

Ground Level Particulate Notification Report - 22 December, 2019

Adelaide Brighton Cement, Birkenhead Works
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EPA Licence No: 1126

Summary

The 24-hour average particulate matter monitoring data collected at the Community Park and Gunn Street monitoring sites during 22 December, 2019 is shown in [Table 1](#) below. The data indicates that:

- The 24-hour average PM₁₀ concentration measured at Community Park of 58.5 µg/m³ exceeded the EPP Air criterion of 50 µg/m³
- The 24-hour average PM_{2.5} concentration measured at Community Park of 56.2 µg/m³ exceeded the EPP Air criterion of 25 µg/m³
- The 24-hour average PM₁₀ concentration measured at Gunn Street of 51.4 µg/m³ exceeded the EPP Air criterion of 50 µg/m³
- The 24-hour average PM_{2.5} concentration measured at Gunn Street of 50.8 µg/m³ exceeded the EPP Air criterion of 25 µg/m³

Table 1: Monitoring Summary

Monitoring Location	Pollutant	24-hour average (µg/m ³)	EPP Air Criterion (µg/m ³)
Community Park	PM ₁₀	58.5	50
	PM _{2.5}	56.2	25
Gunn Street	PM ₁₀	51.4	50
	PM _{2.5}	50.8	25

Smoke and dust from bush fires burning in rural areas surrounding Adelaide have contributed to elevated levels of particulate in the Adelaide metropolitan area. The community monitors reflect these elevated particulate levels with the measured 24 hr averages for PM₁₀ and PM_{2.5} levels exceeding the EPP Air criterion, on both the Community Park and Gunn Street monitors.

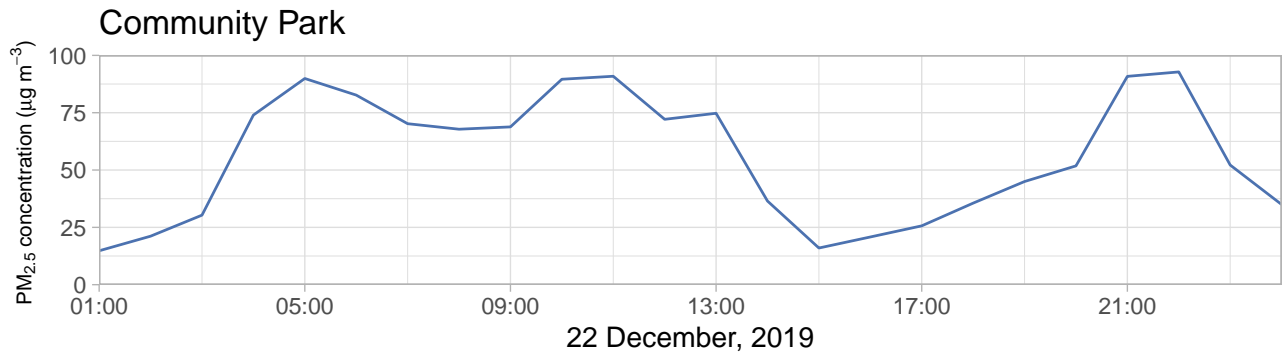
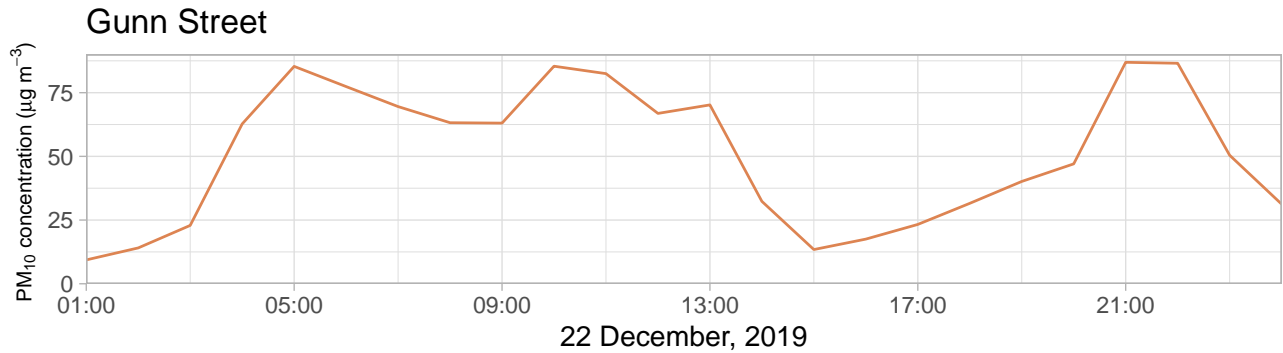
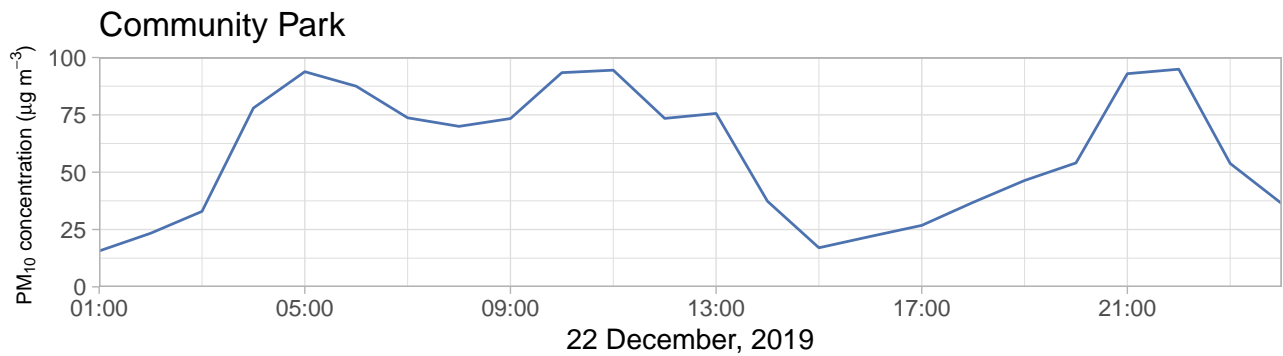
Community Monitoring

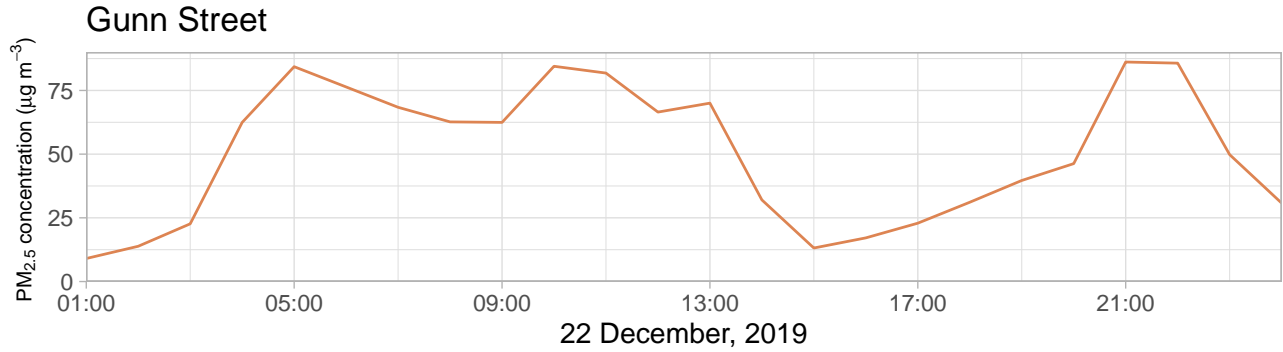
Monitoring data collected at the community monitoring sites is presented in this section.

The table below shows the proportion of PM₁₀ and PM_{2.5} measured at each monitor, according to the average wind direction at the time of monitoring.

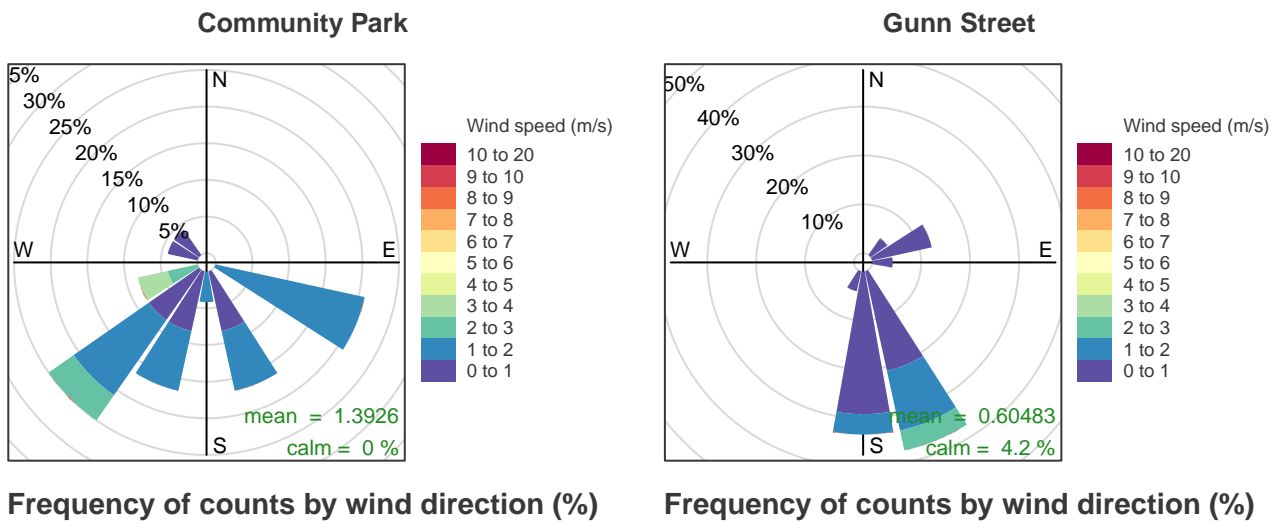
Monitoring Location	Direction	PM ₁₀ proportion (%)	PM _{2.5} proportion (%)
Community Park	From direction of ABC (WD < 180)	45	44
Community Park	From other direction (WD > 180)	55	56
Gunn Street	From direction of ABC (WD < 180)	94	94
Gunn Street	From other direction (WD > 180)	6	6

The figures below show the time series of 1-hour average measurements throughout 22 December, 2019

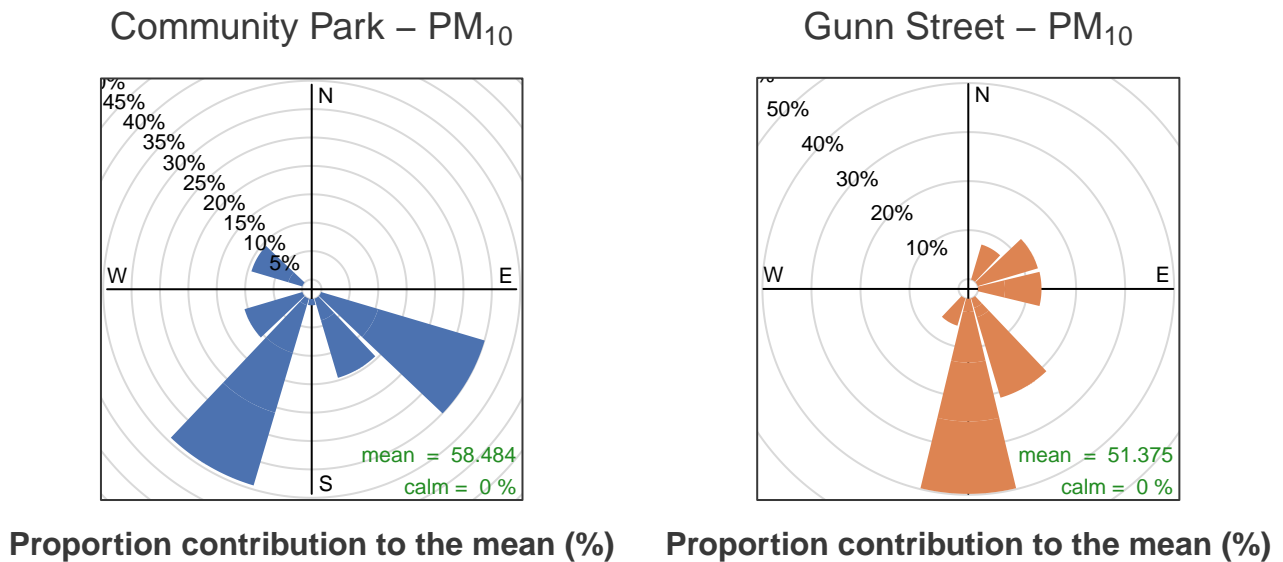




The figures below show wind roses summarising the period 22 December, 2019.



The figures below show dust roses summarising the period 22 December, 2019



EPA Monitoring

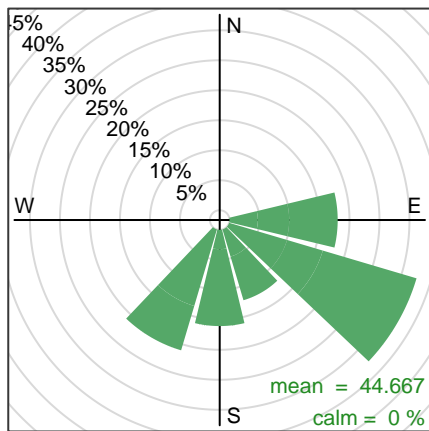
The 24-hour average PM₁₀ and PM_{2.5} concentrations measured at the EPA monitoring sites are shown in the table below. Note that the data has not been validated.

Site	Region	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
CBD	Adelaide CBD	44	28
Christies	Southern Adelaide	34	-
Elizabeth	Northern Adelaide	43	21
Kensington	Eastern Adelaide	41	-
Le Fevre 1	Northwestern Adelaide	44	23
Le Fevre 2	Northwestern Adelaide	47	25
Netley	Western Adelaide	54	25
Port Augusta	Mobile Station	44	23
Port Pirie Oliver St	Spencer Gulf	57	-
Whyalla Schulz Res	Spencer Gulf	49	-
Whyalla Walls St	Spencer Gulf	51	-

All EPA monitors reflect increased levels of particulate, confirming the regional influence of smoke and dust from the bush fires burning in rural areas surrounding Adelaide.

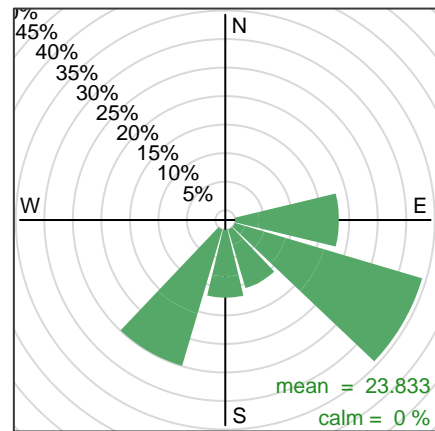
The dust roses below show the distribution of PM₁₀ and PM_{2.5} measured at Le Fevre 1 for the period 22 December, 2019 .

Le Fevre 1 – PM₁₀



Proportion contribution to the mean (%)

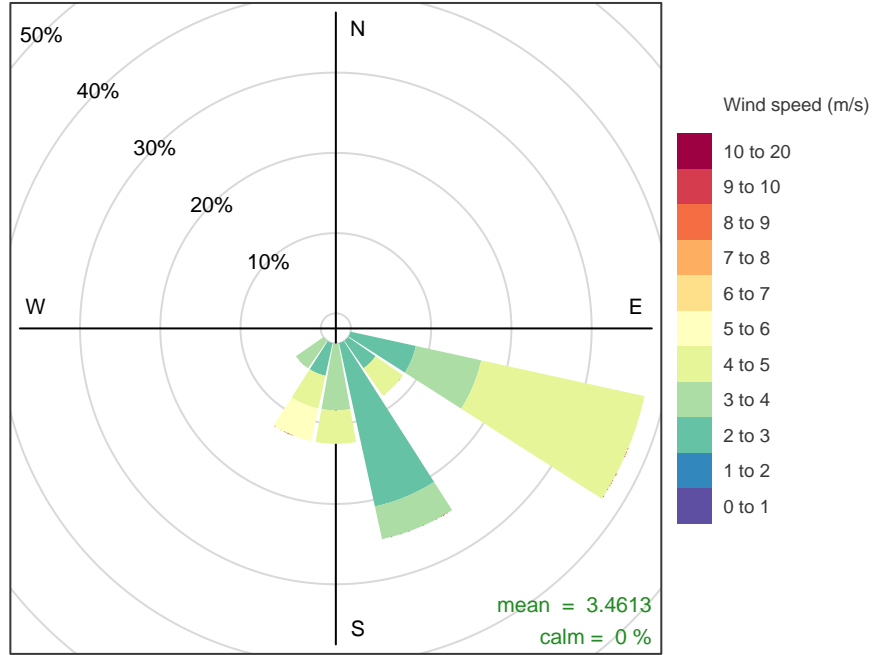
Le Fevre 1 – PM_{2.5}



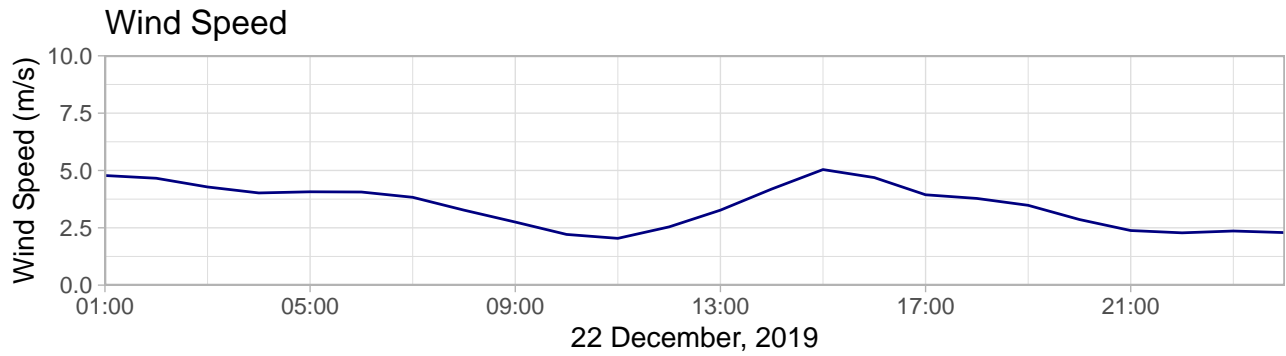
Proportion contribution to the mean (%)

Meteorological Monitoring

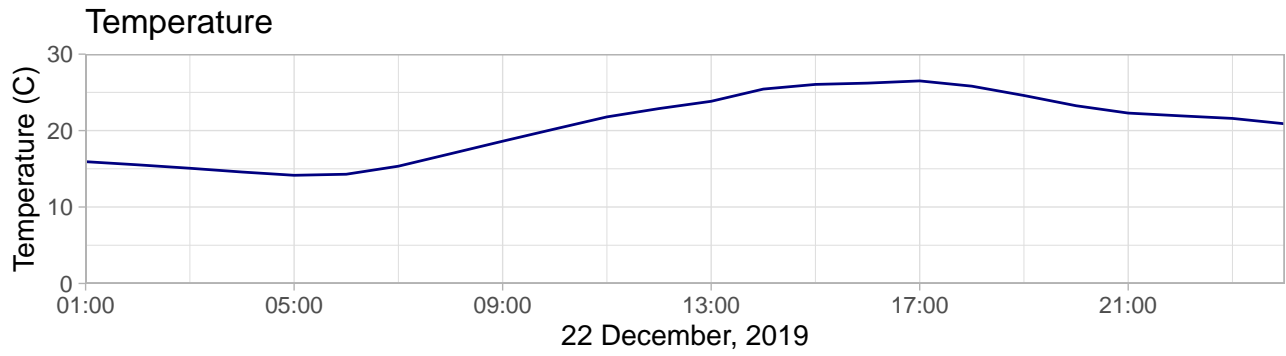
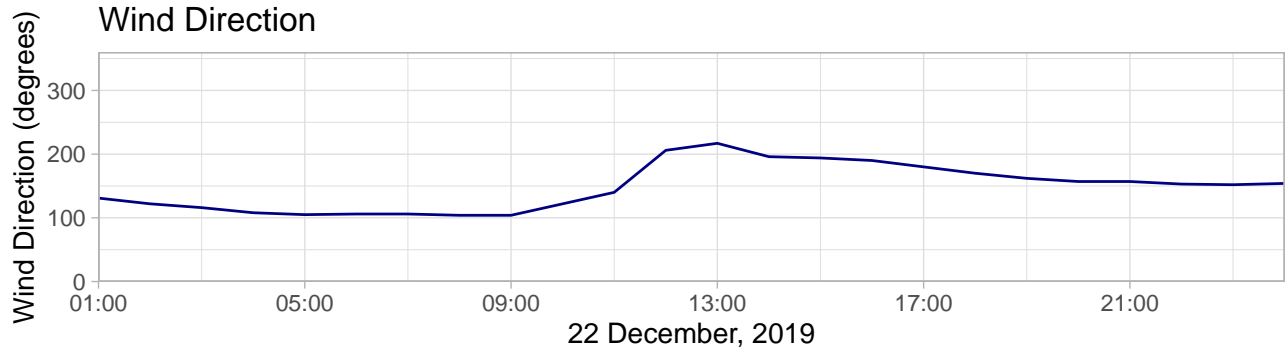
The following figures show meteorological parameters measured¹ throughout the day.



Frequency of counts by wind direction (%)



¹Powered by [Dark Sky](#)



Recent air quality data measured by ABC or EPA is indicative only and may be affected by instruments not working correctly, power failures and the like. Data is published directly from the monitors and will be validated at a later date.