accordance with *MPO Environmental Monitoring Program (EMP)*, Project Approval (DA 92/97) and Development Consent (SSD 10418).

All monitoring is undertaken by suitably qualified and experienced person(s). The MPO Environmental Monitoring Network is shown in the following figures:

- **Figure 2-1** shows MPO attended noise monitoring locations and Noise Assessment Groups (NAGs).
- **Figure 2-2** shows the MPO Air Quality Monitoring network.
- **Figure 2-3** shows the MPO Blast Monitoring Locations.
- **Figure 2-4** shows the MPO Groundwater Monitoring network; and
- **Figure 2-5** shows the MPO Surface Water Monitoring network.

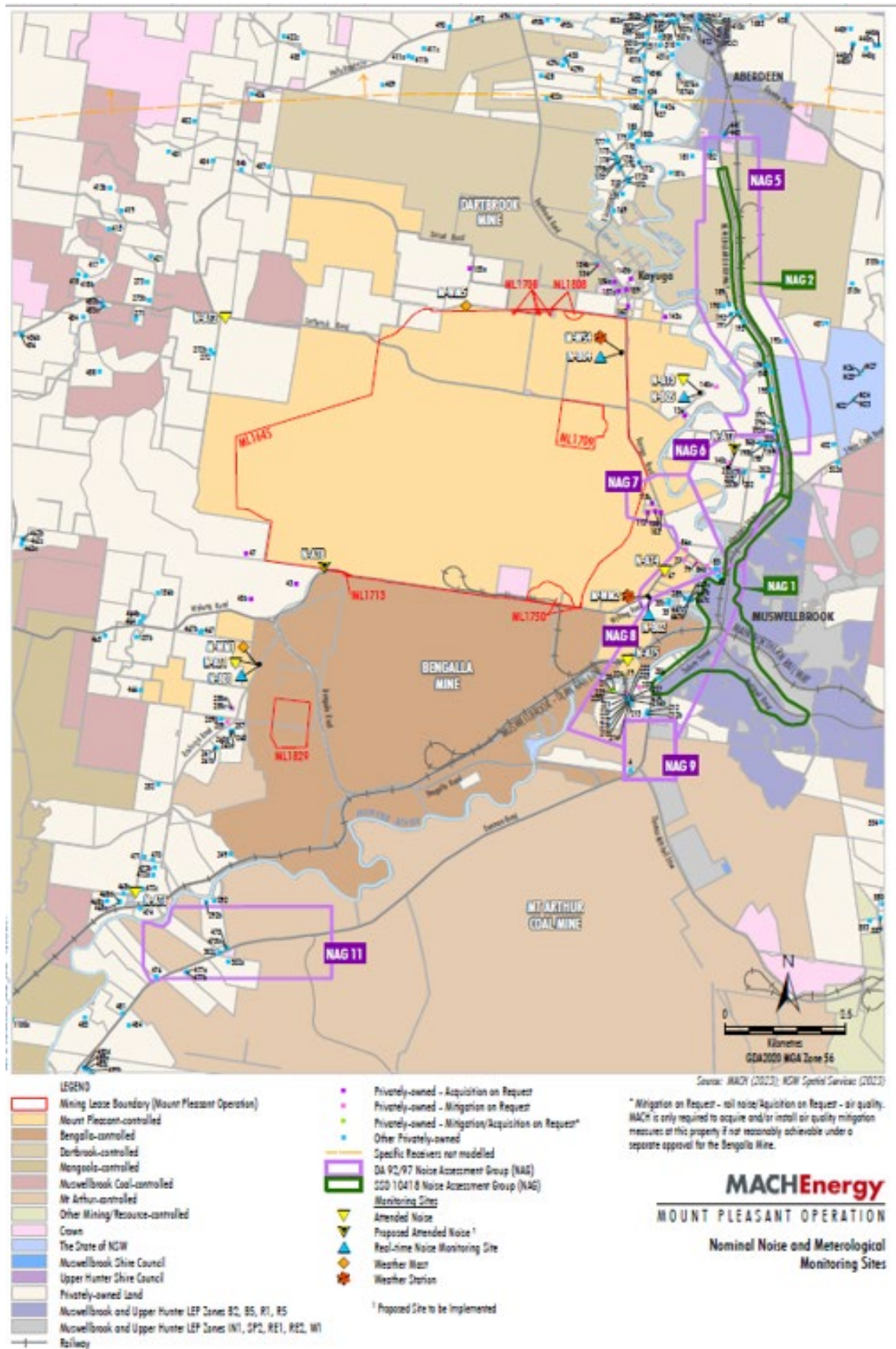


Figure 2-1 – MPO Attended Noise Monitoring Assessment Groups and Locations - Approved (SSD 10418) Water Management Plan

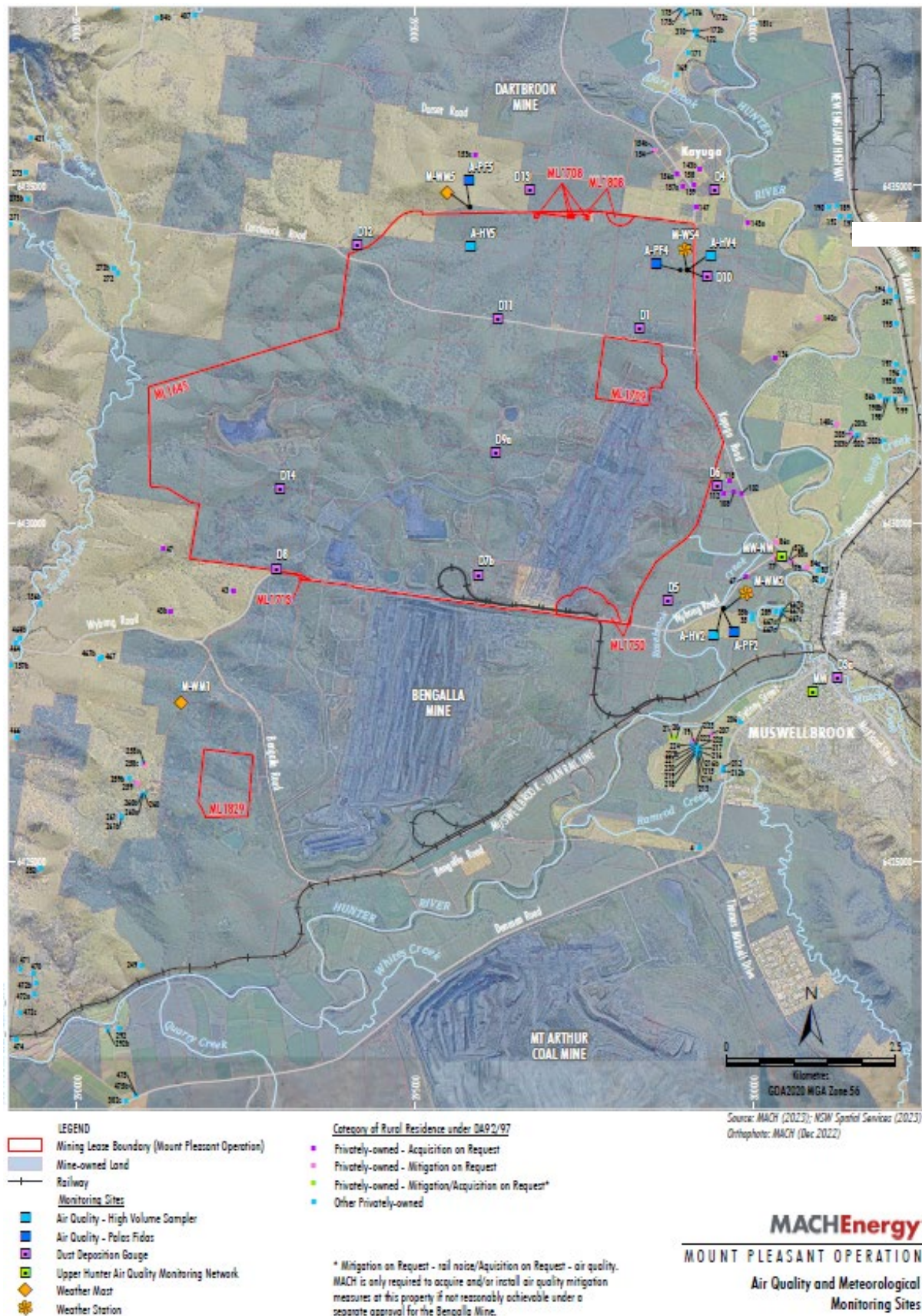


Figure 2-2 – MPO Air Quality and Meteorological Monitoring Network - Approved (SSD 10418) Water Management Plan

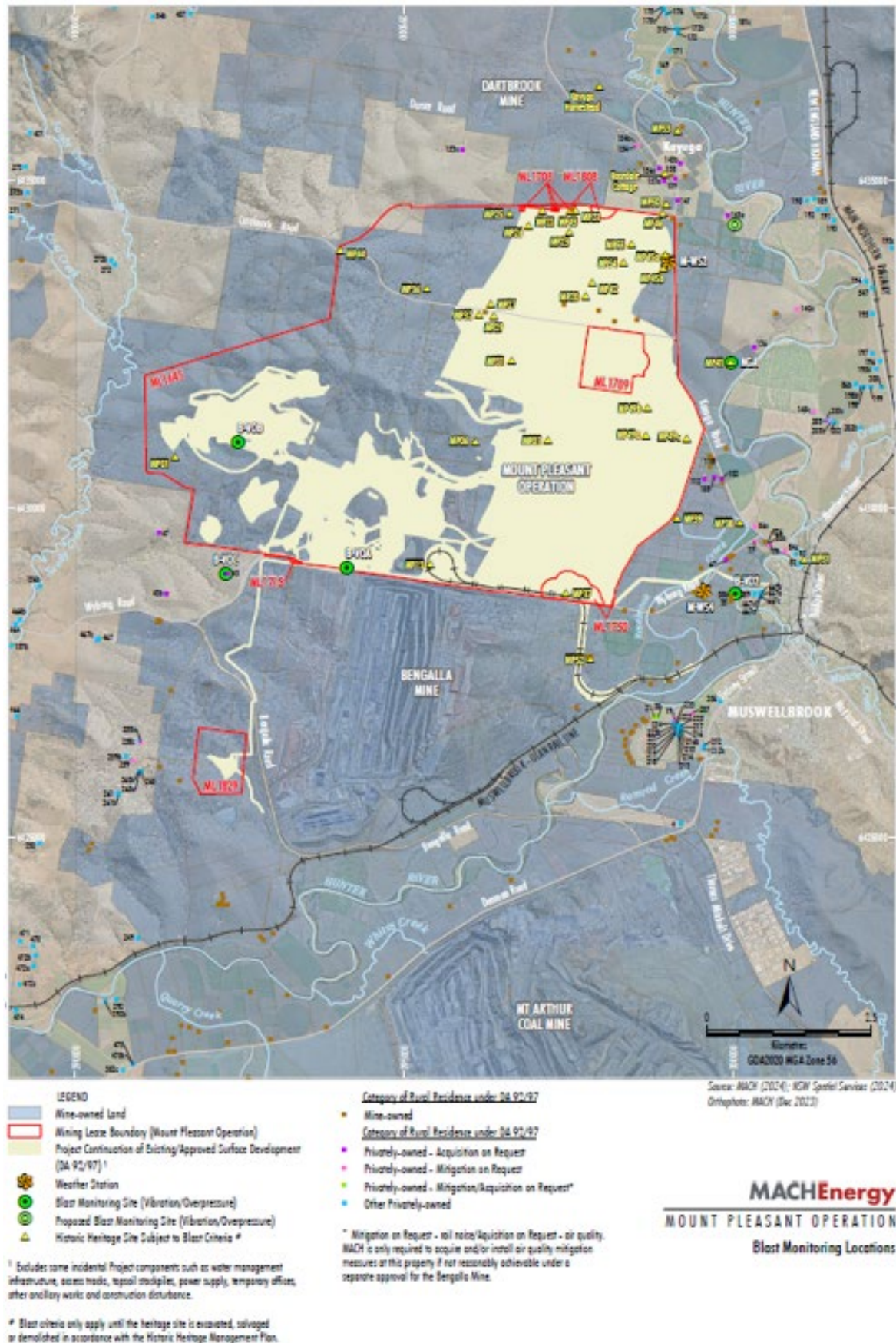


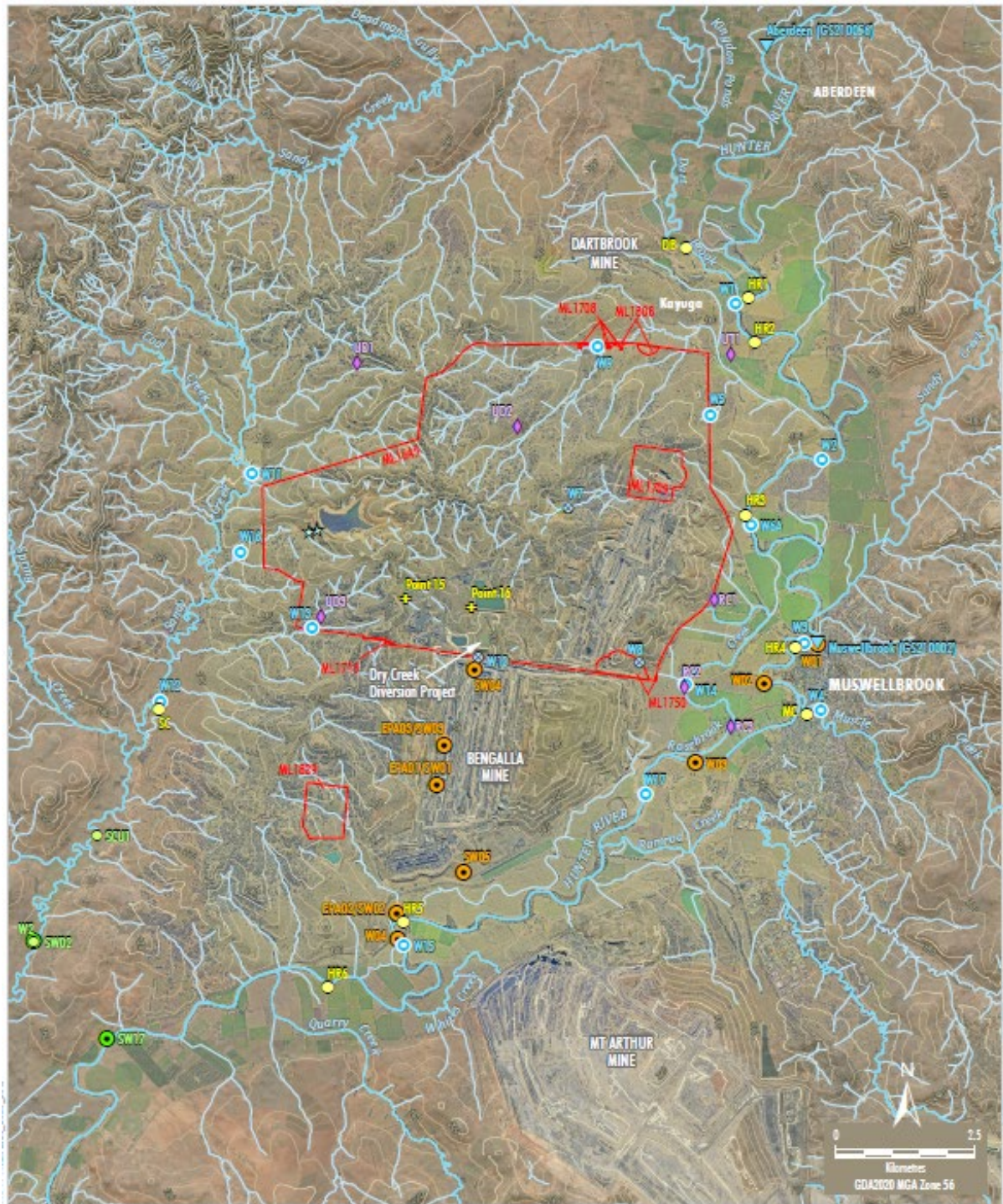
Figure 2-3 – MPO Blast Monitoring Locations



- LEGEND**
- Mining Lease Boundary (Mount Pleasant Operation)
 - Mount Pleasant Monitoring**
 - GDE Bore
 - Vibrating Wire Piezometer
 - Standpipe
 - Standpipe - Alluvium
 - Standpipe - Coal Seam
 - Standpipe - Interburden
 - Standpipe - Historical
 - Bengalla Monitoring**
 - Bengalla Standpipe
 - Bengalla Vibrating Wire Piezometer

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MOUNT PLEASANT OPERATION
Groundwater Monitoring Network

Figure 2-4 – MPO Groundwater Monitoring Network – Approved (SSD 10418) Water Management Plan



Source: MACH (2023); NSW Spatial Services (2023); NSW Department of Primary Industries - Water (2016); Bengalla Mining Company (2015); Mangool Coal Operations Pty Ltd (2014)
Orthophoto: MACH (Jun 2023, 2020)

LEGEND	
	Mining Lease Boundary (Mount Pleasant Operation)
—	Contour (20 m Interval)
▲	DPI Water Gauging Station
◆	<u>Mount Pleasant Monitoring</u>
◇	Aquatic Ecology Habitat Assessment Site
●	Surface Water Monitoring Site
⊙	Historical Surface Water Monitoring Site
●	Stream Health Monitoring Site
☆	V-notch Weir
+	Water Discharge/Monitoring Point (EPL 20850)
●	<u>Mangoola Monitoring</u>
●	Surface Water Monitoring Site
●	Stream Health Monitoring Site
●	<u>Bengalla Monitoring</u>
●	Surface Water Monitoring Site

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Surface Water and Stream Health
Monitoring Sites

Figure 2-5 – MPO Surface Water Monitoring Network - Approved (SSD 10418) Water Management Plan

3. Meteorological Monitoring

Weather data is measured continuously¹ at the Kayuga Road (M-WS4) and the Wybong Road (M-WS2) meteorological stations. In addition to air quality parameters (particulate matter less than 10 µm and less than 2.5 µm (PM₁₀ and PM_{2.5})), the weather stations measure wind speed and direction, temperature (at 2 metres (m) and 10m), temperature inversion (using the sigma theta method), solar radiation, relative humidity, rainfall, and atmospheric pressure.

Meteorological data was captured at M-WS2 during March 2025 (the monitoring period). An additional monitor (E-BAM) is located at M-WS2 to provide additional capture for air quality. Additional meteorological data was collected at M-WS4.

Throughout March 2025, there was 152.2mm and 130.8mm of rainfall recorded at M-WS2 and M-WS4, respectively.

4. Dust Depositional Monitoring

4.1 Methodology

Dust deposition was monitored according to the OEH's *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* (DECC 2007), which references *Australian Standard (AS)/New Zealand Standard (NZS) 3580.10.1:2016 Methods for Sampling and Analysis of Ambient Air: Determination of particulate matter – Deposited matter – Gravimetric Method*. The dust deposition monitoring network comprises of 13 dust deposition gauges (DDG). Details of the monitoring locations are shown in **Figure 2-2**.

DDG samples can be contaminated by a variety of means, notably by the presence of insects and bird droppings. Results for contaminated gauges were not included in the calculation of the annual averages as this would result in skewed or misleading results for the purpose of dust deposition assessment. The Australian Standard does not provide criteria for the determination of contamination of a DDG. AECOM determines a gauge sample to be contaminated only after reference to field observation sheets, historical monitoring location data, laboratory notes and results, prevailing atmospheric conditions, and feedback from field technicians. For example, a gauge sample with a statistically abnormally high insoluble solids result, a low ash residue result (indicating an elevated level of organic matter) and field notation that bird droppings or insects were present is likely to be considered contaminated.

While the new SSD 10418 doesn't explicitly mention dust deposition gauges, there's a notable shift in regulations towards embracing high volume air sampler results and continuous air quality monitoring programs, with a specific focus on total particulate matter, PM₁₀, and PM_{2.5}. These modern monitoring techniques offer a more comprehensive approach to environmental surveillance, furnishing real-time data and insights into air quality conditions. By harnessing these advanced methods, MPO can ensure the implementation of robust monitoring practices, effectively supplanting the older dust deposition gauges. This transition from the previous development consent DA92/97 (which is yet to be surrendered) to SSD 10418 signifies a proactive measure towards upholding environmental compliance. Therefore, Dust Depositional Monitoring will continue to be included in monthly reporting as per DA92/97 up until surrender where it will be discontinued.

¹ The EPA's Ambient air monitoring guidance note (Guidance Note) states that after allowing sufficient down time for routine maintenance and calibrations a continuous monitoring system should be able to achieve at least a 95% availability.

4.2 Results

The dust deposition exposure period for gauges commenced on 27 February 2025 sample collection was undertaken on 27 March 2025 by AECOM with sample analysis performed by ALS, a National Accreditation and Testing Authority (NATA) accredited laboratory. Results are summarised in **Table 4-1**. Annual rolling averages for March 2025 have been provided as an indication of performance between April 2024 – March 2025 and represents 12month average results as per Schedule 3, Condition 20 of DA 92/97 and Schedule 2, Condition B28 of SSD 10418.

Table 4-1: Dust Depositional Results – March 2025

Location	YTD Insoluble Solids (g/m ² .month)	Insoluble Solids Annual Rolling Average (g/m ² .month)
D1	3.0	2.5
D3	2.2	1.4
D4	1.1	1.2
D5a	1.8	2.1
D6	1.7	1.9
D7b	8.5	9.0
D8	6.7	4.8
D9a	6.0	3.7
D10	1.1	1.0
D11	6.5	3.9
D12	2.5	1.3
D13	3.0	1.8
D14	5.9	3.7
Criterion	-	4

Notes:

Results in **bold** indicate an elevated measurement of adopted assessment criteria.

* Insufficient monthly results to calculate annual average

Contaminated results, as described in Section 4.1, are not included in the 12-month rolling average. Site D7b is located within close proximity to the northern boundary of a neighbouring mining operation and thus can be influenced by this site. D7b will continue to be monitored, however will not be used to assess compliance or to represent residential receivers in the area. Furthermore, there are no privately-owned receivers in the vicinity of D8, D9 and D14. Whilst these sites do not represent residence(s) on privately-owned land, they will continue to be monitored in accordance with the *MPO Air Quality and Greenhouse Gas Management Plan* (MACH Energy, 2019).

Field notes from the March sampling event noted that all thirteen gauges contained insects, two had algae grown, one contained bird droppings. Annual average dust deposition results were below the annual average criterion of 4 g/m².month at all sites except D7b (9.2 g/m²), D8 (4.8 g/m²), and D11 (6.5 g/m²).

Figure 4-1 compares the monthly insoluble solids results to the annual averages for each dust gauge and the assessment criterion.

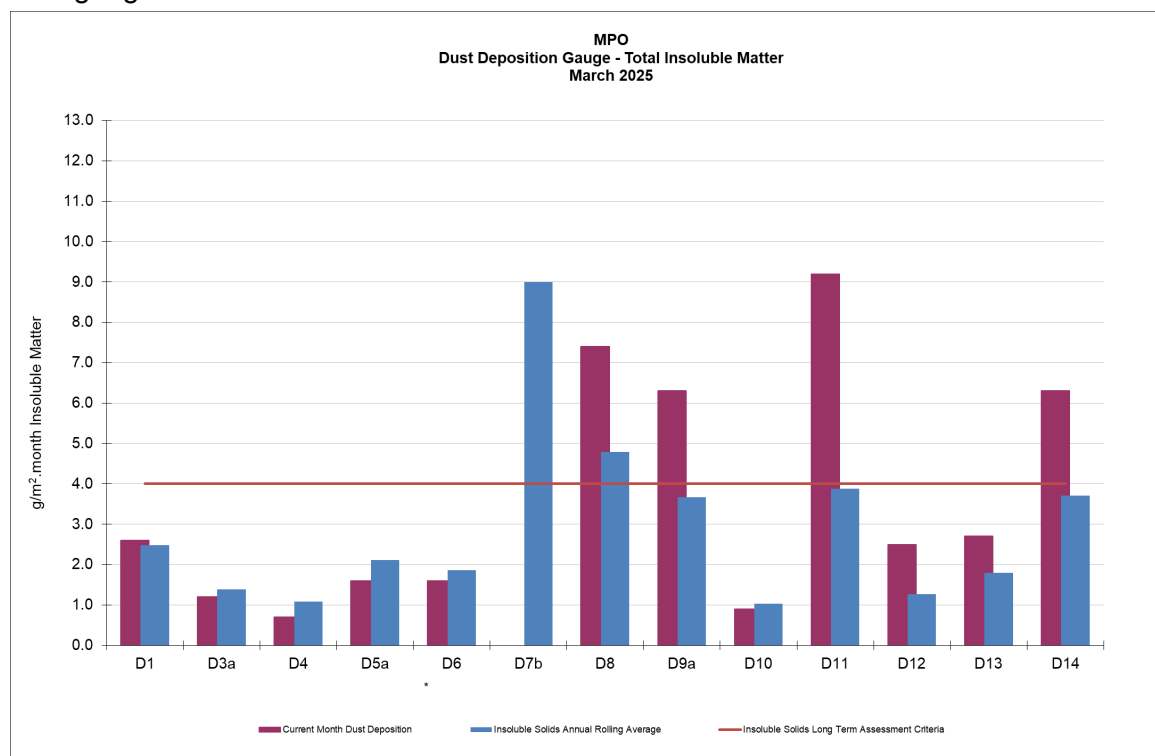


Figure 4-1: MPO Dust Deposition Monthly Results and Annual Rolling Average – March 2025

5. Total Suspended Particulates

All High-Volume Air Samplers (HVAS) are run for 24 hours every six days in accordance with *AM-15 of Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* (DECC, 2007), referencing *AS/NZS 3580.9.3:2015 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – Total suspended particulate matter (TSP) - High volume sampler gravimetric method*, for the monitoring of TSP.

Three TSP HVAS units are included in the MPO air quality monitoring network and are displayed in **Table 5-1** below. These units were commissioned in March 2017.

Table 5-1 Total Suspended Particulate Monitoring Sites

ID	Description
A-PF2	Reilly's
M-WS4	Kayuga Road Met Station
A-PF5	Athlone

5.1 Assessment Criteria

TSP is assessed against the guidelines defined in the *EPA Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA 2016), Project Approval DA 92/97 and Development Consent SSD 10418. The DA 92/97 and SSD 10418 both specify an annual average project contribution plus background criterion of 90 µg/m³.

5.2 Results

Sample collection was undertaken by AECOM with sample analysis performed by ALS, a NATA accredited laboratory. TSP results for the monitoring period are provided in **Table 5-2**. Twelve month rolling averages to March 2025 is provided as an indication of performance between April 2024 – March 2025 as per Schedule 3, Condition 20 of DA 92/97 and Schedule 2, Condition B28 of SSD 10418.

Table 5-2 Total Suspended Particulate Monitoring Data – March 2025

Run Date	Assessment Criterion	TSP µg/m ³		
		HVAS A-PF2	HVAS A-PF5	HVAS M-WS4
1/03/2025	-	68.6	127	83.2
7/03/2025		37.3	125	27.4
13/03/2025		47.7	32.7	29.2
19/03/2025	-	49.6	70.4	37
25/03/2025	-	16.9	51.6	14.2
31/03/2025	-	28	77.6	35.8
*Monthly Mean	-	41.4	80.7	37.8
Annual Rolling Average	90	45	47	35

Notes:

* Results have been rounded to one decimal place for reporting purposes where applicable.

^ Indicates makeup run results for run date 11/11/2024.

5.3 Discussion

For the reporting period, the annual rolling average TSP data at all sites was below the annual average criterion of 90 µg/m³.

6. Real Time Air Quality Monitoring

Continuous particulate matter less than 10 µm (PM₁₀) and particulate matter less than 2.5 µm (PM_{2.5}) monitoring was conducted by three Palas Fidas units (one utilised for management only) at MPO during March 2025.

The EPA identification numbers 1 and 2 refer to Palas Fidas units installed on Wybong Road (A-PF2) and Dorset Road (A-PF5), respectively. In addition, a third unit (A-PF4) is installed on Kayuga Road with data used for management purposes only.

Real time PM₁₀ and PM_{2.5} 12-month rolling averages to March 2025 have been provided in Section 6.2 and 6.4 respectively, as an indication of performance during the last 12 month as per Schedule 3, Condition 20 of DA 92/97 and Schedule 2, Condition B28 of SSD 10418.

6.1 PM₁₀ Results – 24 Hour Rolling Average

In accordance with the DA 92/97 and SSD 10418 limit of 50 µg/m³ for the 24-hour daily average, there were no elevated readings in March 2025. Real time PM₁₀ 24 hour daily average results for March 2025 are presented in **Table 6-1**.

Table 6-1: MPO Palas Fidas PM₁₀ Data – March 2025

Date	A-PF2/EPA ID 1	A-PF4	A-PF5/EPA ID 2	Muswellbrook NW	A-PF2, A-PF4, A-PF5 24 Hour Average Limit (µg/m³)
	24-hour Average Result				
1/03/2025	34.07	33.35	28.61	37.1	50
2/03/2025	29.52	26.92		29.2	50
3/03/2025	24.98	21.47		24.9	50
4/03/2025	17.00	14.16		19.7	50
5/03/2025	13.34	11.82		15.9	50
6/03/2025	12.68	10.96		12.8	50
7/03/2025	14.27	12.27		17.3	50
8/03/2025	12.54	10.77		9.5	50
9/03/2025	11.76	10.17		13.6	50
10/03/2025	13.44	12.45		12.2	50
11/03/2025	11.11	10.65	12.53	11.1	50
12/03/2025	10.15	9.56	11.58	9.9	50
13/03/2025	11.29	10.50	12.29	14.3	50
14/03/2025	14.09	11.98	10.90	19.1	50
15/03/2025	14.32	12.72	11.04		50
16/03/2025	15.19	13.03	11.53	12.8	50
17/03/2025	22.87	15.14	13.99	51.1	50
18/03/2025	18.99	16.74	19.70	26.1	50
19/03/2025	17.21	17.07	21.51	26.3	50
20/03/2025	23.62	20.56	28.30	25.4	50
21/03/2025	20.35	16.21	14.23	18.6	50
22/03/2025	12.75	12.17	11.79	13.1	50
23/03/2025	11.21	11.21	13.46	8.7	50
24/03/2025	9.85	9.65	11.85	12.1	50
25/03/2025	10.34	10.13	12.28	10.3	50
26/03/2025	10.06	10.08	12.94	11	50
27/03/2025	10.69	10.44	22.45	15.8	50
28/03/2025	10.58	9.45	30.86	9.8	50
29/03/2025	7.78	9.39	23.08	6.3	50
30/03/2025	8.95	13.85	13.85	8.4	50
31/03/2025	8.83	12.73	17.33	9	50

Notes:

Results in **bold** indicate elevated readings during adverse weather conditions.

Results with “-” indicate dates where data was affected by maintenance or servicing (scheduled and unscheduled)

Figure 6-1 below shows the results of real-time PM₁₀ 24 hour daily average results at MPO air quality monitoring sites March 2025.

6.2 PM₁₀ Results – Annual Rolling Average

There was no exceedance of the PM₁₀ annual rolling average reported at MPO during March 2025. Real time PM₁₀ annual rolling averages during the reporting period are presented in **Figure 6-2** below.

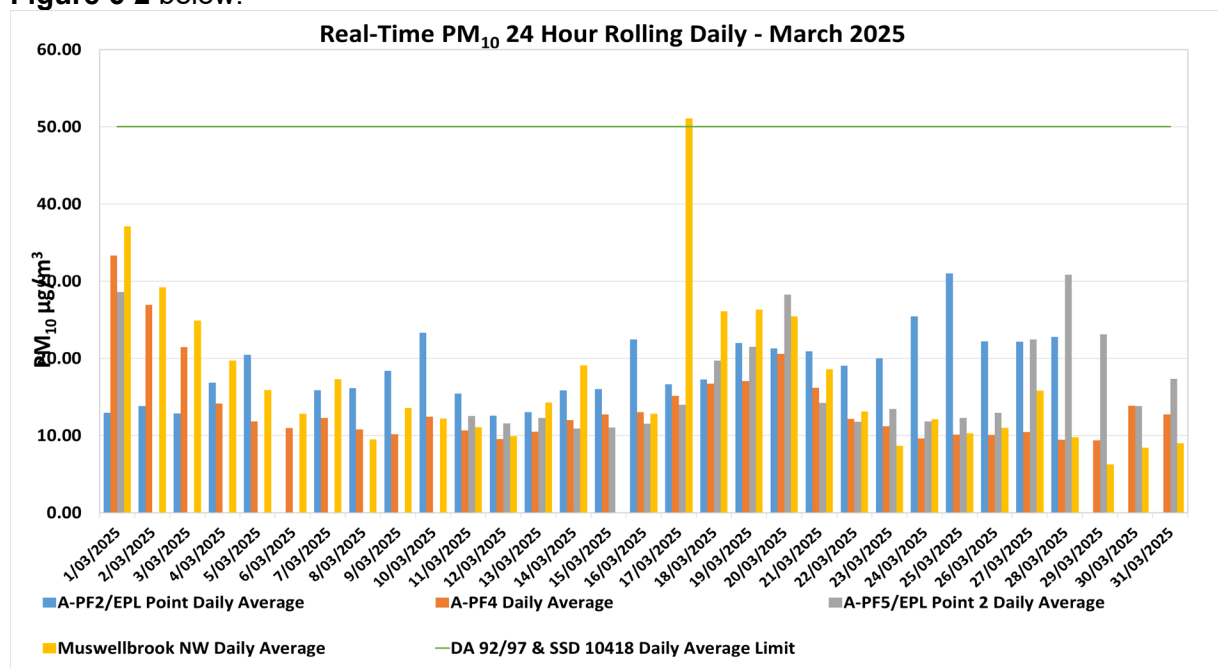


Figure 6-1: Real-time PM₁₀ 24 Daily Average Results for March 2025.

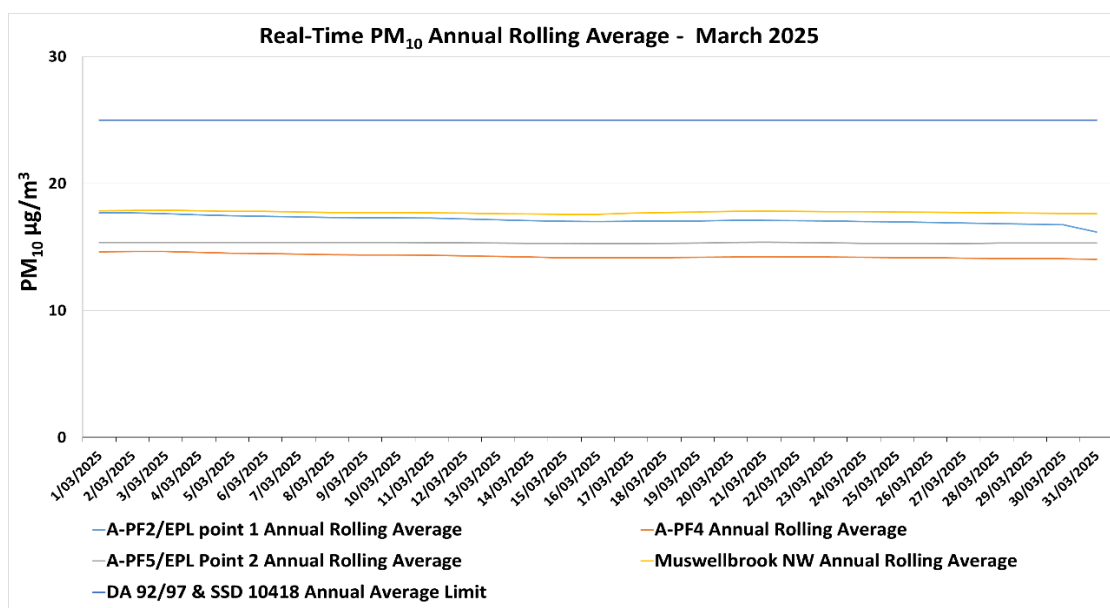


Figure 6-2: Real-time PM₁₀ Annual Rolling Average Results for March 2025.

6.3 PM_{2.5} Results – 24 Hour Daily Average

There was no exceedance of the PM_{2.5} annual rolling average reported at MPO during March 2025. Real time PM_{2.5} 24 hour rolling average results for March 2025 are presented in **Table 6-2**.

Table 6-2: MPO Palas Fidas PM_{2.5} Data – March 2025

Date	A-PF2/EPA ID 1	A-PF4	A-PF5/EPA ID 2	A-PF2, A-PF4, A-PF5 24 Hour Average Limit (µg/m³)
	24-hour Average Result			
1/03/2025	9.62	9.62	6.42	25
2/03/2025	10.32	10.32	6.63	25
3/03/2025	8.28	8.28	5.96	25
4/03/2025	6.07	6.07	5.37	25
5/03/2025	5.11	5.11	8.42	25
6/03/2025	5.13	5.13	7.28	25
7/03/2025	5.11	5.11	8.05	25
8/03/2025	4.59	4.59	7.55	25
9/03/2025	4.40	4.40	7.78	25
10/03/2025	4.49	4.49		25
11/03/2025	3.73	3.73		25
12/03/2025	3.79	3.79		25
13/03/2025	4.28	4.28		25
14/03/2025	4.67	4.67		25
15/03/2025	4.59	4.59		25
16/03/2025	4.40	4.40		25
17/03/2025	5.27	5.27		25
18/03/2025	5.53	5.53		25
19/03/2025	4.88	4.88	4.15	25
20/03/2025	5.58	5.58	4.01	25
21/03/2025	5.53	5.53	4.11	25
22/03/2025	4.36	4.36	3.96	25
23/03/2025	5.15	5.15	3.92	25
24/03/2025	4.43	4.43	3.93	25
25/03/2025	4.60	4.60	4.51	25
26/03/2025	3.98	3.98	5.81	25
27/03/2025	3.90	3.90	5.36	25
28/03/2025	3.90	3.90	5.98	25
29/03/2025	3.12	3.12	4.62	25
30/03/2025	3.39	3.39	4.17	25
31/03/2025	3.20	3.20	5.60	25

Notes:

Results in **bold** indicate elevated readings during adverse weather conditions.

Results with "-" indicate dates where data was affected by maintenance or servicing (scheduled and unscheduled)

Real time PM_{2.5} 24-hour average results for March 2025 are presented in **Figure 6-3** below.

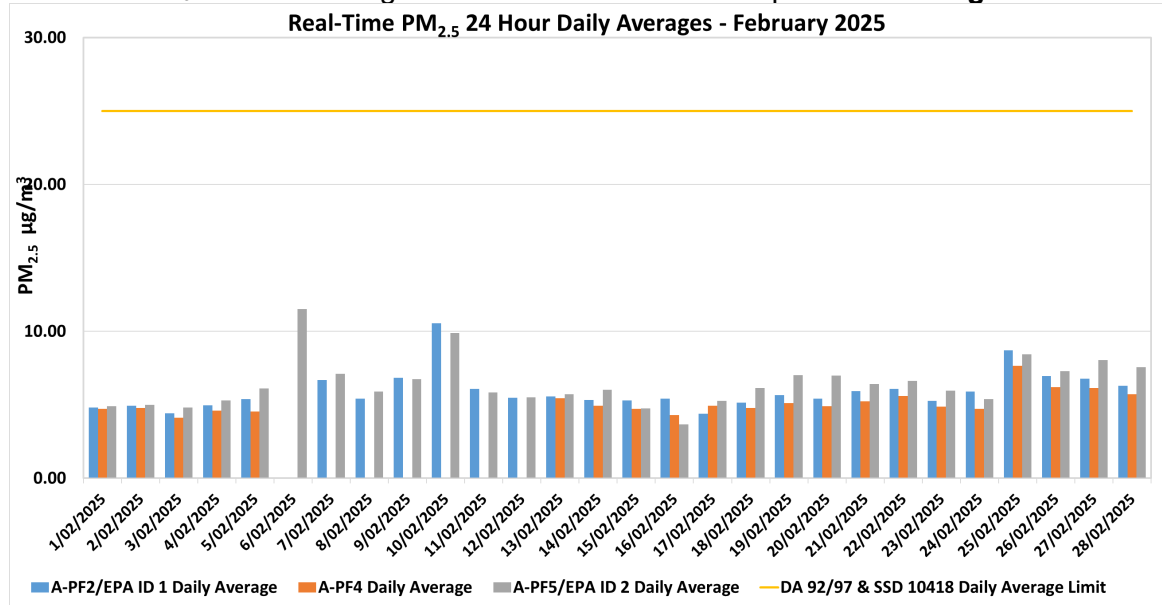


Figure 6-3: Real-time PM_{2.5} 24 hour Daily Average Results for March 2025.

6.4 PM_{2.5} Results - Annual Rolling Average

There was no exceedance of the PM_{2.5} annual rolling average reported at MPO during March 2025. Real time PM_{2.5} annual rolling averages during the reporting period are presented in **Figure 6-4** below.

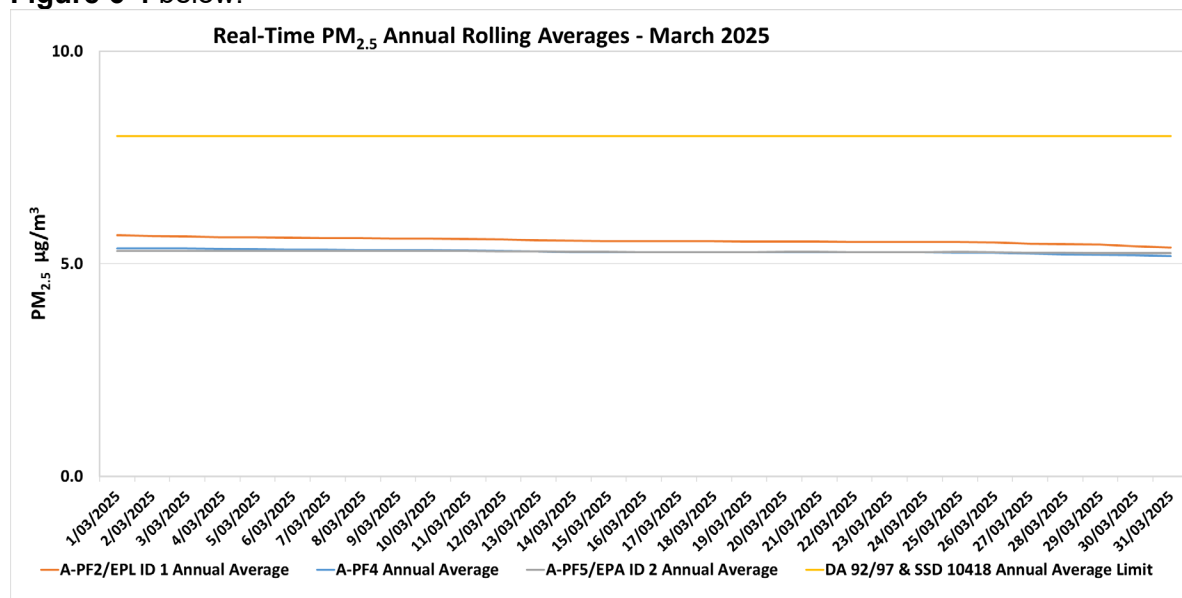


Figure 6-4: Real-time PM_{2.5} Annual Rolling Average Results for March 2025.

7. Surface Water Monitoring

7.1 Methodology

Surface water quality is monitored at 14 sites on a monthly basis, with additional monitoring conducted if triggered by a rain event. A more comprehensive suite of analysis is performed at these sites on a quarterly basis.

7.2 Assessment Criteria

Surface waters were assessed as per the [MPO Water Management Plan](#) (MACH Energy, 2024) in accordance with site specific trigger values that have been developed using the [ANZECC](#) (2000) guidelines for sites that contain a minimum of two years of monthly data. Sites with insufficient data are assessed on default trigger values adopted from ANZECC (2000) guidelines.

7.3 Results

Surface water monitoring was conducted by AECOM on 25 March 2025. Laboratory analysis was performed by ALS NATA accredited laboratory. Monthly monitoring results for pH, EC, TSS and Total Dissolved Solids (TDS) are presented in **Table 7-1**.

Table 7-1 – MPO Monthly Surface Water Monitoring Results – 25 March 2025

Station	pH	Electrical Conductivity (EC) (µs/cm) ¹	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (TSS) (mg/L)
W1	7.9	526	300	20
W2	7.7	578	330	18
W3	7.9	596	340	19
W4	7.5	2110	1300	9
W5	*	*	*	*
W6A	8.0	574	330	17
W9	*	*	*	*
W11	8.3	3990	2200	6.1
W12	7.9	4940	2700	15
W13	*	*	*	*
W14	*	*	*	*
W15	7.9	639	370	25
W16	*	*	*	*
W17	7.8	620	360	20

Note: Results in **bold** indicate exceedances of adopted assessment criteria.

*Dry or insufficient water to sample.

** No access due to track conditions.

¹ Results have been rounded in accordance with the In-house method Q4AN(EV)-332-WI2 (EC).

7.3.1.1.1.1.1 During 25 March 2025 monitoring event, five (5) sites were dry. Sites W2, W6A, and W15 were above their respective EC trigger levels. Sites W1 and W15 were above pH trigger levels. Sites W15 was above the TSS trigger level.

Site W6A was above the respective EC trigger level for six consecutive monitoring events during the last monthly environmental report (February 2025) and continues to be above trigger levels for March 2025.

In accordance with the MPO Water Management Plan (WMP) Table 26 (MACH Energy, 2024) if a water quality indicator at a potential impact monitoring location or at a downstream receiving water monitoring location is above (or outside the range) of the site-specific trigger value for three consecutive sampling events an investigation is required.

Site W6A continued to exceed the respective EC trigger level (520 $\mu\text{S}/\text{cm}$) for March 2025; however, according to Table 26 of the WMP no further investigation is required as the upstream site W2 (Hunter River reference site) was also found to be exceeding trigger levels.

8. Groundwater Monitoring

No groundwater sampling was undertaken in March 2025. Next annual and quarterly groundwater sampling is scheduled for May 2025.

9. Noise Monitoring

Attended noise monitoring was undertaken during the night of the 9th April 2025 at eight (8) monitoring locations as per the [MPO Noise Management Plan](#) (MACH Energy, 2021) in accordance with DA 92/97, SSD 10418 and EPL 20850.

9.1 Results

The results for nighttime attended noise monitoring for noise generated by MPO in April 2025 against noise criteria is shown in **Table 9-1**; **Table 9-2**; and **Table 9-3**.

Table 9-1 – $L_{A1,1\text{min}}$ Generated by MPO: Attended Night Monitoring – 9 April 2025

Location	Start Date and Time	MPO Only $L_{A1,1\text{min}}$ dB ^{2,4}	Criterion dB	Wind Speed m/s Direction °	Criterion Applies ¹	Stability Class	Exceedance dB ³
N-AT1	1:36am	IA	45	0.7 / 077	Yes	D	No
N-AT2	10:50pm	IA	45	1.4 / 171	Yes	D	No
N-AT3	11:25pm	IA	45	1.2 / 161	Yes	D	No
N-AT4	11:53pm	IA	45	0.7 / 262	Yes	E	No
N-AT5	12:15am	26	45	0.7 / 190	Yes	E	No
N-AT6	1:11am	IA	45	1.1 / 131	Yes	E	No
N-AT7	10:09pm	IA	45	2.4 / 164	Yes	D	No
N-AT8	12:42am	37	NA ²	1.0 / 154	NA ⁶	D	NA ⁶

Notes:

1. As per Condition L2.3 of EPL 20850, noise emission limits do not apply during wind speeds greater than 3m/s at 10m above ground level, or stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level, or stability category G temperature inversion conditions.
2. Estimated or measured $L_{A1,1\text{minute}}$ attributed to MPO.
3. NA in exceedance column means meteorological conditions outside those specified in Condition L2.3 of EPL 20850 and thus criterion is not applicable.
4. IA = inaudible; and
5. Bold results indicate exceedance of criteria.
6. This is not a compliance monitoring location.

Table 9-2 – $L_{Aeq,15\text{min}}$ Generated by MPO: Attended Night Monitoring – 9 April 2025

Location	Start Date and Time	MPO Only $L_{A1,1\text{min}}$ dB ^{2,4}	Criterion dB	Wind Speed m/s Direction °	Criterion Applies ¹	Stability Class	Exceedance dB ³
N-AT1	1:36am	IA	37	2.2 / 179	Yes	D	No
N-AT2	10:50pm	IA	35	6.1 / 161	Yes	D	No
N-AT3	11:25pm	IA	40	5.2 / 158	Yes	D	No
N-AT4	11:53pm	IA	38	2.6 / 161	Yes	E	No
N-AT5	12:15am	22	37	2.7 / 159	Yes	E	No
N-AT6	1:11am	IA	35	2.5 / 163	Yes	E	No
N-AT7	10:09pm	IA	37	5.0 / 161	Yes	D	No
N-AT8	12:42am	33	NA ²	2.0 / 167	NA ⁶	D	NA ⁶

Notes:

1. As per Condition L2.3 of EPL 20850, noise emission limits do not apply during wind speeds greater than 3m/s at 10m above ground level, or stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level, or stability category G temperature inversion conditions.
2. Estimated or measured $L_{Aeq,15\text{minute}}$ attributed to MPO.
3. IA = inaudible; and
4. Bold results indicate exceedance of criteria.
5. This is not a compliance monitoring location.

Table 9-3 – $L_{Aeq, \text{period}}$ Cumulative Noise: Attended Night Monitoring – 9 April 2025

Location	Start Date and Time	Measured Mining Only $L_{Aeq, \text{period}}$ dB ^{1,2,3}	Cumulative Noise Criterion L_{Aeq} dB	Exceedance dB
N-AT1	1:36am	IA	40	No
N-AT2	10:50pm	IA	40	No
N-AT3	11:25pm	IA	40	No
N-AT4	11:53pm	IA	40	No
N-AT5	12:15am	22	40	No
N-AT6	1:11am	IA	40	No
N-AT7	10:09pm	IA	40	No
N-AT8	12:42am	33	NA ⁴	NA ⁴

Notes:

1. These are the results for MPO and all other mining sources. 15-minute measurements have been assumed to apply across the entire night period as a conservative measure and to represent "worst case" results; and

2. By definition, cumulative noise refers to two or more noise sources. If only one other source of mining is audible, or if MPO is inaudible, the measured cumulative noise defined here is 'Nil'.
3. NA in exceedance column means criterion was not applicable due to atmospheric conditions.
4. This is not a compliance monitoring location.

The purpose of the noise monitoring is to quantify and describe the existing acoustic environment around the mining operation and compare results with relevant limits as per the *MPO Noise Management Plan* (MACH Energy, 2021).

10. Blast Monitoring

There were eight (8) blast events during March 2025 (a total of 31 blasts YTD). Results for March are presented in **Table 10-1**. All blast results during this monitoring period were below the criteria stated in Schedule 3, Condition 10 of DA 92/97, Schedule 2; Condition B12 of SSD 10418; and L5 of EPL 20850.

Table 10-1 – MPO Blast Monitoring Results – March 2025

Day & Date Fired	Time Fired	BVOC Vibration (mm/s)	BVOC Overpressure (dBL)	BVO2 Vibration (mm/s)	BVO2 Overpressure (dBL)	Blast Fume Compliant
4/03/25	16:35	0.460 mm/s	107 DBL	0.590 mm/s	103 DBL	Y
7/03/25	9:51	0.210 mm/s	105 DBL	0.260 mm/s	98 DBL	Y
11/03/25	14:54	0.110 mm/s	86.6 DBL	0.160 mm/s	90.4 DBL	Y
14/03/25	11:06	0.480 mm/s	93 DBL	0.360 mm/s	94.9 DBL	Y
18/03/25	13:23	0.010 mm/s	95.7 DBL	0.040 mm/s	94.6 DBL	Y
18/03/25	13:07	0.080 mm/s	93.6 DBL	0.130 mm/s	91.5 DBL	Y
19/03/25	14:05	0.340 mm/s	91.1 DBL	0.330 mm/s	90.9 DBL	Y
21/03/25	09:56	0.540 mm/s	91.7 DBL	0.280 mm/s	101 DBL	Y
26/03/25	15:10	0.500 mm/s	99.4 DBL	0.480 mm/s	99.9 DBL	Y
28/03/25	11:11	1.260 mm/s	109 DBL	0.260 mm/s	105 DBL	Y

END OF REPORT