

**Mount Pleasant Operation**  
**Monthly Environmental Monitoring Report**

**June 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**

<b>Name of Operation</b>	Mount Pleasant Operation
<b>Name of Licensee</b>	MACH Energy Australia Pty Ltd
<b>Environmental Protection Licence</b>	20850
<b>Project Approval</b>	DA 92/97 and SSD 10418
<b>Reporting Period Start Date</b>	1 June 2025
<b>Reporting Period End Date</b>	30 June 2025
<b>Date All Data Received</b>	16 July 2025

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

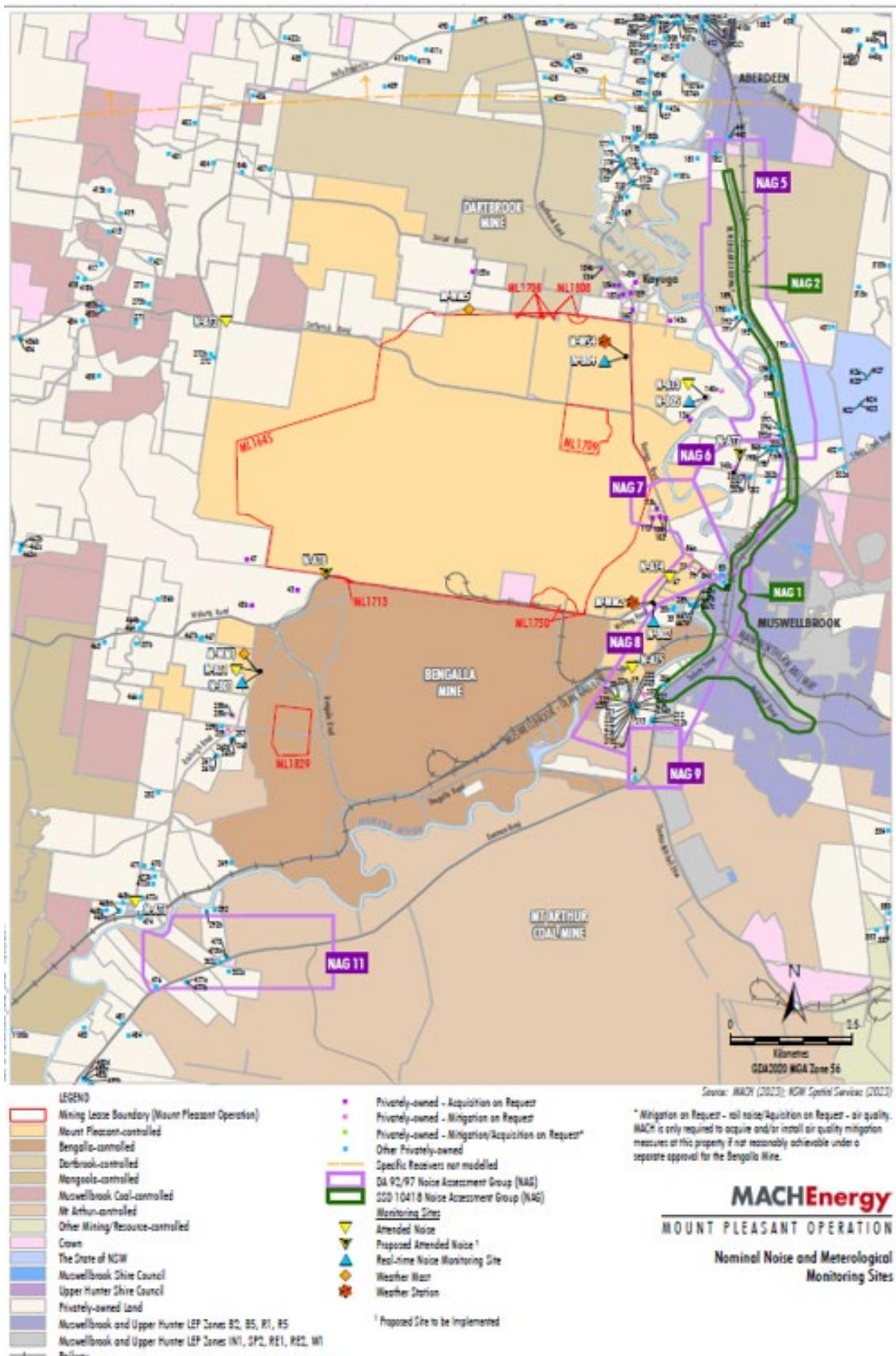
The MPO EPL 20850 specifically requires the monitoring of:

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

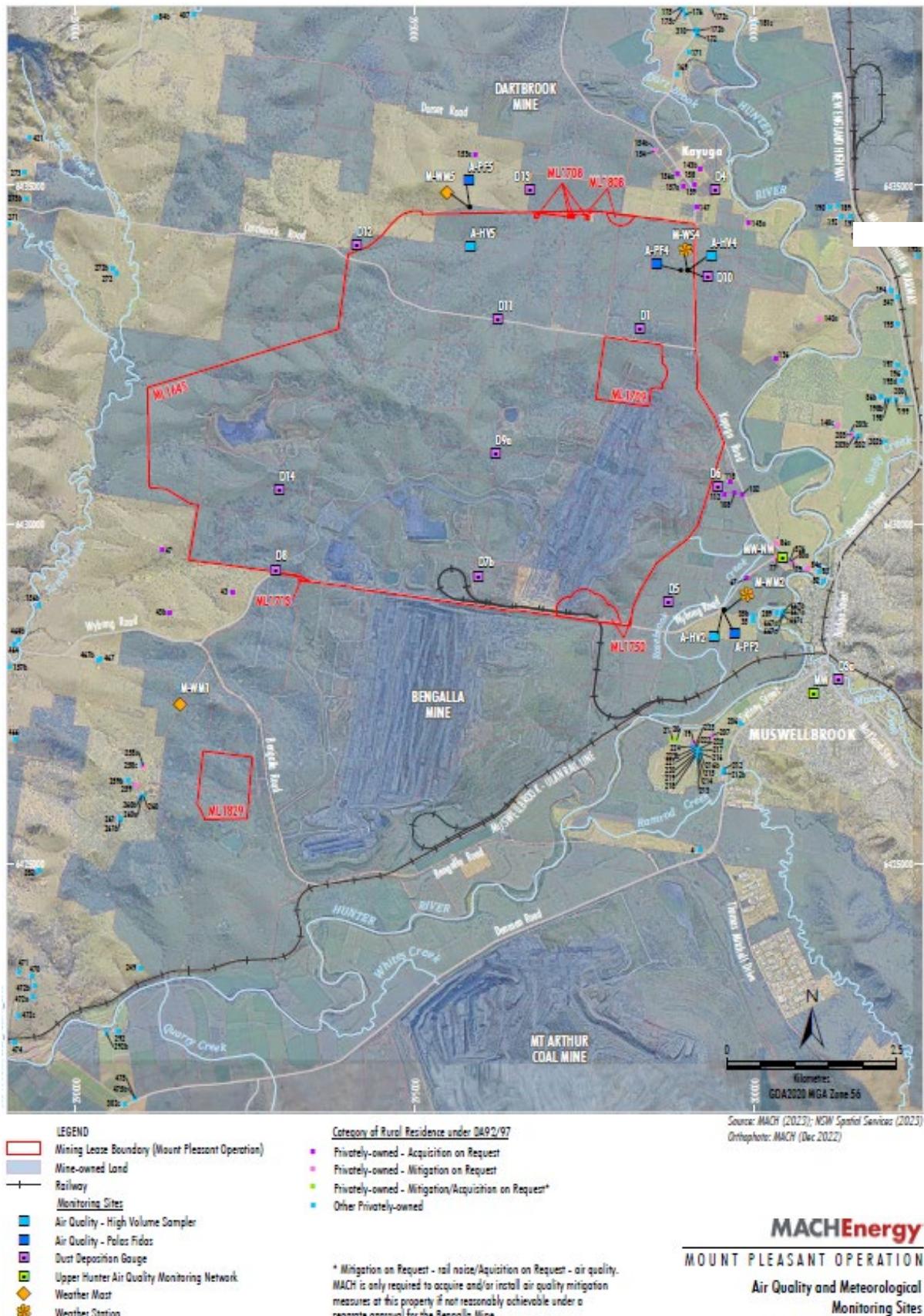
Monitoring of sites not required by the EPL are conducted in accordance with *MPO Environmental Monitoring Program (EMP)*, Project Approval (DA 92/97) and Development Consent (SSD 10418).

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**

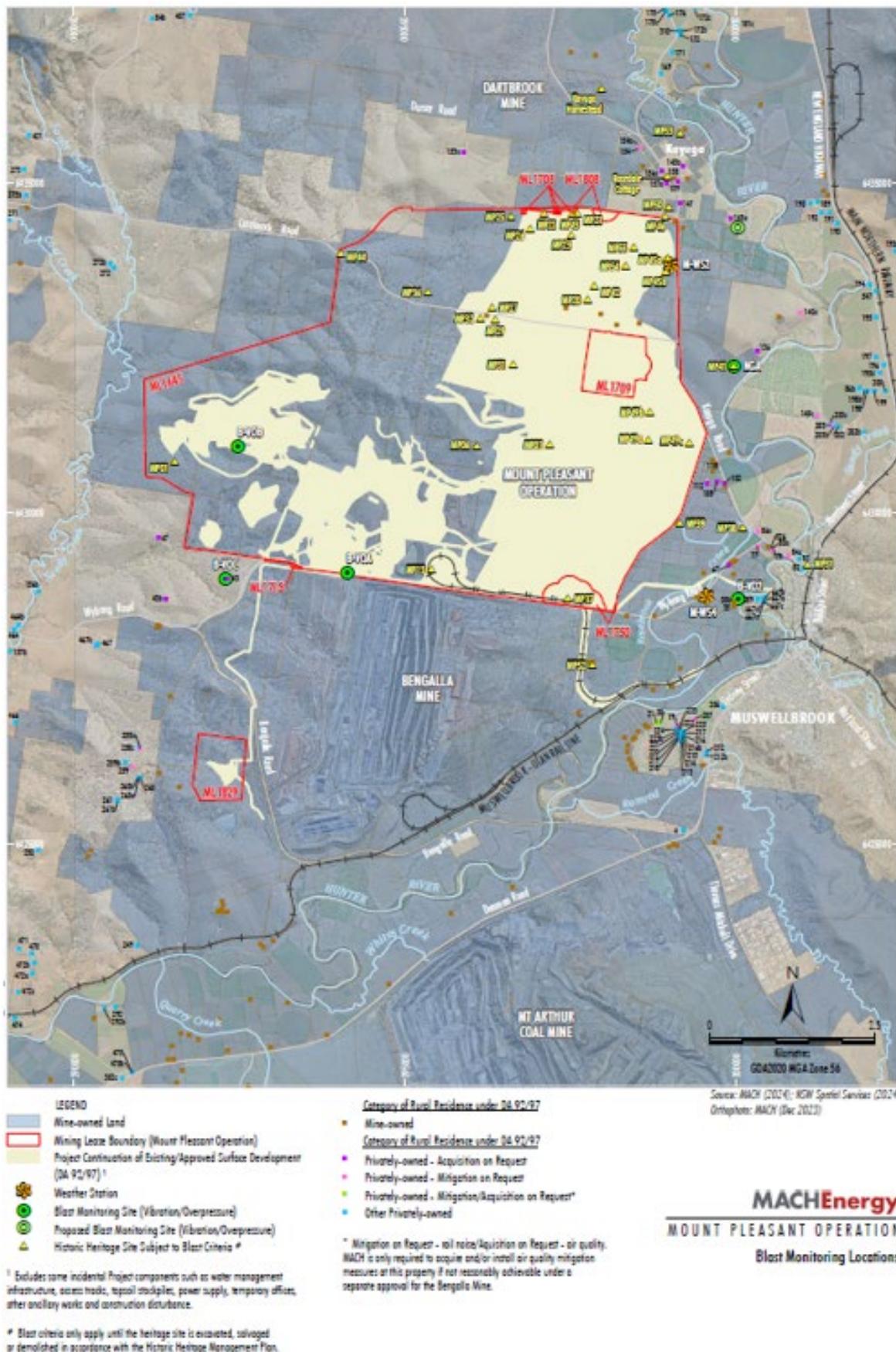
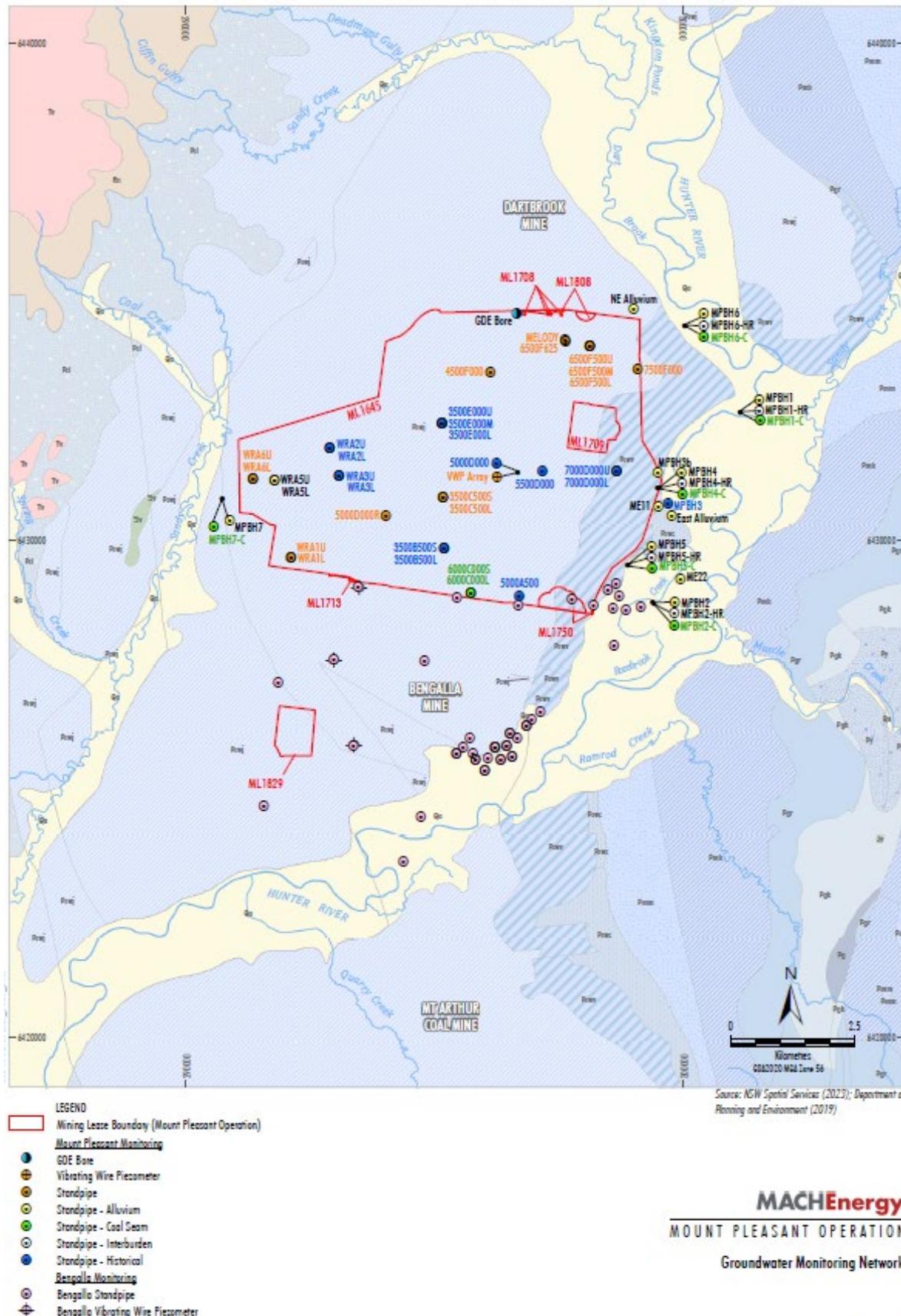
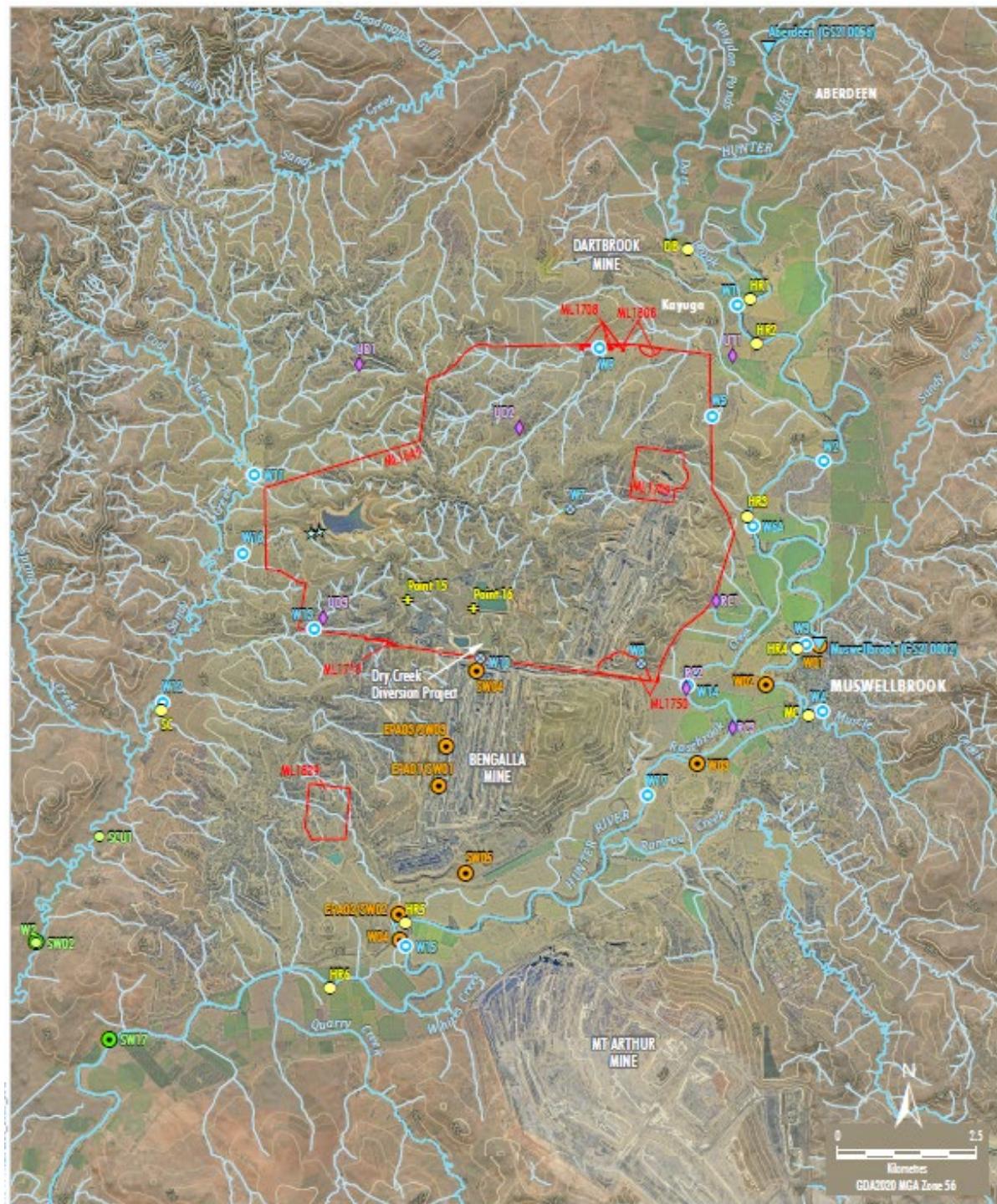


Figure 2-3 – MPO Blast Monitoring Locations

# MACHEnergy



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



#### LEGEND

- Mining Lease Boundary (Mount Pleasant Operation)
- Contour (20 m Interval)
- DPI Water Gauging Station
- Mount Pleasant Monitoring
- 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)

- Mangoola Monitoring**
- Surface Water Monitoring Site
- Stream Health Monitoring Site
- Bengalla Monitoring**
- Surface Water Monitoring Site

**MACHEnergy**  
MOUNT PLEASANT OPERATION  
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 continuously<sup>1</sup> 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 (PM<sub>10</sub> and PM<sub>2.5</sub>)), 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 June 2025 (the monitoring period). An additional monitor (E-BAM) was relocated to M-WS4 to provide additional capture for air quality. Additional meteorological data was collected at M-WS4.

Throughout June 2025, there was 20.2mm and 20.0mm 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, PM<sub>10</sub>, and PM<sub>2.5</sub>. 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.

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<sup>1</sup> 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 25 June 2025 sample collection was undertaken on 25 June 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 June 2025 have been provided as an indication of performance between July 2024 – June 2025 and represents 12 month 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 – June 2025**

Location	YTD Insoluble Solids (g/m <sup>2</sup> .month)	Insoluble Solids Annual Rolling Average (g/m <sup>2</sup> .month)
D1	3.7	2.9
D3	1.5	1.3
D4	1.0	1.0
D5a	1.8	2.1
D6	1.8	2.0
D7b	8.4	<b>7.4</b>
D8	5.5	<b>4.7</b>
D9a	4.8	3.8
D10	1.1	1.1
D11	5.8	<b>4.3</b>
D12	1.8	1.3
D13	2.7	2.0
D14	4.6	3.9
<b>Criterion</b>	-	<b>4.0</b>

Notes:

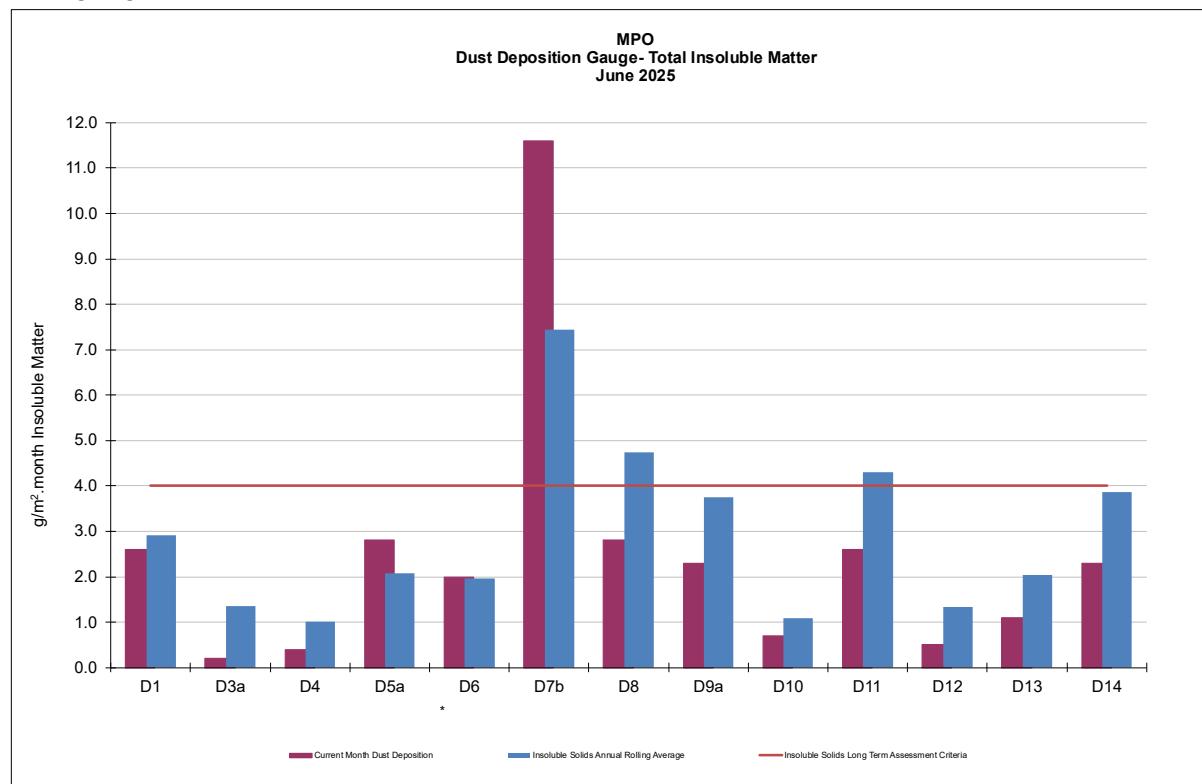
Results in **bold** indicate an elevated measurement of adopted assessment criteria.

\* 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 June sampling event noted that all thirteen gauges contained insects, two had bird droppings and one had vegetation. Annual average dust deposition results were below the annual average criterion of 4 g/m<sup>2</sup>.month at all sites except D7b (7.4 g/m<sup>2</sup>), D8 (4.7 g/m<sup>2</sup>) and D11 (4.3 g/m<sup>2</sup>).

**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 – June 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  $\mu\text{g}/\text{m}^3$ .

## 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 June 2025 is provided as an indication of performance between July 2024 – June 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 – June 2025**

Run Date	Assessment Criterion	TSP $\mu\text{g}/\text{m}^3$		
		HVAS A-PF2	HVAS A-PF5	HVAS M-WS4
05/06/2025	-	12.9	12.3	15.6
11/06/2025		95.5	2	6.5
17/06/2025		60.8	7.4	11.1
23/06/2025	-	33.8	17.8	28.4
29/06/2025	-	37.4	14	46
*Monthly Mean	-	48.1	47	21.5
<b>Annual Rolling Average</b>	90	48	46	36

Notes:

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

## 5.3 Discussion

For the reporting period, the annual rolling average TSP data at all sites was below the annual average criterion of 90  $\mu\text{g}/\text{m}^3$ .

## 6. Real Time Air Quality Monitoring

Continuous particulate matter less than 10  $\mu\text{m}$  ( $\text{PM}_{10}$ ) and particulate matter less than 2.5  $\mu\text{m}$  ( $\text{PM}_{2.5}$ ) monitoring was conducted by three Palas Fidas units (one utilised for management only) at MPO during June 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  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  12-month rolling averages to June 25 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 PM<sub>10</sub> Results – 24 Hour Rolling Average

In accordance with the DA 92/97 and SSD 10418 limit of 50 µg/m<sup>3</sup> for the 24-hour daily average, there were no elevated readings in June 2025. Real time PM<sub>10</sub> 24 hour daily average results for June 2025 are presented in **Table 6-1**.

**Table 6-1: MPO Palas Fidas PM<sub>10</sub> Data – June 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/m <sup>3</sup> )
	24-hour Average Result				
01/06/2025	12.35		15.37	10.2	50
02/06/2025	11.18		12.57	10.4	50
03/06/2025	12.36		14.64	10.7	50
04/06/2025	12.58	12.81	10.32	10.8	50
05/06/2025	8.95	9.95	9.76	9.3	50
06/06/2025	10.39	8.41	7.70	8.1	50
07/06/2025	13.09	7.80	6.34	15.4	50
08/06/2025	13.80	9.02	8.28	17.8	50
09/06/2025	12.76	7.06	6.47	15.2	50
10/06/2025	17.78	5.85	5.55	20.5	50
11/06/2025	21.95	5.46	5.16	16.8	50
12/06/2025	12.90	6.21	5.24	11.8	50
13/06/2025	12.96	8.09	6.71	15.2	50
14/06/2025	14.51	12.10	11.96	14.1	50
15/06/2025	12.77	10.97	12.08	12.1	50
16/06/2025	12.97	8.29	6.74	12.5	50
17/06/2025	13.60	8.11	6.98	13.2	50
18/06/2025	15.39	10.22	10.66	18	50
19/06/2025	17.85	18.07	22.88	18.8	50
20/06/2025	18.19	23.60	22.83	20.6	50
21/06/2025	17.92	22.62	23.13	20.8	50
22/06/2025	16.33	16.80	20.54	12.8	50
23/06/2025	14.36	10.18	7.65	13.2	50
24/06/2025	10.90	10.42	8.16	8.6	50
25/06/2025	12.36	9.30	8.75	25.7	50
26/06/2025	10.79	8.09	7.55	9.8	50
27/06/2025	9.14	8.57	9.13	11	50
28/06/2025	10.96	9.49	9.83	8.1	50
29/06/2025	9.70	9.86	10.04	12.4	50
30/06/2025	13.27	14.85	12.20	12.6	50

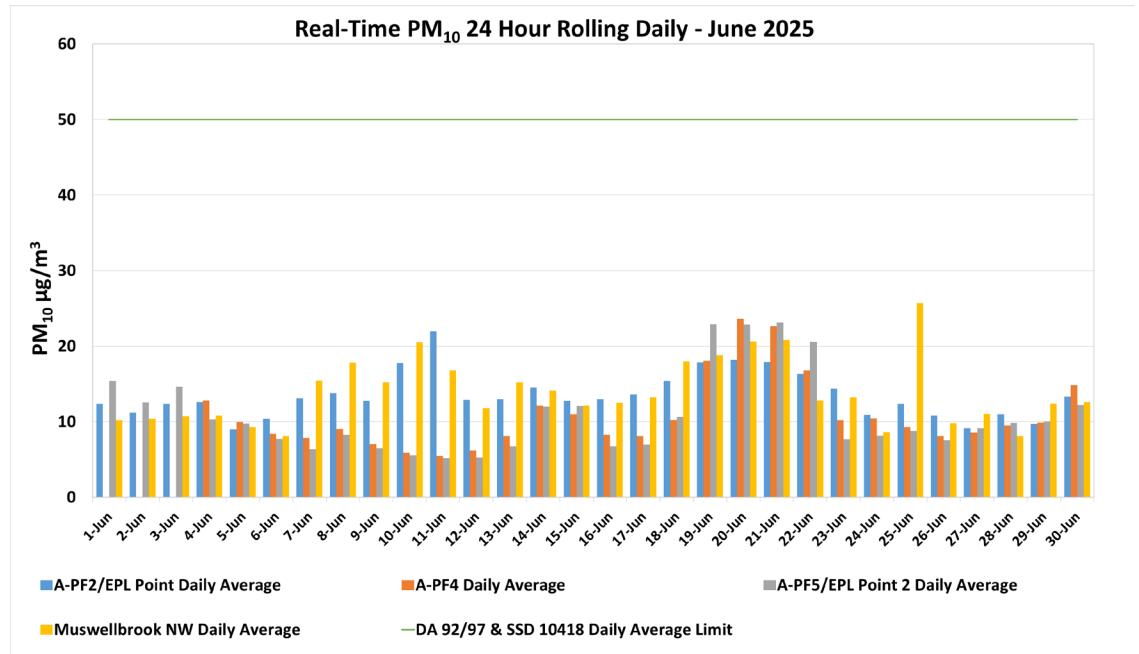
Results in **bold** indicate elevated readings during adverse weather conditions.

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

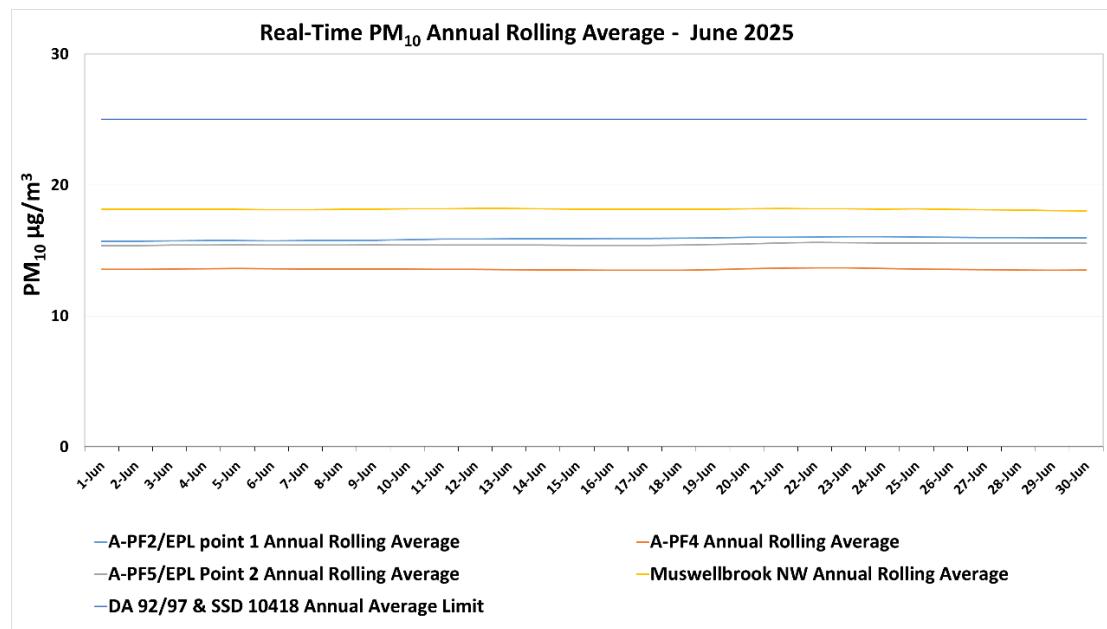
**Figure 6-1** below shows the results of real-time PM<sub>10</sub> 24 hour daily average results at MPO air quality monitoring sites June 2025.

## 6.2 PM<sub>10</sub> Results – Annual Rolling Average

There was no exceedance of the PM<sub>10</sub> annual rolling average reported at MPO during June 2025. Real time PM<sub>10</sub> annual rolling averages during the reporting period are presented in **Figure 6-2** below.



**Figure 6-1: Real-time PM<sub>10</sub> 24 Daily Average Results for June 2025.**



**Figure 6-2: Real-time PM<sub>10</sub> Annual Rolling Average Results for June 2025.**

## 6.3 PM<sub>2.5</sub> Results – 24 Hour Daily Average

There was no exceedance of the PM<sub>2.5</sub> annual rolling average reported at MPO during June 2025. Real time PM<sub>2.5</sub> 24 hour rolling average results for June 2025 are presented in **Table 6-2**.

**Table 6-2: MPO Palas Fidas PM<sub>2.5</sub> Data – June 2025**

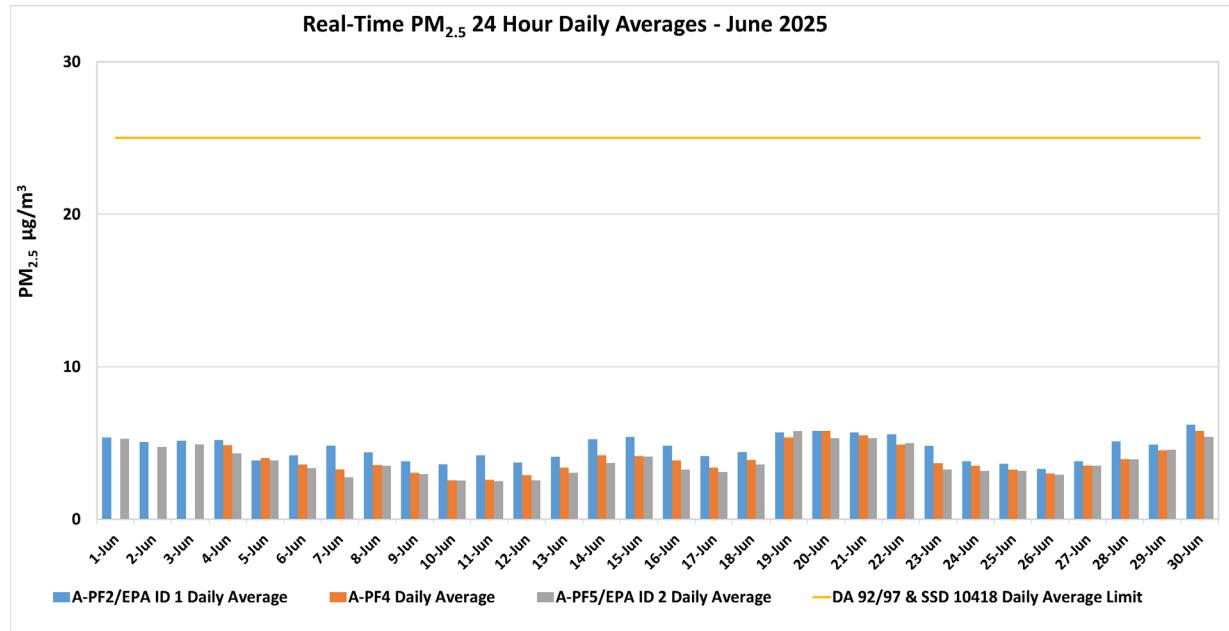
Date	A-PF2/EPA ID 1	A-PF4	A-PF5/EPA ID 2	A-PF2, A-PF4, A-PF5 24 Hour Average Limit (µg/m <sup>3</sup> )
	24-hour Average Result			
01/06/2025	5.36		5.28	25
02/06/2025	5.04		4.75	25
03/06/2025	5.14		4.92	25
04/06/2025	5.20	4.87	4.32	25
05/06/2025	3.85	3.99	3.85	25
06/06/2025	4.18	3.59	3.37	25
07/06/2025	4.84	3.28	2.75	25
08/06/2025	4.39	3.57	3.49	25
09/06/2025	3.82	3.04	2.95	25
10/06/2025	3.61	2.56	2.52	25
11/06/2025	4.20	2.59	2.51	25
12/06/2025	3.71	2.89	2.56	25
13/06/2025	4.09	3.39	3.04	25
14/06/2025	5.24	4.19	3.69	25
15/06/2025	5.38	4.14	4.10	25
16/06/2025	4.84	3.86	3.25	25
17/06/2025	4.14	3.39	3.10	25
18/06/2025	4.42	3.88	3.59	25
19/06/2025	5.69	5.36	5.79	25
20/06/2025	5.80	5.79	5.31	25
21/06/2025	5.68	5.51	5.30	25
22/06/2025	5.58	4.89	5.01	25
23/06/2025	4.81	3.68	3.27	25
24/06/2025	3.80	3.51	3.18	25
25/06/2025	3.64	3.24	3.18	25
26/06/2025	3.31	3.00	2.92	25
27/06/2025	3.80	3.53	3.51	25
28/06/2025	5.11	3.95	3.92	25
29/06/2025	4.87	4.52	4.56	25
30/06/2025	6.18	5.81	5.39	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)

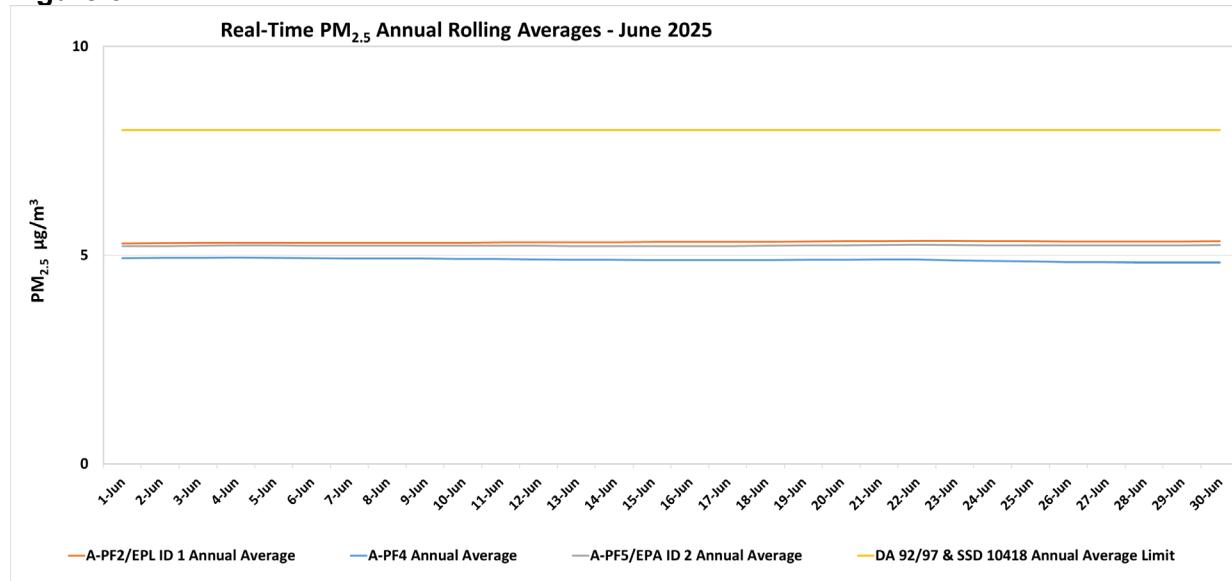
Real time PM<sub>2.5</sub> 24-hour average results for June 2025 are presented in **Figure 6-3** below.



**Figure 6-3: Real-time PM<sub>2.5</sub> 24 hour Daily Average Results for June 2025.**

## 6.4 PM<sub>2.5</sub> Results - Annual Rolling Average

There was no exceedance of the PM<sub>2.5</sub> annual rolling average reported at MPO during June 2025. Real time PM<sub>2.5</sub> annual rolling averages during the reporting period are presented in **Figure 6-4** below.



**Figure 6-4: Real-time PM<sub>2.5</sub> Annual Rolling Average Results for June 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, 2025) 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 30 June 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 – 30 June 2025**

Station	pH	Electrical Conductivity (EC) ( $\mu\text{s}/\text{cm}$ ) <sup>1</sup>	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (TSS) (mg/L)
W1	8.2	506	250	<5
W2	8.1	<b>543</b>	270	<5
W3	8.1	572	280	5.7
W4	7.9	1976	1100	<5
W5	*	*	*	*
W6A	8.3	<b>534</b>	270	<5
W9	*	*	*	*
W11	<b>8.2</b>	<b>8390</b>	4800	10
W12	<b>8.2</b>	4790	2600	<5
W13	8.4	5780	3300	6.1
W14	*	*	*	*
W15	<b>8.3</b>	<b>675</b>	310	5.1
W16	8.2	4150	2100	<5
W17	8.1	562	300	5.7

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

\*Dry or insufficient water to sample.

\*\* No access due to track conditions.

<sup>1</sup> Results have been rounded in accordance with the In-house method Q4AN(EV)-332-W12 (EC).

During 30 June 2025 monitoring event, three (3) sites were dry. Site W11, W12 and W15 were above pH trigger levels. Site W2, W6A, W11 and W15 were above electrical conductivity trigger levels.

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.

## 8. Groundwater Monitoring

No groundwater sampling was undertaken in June 2025. Next annual and quarterly groundwater sampling is scheduled for August 2025.

## 9. Noise Monitoring

Attended noise monitoring was undertaken during the night of 12<sup>th</sup> and 13<sup>th</sup> June 2025 at eight (8) monitoring locations as per the [MPO Noise Management Plan](#) (MACH Energy, 2024) 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 June 2025 against noise criteria is shown in **Table 9-1**; **Table 9-2**; and **Table 9-3**.

**Table 9-1 – L<sub>A1,1min</sub> Generated by MPO: Attended Night Monitoring – 12 and 13 June 2025**

Location	Start Date and Time	MPO Only L <sub>A1,1min</sub> dB <sup>2,4</sup>	Criterion dB	Wind Speed m/s Direction °	Criterion Applies <sup>1</sup>	Stability Class	Exceedance dB <sup>3</sup>
N-AT1	1:43am	IA	45	1.2 / 063	Yes	E	No
N-AT2	10:58pm	IA	45	1.8 / 291	Yes	D	No
N-AT3	11:36pm	28	45	2.5 / 289	Yes	E	No
N-AT4	12:04am	IA	45	1.1 / 041	Yes	D	No
N-AT5	12:25am	IA	45	1.6 / 071	Yes	D	No
N-AT6	1:20am	IA	45	0.9 / 202	Yes	E	No
N-AT7	10:16pm	37	45	2.6 / 288	Yes	E	No
N-AT8	12:51am	35	NA2	1.5 / 068	NA <sup>6</sup>	E	NA <sup>2</sup>

*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<sub>A1,1min</sub> 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 –  $L_{Aeq,15min}$  Generated by MPO: Attended Night Monitoring – 12 and 13 June 2025**

Location	Start Date and Time	MPO Only $L_{A1,1min}$ dB <sup>2,4</sup>	Criterion dB	Wind Speed m/s Direction °	Criterion Applies <sup>1</sup>	Stability Class	Exceedance dB <sup>3</sup>
N-AT1	1:43am	IA	37	1.2 / 063	Yes	E	No
N-AT2	10:58pm	IA	35	1.8 / 291	Yes	D	No
N-AT3	11:36pm	25	40	2.5 / 289	Yes	E	No
N-AT4	12:04am	IA	38	1.1 / 041	Yes	D	No
N-AT5	12:25am	IA	37	1.6 / 071	Yes	D	No
N-AT6	1:20am	IA	35	0.9 / 202	Yes	E	No
N-AT7	10:16pm	34	37	2.6 / 288	Yes	E	No
N-AT8	12:51am	30	NA <sup>2</sup>	1.5 / 068	NA <sup>6</sup>	E	NA <sup>2</sup>

*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  $L_{Aeq,15min}$  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 –  $L_{Aeq, period}$  Cumulative Noise: Attended Night Monitoring – 12 and 13 June 2025**

Location	Start Date and Time	Measured Mining Only $L_{Aeq, period}$ dB <sup>1,2,3</sup>	Cumulative Noise Criterion $L_{Aeq}$ dB	Exceedance dB
N-AT1	1:43am	IA	40	No
N-AT2	10:58pm	IA	40	No
N-AT3	11:36pm	25	40	No
N-AT4	12:04am	IA	40	No
N-AT5	12:25am	IA	40	No
N-AT6	1:20am	IA	40	No
N-AT7	10:16pm	34	40	No
N-AT8	12:51am	30	NA <sup>2</sup>	NA <sup>2</sup>

*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 eleven (11) blast events during June 2025 (a total of 51 blasts YTD). Results for June 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 – June 2025**

Day & Date Fired	Time Fired	BVOC Vibration (mm/s)	BVOC Overpressure (dBBL)	BVO2 Vibration (mm/s)	BVO2 Overpressure (dBBL)	Blast Fume Compliant
04/06/25	15:52	0.560 mm/s	93.6 DBL	0.720 mm/s	100.6 DBL	Y
06/06/2025	10:42	0.310 mm/s	91.7 DBL	0.360 mm/s	95.9 DBL	Y
11/06/2025	15:01	0.620 mm/s	97.6 DBL	0.700 mm/s	103.3 DBL	Y
12/06/2025	15:09	0.020 mm/s	79.4 DBL	0.050 mm/s	88.9 DBL	Y
16/06/2025	15:04	0.210 mm/s	88.9 DBL	0.260 mm/s	91.5 DBL	Y
18/06/2025	11:39	0.670 mm/s	94.4 DBL	0.250 mm/s	96.9 DBL	Y
20/06/2025	16:38	0.750 mm/s	100.3 DBL	0.620 mm/s	96.3 DBL	Y
21/06/2025	10:12	0.020 mm/s	92.6 DBL	0.030 mm/s	88 DBL	Y
24/06/2025	16:23	0.460 mm/s	105.3 DBL	0.260 mm/s	106.4 DBL	Y
26/06/25	15:14	0.620 mm/s	95.9 DBL	0.370 mm/s	96.8 DBL	Y
26/06/25	16:10	0.220 mm/s	78.3 DBL	0.180 mm/s	79.5 DBL	Y

## END OF REPORT