

# Air Quality Bulletin

Southern Queensland

December 2024



**Queensland**  
Government

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

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*Cover artwork by Navada Currie,  
Mununjali and Kabi Kabi woman at Gilimbaa .*

June 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.

Air quality monitoring was carried out by the Queensland Government at 18 sites in Southern Queensland during December 2024. Data from Ampol Refineries (Qld) Ltd's monitoring sites at Wynnum North, Wynnum West and Lytton along with the Department of Transport and Main Roads' monitoring sites at South Brisbane and at Coomera and Parkwood on the Gold Coast are also included.

Air pollutants monitored include carbon monoxide, ozone, nitrogen oxides, sulfur dioxide, visibility-reducing particles, PM<sub>10</sub> (particles less than 10µm in diameter) and PM<sub>2.5</sub> (particles less than 2.5µm in diameter). Dustfall (dust particles that rapidly settle from the air due to their large size) and total suspended particulate (TSP) matter that can cause nuisance were also monitored.

## Air quality summary tables

Tables 3 to 11 present summaries of air quality data for each month of 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 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 data is not recorded, the reason for the low data availability is summarised in Table 12 at the end of this bulletin.

Table 1. Air pollutants monitored at Southern Queensland ambient air quality monitoring sites.

	Nitrogen dioxide	Sulfur dioxide	Carbon monoxide	Ozone	PM <sub>10</sub>	PM <sub>2.5</sub>	Visibility-reducing particles	TSP	Dustfall
Maryborough					✓	✓			
Nambour					✓	✓			
Mountain Creek	✓			✓	✓	✓	✓		
Deception Bay	✓			✓	✓	✓			
Deagon	✓			✓	✓	✓	✓		
Wynnum North (industry)	✓	✓			✓	✓			
Wynnum West (industry)		✓			✓	✓			
Lytton (industry)		✓			✓	✓			
Cannon Hill	✓			✓	✓	✓		✓	✓
Brisbane CBD					✓	✓	✓		
South Brisbane	✓		✓		✓	✓			
Woolloongabba	✓		✓		✓	✓			
Sherwood									✓
Rocklea	✓			✓	✓	✓	✓		
Springwood	✓	✓		✓	✓	✓			
North Maclean	✓			✓	✓	✓			
Southport	✓			✓	✓	✓			
Coomera	✓		✓		✓	✓			
Parkwood	✓		✓		✓	✓			
Raceview	✓	✓		✓	✓	✓	✓		
Mutdapilly	✓			✓	✓	✓			
Toowoomba (Brook St)									✓
Toowoomba (Mort St)									✓
Toowoomba (Tor St)					✓	✓			

## 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

Figures 1 to 27 summarise available air quality data for each day of December. Only the maximum recorded level for each day is used to show the day-to-day variation in air quality. Figures 28 and 29 show the averaged daily dust deposition rate for December.

## Guidelines

Air quality measurements are compared against air quality objectives contained in the Environmental Protection (Air) Policy 2019 and the Environmental Protection (Air) Amendment Policy 2024 (in force from September 2024) (EPP (Air)) to assess whether pollutants levels could affect health and wellbeing. The EPP (Air) visibility objective is used to assess the impact of visibility-reducing particles on visual air quality. Limit values for TSP and dustfall specified in the former Department of the Environment, Science and Innovation (DESI) guideline document. *Application requirements for activities with impacts to air* (Air Impacts Guideline) are used to assess dust nuisance effects. The relevant guidelines are shown in the air quality summary table for each pollutant.

Compliance with air quality guidelines

During December, measured pollutant levels, with the exception of dustfall, did not exceed the relevant EPP (Air) air quality objectives, or DESI dust nuisance limit values, at Queensland Government and industry air monitoring sites in Southern Queensland.

Dustfall at the Toowoomba (Brook Street) site exceeded the DESI nuisance dust limit value during December. No coal particles were detected in the dust, indicating that coal trains travelling along the rail corridor did not contribute to this exceedance. Particle composition analysis found high levels of biological material (insect matter) in the deposited dust, pointing to natural sources as the primary contributing factor.

Table 2. Number of occasions during December 2024 when measured levels exceeded EPP (Air) objectives for carbon monoxide, ozone, nitrogen dioxide, sulfur dioxide, PM<sub>10</sub>, PM<sub>2.5</sub>, visibility-reducing particles and TSP, as well as the DESI nuisance dust limit values for TSP and dustfall, at Queensland Government and industry air monitoring sites in Southern Queensland.

Air pollutant	Averaging period	Exceedences
Carbon monoxide	<i>EPP (Air)</i> 8-hour	0
Ozone	<i>EPP (Air)</i> 4-hour 1-hour	0 0
Nitrogen dioxide	<i>EPP (Air)</i> Annual 1-hour	0 0
Sulfur dioxide	<i>EPP (Air)</i> 24-hour 1-hour	0 0
Visibility-reducing particles (refers to protecting aesthetic environment, not health and wellbeing)	<i>EPP (Air)</i> 1-hour	0
PM <sub>2.5</sub>	<i>EPP (Air)</i> Annual 24-hour	0 0
PM <sub>10</sub>	<i>EPP (Air)</i> Annual 24-hour	0 0
TSP (24-hour period refers to dust nuisance, not health and wellbeing)	<i>EPP (Air)</i> Annual <i>DESI limit</i> 24-hour	0 0
Dustfall (30-day period refers to dust nuisance, not health and wellbeing)	<i>DESI limit</i> 30-day	1

Measured ambient concentrations

Carbon monoxide

Figure 1. Ambient concentrations of carbon monoxide at South Brisbane, Woolloongabba, Coomera and Parkwood sites. Daily maximum 8-hour average concentrations (ppm), December 2024.

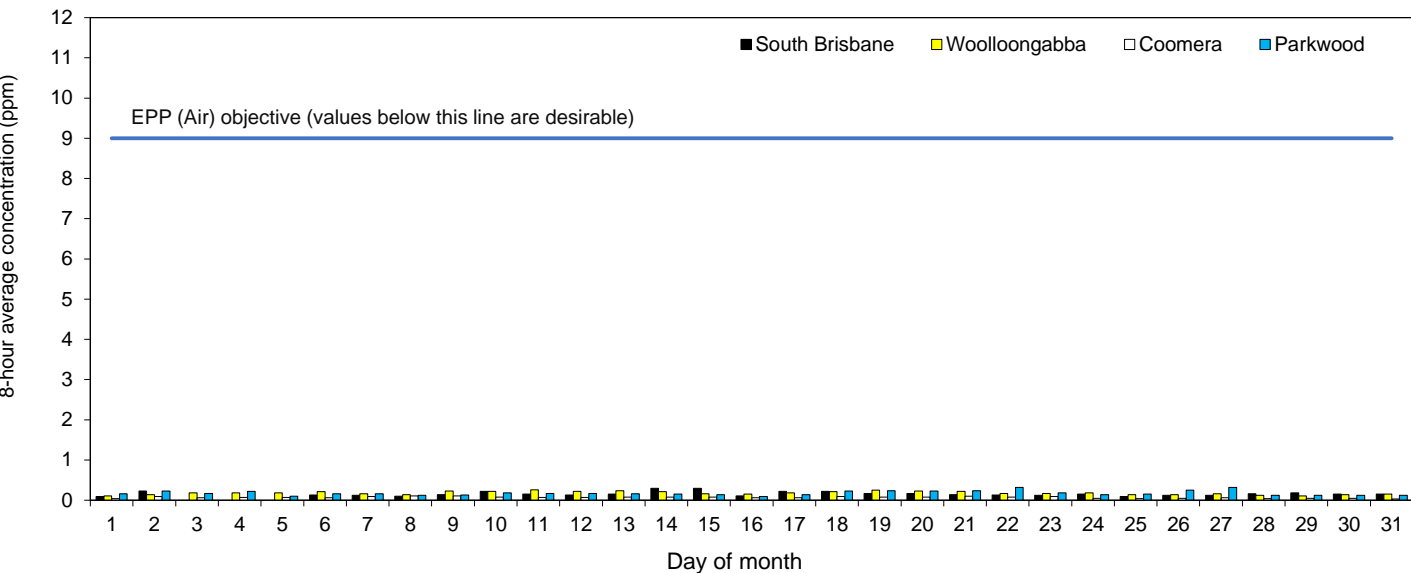


Table 3. Ambient concentrations of carbon monoxide. Monthly maximum 8-hour average concentrations (ppm), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>South Brisbane</b>												
Maximum 8-hour	0.27	0.39	0.38	0.31	0.69	0.84	0.55	0.66	0.39	0.40	0.56	0.30
% I.A.	100	100	100	100	100	100	100	100	100	100	100	94
<b>Woolloongabba</b>												
Maximum 8-hour	0.27	0.22	0.29	0.34	0.30	0.74	0.41	0.46	0.41	0.32	0.36	0.26
% I.A.	100	100	100	99	83	99	100	99	100	88	100	100
<b>Coomera</b>												
Maximum 8-hour	0.14	0.15	0.16	0.23	0.24	0.39	0.26	0.24	0.27	0.14	0.15	0.11
% I.A.	100	100	99	100	93	100	100	100	100	100	100	100
<b>Parkwood</b>												
Maximum 8-hour	0.29	0.18	0.20	0.29	1.55	0.53	0.53	0.41	0.40	0.25	0.29	0.32
% I.A.	100	100	100	100	100	100	100	100	97	100	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 Environmental Protection (Air) Policy 2019 air quality objective for carbon monoxide is an 8-hour average of 9ppm.												

## Ozone (photochemical oxidants)

Figure 2. Ambient concentrations of ozone at Mountain Creek, Deception Bay, Deagon and Cannon Hill sites. Daily maximum 8-hour average concentrations (ppm), December 2024.

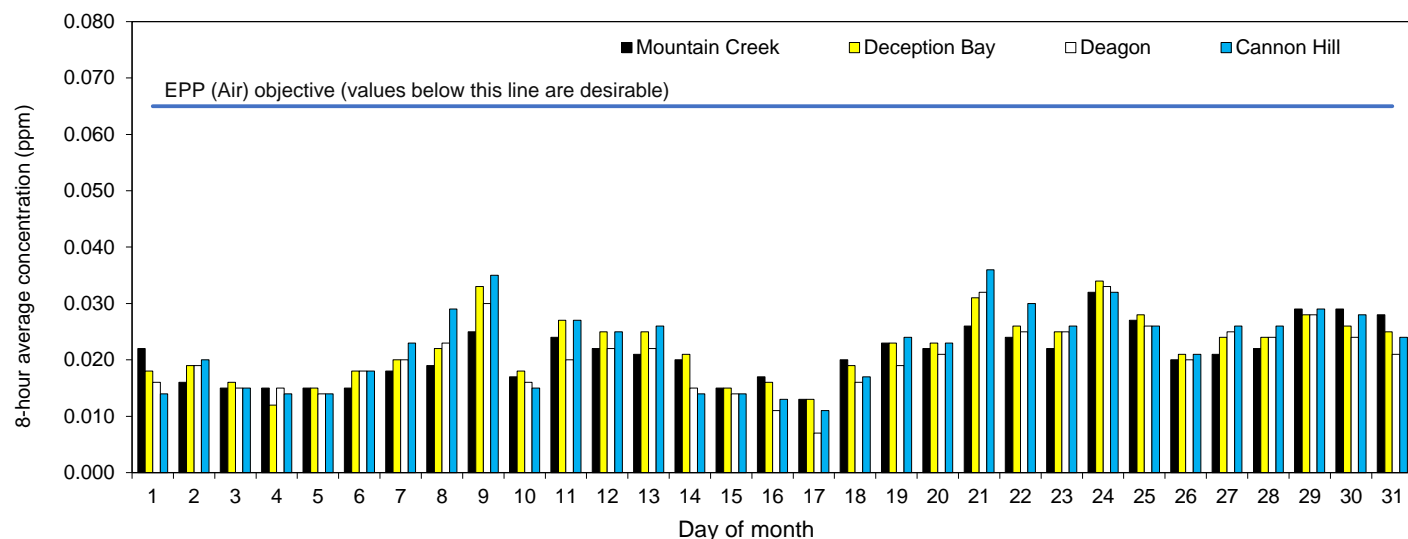


Figure 3. Ambient concentrations of ozone at Rocklea, Springwood and North Maclean sites. Daily maximum 8-hour average concentrations (ppm), December 2024.

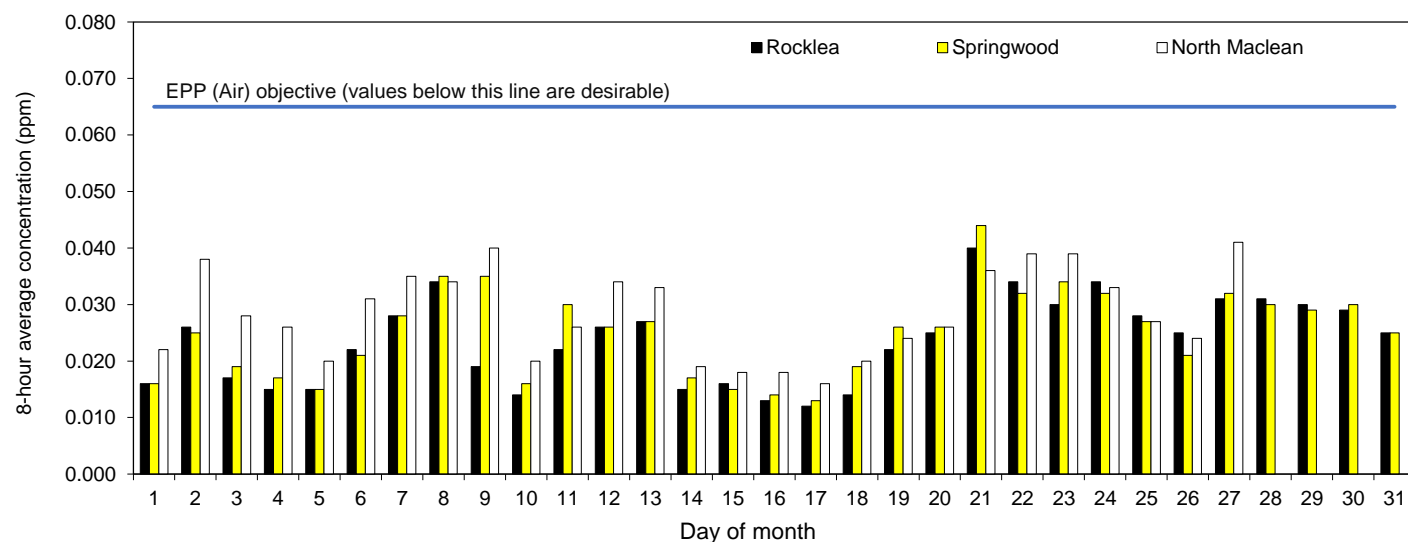


Figure 4. Ambient concentrations of ozone at Southport, Raceview and Mutdapilly sites. Daily maximum 8-hour average concentrations (ppm), December 2024.

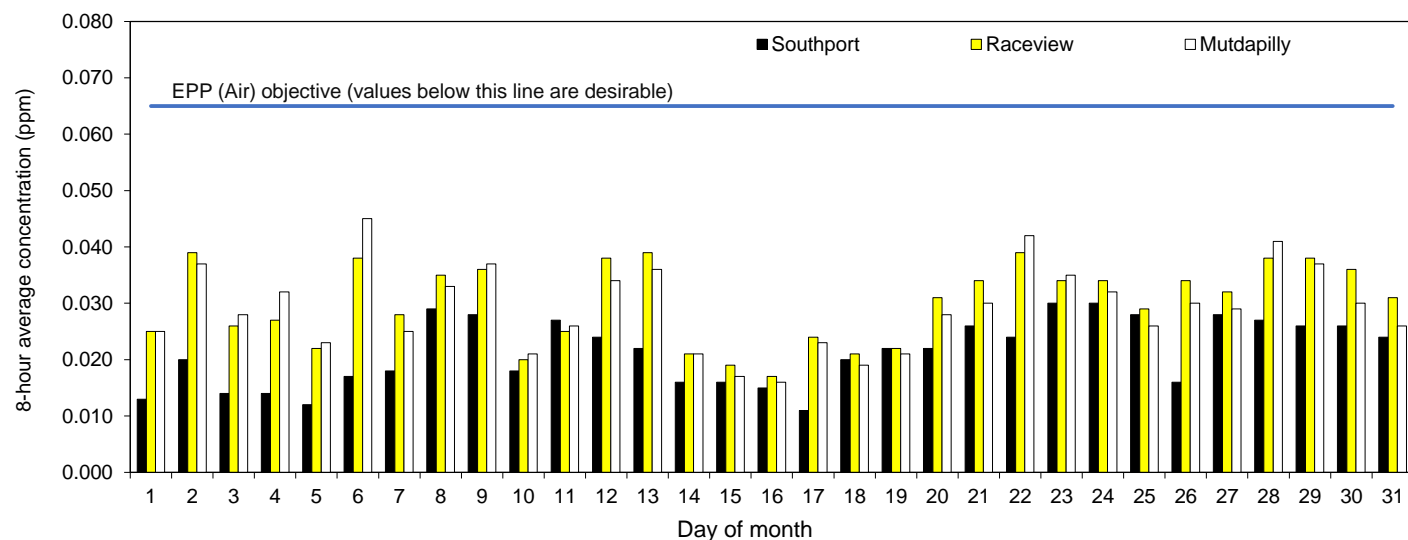


Table 4. Ambient concentrations of ozone. Monthly maximum 8-hour average concentrations (ppm), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Mountain Creek</b>												
Maximum 8-hour	0.031	0.028	0.033	0.034	0.032	0.043	0.035	0.041	0.041	0.044	0.047	0.032
% I.A.	92	100	100	99	100	100	100	100	100	82	100	100
<b>Deception Bay</b>												
Maximum 8-hour	0.035	0.039	0.046	0.050	0.038	0.039	0.037	0.047	0.052	0.049	0.053	0.034
% I.A.	99	100	99	100	100	100	100	100	97	98	100	100
<b>Deagon</b>												
Maximum 8-hour	0.034	0.039	0.042	0.047	0.030	0.034	0.034	0.043	0.050	0.043	0.051	0.033
% I.A.	97	98	100	99	100	99	100	90	95	100	95	100
<b>Cannon Hill</b>												
Maximum 8-hour	0.049	0.048	0.035	0.048	0.031	0.032	0.035	0.046	0.047	0.042	0.054	0.036
% I.A.	97	99	100	100	100	100	100	100	99	99	99	100
<b>Rocklea</b>												
Maximum 8-hour	0.045	0.050	0.035	0.042	0.031	0.034	0.034	0.053	0.061	0.048	0.051	0.040
% I.A.	100	100	100	99	100	99	100	96	100	100	100	100
<b>Springwood</b>												
Maximum 8-hour	0.056	0.058	0.036	0.041	0.031	0.033	0.037	0.052	0.053	0.054	0.056	0.044
% I.A.	100	100	100	99	99	99	100	100	100	100	100	100
<b>North Maclean</b>												
Maximum 8-hour	0.048	0.046	0.047	0.043	0.033	0.035	0.039	0.062	0.063	0.056	0.054	0.041
% I.A.	98	99	100	97	100	99	99	99	99	100	100	91
<b>Southport</b>												
Maximum 8-hour	0.037	0.030	0.032	0.034	0.033	0.036	0.035	0.052	0.048	0.043	0.047	0.030
% I.A.	97	97	98	100	100	95	100	100	100	99	99	100
<b>Raceview<sup>†</sup></b>												
Maximum 8-hour	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.039
% I.A.	0	0	0	0	0	0	0	0	0	0	0	100
<b>Mutdapilly</b>												
Maximum 8-hour	0.052	0.047	0.055	0.043	0.031	0.039	0.037	0.050	0.059	0.051	0.053	0.045
% I.A.	94	99	99	99	100	100	99	97	100	99	98	98
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
<sup>†</sup> Ozone monitoring commenced at Raceview in December 2024.												
The Environmental Protection (Air) Amendment Policy 2024 air quality objective for ozone is an 8-hour average of 0.065ppm.												

## Nitrogen dioxide

Figure 5. Ambient concentrations of nitrogen dioxide at Mountain Creek, Deception Bay, Deagon and Wynnum North sites. Daily maximum 1-hour average concentrations (ppm), December 2024.

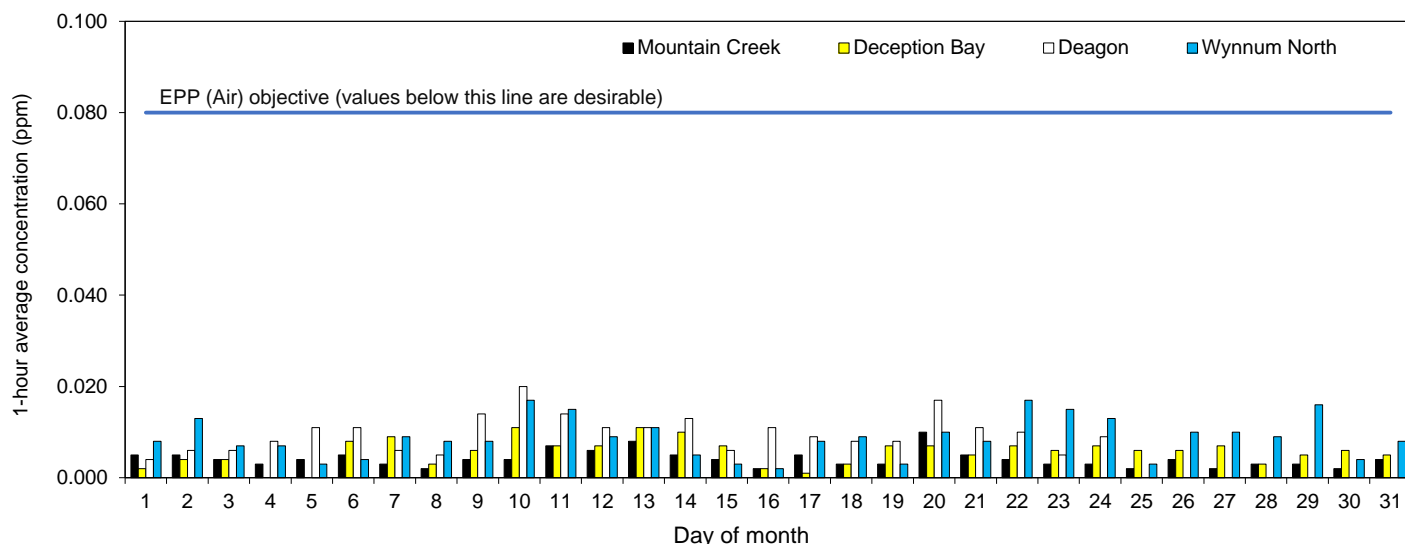


Figure 6. Ambient concentrations of nitrogen dioxide at Cannon Hill, South Brisbane, Woolloongabba and Rocklea sites. Daily maximum 1-hour average concentrations (ppm), December 2024.

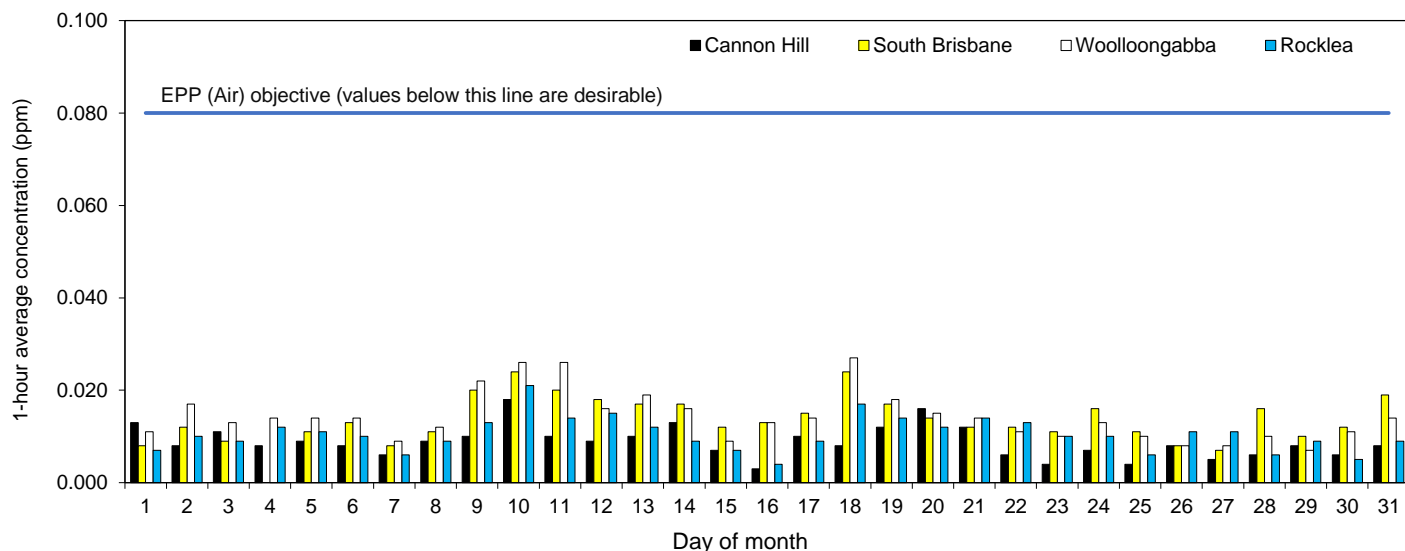


Figure 7. Ambient concentrations of nitrogen dioxide at Springwood, North Maclean, Southport and Coomera sites. Daily maximum 1-hour average concentrations (ppm), December 2024.

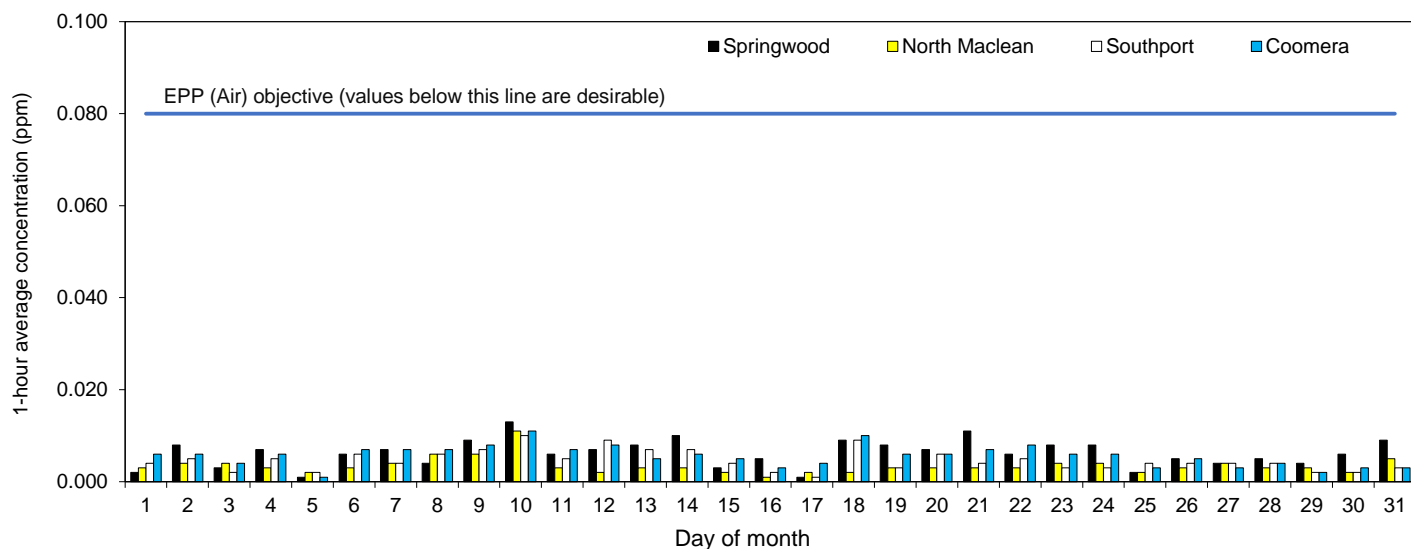




Figure 8. Ambient concentrations of nitrogen dioxide at Parkwood, Raceview and Mutdapilly sites. Daily maximum 1-hour average concentrations (ppm), December 2024.

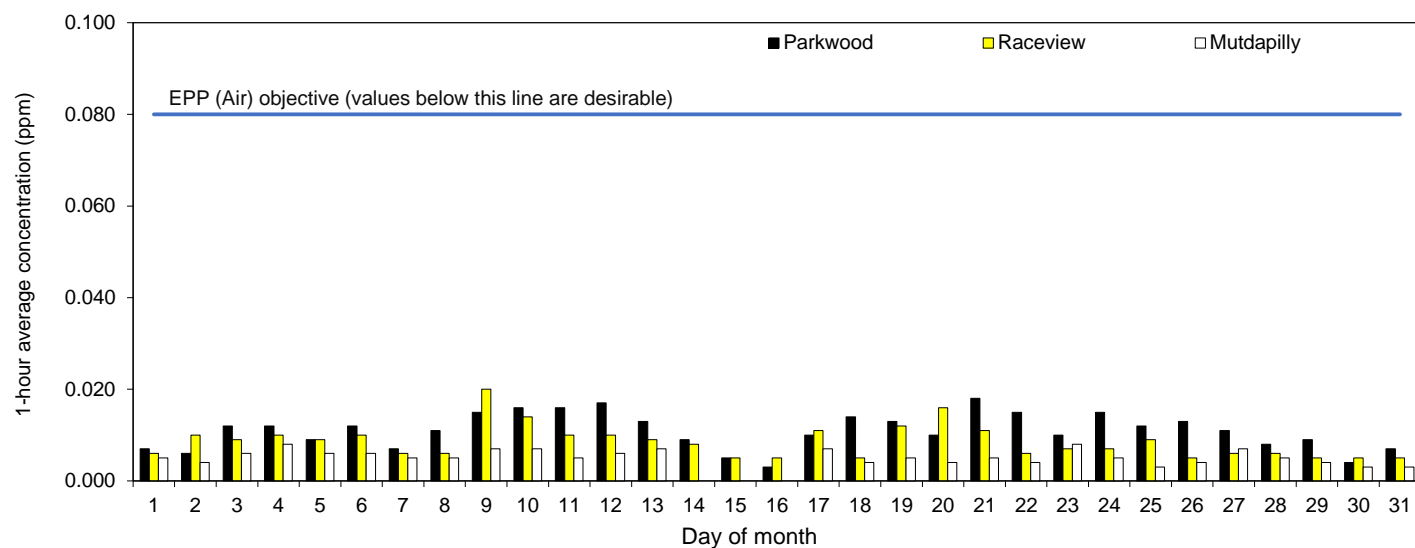


Table 5. Ambient concentrations of nitrogen dioxide. Annual average and monthly maximum 1-hour concentrations (ppm), January 2024 to December 2024.

Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Mountain Creek</b>													
Annual average:	0.003												
Maximum 1-hour		0.007	0.009	0.010	0.018	0.019	0.028	0.027	0.028	0.015	0.010	0.016	0.010
% I.A.		99	100	100	99	100	100	100	100	100	100	100	100
<b>Deception Bay</b>													
Annual average:	0.004												
Maximum 1-hour		0.010	0.013	0.016	0.022	0.026	0.033	0.029	0.033	0.026	0.020	0.014	0.011
% I.A.		100	100	100	100	100	100	100	100	97	98	100	97
<b>Deagon</b>													
Annual average:	0.007												
Maximum 1-hour		0.013	0.015	0.021	0.027	0.038	0.043	0.039	0.039	0.033	0.030	0.025	0.020
% I.A.		94	96	100	99	100	99	100	99	100	100	87	79
<b>Wynnum North (industry-operated site)</b>													
Annual average:	0.006												
Maximum 1-hour		0.013	0.018	0.015	0.024	0.031	0.049	0.034	0.033	0.031	0.023	0.022	0.017
% I.A.		95	94	93	94	94	95	95	95	94	94	80	95
<b>Cannon Hill</b>													
Annual average:	0.007												
Maximum 1-hour		0.014	0.013	0.019	0.028	0.034	0.044	0.035	0.038	0.028	0.020	0.027	0.018
% I.A.		99	99	100	100	100	100	100	100	96	86	99	100
<b>South Brisbane</b>													
Annual average:	0.012												
Maximum 1-hour		0.022	0.025	0.024	0.032	0.044	0.052	0.040	0.040	0.038	0.035	0.031	0.024
% I.A.		99	100	100	100	100	100	100	100	100	100	100	97
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.													
The Environmental Protection (Air) Amendment Policy 2024 air quality objectives for nitrogen dioxide are an annual average of 0.015ppm and a 1-hour average of 0.080ppm.													

Table 5 (contd). Ambient concentrations of nitrogen dioxide. Annual average and monthly maximum 1-hour concentrations (ppm), January 2024 to December 2024.

Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Woolloongabba</b>													
Annual average:	0.011												
Maximum 1-hour		0.024	0.029	0.024	0.034	0.034	0.046	0.035	0.039	0.034	0.041	0.032	0.027
% I.A.		100	100	100	99	99	99	100	97	100	99	100	100
<b>Rocklea</b>													
Annual average:	0.009												
Maximum 1-hour		0.013	0.017	0.017	0.026	0.034	0.042	0.035	0.034	0.032	0.030	0.030	0.021
% I.A.		100	100	100	99	100	99	100	100	100	100	100	100
<b>Springwood</b>													
Annual average:	0.005												
Maximum 1-hour		0.011	0.016	0.015	0.019	0.020	0.030	0.026	0.027	0.031	0.019	0.019	0.013
% I.A.		100	100	100	100	99	99	100	100	100	100	100	100
<b>North Maclean</b>													
Annual average:	0.002												
Maximum 1-hour		0.005	0.007	0.008	0.010	0.018	0.019	0.020	0.017	0.014	0.008	0.016	0.011
% I.A.		89	99	100	97	100	99	100	99	99	100	100	100
<b>Southport</b>													
Annual average:	0.004												
Maximum 1-hour		0.011	0.013	0.014	0.022	0.024	0.029	0.031	0.029	0.027	0.016	0.010	0.010
% I.A.		98	97	98	100	100	100	100	100	100	99	99	100
<b>Coomera</b>													
Annual average:	0.004												
Maximum 1-hour		0.016	0.014	0.013	0.018	0.022	0.030	0.030	0.026	0.026	0.016	0.014	0.011
% I.A.		100	100	100	99	99	100	100	100	100	100	100	100
<b>Parkwood</b>													
Annual average:	0.007												
Maximum 1-hour		0.017	0.016	0.020	0.027	0.039	0.047	0.049	0.038	0.042	0.030	0.024	0.018
% I.A.		100	100	100	100	100	99	100	100	100	100	100	100
<b>Raceview<sup>†</sup></b>													
Annual average:	-												
Maximum 1-hour		n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.020
% I.A.		0	0	0	0	0	0	0	0	0	0	0	100
<b>Mutdapilly</b>													
Annual average:	0.003												
Maximum 1-hour		0.008	0.011	0.013	0.012	0.013	0.019	0.020	0.018	0.016	0.013	0.010	0.008
% I.A.		86	99	99	100	100	100	99	96	100	99	98	90
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.													
<sup>†</sup> Nitrogen dioxide monitoring commenced at Raceview in December 2024.													
The Environmental Protection (Air) Amendment Policy 2024 air quality objectives for nitrogen dioxide are an annual average of 0.015ppm and a 1-hour average of 0.080ppm.													

Sulfur dioxide

Figure 9. Ambient concentrations of sulfur dioxide at Wynnum North, Wynnum West and Lytton sites. Daily 24-hour average concentrations (ppm), December 2024.

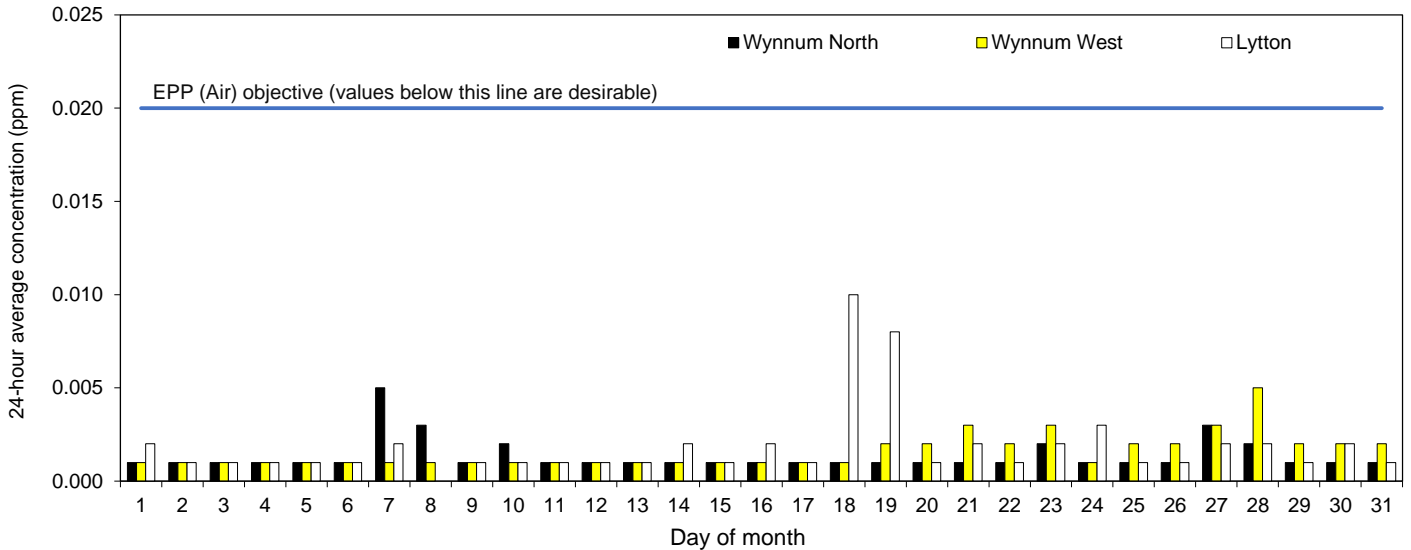


Figure 10. Ambient concentrations of sulfur dioxide at Springwood and Raceview sites. Daily 24-hour average concentrations (ppm), December 2024.

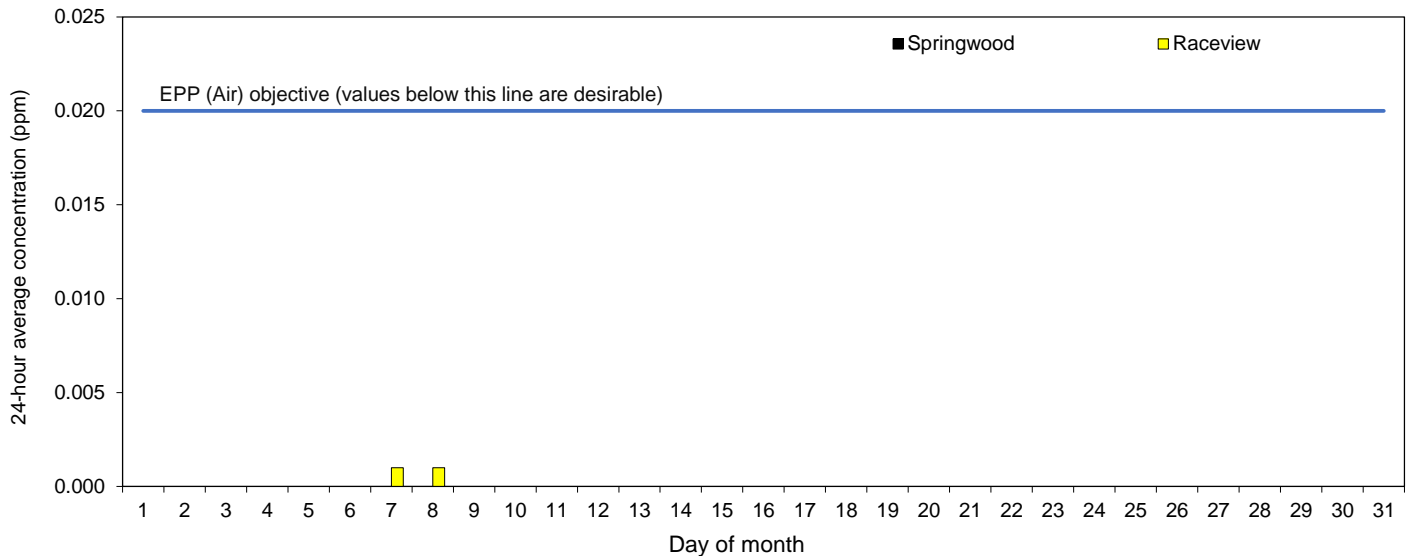


Figure 11. Ambient concentrations of sulfur dioxide at Wynnum North, Wynnum West and Lytton sites. Daily maximum 1-hour average concentrations (ppm), December 2024.

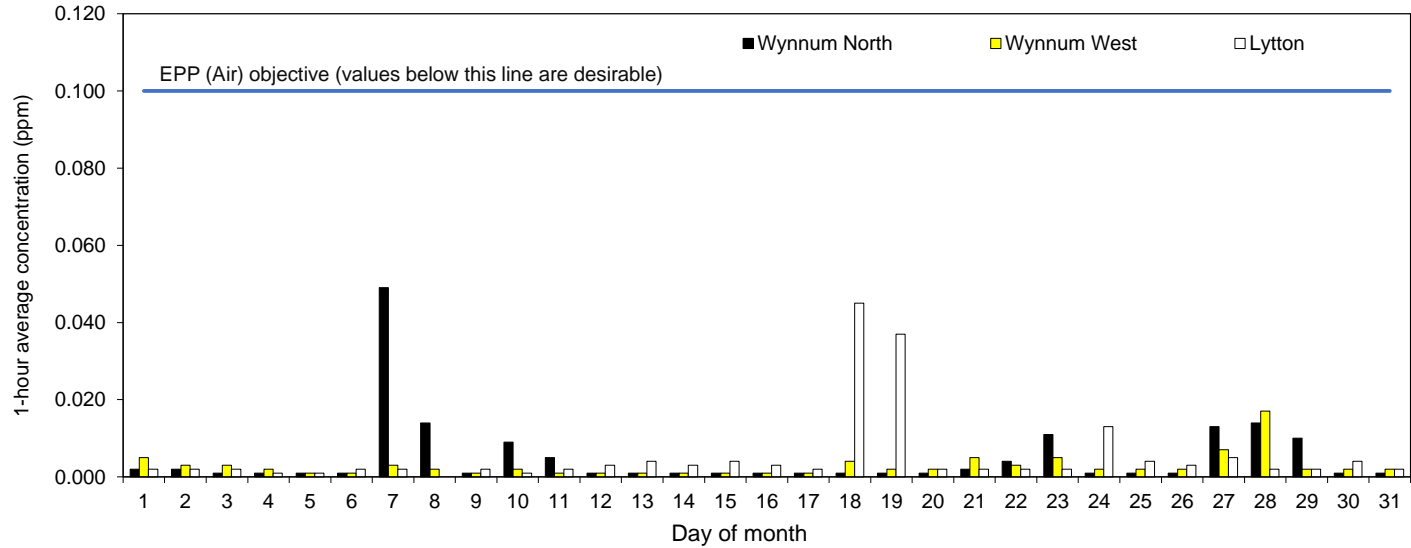


Figure 12. Ambient concentrations of sulfur dioxide at Springwood and Raceview sites. Daily maximum 1-hour average concentrations (ppm), December 2024.

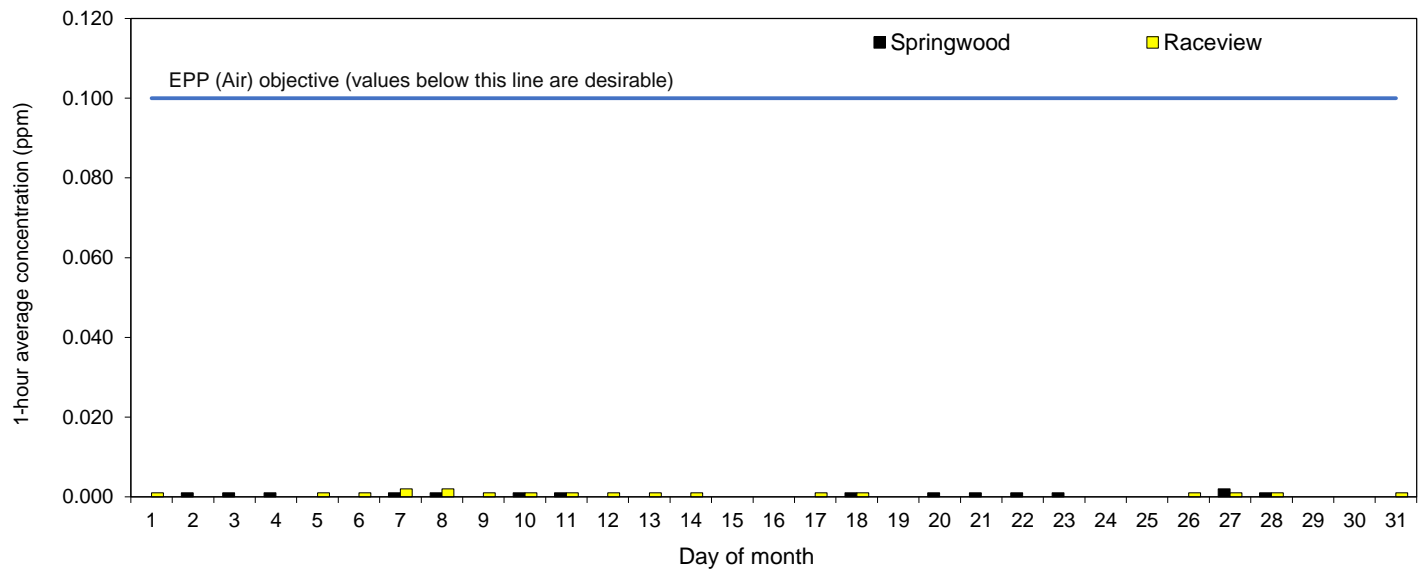


Table 6. Ambient concentrations of sulfur dioxide. Annual average and monthly maximum 24-hour and 1-hour average concentrations (ppm), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Wynnum North</b> (industry-operated site)												
Annual average:	0.001											
Maximum 24-hour	0.001	0.002	0.002	0.001	0.001	0.008	0.002	0.009	0.009	0.007	0.013	0.005
Maximum 1-hour	0.010	0.011	0.012	0.007	0.006	0.070	0.008	0.050	0.067	0.026	0.034	0.049
% I.A.	96	96	95	94	95	96	95	96	95	95	84	95
<b>Wynnum West</b> (industry-operated site)												
Annual average:	0.001											
Maximum 24-hour	0.002	0.001	0.001	0.002	0.003	0.002	0.004	0.003	0.004	0.012	0.004	0.005
Maximum 1-hour	0.014	0.004	0.005	0.008	0.014	0.008	0.020	0.017	0.027	0.053	0.013	0.017
% I.A.	96	95	95	95	96	95	94	95	95	96	96	95
<b>Lytton</b> (industry-operated site)												
Annual average:	0.002											
Maximum 24-hour	0.006	0.004	0.029	0.006	-	0.005	0.013	0.002	0.007	0.010	0.003	0.010
Maximum 1-hour	0.028	0.017	0.072	0.021	-	0.013	0.056	0.006	0.047	0.022	0.012	0.045
% I.A.	81	71	90	80	57	83	91	90	90	94	93	90
<b>Springwood</b>												
Annual average:	<0.001											
Maximum 24-hour	<0.001	0.001	<0.001	0.001	<0.001	0.002	0.001	0.001	0.001	0.001	0.002	<0.001
Maximum 1-hour	0.002	0.002	0.001	0.004	0.004	0.009	0.002	0.004	0.004	0.007	0.004	0.002
% I.A.	95	100	100	100	99	99	100	100	100	99	100	100
<b>Raceview</b> <sup>†</sup>												
Annual average:	-											
Maximum 24-hour	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.001
Maximum 1-hour	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.002
% I.A.	0	0	0	0	0	0	0	0	0	0	0	100
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
<sup>†</sup> Sulfur dioxide monitoring commenced at Raceview in December 2024.												
The Environmental Protection (Air) Amendment Policy 2024 air quality objectives for sulfur dioxide are a 24-hour average of 0.020ppm and a 1-hour average of 0.100ppm.												

Visibility-reducing particles

Figure 13. Ambient concentrations of visibility-reducing particle levels at Mountain Creek, Deagon and Brisbane CBD sites. Daily maximum 1-hour average light scattering coefficient ( $B_{sp}$ ) values ( $Mm^{-1}$ ), December 2024.

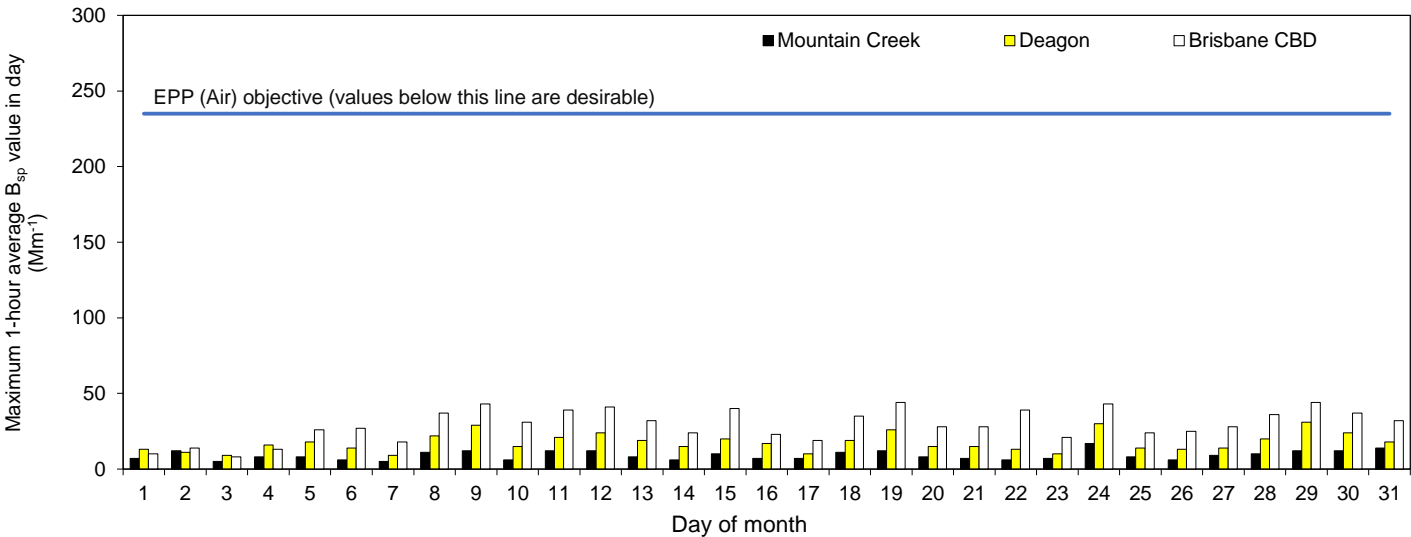


Figure 14. Ambient concentrations of visibility-reducing particle levels at Rocklea and Raceview sites. Daily maximum 1-hour average light scattering coefficient ( $B_{sp}$ ) values ( $Mm^{-1}$ ), December 2024.

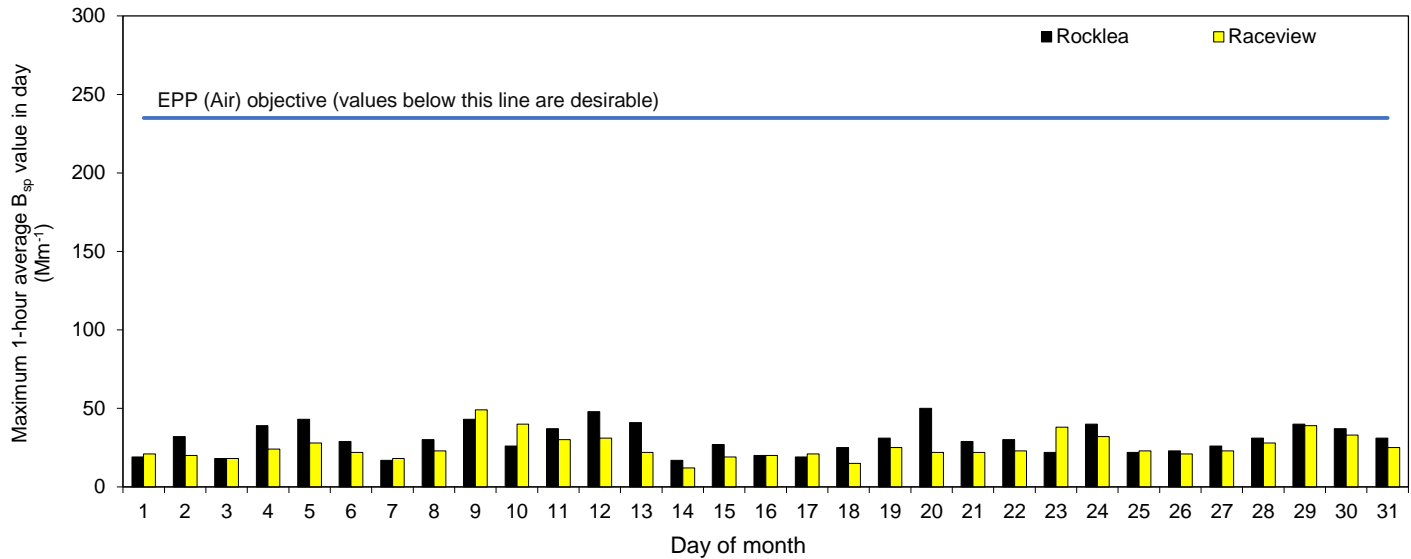


Table 7. Ambient visibility-reducing particle levels. Monthly maximum 1-hour light scattering coefficient ( $B_{sp}$ ) values ( $Mm^{-1}$ ), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Mountain Creek</b>												
Maximum 1-hour	30	21	29	29	25	37	22	19	61	37	57	17
% I.A.	99	100	100	99	100	100	100	100	100	100	100	100
<b>Deagon</b>												
Maximum 1-hour	58	31	35	39	58	107	56	250	123	58	50	31
% I.A.	97	98	100	99	100	99	100	97	100	100	99	100
<b>Brisbane CBD</b>												
Maximum 1-hour	168	33	47	64	32	145	128	151	186	60	175	44
% I.A.	100	100	100	100	100	100	100	98	100	100	100	100
<b>Rocklea</b>												
Maximum 1-hour	74	48	87	65	137	275	120	190	283	104	71	50
% I.A.	100	100	100	99	100	99	100	100	100	100	100	100
<b>Raceview<sup>†</sup></b>												
Maximum 1-hour	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	49
% I.A.	0	0	0	0	0	0	0	0	0	0	0	100
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
<sup>†</sup> Visibility-reducing particles monitoring commenced at Raceview in December 2024.												
The Environmental Protection (Air) Policy 2019 air quality objective for visibility-reducing particles is 20km visibility. This equates to light scattering coefficient values of $235Mm^{-1}$ or less.												

# PM<sub>10</sub>

Figure 15. Ambient concentrations of PM<sub>10</sub> at Maryborough, Nambour, Mountain Creek and Deception Bay sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

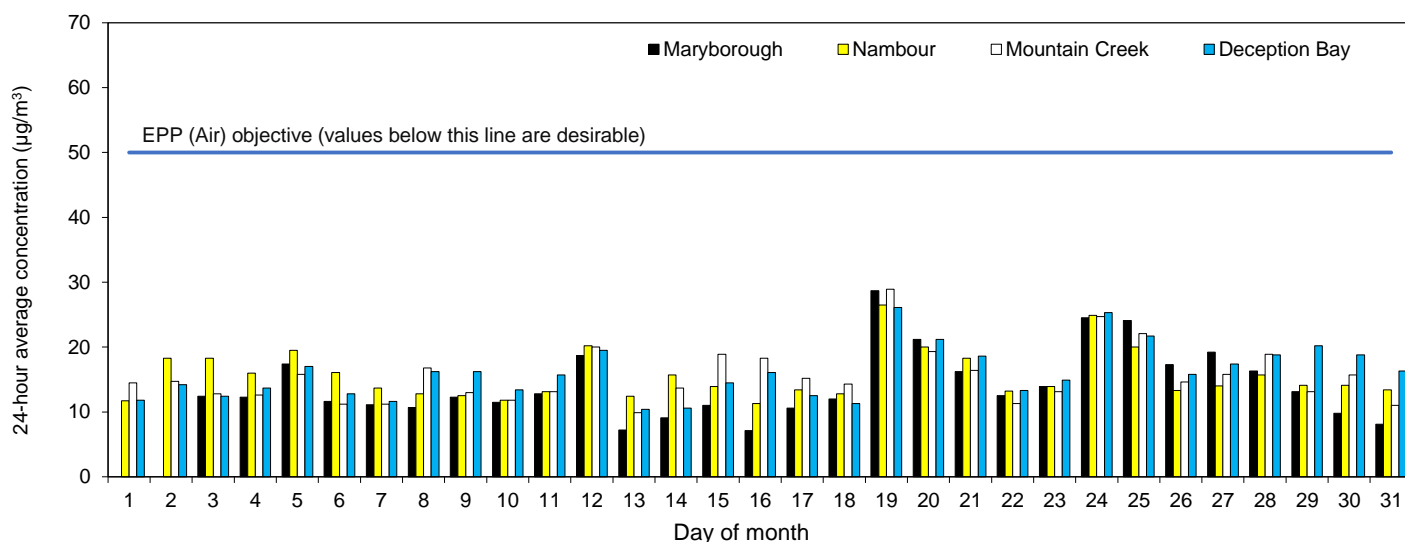


Figure 16. Ambient concentrations of PM<sub>10</sub> at Deagon, Brisbane CBD, South Brisbane and Woolloongabba sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

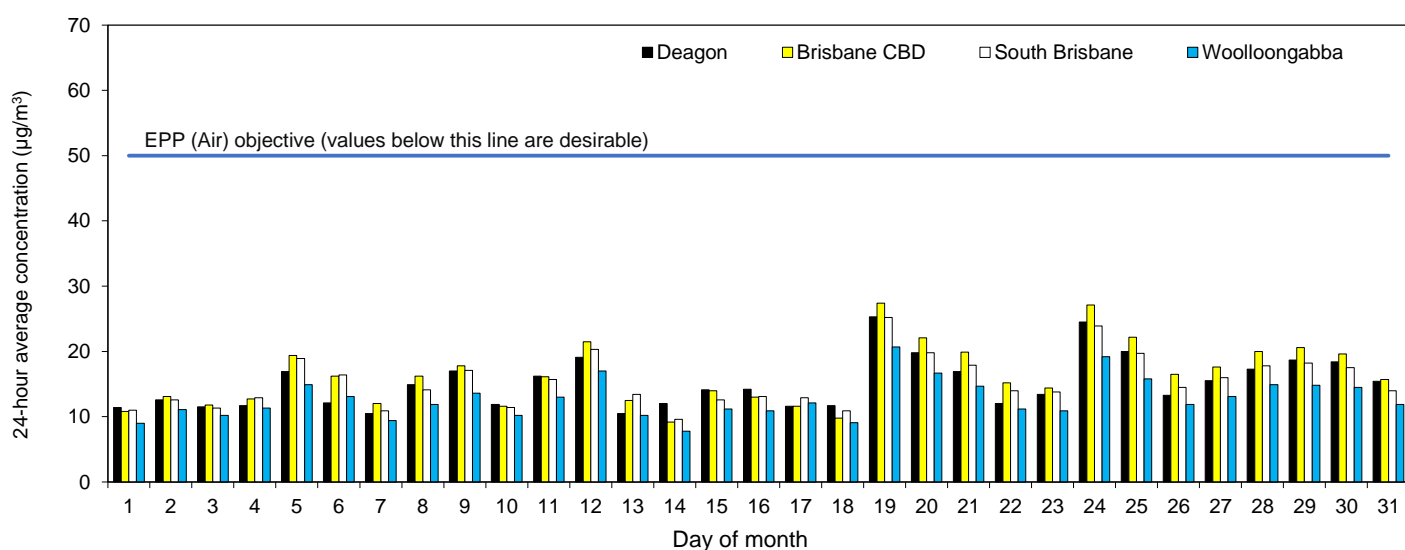


Figure 17. Ambient concentrations of PM<sub>10</sub> at Cannon Hill, Wynnum North, Wynnum West and Lytton sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

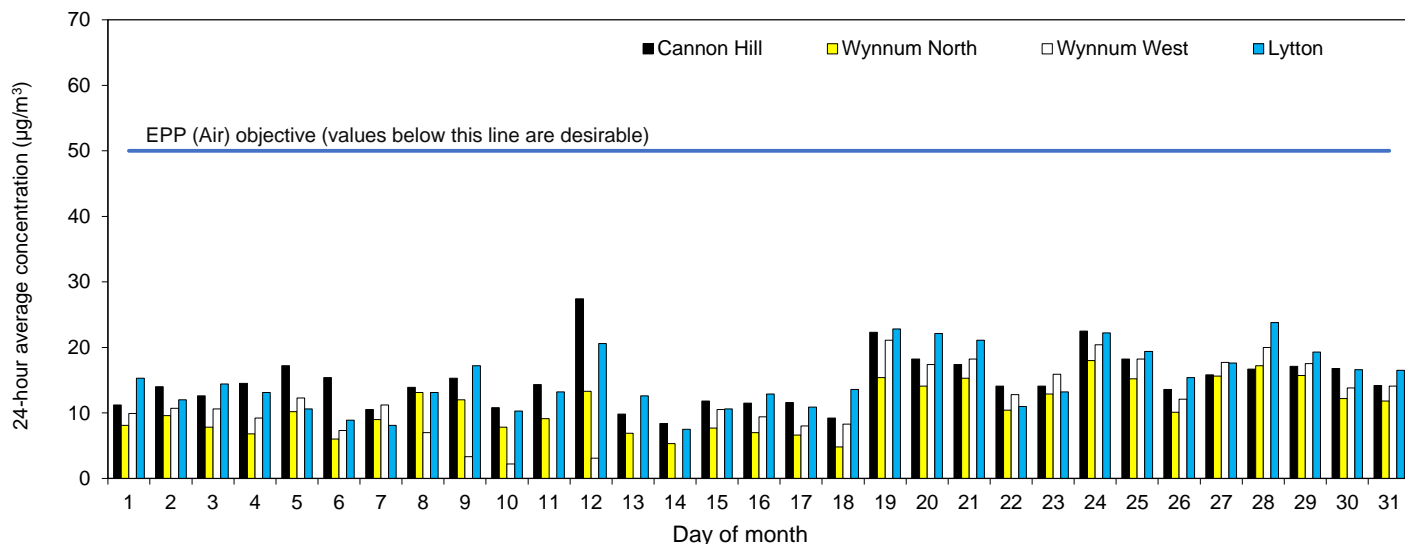


Figure 18. Ambient concentrations of PM<sub>10</sub> at Rocklea, North Maclean and Springwood sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

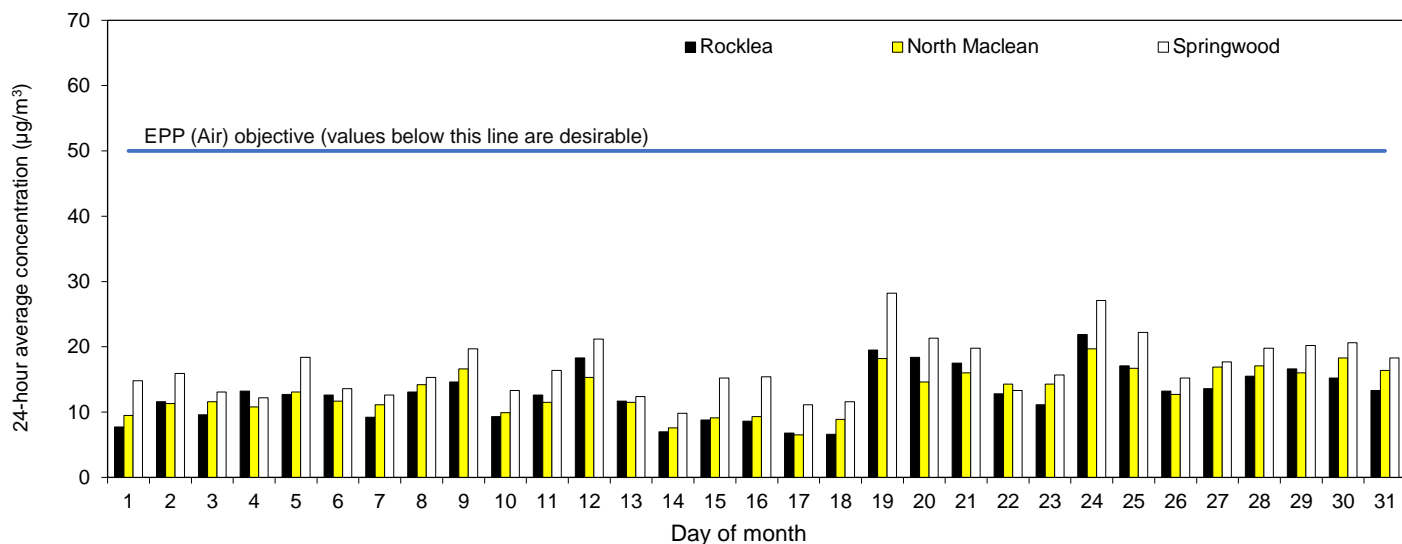


Figure 19. Ambient concentrations of PM<sub>10</sub> at Southport, Coomera and Parkwood sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

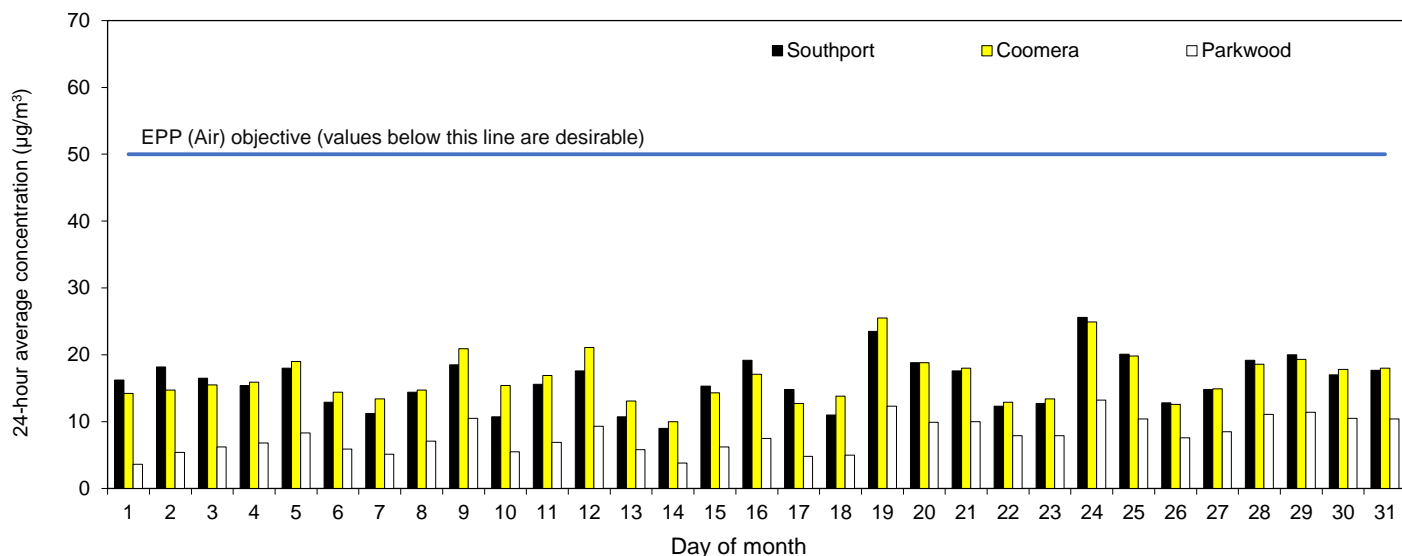


Figure 20. Ambient concentrations of PM<sub>10</sub> at Raceview, Mutdapilly and Toowoomba (Tor St) sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

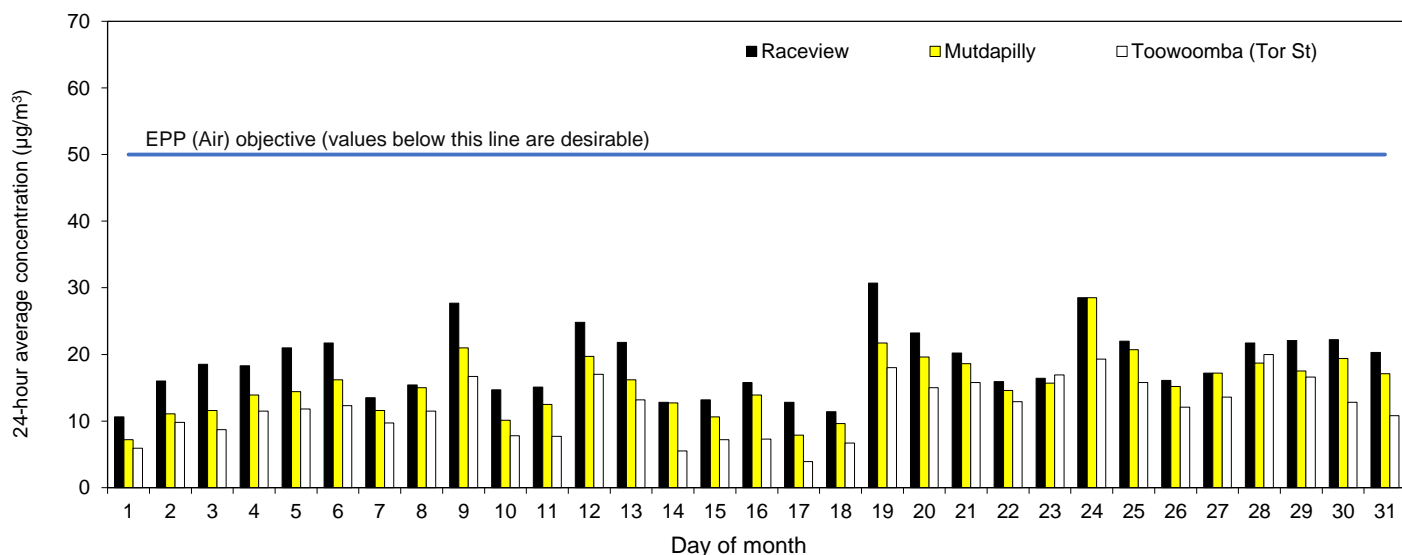




Table 8. Ambient concentrations of PM<sub>10</sub>. Annual average and monthly maximum 24-hour concentrations (µg/m<sup>3</sup>), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Maryborough</b>												
Annual average:	14.4											
Maximum 24-hour	27.9	20.4	24.1	20.7	20.1	22.4	30.1	20.4	31.1	24.8	-	28.7
% I.A.	100	100	100	100	100	100	100	100	100	100	54	95
<b>Nambour</b>												
Annual average:	13.7											
Maximum 24-hour	24.1	25.4	23.3	17.5	24.4	16.6	15.0	23.6	26.7	22.8	23.6	26.5
% I.A.	100	100	100	100	99	100	100	100	100	100	99	100
<b>Mountain Creek</b>												
Annual average:	14.5											
Maximum 24-hour	32.4	23.6	28.6	20.9	14.9	20.1	18.6	28.9	27.4	25.9	23.7	28.9
% I.A.	100	100	100	100	100	100	100	100	100	100	100	100
<b>Deception Bay</b>												
Annual average:	15.0											
Maximum 24-hour	26.2	21.8	22.3	16.1	14.8	28.2	23.1	30.3	33.6	23.7	26.0	26.1
% I.A.	100	100	100	100	100	100	100	100	93	98	100	100
<b>Deagon</b>												
Annual average:	14.6											
Maximum 24-hour	26.1	24.7	21.2	15.6	15.7	25.3	18.9	30.6	30.1	23.8	26.8	25.3
% I.A.	98	100	100	100	100	99	99	99	100	100	99	100
<b>Brisbane CBD</b>												
Annual average:	15.8											
Maximum 24-hour	27.6	24.6	21.9	16.8	16.3	-	22.1	37.8	36.0	24.8	34.2	27.4
% I.A.	100	100	100	100	100	19	100	100	100	100	100	100
<b>South Brisbane</b>												
Annual average:	16.3											
Maximum 24-hour	27.2	24.6	23.2	19.7	19.8	53.0	24.4	33.3	34.1	23.4	29.7	25.2
% I.A.	100	100	100	100	100	100	100	100	100	100	100	99
<b>Woolloongabba</b>												
Annual average:	17.8											
Maximum 24-hour	25.5	22.3	25.0	23.0	22.8	41.9	32.4	36.2	37.7	46.4	29.4	20.7
% I.A.	100	100	100	99	99	98	100	100	100	99	100	100
<b>Cannon Hill</b>												
Annual average:	15.5											
Maximum 24-hour	26.6	25.7	20.9	20.7	16.5	44.8	21.8	32.6	34.4	25.3	32.8	27.4
% I.A.	100	96	100	100	100	100	100	100	99	100	99	100
<b>Wynnum North (industry-operated site)</b>												
Annual average:	11.3											
Maximum 24-hour	24.2	20.3	15.0	18.0	13.1	38.8	20.8	30.5	26.6	24.8	22.4	18.0
% I.A.	66	77	95	98	100	100	98	100	96	96	85	99
<b>Wynnum West (industry-operated site)</b>												
Annual average:	12.0											
Maximum 24-hour	19.9	17.1	16.4	16.5	21.0	36.6	34.6	30.8	27.5	28.5	22.2	21.1
% I.A.	79	90	89	96	100	99	97	99	95	94	92	93
<b>Lytton (industry-operated site)</b>												
Annual average:	16.9											
Maximum 24-hour	-	22.9	21.5	27.2	28.6	53.7	37.0	35.6	42.4	32.5	21.2	23.8
% I.A.	57	74	97	97	99	99	98	100	91	85	97	93
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The Environmental Protection (Air) Policy 2019 air quality objectives for PM <sub>10</sub> are an annual average of 25µg/m <sup>3</sup> and a 24-hour average of 50µg/m <sup>3</sup> .												

Table 8 (contd). Ambient concentrations of PM<sub>10</sub>. Annual average and monthly maximum 24-hour concentrations (µg/m<sup>3</sup>), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Rocklea</b>												
Annual average:	13.7											
Maximum 24-hour	20.6	20.5	19.2	17.0	19.2	40.9	27.0	33.9	30.3	24.2	26.0	21.9
% I.A.	100	100	99	86	100	100	100	99	100	100	82	99
<b>North Maclean</b>												
Annual average:	16.2											
Maximum 24-hour	16.0	16.0	16.0	17.0	23.2	35.7	31.0	48.8	74.4	35.7	30.8	19.7
% I.A.	100	100	100	100	100	100	100	100	99	100	100	100
<b>Springwood</b>												
Annual average:	16.5											
Maximum 24-hour	32.8	24.2	25.3	23.0	15.8	28.2	26.7	45.5	66.1	28.3	30.3	28.2
% I.A.	100	100	100	100	100	99	100	100	100	100	100	100
<b>Southport</b>												
Annual average:	14.8											
Maximum 24-hour	28.4	25.1	27.1	17.4	16.7	23.9	18.4	27.8	30.8	28.2	25.9	25.6
% I.A.	99	100	100	100	100	100	100	100	100	99	100	100
<b>Coomera</b>												
Annual average:	15.5											
Maximum 24-hour	26.8	22.1	23.7	16.9	15.5	29.4	20.3	31.8	38.2	27.1	31.1	25.5
% I.A.	100	100	100	100	100	100	100	100	100	100	100	100
<b>Parkwood</b>												
Annual average:	14.3											
Maximum 24-hour	29.0	25.4	25.7	15.7	15.5	24.4	53.7	30.8	58.3	42.1	35.6	13.2
% I.A.	100	100	100	100	100	100	100	100	100	100	100	100
<b>Raceview<sup>†</sup></b>												
Annual average:	-											
Maximum 24-hour	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	30.7
% I.A.	0	0	0	0	0	0	0	0	0	0	0	100
<b>Mutdapilly</b>												
Annual average:	18.3											
Maximum 24-hour	25.9	64	40	32.3	33.1	33.5	36.2	49.2	53.3	42.2	34.8	28.5
% I.A.	97	99	100	100	100	100	99	97	100	99	98	98
<b>Toowoomba (Tor St)</b>												
Annual average:	12.8											
Maximum 24-hour	19.0	21.3	22.3	13.8	15.4	24.0	20.2	38.1	27.7	21.6	25.2	20.0
% I.A.	92	100	100	100	100	100	100	100	100	100	100	100
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
<sup>†</sup> PM <sub>10</sub> monitoring commenced at Raceview in December 2024.												
The Environmental Protection (Air) Policy 2019 air quality objectives for PM <sub>10</sub> are an annual average of 25µg/m <sup>3</sup> and a 24-hour average of 50µg/m <sup>3</sup> .												

## PM<sub>2.5</sub>

Figure 21. Ambient concentrations of PM<sub>2.5</sub> at Maryborough, Nambour, Mountain Creek and Deception Bay sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

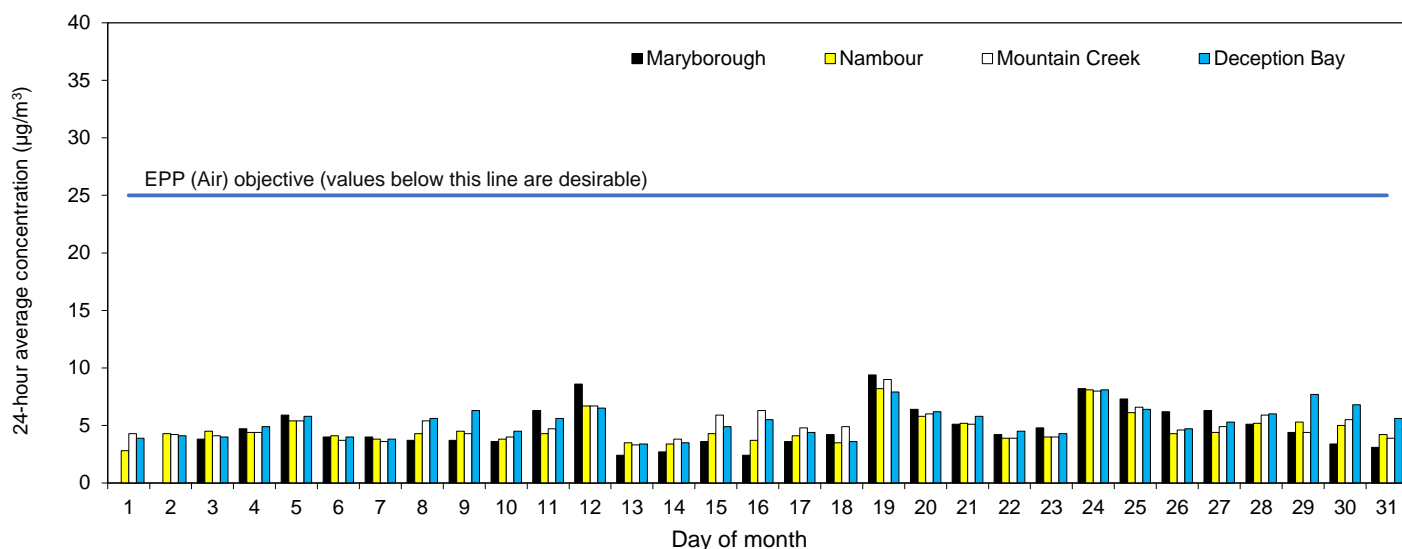


Figure 22. Ambient concentrations of PM<sub>2.5</sub> at Deagon, Brisbane CBD, South Brisbane and Woolloongabba sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

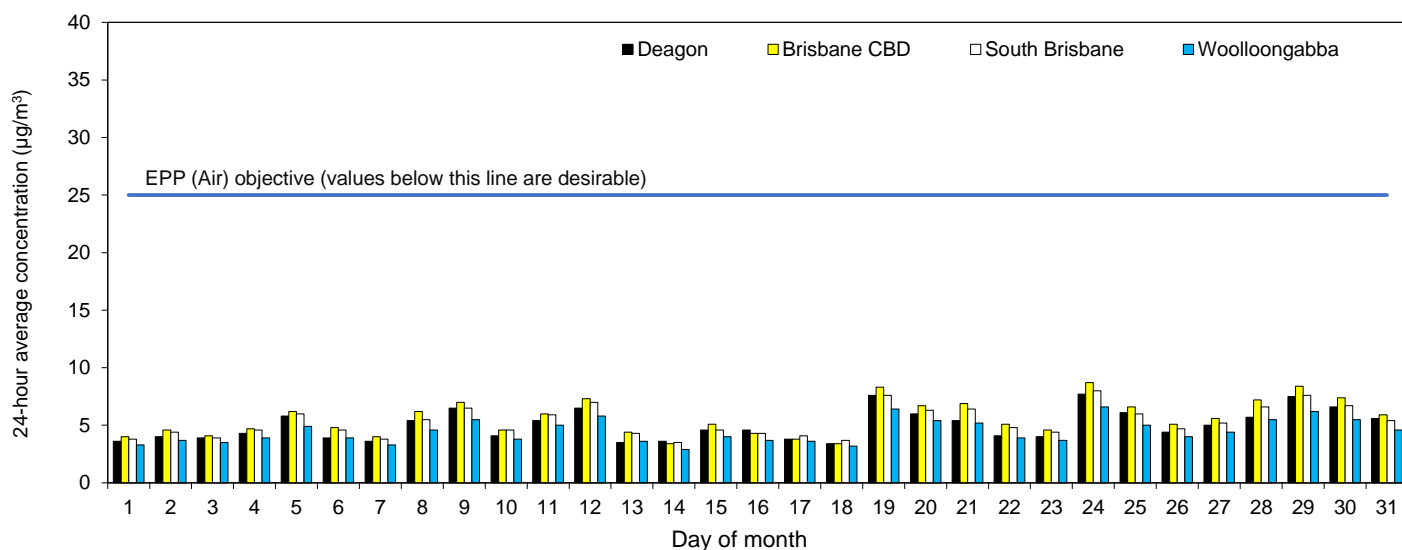


Figure 23. Ambient concentrations of PM<sub>2.5</sub> at Cannon Hill, Wynnum North, Wynnum West and Lytton sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

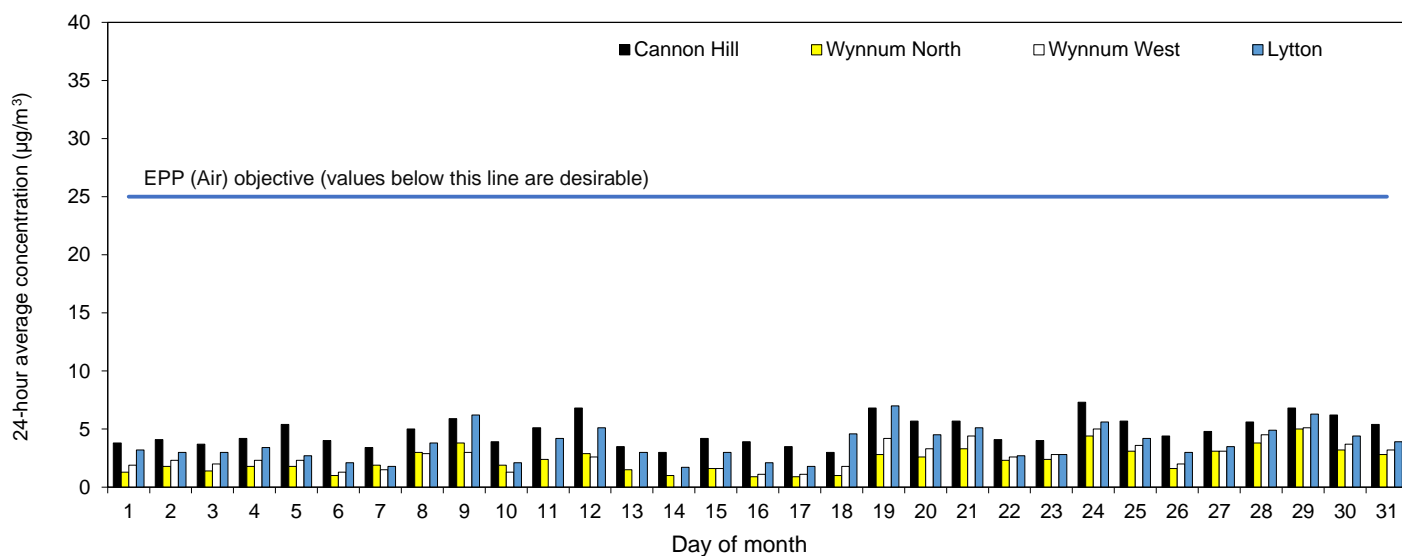


Figure 24. Ambient concentrations of PM<sub>2.5</sub> at Rocklea, North Maclean and Springwood sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

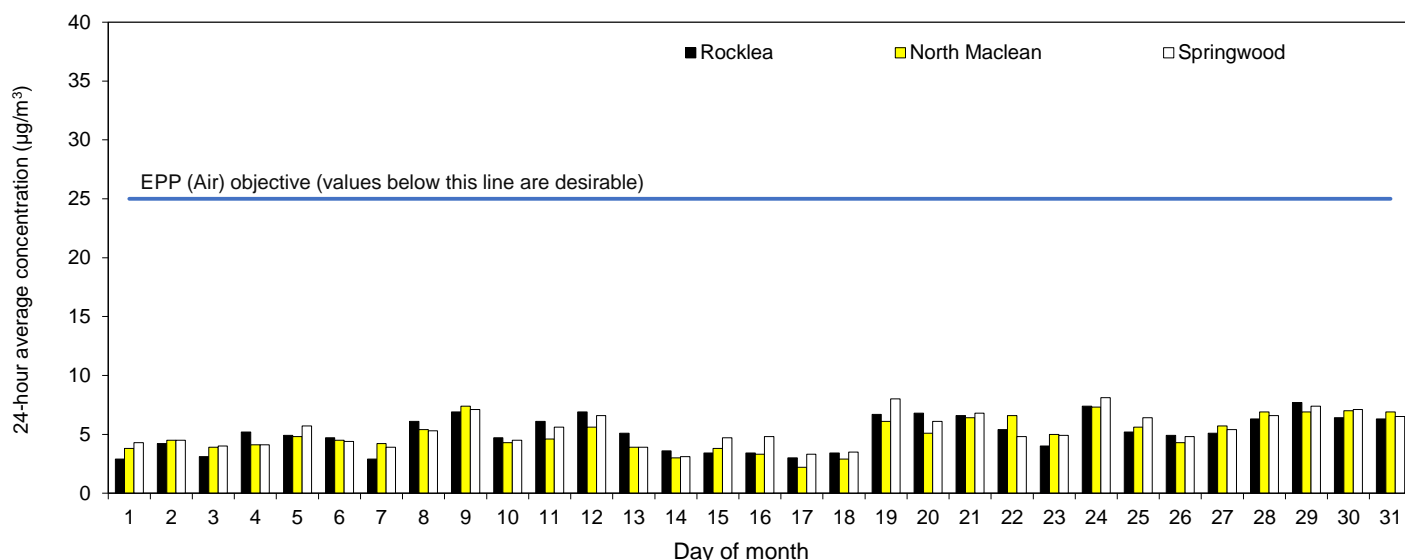


Figure 25. Ambient concentrations of PM<sub>2.5</sub> at Southport, Coomera and Parkwood sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

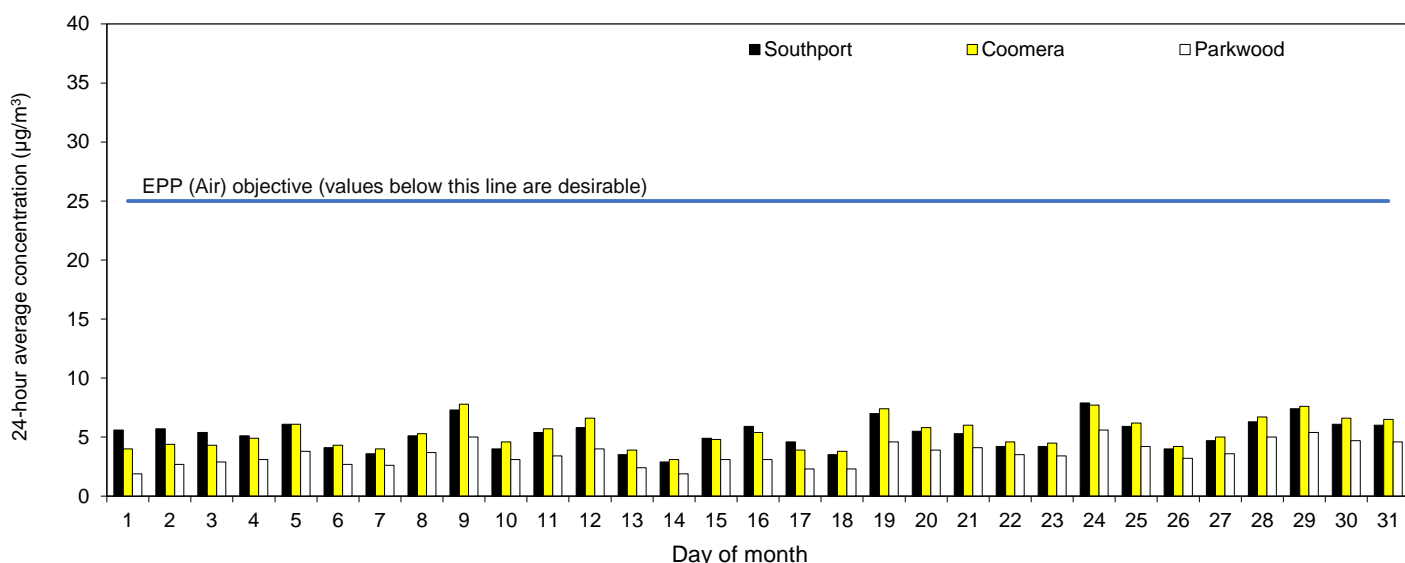


Figure 26. Ambient concentrations of PM<sub>2.5</sub> at Raceview, Mutdapilly and Toowoomba (Tor St) sites. Daily 24-hour average concentrations (µg/m<sup>3</sup>), December 2024.

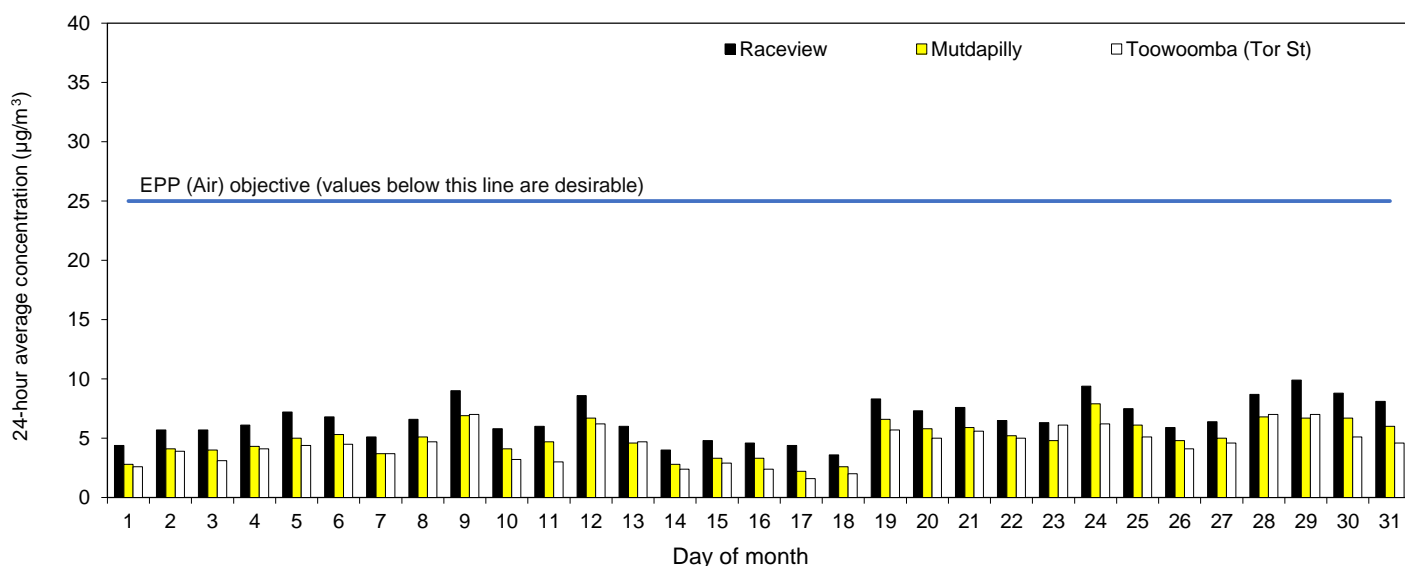


Table 9. Ambient concentrations of PM<sub>2.5</sub>. Annual average and monthly maximum 24-hour concentrations (µg/m<sup>3</sup>), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Maryborough</b>												
Annual average:	5.9											
Maximum 24-hour	10.3	7.1	8.5	8.8	13.9	10.6	19.2	13.5	13.7	10.8	-	9.4
% I.A.	100	100	100	100	100	100	100	100	100	100	54	95
<b>Nambour</b>												
Annual average:	5.2											
Maximum 24-hour	9.2	7.3	8.2	6.2	16.2	7.4	6.6	13.6	14.2	10.3	11.6	8.2
% I.A.	100	100	100	100	99	100	100	100	100	100	99	100
<b>Mountain Creek</b>												
Annual average:	5.7											
Maximum 24-hour	11.3	7.8	9.9	7.3	6.9	13.5	8.7	12.8	14.3	10.5	11.3	9.0
% I.A.	100	100	100	100	100	100	100	100	100	100	100	100
<b>Deception Bay</b>												
Annual average:	6.0											
Maximum 24-hour	9.4	8.0	8.8	7.3	6.8	12.3	12.7	16.6	21.8	11.0	11.4	8.1
% I.A.	100	100	100	100	100	100	100	100	93	98	100	100
<b>Deagon</b>												
Annual average:	5.8											
Maximum 24-hour	8.8	8.0	7.6	7.3	7.0	15.0	8.6	20.2	18.8	10.5	11.9	7.7
% I.A.	98	100	100	100	100	99	99	99	100	100	99	100
<b>Brisbane CBD</b>												
Annual average:	6.4											
Maximum 24-hour	9.1	8.3	7.7	8.3	7.4	-	10.9	21.6	20.2	12.7	16.0	8.7
% I.A.	100	100	100	100	100	19	100	100	100	100	100	100
<b>South Brisbane</b>												
Annual average:	6.7											
Maximum 24-hour	9.2	8.5	8.0	9.9	9.0	32.7	12.1	18.3	19.7	11.5	13.4	8.0
% I.A.	100	100	100	100	100	100	100	100	100	100	100	99
<b>Woolloongabba</b>												
Annual average:	5.8											
Maximum 24-hour	8.0	7.5	7.0	8.1	8.0	15.7	11.2	15.9	19.0	12.2	11.9	6.6
% I.A.	100	100	100	99	99	98	100	100	100	99	100	100
<b>Cannon Hill</b>												
Annual average:	6.1											
Maximum 24-hour	9.0	8.5	7.6	7.8	8.1	27.5	10.0	15.6	18.1	11.5	11.8	7.3
% I.A.	100	96	100	100	100	100	100	100	99	100	99	100
<b>Wynnum North (industry-operated site)</b>												
Annual average:	2.9											
Maximum 24-hour	4.1	5.0	4.7	5.1	4.9	15.8	5.0	13.9	13.4	7.5	8.7	5.0
% I.A.	99	99	96	98	100	100	98	100	99	99	86	100
<b>Wynnum West (industry-operated site)</b>												
Annual average:	2.9											
Maximum 24-hour	4.5	5.6	4.1	4.8	4.9	13.6	5.5	11.2	11.2	7.0	6.4	5.1
% I.A.	99	97	94	96	100	99	98	100	99	99	92	94
<b>Lytton (industry-operated site)</b>												
Annual average:	4.2											
Maximum 24-hour	5.3	5.2	7.3	6.0	7.6	17.2	8.9	13.7	13.2	8.7	7.1	7.0
% I.A.	97	99	99	99	99	100	99	100	94	90	97	97
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The Environmental Protection (Air) Policy 2019 air quality objectives for PM <sub>2.5</sub> are an annual average of 8µg/m <sup>3</sup> and a 24-hour average of 25µg/m <sup>3</sup> .												

Table 9 (contd). Ambient concentrations of PM<sub>2.5</sub>. Annual average and monthly maximum 24-hour concentrations (µg/m<sup>3</sup>), January 2024 to December 2024.

Site		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Rocklea</b>													
Annual average:	6.2												
Maximum 24-hour		10.1	8.9	8.7	8.1	9.3	22.3	15.6	18.6	19.1	12.5	13.5	7.7
% I.A.		100	100	99	86	100	100	100	99	100	100	82	99
<b>North Maclean</b>													
Annual average:	7.2												
Maximum 24-hour		6.7	6.3	6.6	8.0	11.7	18.8	16.6	27.2	47.7	23.0	15.0	7.4
% I.A.		100	100	100	100	100	100	100	100	99	100	100	100
<b>Springwood</b>													
Annual average:	6.6												
Maximum 24-hour		9.1	7.7	8.0	8.7	7.3	13.9	15.0	27.4	50.5	15.3	12.8	8.1
% I.A.		100	100	100	100	100	99	100	100	100	100	100	100
<b>Southport</b>													
Annual average:	5.6												
Maximum 24-hour		10.1	8.2	9.5	6.6	6.8	12.5	8.0	16.1	18.8	12.5	11.3	7.9
% I.A.		99	100	100	100	100	100	100	100	100	99	100	100
<b>Coomera</b>													
Annual average:	5.9												
Maximum 24-hour		9.8	7.9	8.4	6.5	6.5	17.1	9.4	17.2	20.7	13.8	12.9	7.8
% I.A.		100	100	100	100	100	100	100	100	100	100	100	100
<b>Parkwood</b>													
Annual average:	4.8												
Maximum 24-hour		9.3	8.0	7.9	5.2	5.5	10.6	6.4	17.3	20.9	12.0	13.0	5.6
% I.A.		100	100	100	100	100	100	100	100	100	100	100	100
<b>Raceview<sup>†</sup></b>													
Annual average:	-												
Maximum 24-hour		n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.9
% I.A.		0	0	0	0	0	0	0	0	0	0	0	100
<b>Mutdapilly</b>													
Annual average:	6.2												
Maximum 24-hour		8.6	10.2	8.6	7.5	9.1	10.1	11.5	27.0	34.6	24.0	15.3	7.9
% I.A.		97	99	100	100	100	100	99	97	100	99	98	98
<b>Toowoomba (Tor St)</b>													
Annual average:	5.5												
Maximum 24-hour		8.3	8.3	10.3	7.0	6.6	13.9	8.7	25.2	16.4	11.0	14.6	7.0
% I.A.		92	100	100	100	100	100	100	100	100	100	100	100
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.													
<sup>†</sup> PM <sub>2.5</sub> monitoring commenced at Raceview in December 2024.													
The Environmental Protection (Air) Policy 2019 air quality objectives for PM <sub>2.5</sub> are an annual average of 8µg/m <sup>3</sup> and a 24-hour average of 25µg/m <sup>3</sup> .													

TSP

Figure 27. Ambient concentrations of TSP at Cannon Hill site. Daily 24-hour average concentrations (µg/m³), December 2024.

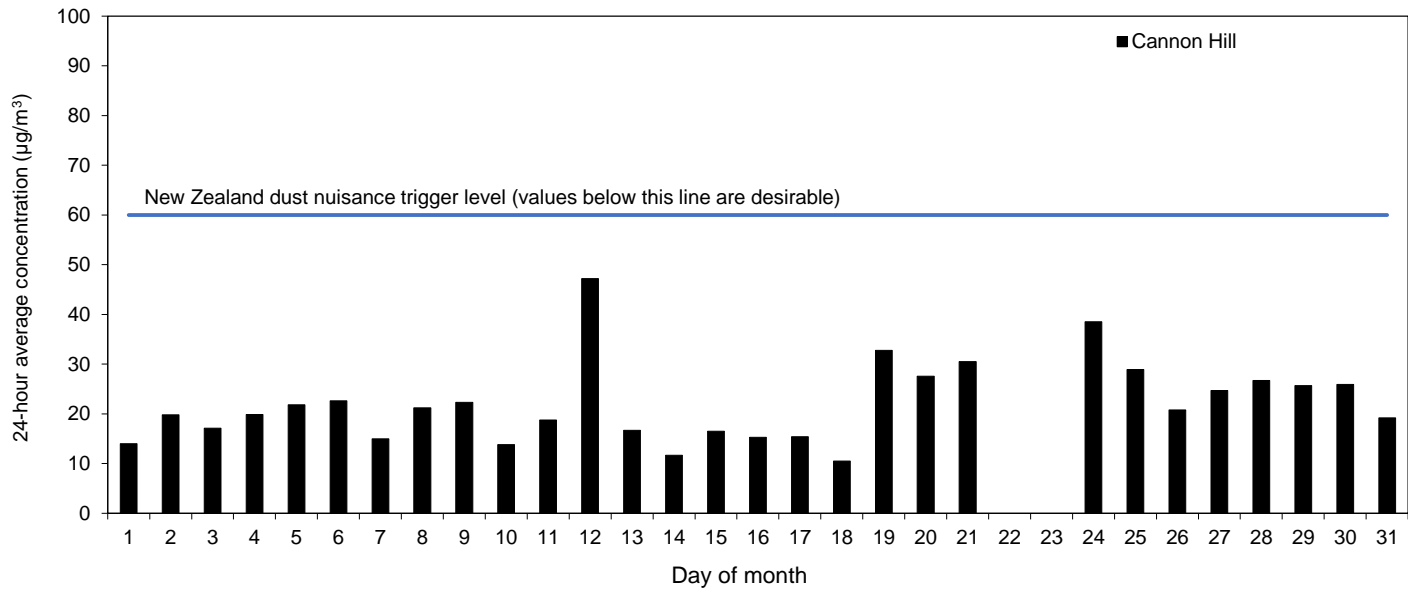


Table 10. Ambient concentrations of TSP. Annual average and monthly maximum 24-hour concentrations (µg/m³), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cannon Hill												
Annual average:	20.8											
Maximum 24-hour	32.4	31.6	32.7	43.9	25.7	46.7	30.5	47.7	45.4	34.0	44.8	47.2
% I.A.	99	98	100	100	100	100	100	100	99	99	95	95
% I.A. indicates instrument availability. - indicates less than three-fifths of the data are available. n.d. indicates no data are available.												
The Environmental Protection (Air) Policy 2019 air quality objective for TSP is an annual average of 90µg/m³.												
The former Department of Environment, Science and Innovation Air Impacts Guideline recommends that short-term (24-hour) TSP concentrations be compared against the trigger levels provided in the New Zealand Ministry for the Environment's <i>Good Practice Guide for Assessing and Managing Dust</i> (2016) to assess dust nuisance impacts. The New Zealand dust nuisance trigger level for high sensitivity areas is a 24-hour average of 60µg/m³.												

## Dustfall

Figure 28. Dust deposition rates at Cannon Hill (north), Cannon Hill (south) and Sherwood sites. Daily dust (insoluble solids fraction) deposition rate ( $\text{mg}/\text{m}^2/\text{day}$ ), for month of December 2024.

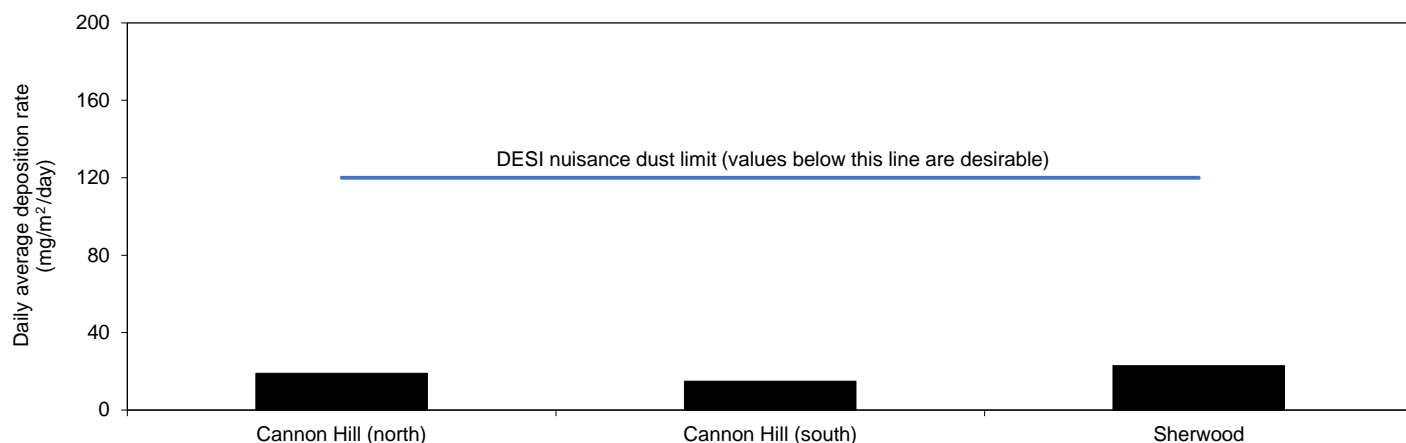


Figure 29. Dust deposition rates at Toowoomba (Brook St) and Toowoomba (Mort St) sites. Daily dust (insoluble solids fraction) deposition rate ( $\text{mg}/\text{m}^2/\text{day}$ ), for month of December 2024.

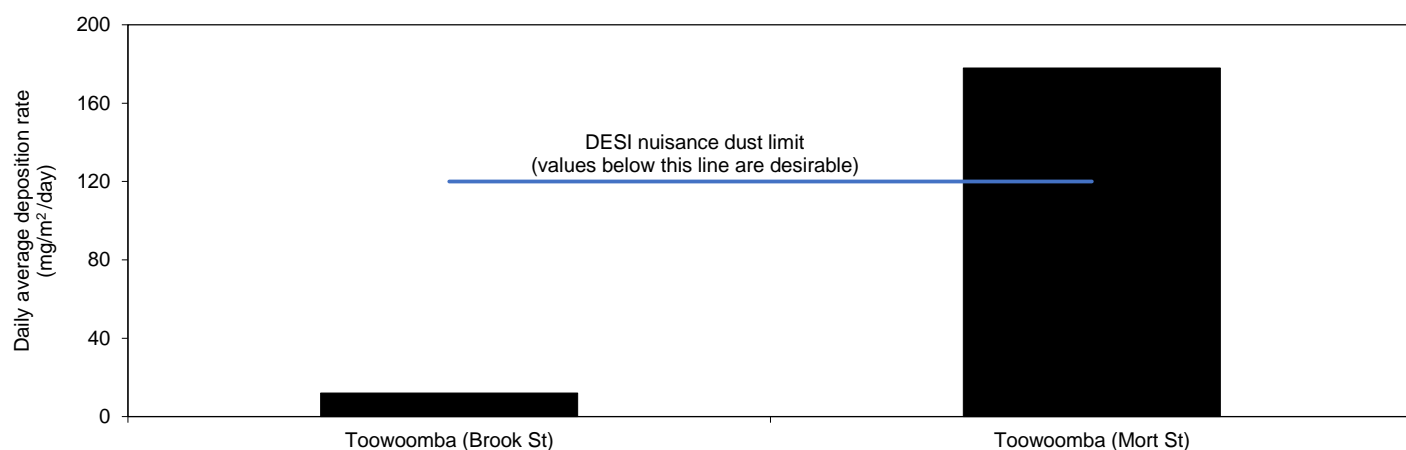


Table 11. Monthly average dust (insoluble fraction) deposition rate ( $\text{mg}/\text{m}^2/\text{day}$ ), January 2024 to December 2024.

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Cannon Hill (north)<sup>†</sup></b>												
Daily average	20	20	18	21	26	19	19	31	33	30	44	19
<b>Cannon Hill (south)<sup>†</sup></b>												
Daily average	5	17	20	40	23	27	26	31	21	47	27	15
<b>Sherwood</b>												
Daily average	22	29	37	33	31	38	37	49	24	73	36	23
<b>Toowoomba (Brook St)</b>												
Daily average	32	10	13	330	25	33	50	35	163	n.d.	105	12
<b>Toowoomba (Mort St)</b>												
Daily average	31	26	71	48	96	28	87	39	43	53	116	178

n.d. indicates no data are available.

<sup>†</sup> At Cannon Hill dustfall monitoring is carried out on both sides of the rail corridor.

The former Department of Environment, Science and Innovation Air Impacts Guideline recommends a dust deposition limit of  $120\text{mg}/\text{m}^2/\text{day}$ , averaged over one month, be used to assess dust nuisance.

There is a minimum dust deposition rate that can be determined with the sampling equipment and laboratory method used. Dust deposition rates below this minimum reporting value are preceded by a "<" sign in this table.



Data availability

When required, Table 12 summarises the reasons for data availability below the minimum criteria for reporting at Southern Queensland monitoring sites.

Table 12. Reasons for low data availability at Southern Queensland ambient air monitoring sites during December 2024.

Station	Air Pollutant	Cause
Nil		

Related air quality information

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

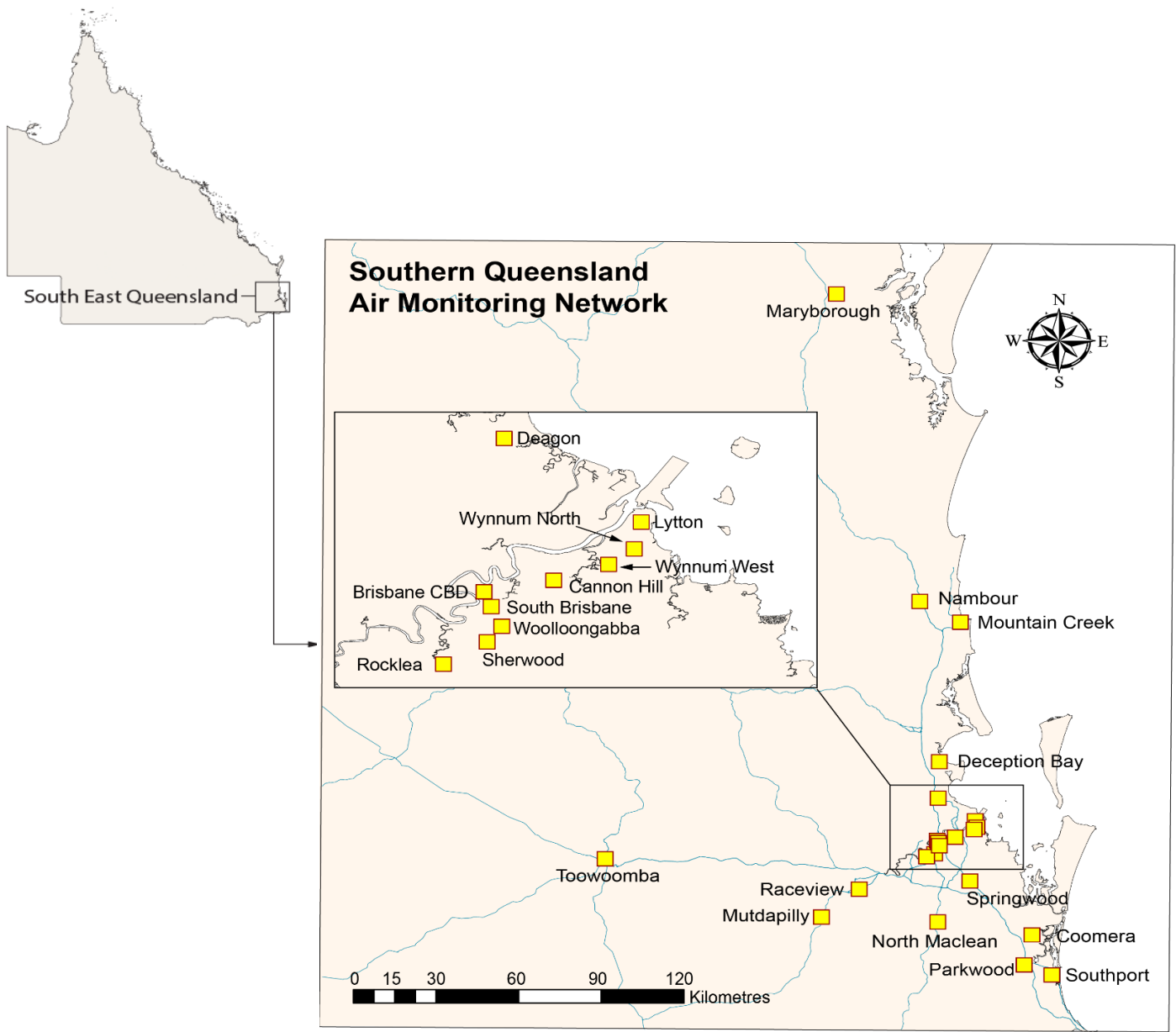
Additional information on air quality monitoring and related issues is also available from the above website.

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](mailto:air.sciences@detsi.qld.gov.au)

Figure 30. Southern Queensland ambient air quality monitoring site locations.



The Department of the Environment, Tourism,  
Science and Innovation acknowledges Aboriginal  
and Torres Strait Islander peoples as the  
Traditional Owners and custodians of the land.

We recognise their connection to land,  
sea and community, and pay our respects  
to Elders past and present.



**Queensland**  
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