

Air Quality Bulletin

Central Queensland

June 2025

DELIVERING
FOR QUEENSLAND



Queensland
Government

Prepared by: Air Quality Monitoring
Department of the Environment, Tourism
Science and Innovation.

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November 2025

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Introduction

Air quality monitoring gathers information on the quality of the air environment. The objectives of the monitoring are to check compliance with ambient air quality guidelines, identify long-term trends in air quality, investigate local air quality concerns, and assess the effectiveness of air quality management strategies.

In Central Queensland, air quality monitoring was carried out by the Queensland Government at seven sites in the Gladstone region, two sites in Moranbah, and one site in Mackay, Emerald, Blackwater and Bluff during June 2025.

Air pollutants monitored included nitrogen dioxide, sulfur dioxide, carbon monoxide, ozone, benzene, toluene, total xylenes, formaldehyde, PM₁₀ and PM_{2.5} (particles with diameters less than 10µm and 2.5µm respectively) and visibility-reducing particles. The air pollutants monitored at Central Queensland sites are shown in Table 1. Site locations are shown in Figure 24 at the end of this bulletin.

The monitoring site in central Gladstone (Memorial Park) uses an open-path monitoring method. Pollutant measurements at this site are the average concentration over the light path running from the Gladstone Entertainment Centre to Memorial Park (see Figure 24).

The Moranbah (East) site on Utah Drive was established in March 2011 to assess the impact of coal mining operations on the community. In July 2020 a second Moranbah (West) site on Cunningham Way was commissioned to further assess mining impacts.

The Blackwater and Bluff monitoring sites were established in February 2019 and November 2020 respectively to also assess the impact of coal mining operations. The Emerald site was established in February 2020 to obtain information on particle levels in an inland community not impacted by mining activities.

Reporting protocol

Data presented in this bulletin are based on clock hours. Hourly or other averages are constrained to start and finish on a clock hour.

Air quality summary graphs

The maximum recorded level for each day is used to show the day-to-day variation in air quality. Figures 1 to 18 summarise the air quality data for the Gladstone region sites and figures 19 to 23 summarise the air quality data for the Mackay and Inland Central Queensland sites.

Air quality summary tables

Tables 4 to 17 present monthly summaries of air quality data for the preceding 12 months. These tables show the month-to-month variation in air quality. A monthly entry is given when at least three-fifths of the maximum possible number of observations during the month are available. When data is not available for the entire month, due to equipment malfunction or other reason, this is indicated by the abbreviation 'n.d.' (no data). A dash is inserted when less than three-fifths of the data are available. Where no data is recorded, the reason for the low data availability is summarised in Table 18 at the end of this bulletin.

Guidelines

Air quality measurements are compared against air quality objectives contained in the Queensland Environmental Protection (Air) Policy 2019 and the Environmental Protection (Air) Amendment Policy 2024 (in force from September 2024 or January 2025) (EPP (Air)) to assess whether pollutant levels could harm health and wellbeing. The EPP (Air) visibility objective is used to assess the impact of visibility-reducing particles on visual air quality. The relevant guidelines are shown in the air quality summary table for each pollutant.

Table 1. Air pollutants monitored at Central Queensland sites.

		Nitrogen dioxide	Sulfur dioxide	Carbon monoxide	Ozone	Benzene	Toluene	Total xylenes	Formaldehyde	PM ₁₀	PM _{2.5}	Visibility-reducing particles
Gladstone region	Targinie	✓	✓							✓	✓	✓
	Boat Creek	✓	✓							✓	✓	✓
	Clinton	✓	✓							✓	✓	✓
	Auckland Point									✓		
	Memorial Park	✓	✓		✓	✓	✓	✓	✓			
	South Gladstone	✓	✓							✓	✓	✓
	Boyne Island	✓	✓	✓						✓	✓	✓
Mackay	West Mackay									✓	✓	✓
Inland Central Queensland	Moranbah (East)									✓	✓	
	Moranbah (West)									✓	✓	
	Blackwater									✓	✓	
	Bluff									✓		
	Emerald									✓	✓	

Compliance with air quality guidelines - Gladstone region

During June, measured pollutant levels, with the exception of visibility-reducing particles, did not exceed EPP (Air) air quality objectives at the Queensland Government air monitoring sites in the Gladstone region.

On 13 June visibility fell below the EPP (Air) objective of 20km for a one hour period at the Boyne Island monitoring site due to smoke from a bushfire burning on Boyne Island.

Smoke from a large vegetation fire at Iveragh, south of Gladstone, was responsible for a one hour period of low visibility at the South Gladstone monitoring site on 23 June and a two hour period of low visibility at the Boyne Island monitoring site on 24 June.

Table 2. Number of occasions during June when measured levels exceeded EPP (Air) objectives for nitrogen dioxide, sulfur dioxide, carbon monoxide, ozone, benzene, toluene, xylenes, formaldehyde, PM₁₀, PM_{2.5} and visibility-reducing particles at the Queensland Government air monitoring sites in the Gladstone region.

Air Pollutant	Averaging period	Exceedances
Nitrogen dioxide	<i>EPP (Air)</i> Annual	0
	1-hour	0
Sulfur dioxide	<i>EPP (Air)</i> Annual	0
	24-hour	0
	1-hour	0
Carbon monoxide	<i>EPP (Air)</i> 8-hour	0
	Ozone	<i>EPP (Air)</i> 4-hour
Benzene	<i>EPP (Air)</i> Annual	0
	Toluene	<i>EPP (Air)</i> Annual
Xylenes	<i>EPP (Air)</i> Annual	0
	24-hour	0
Formaldehyde	<i>EPP (Air)</i> 24-hour	0
	PM ₁₀	<i>EPP (Air)</i> Annual
PM _{2.5}	<i>EPP (Air)</i> Annual	0
	24-hour	0
Visibility-reducing particles (refers to protecting aesthetic environment, not health and wellbeing).	<i>EPP (Air)</i> 1-hour	4

Compliance with air quality guidelines - Mackay and inland Central Queensland.

During June, measured pollutant levels, with the exception of PM₁₀, did not exceed EPP (Air) air quality objectives at the Queensland Government air monitoring sites in Mackay, Moranbah, Emerald, Blackwater and Bluff.

Over the 12-month period ending June 2025, the EPP (Air) annual average PM₁₀ objective was exceeded at the Moranbah (West) monitoring site. Monitoring indicates that a range of particle sources contributed to this exceedance, including erosion of dry ground surfaces by strong winds, local activities such as vehicle movements on unsealed roads close to the monitoring site, dust from coal mining operations and bushfire smoke events.

Table 3. Number of occasions during June when measured levels exceeded EPP (Air) objectives for PM_{2.5}, PM₁₀, and visibility-reducing particles at Queensland Government air monitoring sites in Mackay, Moranbah, Emerald, Blackwater and Bluff.

Pollutant	Averaging period	Exceedences
PM ₁₀	<i>EPP (Air)</i> Annual	1
	24-hour	0
PM _{2.5}	<i>EPP (Air)</i> Annual	0
	24-hour	0
Visibility-reducing particles (refers to protecting aesthetic environment, not health and wellbeing).	<i>EPP (Air)</i> 1-hour	0

Measured ambient concentrations - Gladstone region

Nitrogen dioxide

Figure 1. Ambient concentrations of nitrogen dioxide at Targinie, Boat Creek and Clinton sites. Daily maximum 1-hour average concentrations (ppm), June 2025.

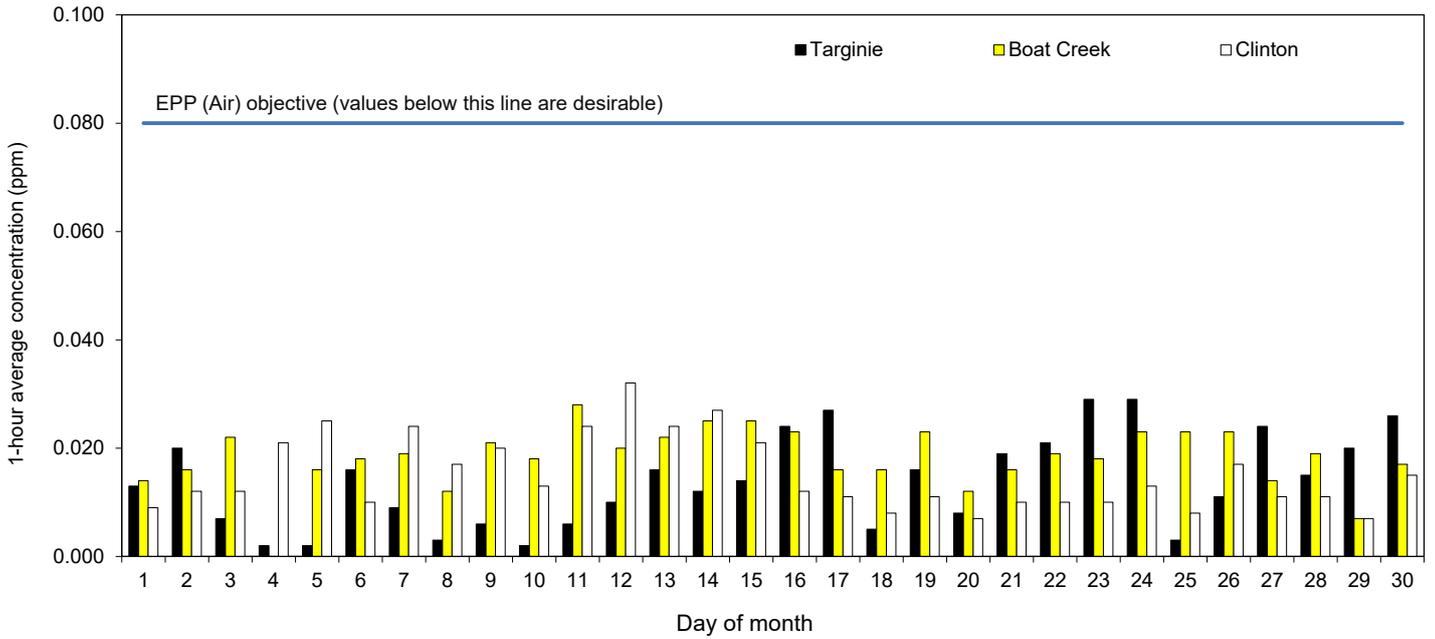


Figure 2. Ambient concentrations of nitrogen dioxide at Memorial Park, South Gladstone and Boyne Island sites. Daily maximum 1-hour average concentrations (ppm), June 2025.

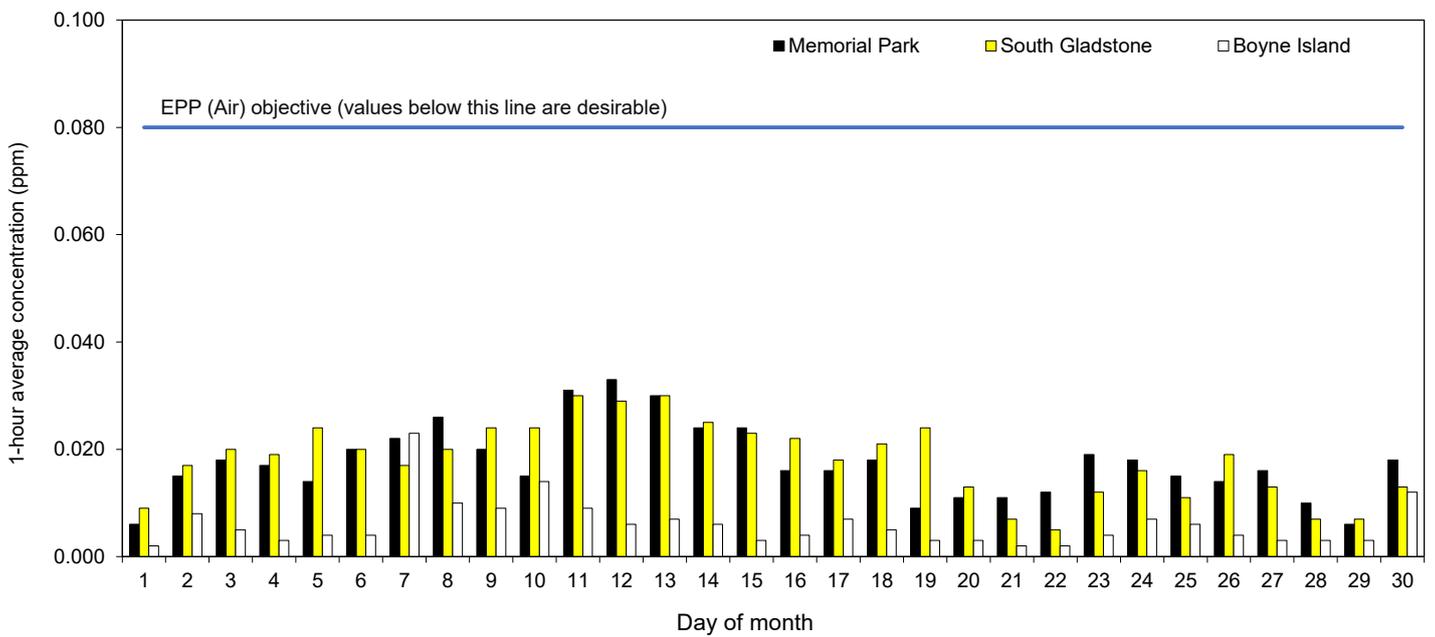


Table 4. Ambient concentrations of nitrogen dioxide. Annual average and monthly maximum 1-hour concentrations (ppm), July 2024 to June 2025.

Site		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region													
Targinie													
Annual average:	0.003												
Maximum 1-hour		0.040	0.035	0.037	0.043	0.023	0.028	0.022	0.023	0.024	0.020	0.024	0.029
% I.A.		99	81	99	99	99	99	90	100	100	99	100	100
Boat Creek													
Annual average:	0.005												
Maximum 1-hour		0.030	0.029	0.025	0.026	0.022	0.025	0.020	0.018	0.017	0.022	0.024	0.028
% I.A.		99	99	99	100	99	100	99	100	99	100	100	98
Clinton													
Annual average:	0.004												
Maximum 1-hour		0.025	0.028	0.018	0.029	0.016	0.011	0.023	0.010	0.014	0.018	0.027	0.032
% I.A.		98	99	99	99	99	100	99	99	100	99	100	99
Memorial Park													
Annual average:	0.003												
Maximum 1-hour		0.029	0.026	0.021	0.033	0.016	0.013	0.022	0.020	0.028	0.025	0.022	0.033
% I.A.		100	94	61	97	100	99	99	99	97	99	99	99
South Gladstone													
Annual average:	0.005												
Maximum 1-hour		0.028	0.025	0.031	0.031	0.019	0.021	0.029	0.024	0.016	0.023	0.021	0.030
% I.A.		99	100	99	100	100	99	99	100	100	100	100	99
Boyne Island													
Annual average:	0.001												
Maximum 1-hour		0.034	0.023	0.021	0.016	0.018	0.017	0.024	0.010	0.020	0.014	0.012	0.023
% I.A.		99	99	99	100	99	100	98	100	100	99	99	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.													
The EPP (Air) air quality objectives for nitrogen dioxide are an annual average of 0.015ppm and a 1-hour average of 0.080ppm.													

Sulfur dioxide

Figure 3. Ambient concentrations of sulfur dioxide at Targinie, Boat Creek and Clinton sites. Daily 24-hour average concentrations (ppm), June 2025.

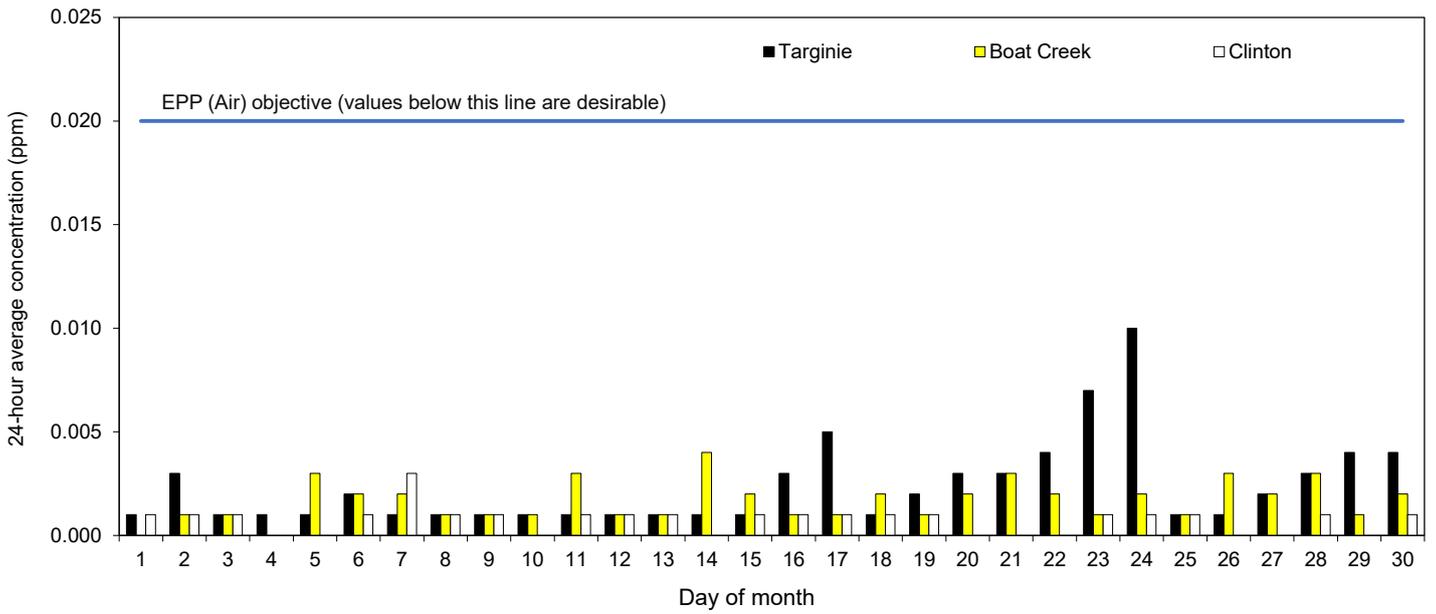


Figure 4. Ambient concentrations of sulfur dioxide at Memorial Park, South Gladstone and Boyne Island sites. Daily 24-hour average concentrations (ppm), June 2025.

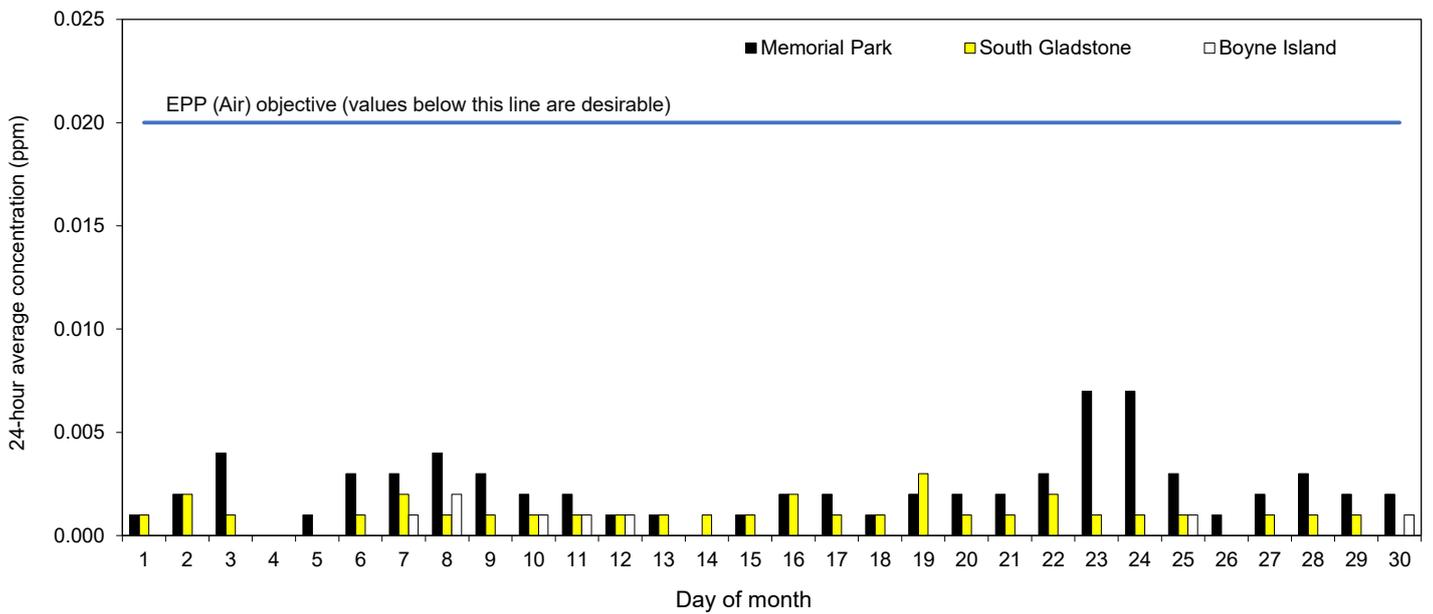


Figure 5. Ambient concentrations of sulfur dioxide at Targinie, Boat Creek and Clinton sites. Daily maximum 1-hour average concentrations (ppm), June 2025.

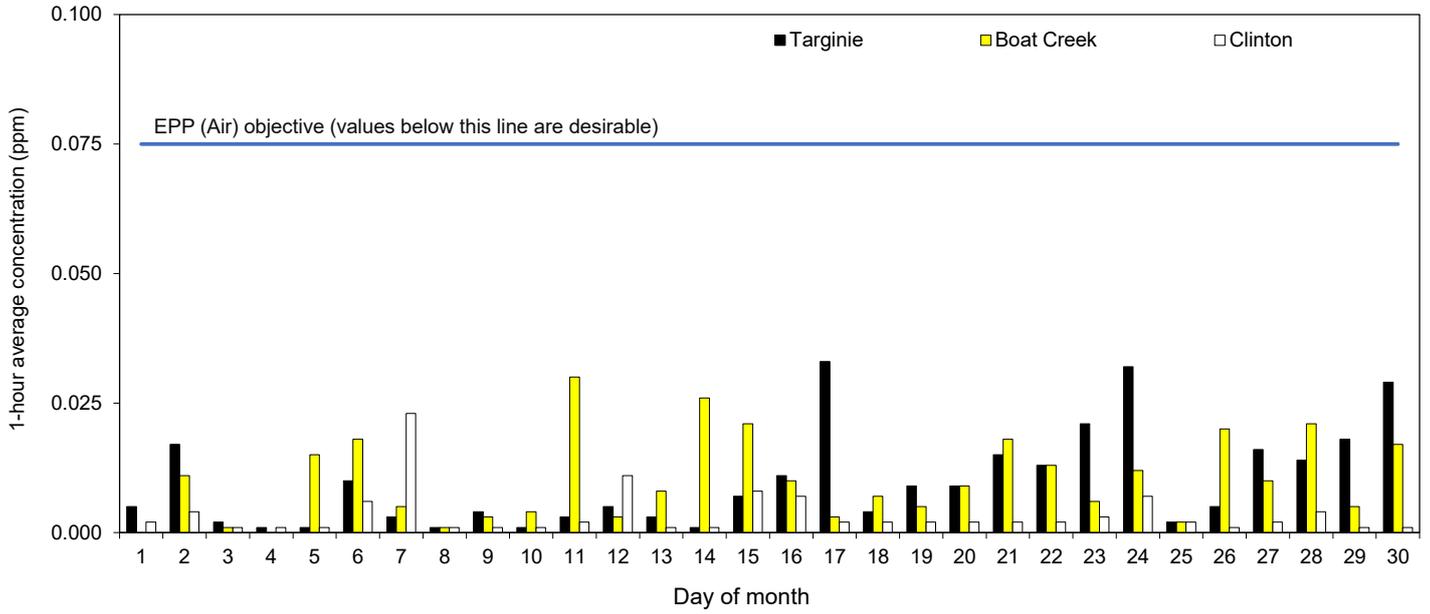


Figure 6. Ambient concentrations of sulfur dioxide at Memorial Park, South Gladstone and Boyne Island sites. Daily maximum 1-hour average concentrations (ppm), June 2025.

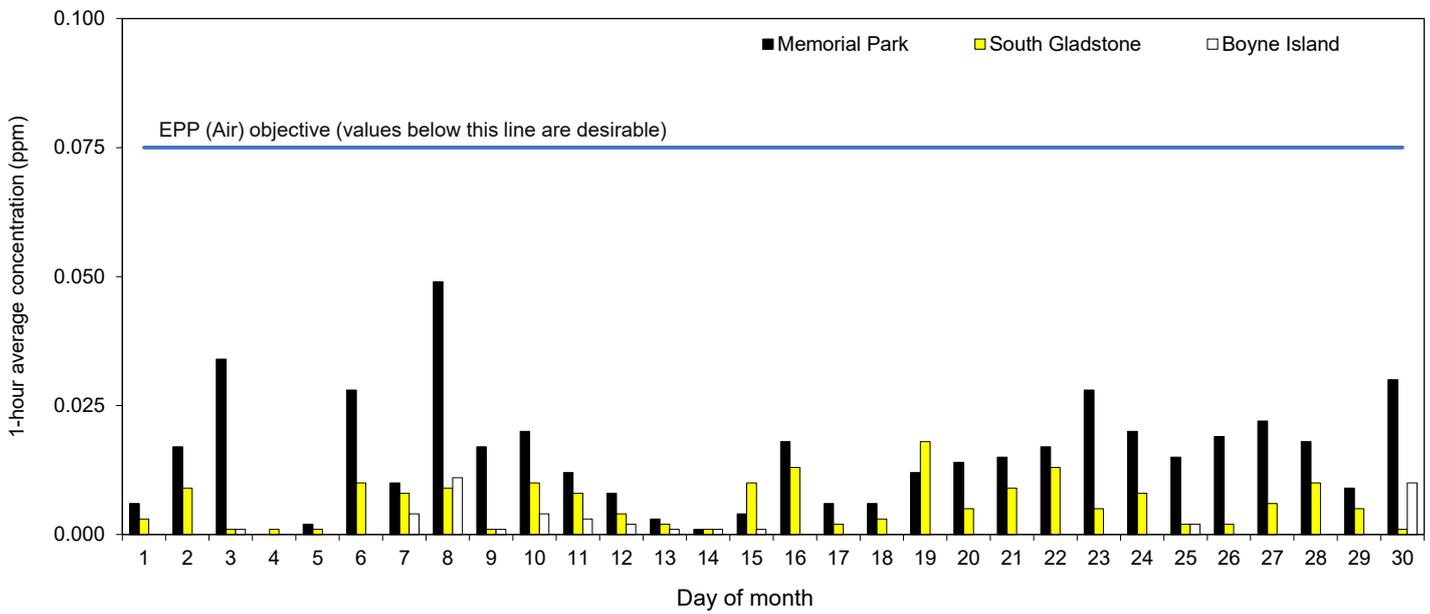


Table 5. Ambient concentrations of sulfur dioxide. Annual average and monthly maximum 24-hour and 1-hour average concentrations (ppm), July 2024 to June 2025.

Site		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region													
Targinie													
Annual average:	0.002												
Maximum 24-hour		0.005	0.004	0.004	0.005	0.004	0.003	0.006	0.006	0.007	-	0.006	0.010
Maximum 1-hour		0.022	0.028	0.020	0.024	0.024	0.015	0.024	0.023	0.021	-	0.019	0.033
% I.A.		99	89	99	100	99	60	90	100	100	53	99	99
Boat Creek													
Annual average:	0.001												
Maximum 24-hour		0.004	0.006	0.004	0.002	0.003	0.003	0.004	0.006	0.003	0.003	0.004	0.004
Maximum 1-hour		0.034	0.043	0.019	0.022	0.026	0.024	0.024	0.029	0.013	0.023	0.026	0.030
% I.A.		99	99	99	100	98	100	99	100	99	100	100	98
Clinton													
Annual average:	0.001												
Maximum 24-hour		0.004	0.003	0.002	0.003	0.001	0.002	0.002	0.001	0.002	0.002	0.002	0.003
Maximum 1-hour		0.013	0.028	0.020	0.023	0.008	0.013	0.011	0.006	0.015	0.008	0.021	0.023
% I.A.		98	99	99	99	100	100	99	99	100	99	100	99
Memorial Park													
Annual average:	0.002												
Maximum 24-hour		0.006	0.006	-	0.006	0.005	0.005	0.006	0.006	0.006	0.004	0.005	0.007
Maximum 1-hour		0.051	0.024	-	0.052	0.032	0.032	0.026	0.035	0.033	0.025	0.029	0.049
% I.A.		96	81	58	97	99	98	97	98	93	95	97	98
South Gladstone													
Annual average:	0.002												
Maximum 24-hour		0.003	0.004	0.011	0.011	0.009	0.007	0.008	0.010	0.006	0.004	0.004	0.003
Maximum 1-hour		0.033	0.032	0.070	0.052	0.047	0.036	0.035	0.058	0.024	0.022	0.029	0.018
% I.A.		96	100	99	100	100	100	99	100	100	100	100	99
Boyne Island													
Annual average:	0.001												
Maximum 24-hour		0.003	0.006	0.004	0.005	0.005	0.008	0.007	0.001	0.002	0.003	0.008	0.002
Maximum 1-hour		0.019	0.029	0.022	0.020	0.034	0.041	0.051	0.006	0.012	0.020	0.058	0.011
% I.A.		99	99	99	100	99	100	95	100	100	99	100	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.													
The EPP (Air) air quality objectives for sulfur dioxide are a 24-hour average of 0.020ppm and a 1-hour average of 0.075ppm.													

Carbon monoxide

Figure 7. Ambient concentrations of carbon monoxide at Boyne Island site. Daily maximum 8-hour average concentrations (ppm), June 2025.

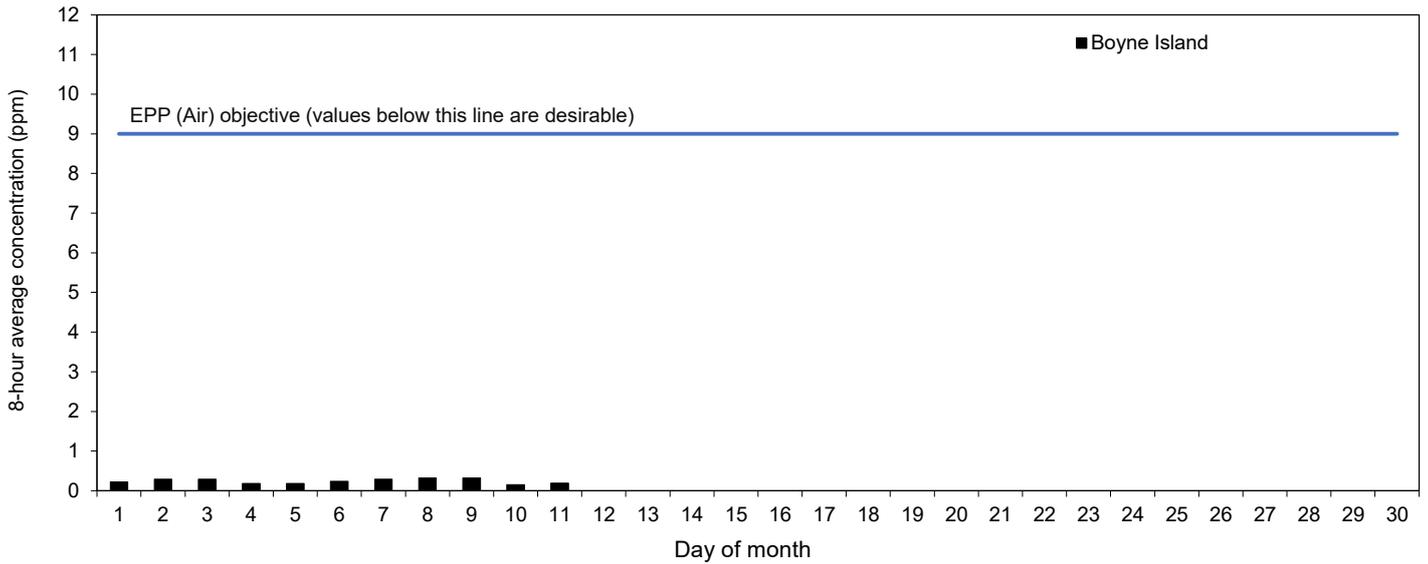


Table 6. Ambient concentrations of carbon monoxide. Monthly maximum 8-hour average concentrations (ppm), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Boyne Island												
Maximum 8-hour	0.18	0.22	0.24	0.15	0.17	0.24	0.22	0.25	0.17	0.96	0.34	-
% I.A.	99	96	99	100	96	100	98	100	100	99	100	37
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objective for carbon monoxide is an 8-hour average of 9ppm.												

Ozone (photochemical oxidants)

Figure 8. Ambient concentrations of ozone at Memorial Park site. Daily maximum 8-hour average concentrations (ppm), June 2025.

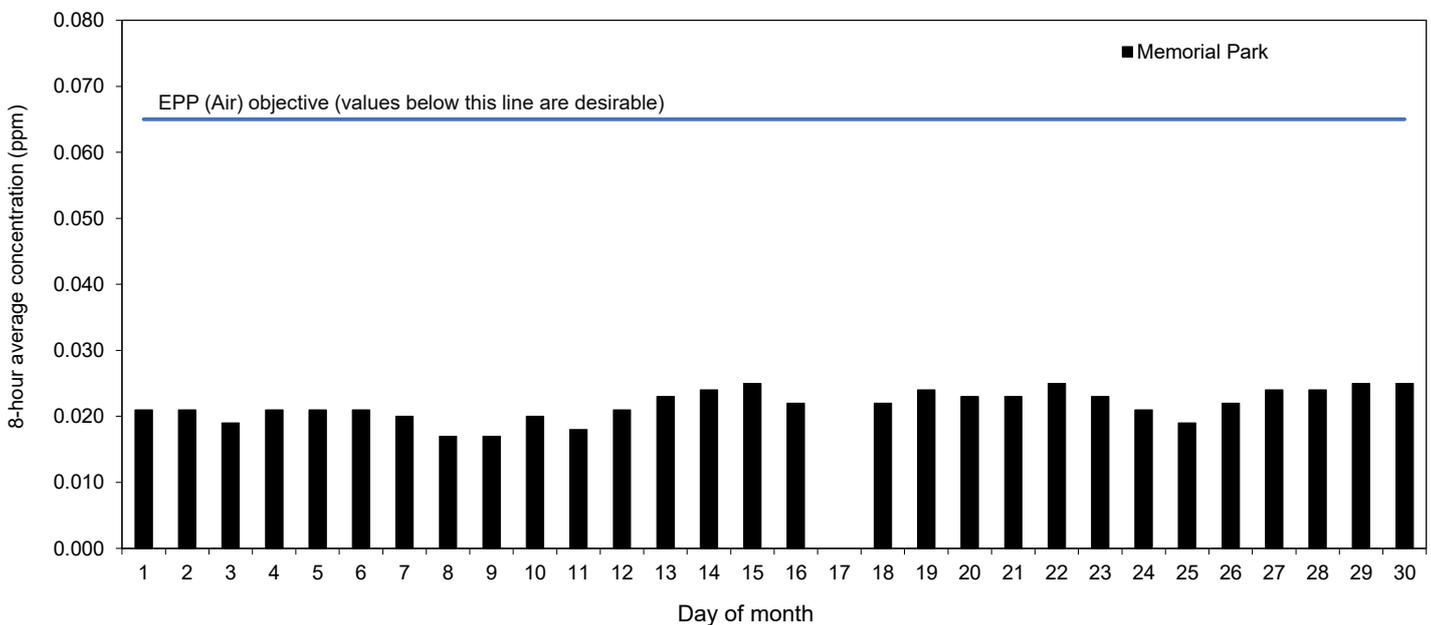


Table 7. Ambient concentrations of ozone. Monthly maximum 8-hour average concentrations (ppm), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Memorial Park												
Maximum 8-hour	0.022	0.023	-	0.040	0.024	0.033	0.030	0.037	0.027	0.030	0.023	0.025
% I.A.	94	73	56	97	100	100	99	99	95	96	99	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (AIr) air quality objective for ozone is an 8-hour average of 0.065ppm.												

Benzene

Figure 9. Ambient concentrations of benzene at Memorial Park site. Daily 24-hour average concentrations (ppb), June 2025.

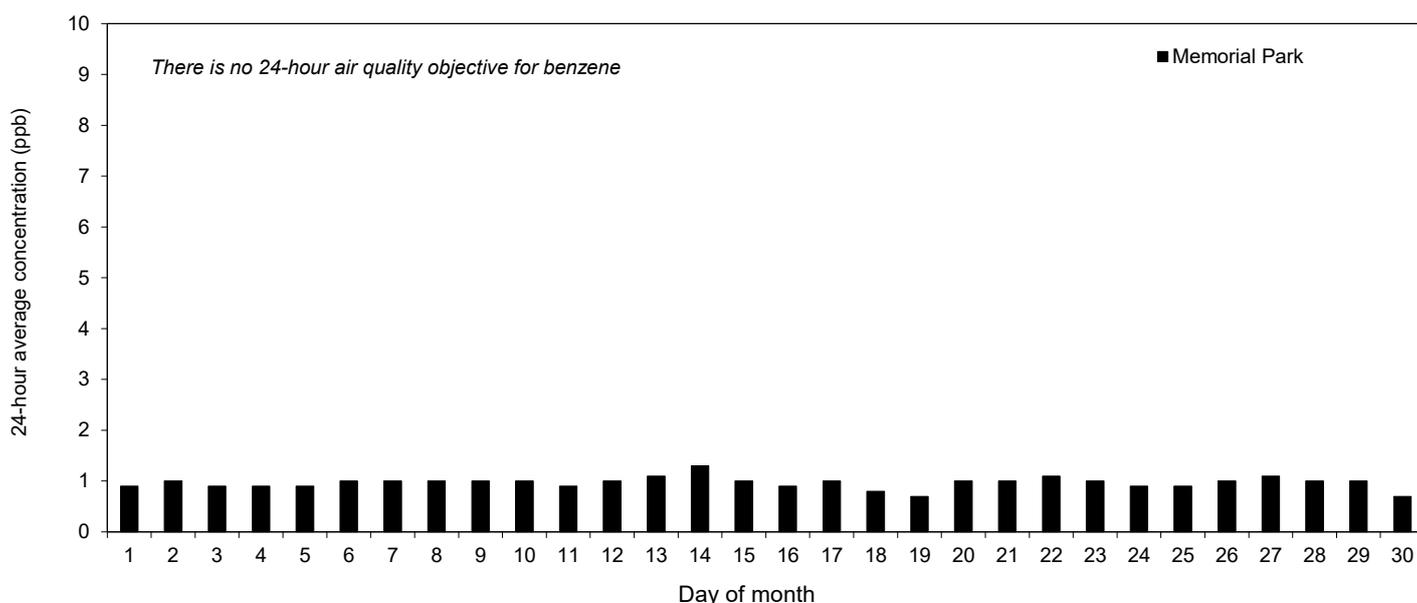


Table 8. Ambient concentrations of benzene. Annual average and monthly maximum 24-hour concentrations (ppb), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Memorial Park												
Annual average:	1.0											
Maximum 24-hour	1.3	1.3	-	1.5	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.3
% I.A.	95	81	58	97	99	97	97	98	94	94	96	97
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (AIr) air quality objective for benzene is an annual average of 0.002ppm (2ppb).												

Toluene

Figure 10. Ambient concentrations of toluene at Memorial Park site. Daily 24-hour average concentrations (ppb), June 2025.

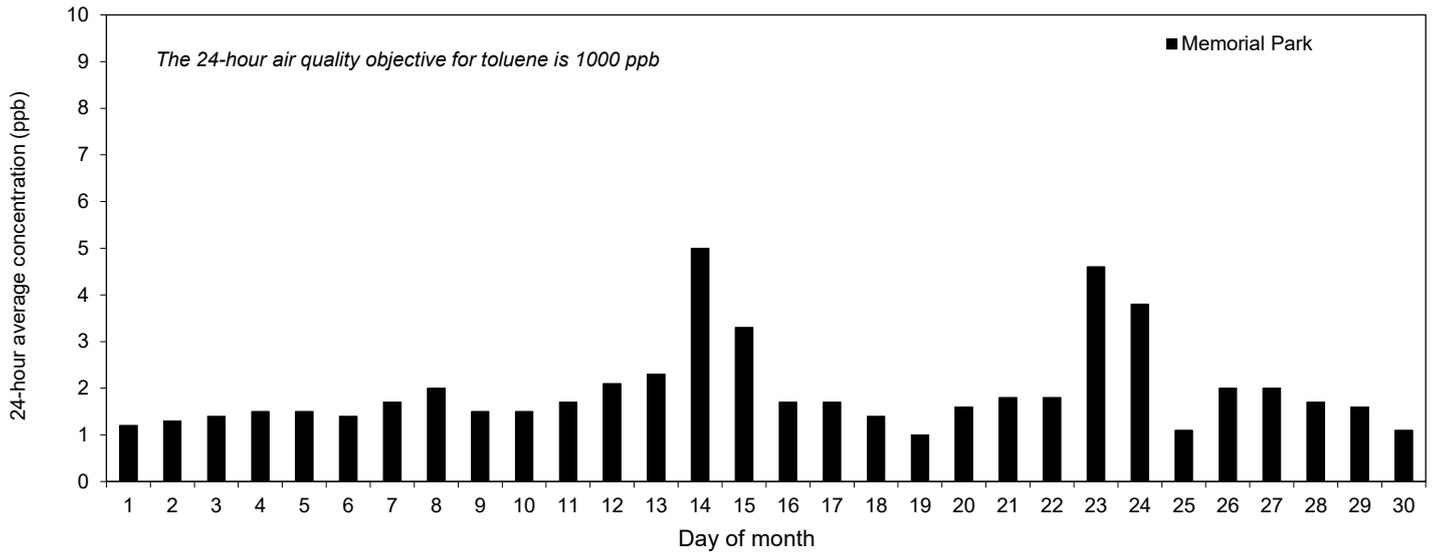


Table 9. Ambient concentrations of toluene. Annual average and monthly maximum 24-hour concentrations (ppb), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Memorial Park												
Annual average:	1.2											
Maximum 24-hour	2.0	-	-	1.7	1.9	1.8	1.4	1.5	1.5	3.4	2.3	5.0
% I.A.	84	25	18	97	99	98	100	100	100	97	98	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objectives for toluene are an annual average of 0.1ppm (100ppb) and a 24-hour average of 1ppm (1000ppb).												

Total xylenes

Figure 11. Ambient concentrations of total xylenes at Memorial Park site. Daily 24-hour average concentrations (ppb), June 2025.

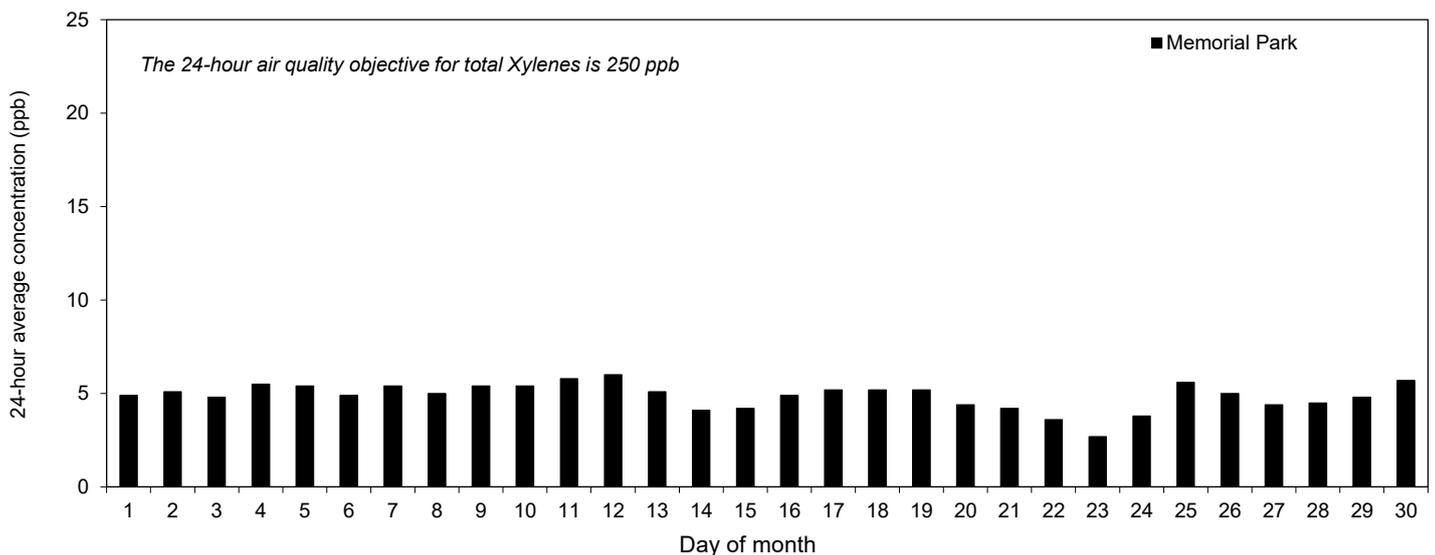


Table 10. Ambient concentrations of total xylenes. Annual average and monthly maximum 24-hour concentrations (ppb), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Memorial Park												
Annual average:	5.3											
Maximum 24-hour	6.5	6.8	-	6.6	5.7	5.9	6.1	6.2	6.2	6.0	5.9	6.0
% I.A.	94	79	57	97	99	98	98	99	95	98	98	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objectives for total xylenes are an annual average of 0.2 ppm (200 ppb) and a 24-hour average of 0.25 ppm (250 ppb).												

Formaldehyde

Figure 12. Ambient concentrations of formaldehyde at Memorial Park site. Daily 24-hour average concentrations (ppb), June 2025.

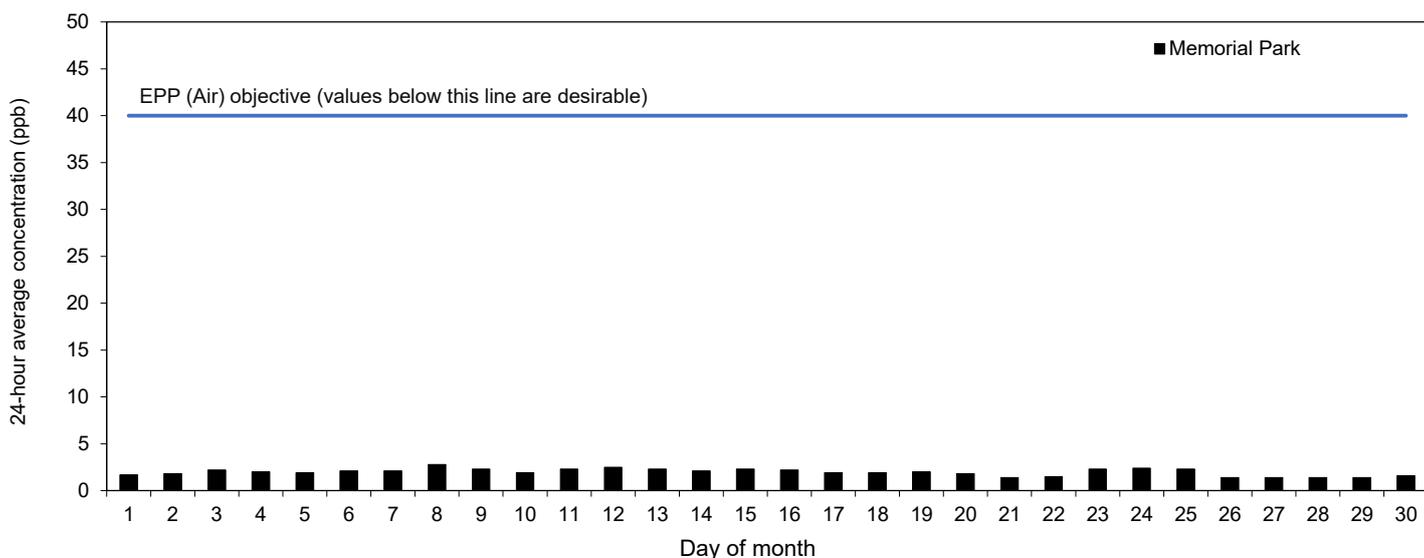


Table 11. Ambient concentrations of formaldehyde. Monthly maximum 24-hour concentrations (ppb), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Memorial Park												
Maximum 24-hour	2.6	2.7	-	2.0	2.2	2.7	3.0	2.3	2.6	3.6	2.6	2.8
% I.A.	94	90	59	96	98	96	96	97	91	92	95	97
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objective for formaldehyde is a 24-hour average of 0.04ppm (40ppb).												

PM₁₀

Figure 13. Ambient concentrations of PM₁₀ at Targinie, Boat Creek and Clinton sites. Daily 24-hour average concentrations (µg/m³), June 2025.

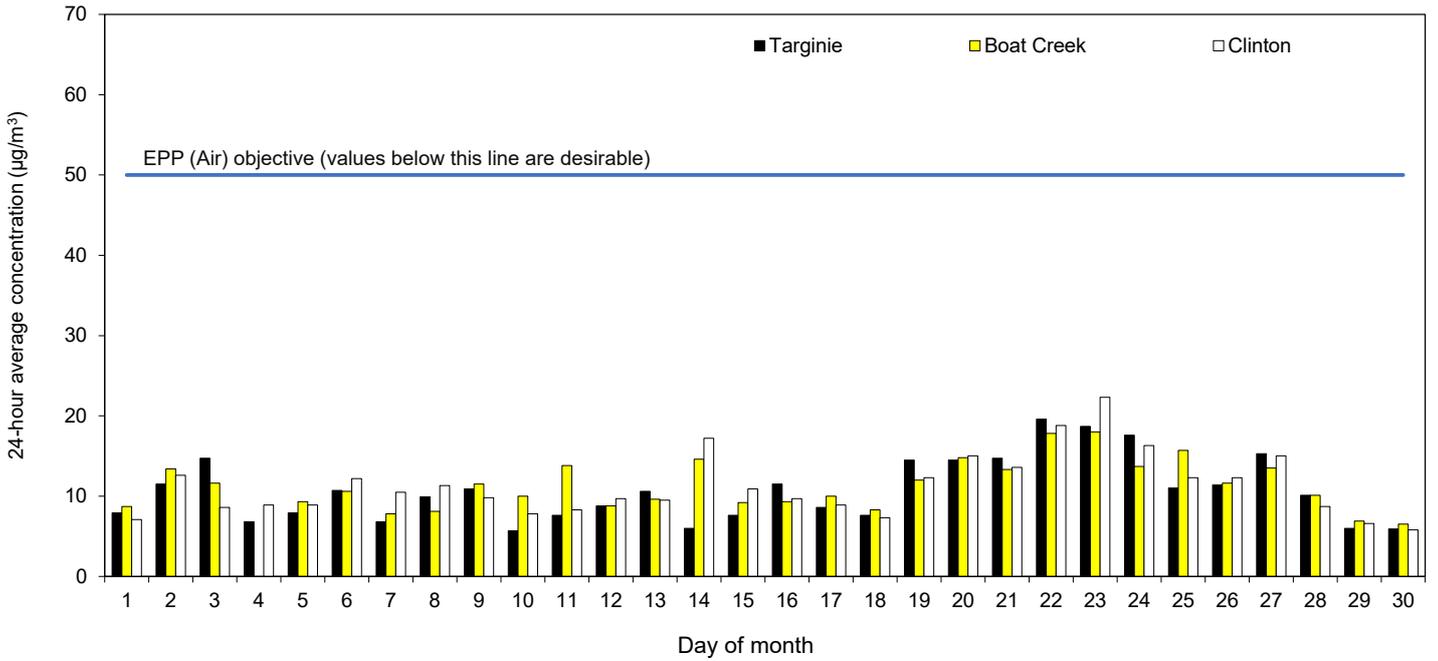


Figure 14. Ambient concentrations of PM₁₀ at Auckland Point, South Gladstone and Boyne Island sites. Daily 24-hour average concentrations (µg/m³), June 2025.

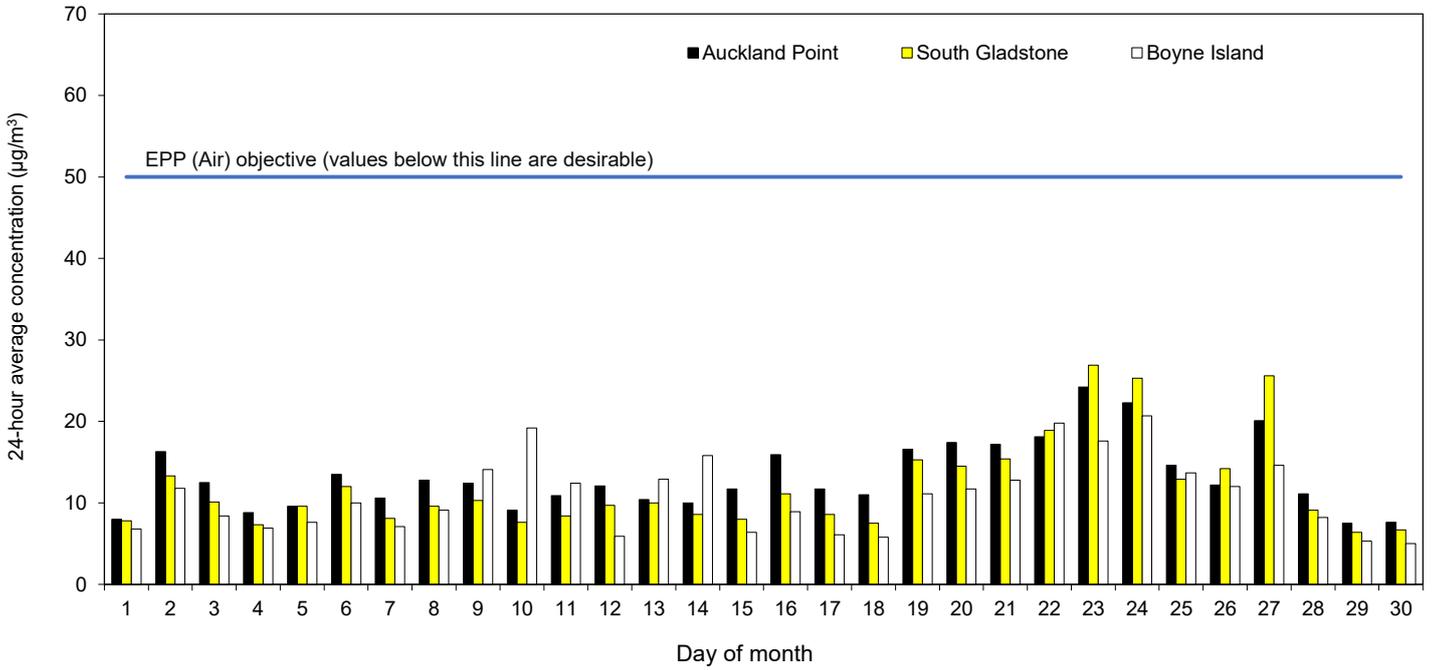


Table 12. Ambient concentrations of PM₁₀. Annual average and monthly maximum 24-hour concentrations (µg/m³), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Targinie												
Annual average:	13.9											
Maximum 24-hour	18.9	22.4	-	28.7	19.1	30.6	26.1	31.1	20.3	25.8	20.8	19.6
% I.A.	100	85	18	100	90	100	99	100	100	99	100	100
Boat Creek												
Annual average:	15.2											
Maximum 24-hour	23.4	25.6	33.0	29.8	21.4	32.6	28.1	29.0	21.6	39.4	24.7	18.0
% I.A.	99	99	99	89	90	100	99	100	93	100	100	98
Clinton												
Annual average:	14.4											
Maximum 24-hour	18.1	28.5	43.5	30.3	20.0	27.7	23.3	24.3	17.9	48.7	21.3	22.3
% I.A.	99	100	100	100	100	100	100	99	100	99	100	99
Auckland Point												
Annual average:	-											
Maximum 24-hour	30.6	33.4	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-	24.1	24.2
% I.A.	99	99	7	0	0	0	0	0	0	2	74	100
South Gladstone												
Annual average:	16.4											
Maximum 24-hour	19.9	35.4	51.5	37.1	27.4	30.9	39.1	43.3	29.8	92.2	32.8	26.9
% I.A.	99	100	99	100	100	100	100	100	100	100	100	99
Boyne Island												
Annual average:	13.8											
Maximum 24-hour	16.3	31.6	32.4	27.9	19.3	27.6	24.8	25.1	16.8	73.8	18.8	20.7
% I.A.	99	99	99	100	99	100	98	100	100	99	100	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objectives for PM ₁₀ are an annual average of 25µg/m ³ and a 24-hour average of 50µg/m ³ .												

PM_{2.5}

Figure 15. Ambient concentrations of PM_{2.5} at Targinie, Boat Creek and Clinton sites. Daily 24-hour average concentrations ($\mu\text{g}/\text{m}^3$), June 2025.

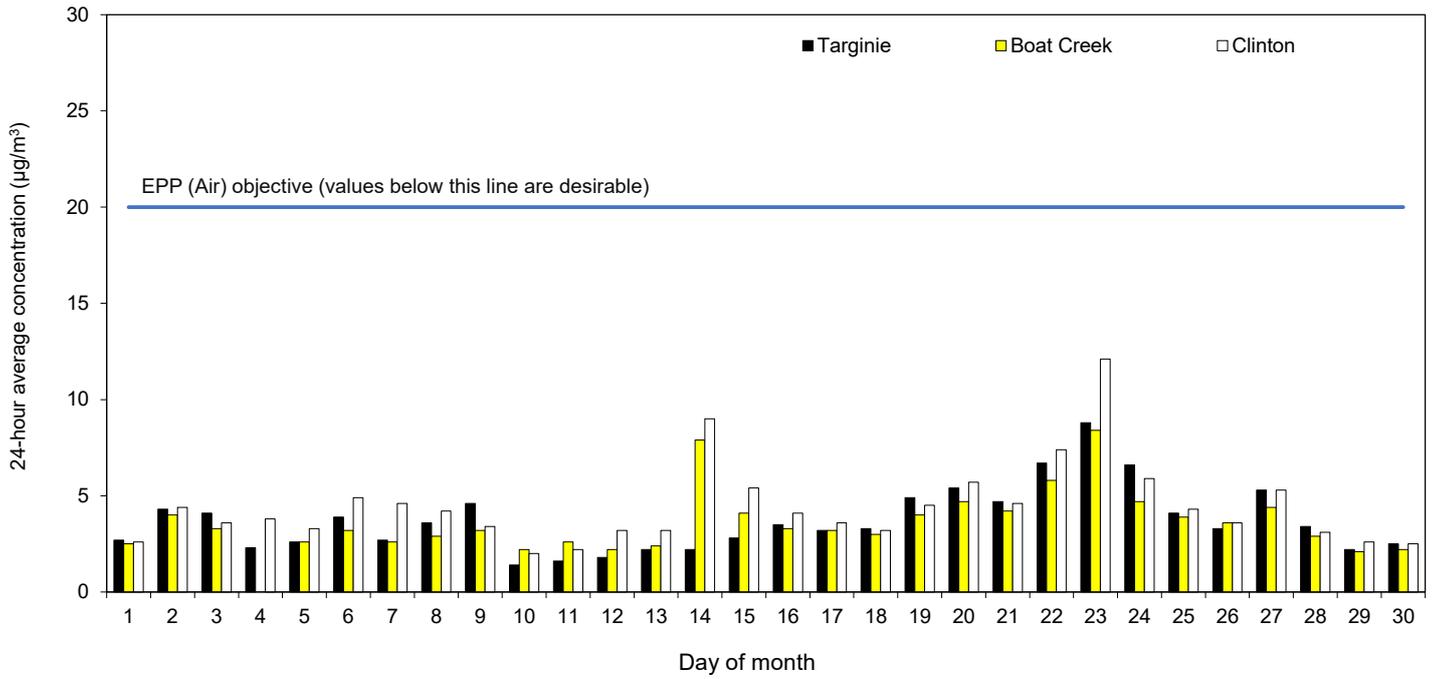


Figure 16. Ambient concentrations of PM_{2.5} at South Gladstone and Boyne Island sites. Daily 24-hour average concentrations ($\mu\text{g}/\text{m}^3$), June 2025.

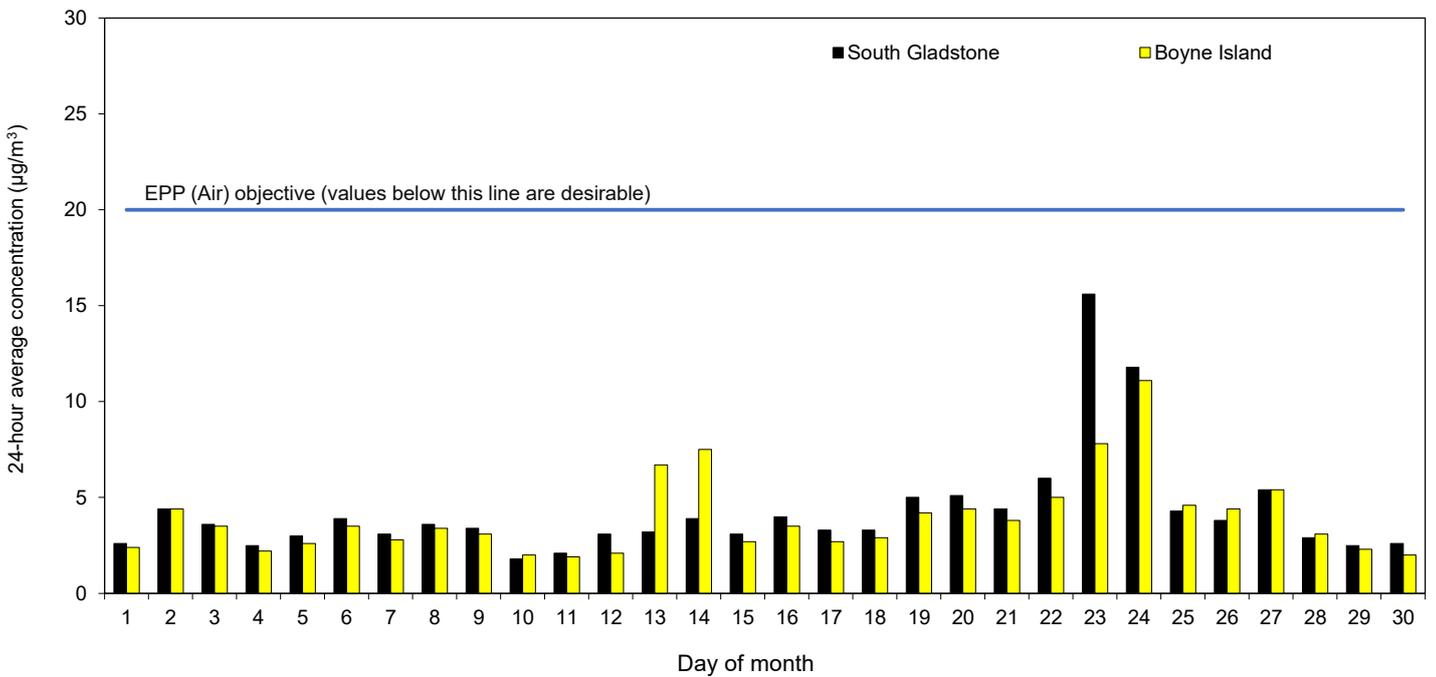


Table 13. Ambient concentrations of PM_{2.5}. Annual average and monthly maximum 24-hour concentrations (µg/m³), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Targinie												
Annual average:	5.2											
Maximum 24-hour	6.8	14.5	-	12.2	9.3	10.6	8.9	10.1	7.1	18.7	9.0	8.8
% I.A.	100	85	18	100	90	100	99	100	100	99	100	100
Boat Creek												
Annual average:	5.2											
Maximum 24-hour	10.6	12.2	13.0	10.2	8.6	9.6	9.1	9.7	7.2	32.5	8.5	8.4
% I.A.	99	99	99	89	90	100	99	100	93	100	100	98
Clinton												
Annual average:	5.4											
Maximum 24-hour	6.4	17.0	17.5	10.6	9.4	8.8	7.8	8.3	5.8	40.0	10.7	12.1
% I.A.	99	100	100	100	100	100	100	99	100	99	100	99
South Gladstone												
Annual average:	5.5											
Maximum 24-hour	7.1	14.2	14.0	10.6	9.5	9.1	8.1	9.3	6.7	65.0	10.4	15.6
% I.A.	99	100	99	100	100	100	100	100	100	100	100	99
Boyne Island												
Annual average:	5.1											
Maximum 24-hour	6.3	13.5	12.0	9.9	7.2	8.5	7.7	8.1	5.6	65.9	9.9	11.1
% I.A.	99	99	99	100	99	100	98	100	100	99	100	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objectives for PM _{2.5} are an annual average of 7µg/m ³ and a 24-hour average of 20µg/m ³ .												

Visibility-reducing particles

Figure 17. Ambient concentrations of visibility-reducing particle levels at Targinie, Boat Creek and Clinton sites. Daily maximum 1-hour average light scattering coefficient (B_{sp}) values (Mm^{-1}), June 2025.

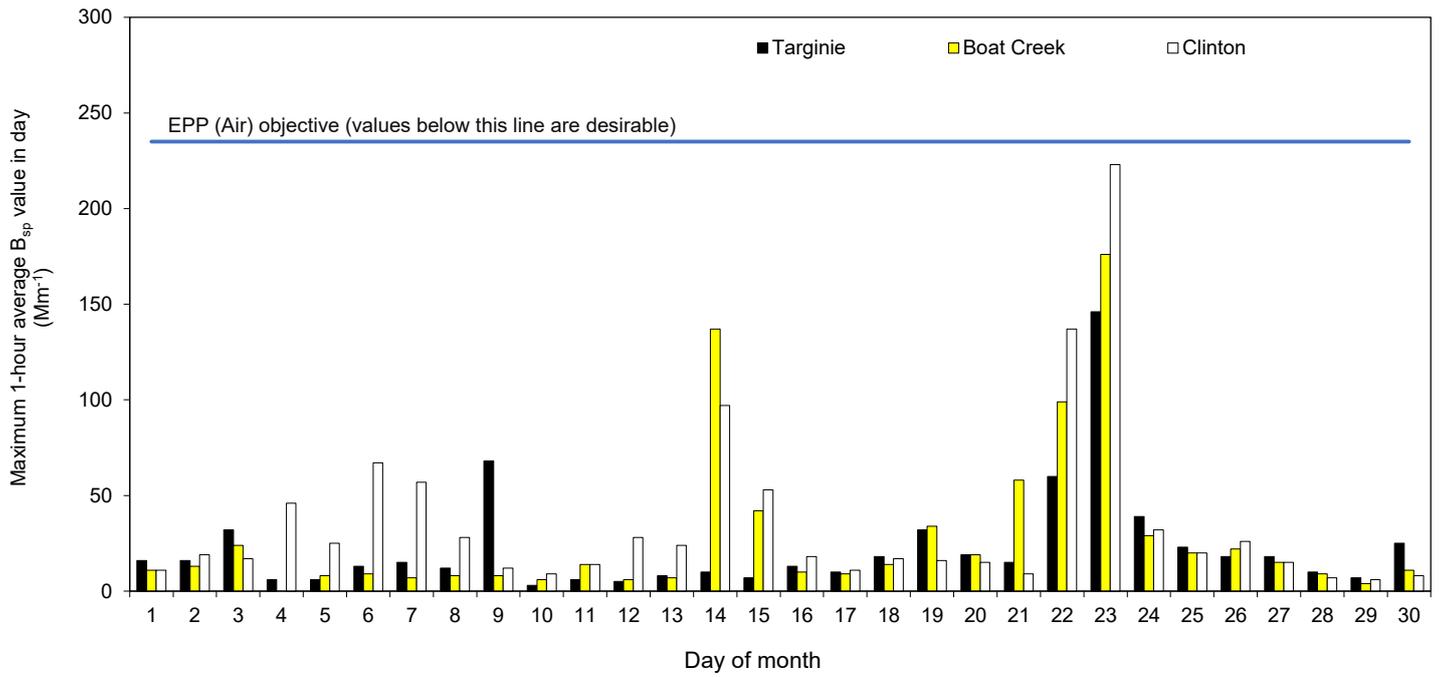


Figure 18. Ambient concentrations of visibility-reducing particle levels at South Gladstone and Boyne Island sites. Daily maximum 1-hour average light scattering coefficient (B_{sp}) values (Mm^{-1}), June 2025.

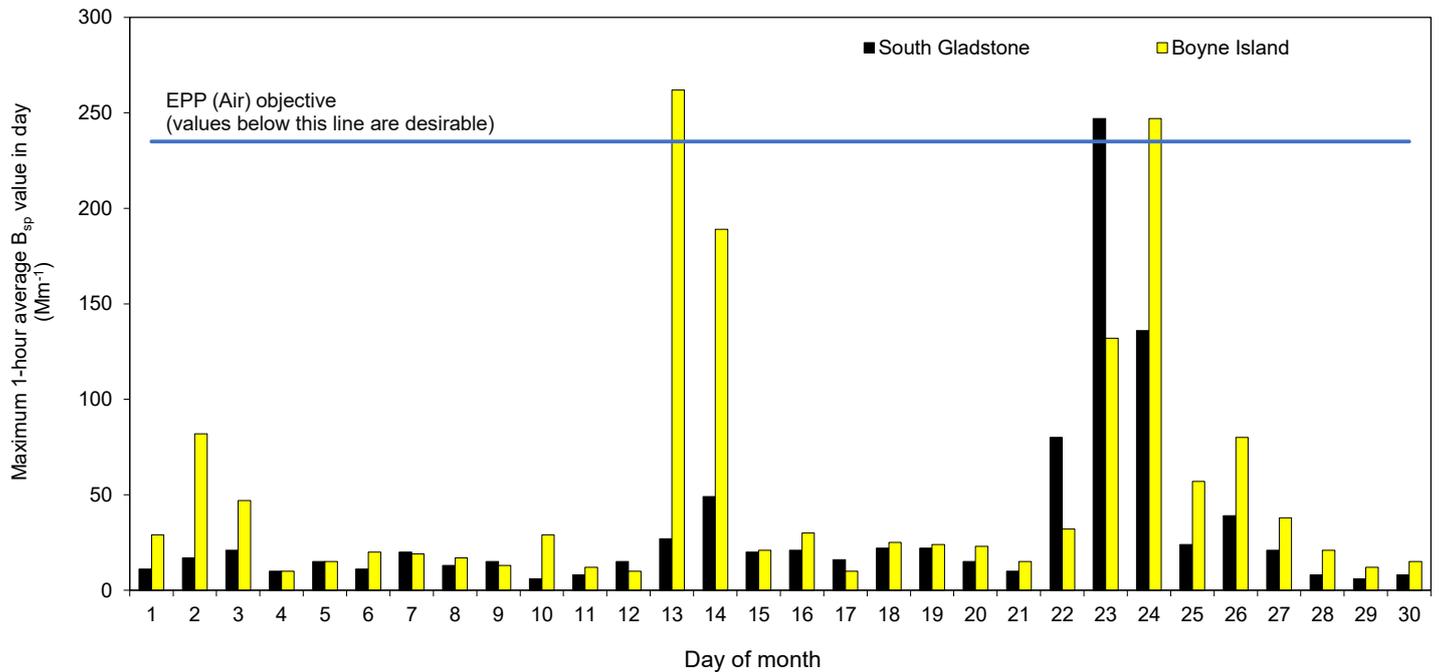


Table 14. Ambient visibility-reducing particle levels. Monthly maximum 1-hour light scattering coefficient (B_{sp}) values (Mm^{-1}), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Gladstone region												
Targinie												
Maximum 1-hour	183	297	167	83	39	92	38	33	n.d.	n.d.	-	146
% I.A.	99	90	99	100	99	100	100	62	0	0	37	100
Boat Creek												
Maximum 1-hour	139	109	100	78	75	74	36	30	34	416	68	176
% I.A.	99	99	99	100	99	100	99	100	99	100	100	98
Clinton												
Maximum 1-hour	90	423	97	66	77	54	54	24	36	302	73	223
% I.A.	98	99	99	100	100	100	99	99	100	99	100	99
South Gladstone												
Maximum 1-hour	43	174	160	45	68	74	53	36	33	959	76	247
% I.A.	99	100	99	100	100	100	99	100	100	100	100	99
Boyne Island												
Maximum 1-hour	67	326	95	42	40	65	48	79	37	907	154	262
% I.A.	98	99	99	100	99	100	98	100	100	99	100	99
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objective for visibility-reducing particles is 20km visibility. This equates to light scattering coefficient values of $235Mm^{-1}$ or less.												

Measured ambient concentrations - Mackay, Moranbah, Emerald, Blackwater and Bluff

PM₁₀

Figure 19. Ambient concentrations of PM₁₀ at West Mackay, Moranbah (East) and Moranbah (West) sites. Daily 24-hour average concentrations ($\mu g/m^3$), June 2025.

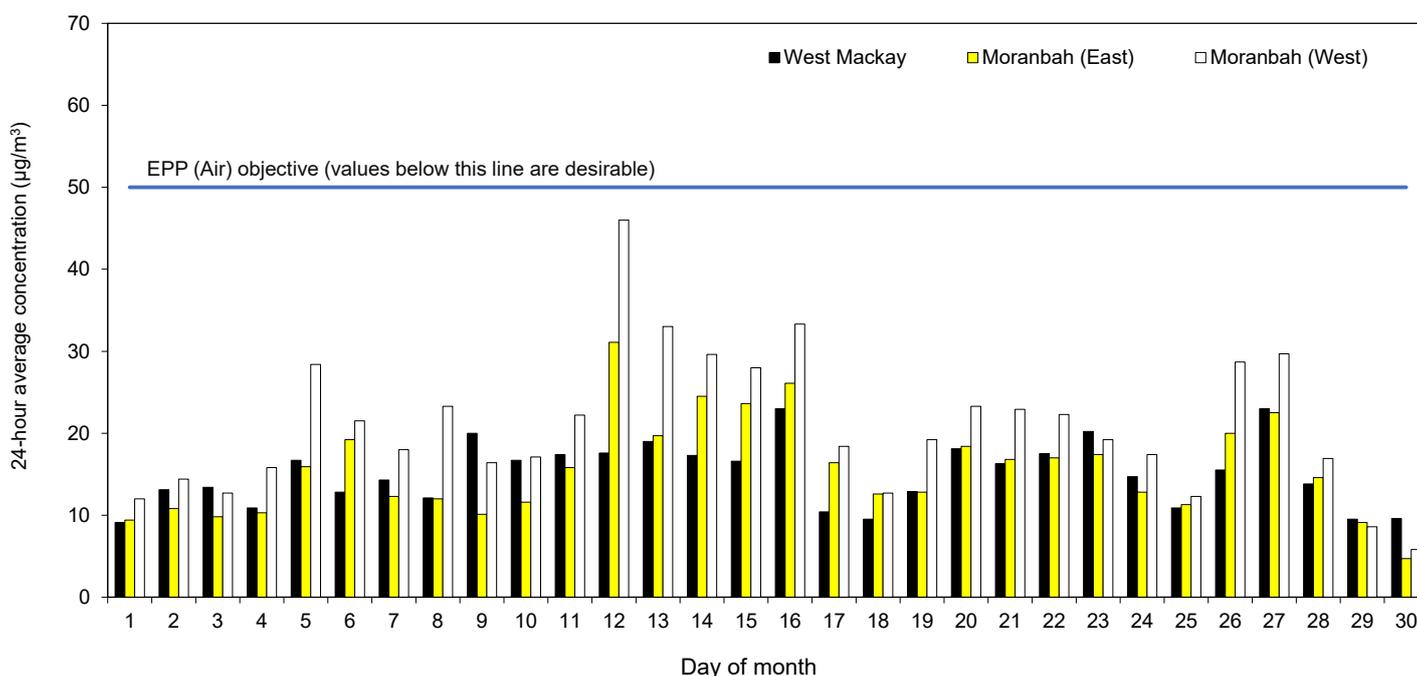


Figure 20. Ambient concentrations of PM₁₀ at Emerald, Blackwater and Bluff sites. Daily 24-hour average concentrations (µg/m³), June 2025.

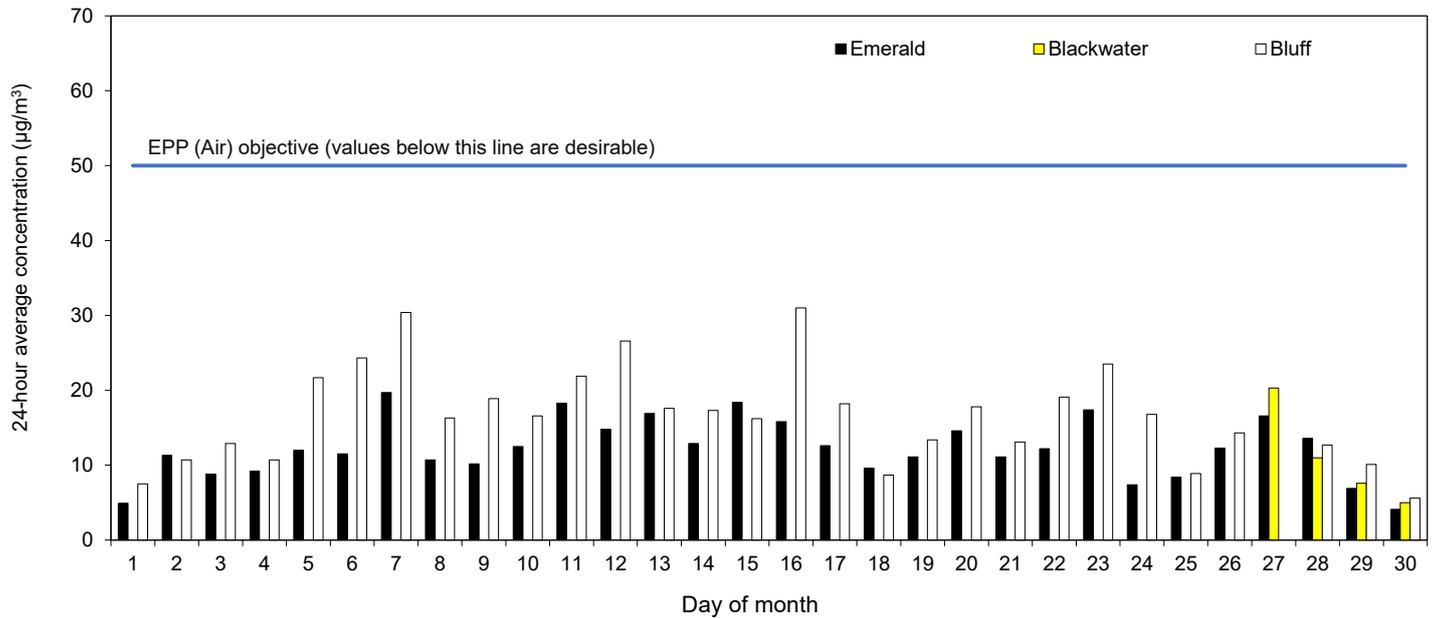


Table 15. Ambient concentrations of PM₁₀. Annual average and monthly maximum 24-hour and 1-hour average concentrations (µg/m³), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Mackay												
West Mackay												
Annual average:	17.1											
Maximum 24-hour	24.8	23.0	35.4	33.9	30.0	26.3	23.5	26.9	21.7	28.6	29.3	23.0
% I.A.	100	100	100	100	99	100	99	98	100	100	100	100
Inland Central Queensland												
Moranbah (East)												
Annual average:	19.7											
Maximum 24-hour	43.3	69.8	124.3	43.0	38.6	30.0	39.0	20.8	29.6	29.4	38.0	31.1
% I.A.	100	100	100	100	67	100	100	100	100	100	100	100
Moranbah (West)												
Annual average:	26.4											
Maximum 24-hour	50.4	64.7	101.8	64.3	64.7	40.0	51.0	32.2	46.9	41.9	42.7	46.0
% I.A.	100	100	99	100	100	96	100	100	68	100	100	100
Emerald												
Annual average:	15.9											
Maximum 24-hour	22.1	28.2	64.1	26.0	37.4	27.6	21.5	24.5	21.5	24.0	34.4	19.7
% I.A.	100	100	99	100	100	100	100	100	92	100	100	100
Blackwater												
Annual average:	15.7											
Maximum 24-hour	33.6	31.3	45.9	31.5	40.3	29.6	20.9	20.3	46.7	22.9	20.2	-
% I.A.	100	100	100	99	99	100	97	100	100	100	86	15
Bluff												
Annual average:	19.2											
Maximum 24-hour	25.1	38.4	52.3	31.7	34.8	35.5	41.9	31.3	43.7	n.d.	48.7	31.0
% I.A.	100	100	99	96	78	97	87	100	98	0	82	98
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objectives for PM ₁₀ are an annual average of 25µg/m ³ and a 24-hour average of 50µg/m ³ .												

PM_{2.5}

Figure 21. Ambient concentrations of PM_{2.5} at West Mackay, Moranbah (East) and Moranbah (West) sites. Daily 24-hour average concentrations ($\mu\text{g}/\text{m}^3$), June 2025.

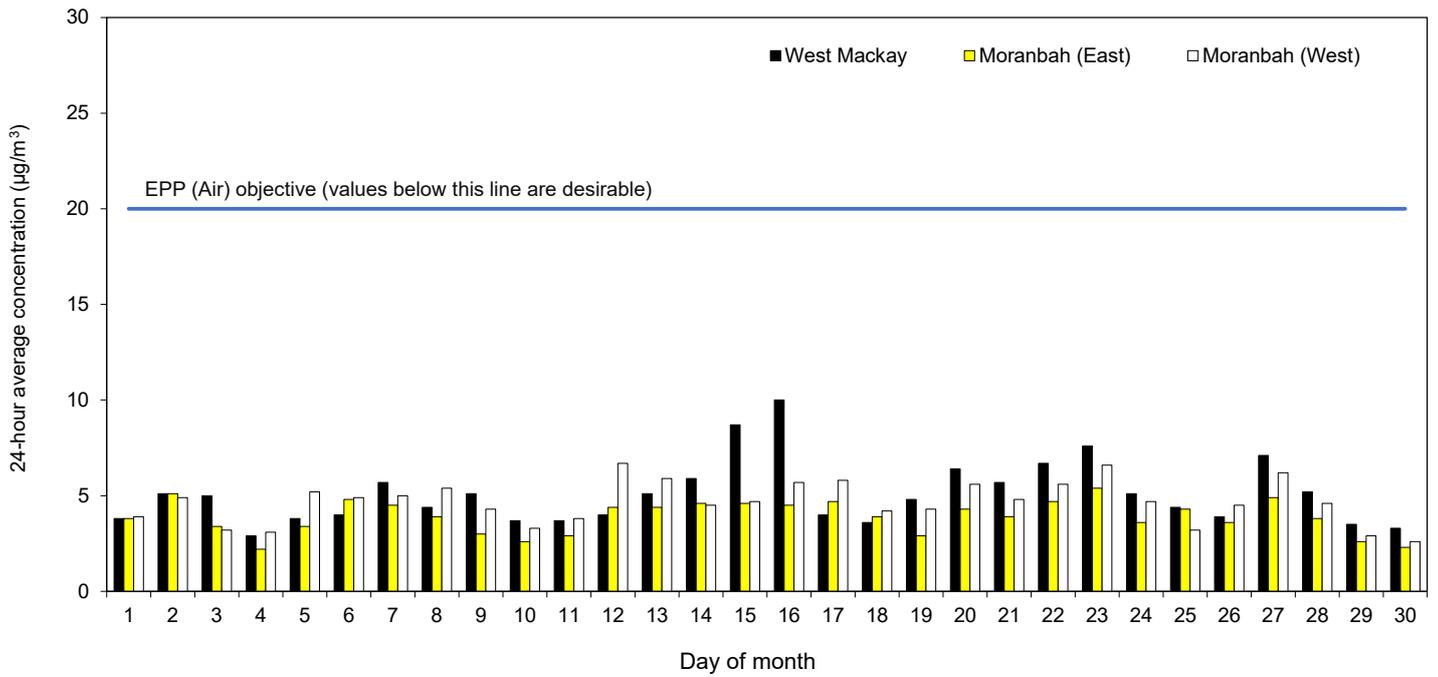


Figure 22. Ambient concentrations of PM_{2.5} at Emerald and Blackwater sites. Daily 24-hour average concentrations ($\mu\text{g}/\text{m}^3$), June 2025.

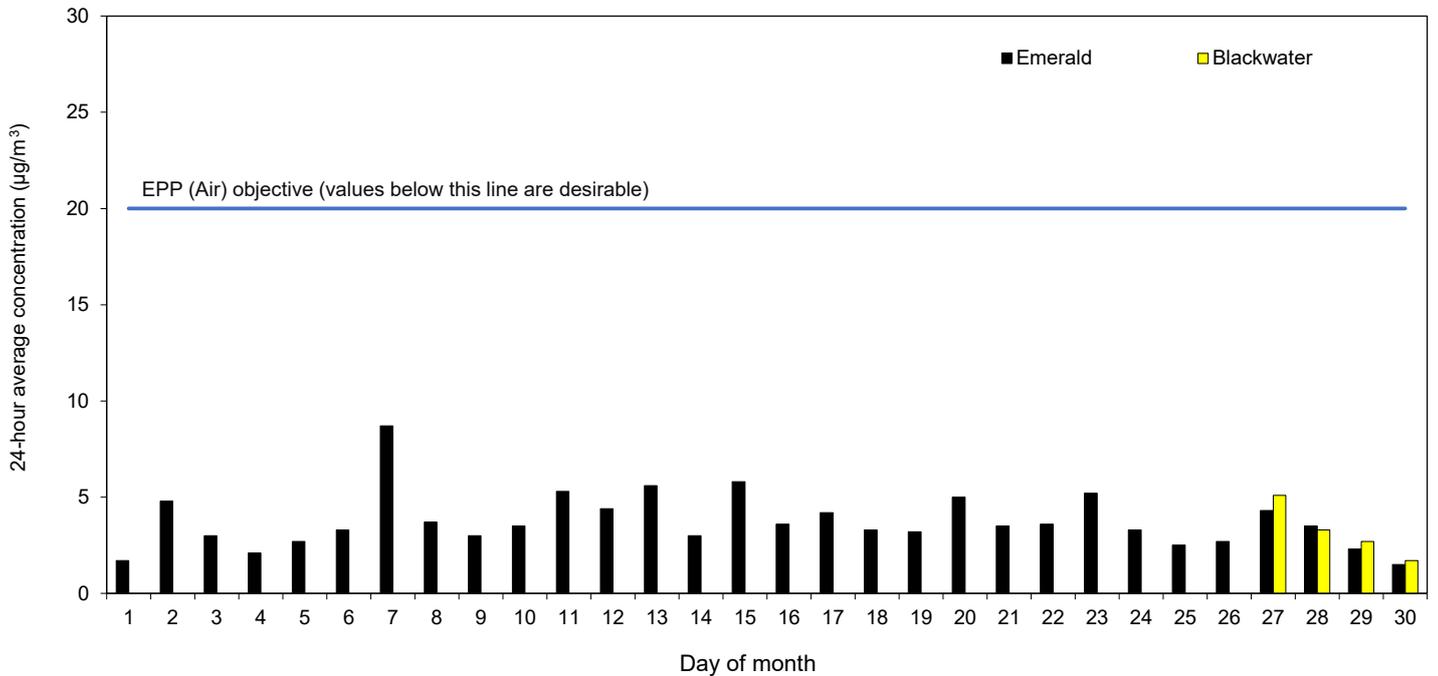


Table 16. Ambient concentrations of PM_{2.5}. Annual average and monthly maximum 24-hour concentrations (µg/m³), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Mackay												
West Mackay												
Annual average:	6.1											
Maximum 24-hour	9.7	11.7	11.2	10.7	10.8	9.3	9.2	9.1	8.6	15.8	8.4	10.0
% I.A.	100	100	100	100	99	100	99	98	100	100	100	100
Inland Central Queensland												
Moranbah (East)												
Annual average:	5.8											
Maximum 24-hour	6.8	40.6	53.3	14.8	24.3	18.6	9.2	5.6	6.5	10.7	6.7	5.4
% I.A.	100	100	100	100	67	100	100	100	100	100	100	100
Moranbah (West)												
Annual average:	6.9											
Maximum 24-hour	8.9	11.9	25.9	16.1	40.3	21.1	10.1	7.5	8.8	11.6	8.9	6.7
% I.A.	100	100	99	100	100	96	100	100	68	100	100	100
Emerald												
Annual average:	5.6											
Maximum 24-hour	11.1	13.2	47.0	13.1	21.8	17.0	6.4	8.0	5.9	6.1	25.0	8.7
% I.A.	100	100	99	100	100	100	100	100	92	100	100	100
Blackwater												
Annual average:	5.1											
Maximum 24-hour	5.6	10.3	19.2	14.3	16.1	15.1	8.9	6.9	13.0	4.6	5.4	-
% I.A.	100	100	100	99	99	100	97	100	100	100	86	15
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The EPP (Air) air quality objectives for PM _{2.5} are an annual average of 7µg/m ³ and a 24-hour average of 20µg/m ³ .												

Visibility-reducing particles

Figure 23. Ambient concentrations of visibility-reducing particle levels at West Mackay site. Daily maximum 1-hour average light scattering coefficient (B_{sp}) values (Mm⁻¹), June 2025.

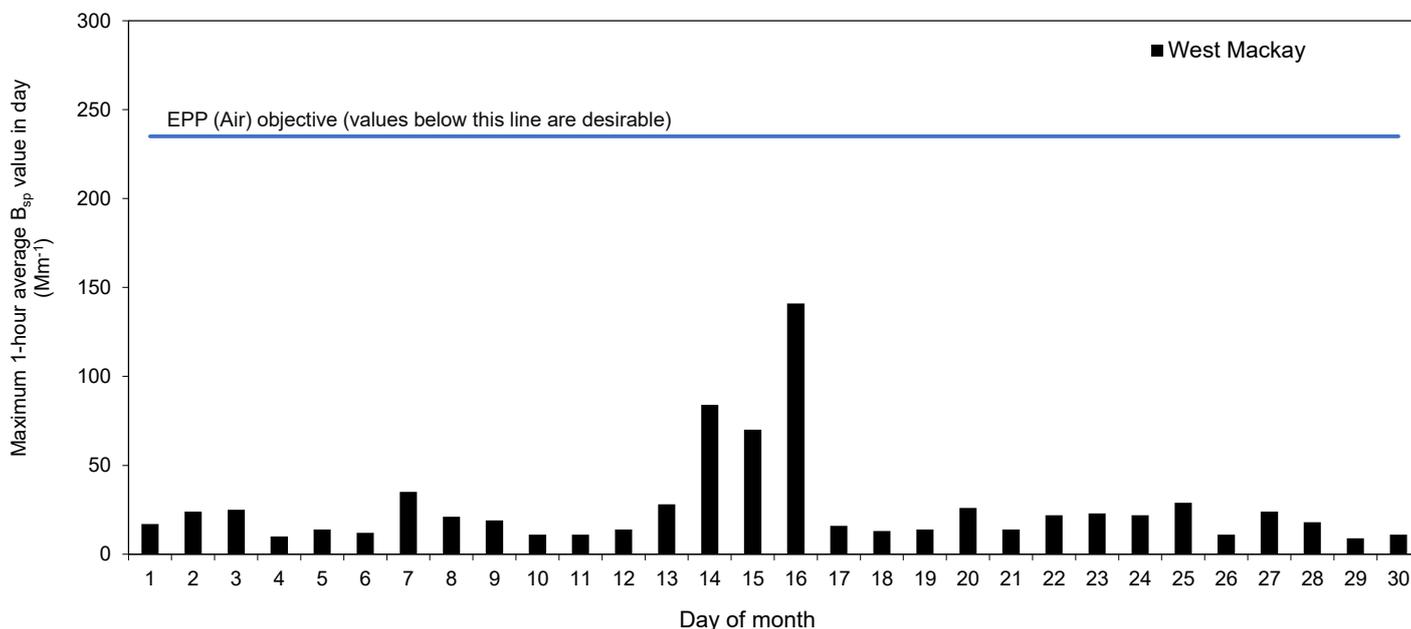


Table 17. Ambient visibility-reducing particle levels. Monthly maximum 1-hour light scattering coefficient (B_{sp}) values (Mm^{-1}), July 2024 to June 2025.

Site	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Mackay												
West Mackay												
Maximum 1-hour	138	176	100	160	163	237	33	45	35	181	77	141
% I.A.	100	100	100	100	99	100	99	98	100	99	100	100

% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.

The EPP (Air) air quality objective for visibility-reducing particles is 20km visibility. This equates to light scattering coefficient values of $235Mm^{-1}$ or less.

Data availability

When required, Table 18 summarises the reasons for data availability below the minimum criteria for reporting at Central Queensland monitoring sites.

Table 18. Reasons for low data availability at Central Queensland ambient air monitoring sites during June 2025.

Station	Air Pollutant	Cause
Boyne Island	Carbon monoxide	Instrument fault
Blackwater	PM ₁₀ , PM _{2.5}	Instrument fault

Related air quality information

Current hourly air quality data is available online at <https://apps.des.qld.gov.au/air-quality/>.

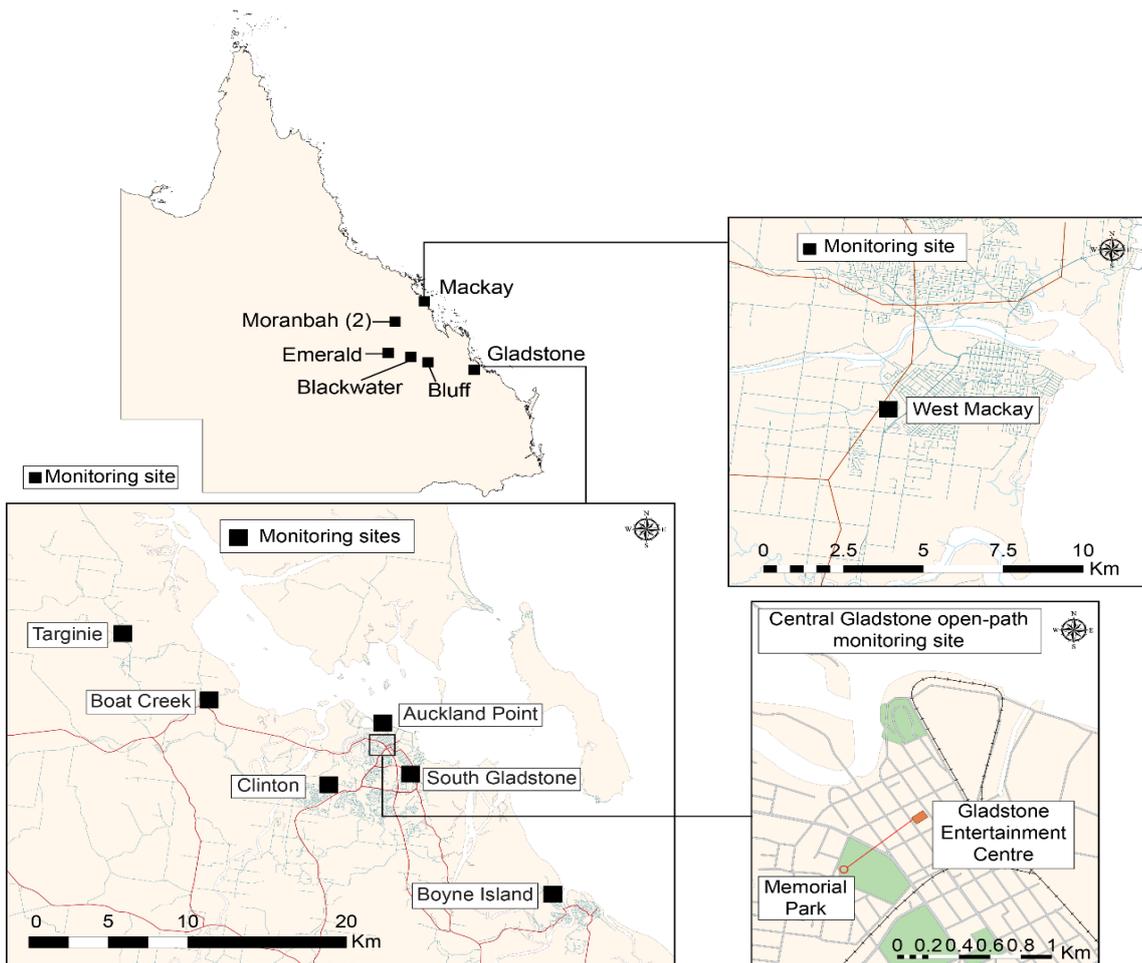
Additional information on air quality monitoring and related issues is also available from the above website.

Further information

For further information about the data presented in this bulletin or related publications, contact:

Air Quality Monitoring
 Coastal and Air Unit
 Science Division
 Department of the Environment, Tourism, Science and Innovation
 Ecosciences Precinct
 41 Boggo Rd
 DUTTON PARK QLD 4102
 Telephone (07) 3170 5477
 Email: air.sciences@detsi.qld.gov.au

Figure 24. Central Queensland ambient air quality monitoring station locations.



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