

Ground Level Particulate Notification Report - 20 December, 2019

Adelaide Brighton Cement, Birkenhead Works
62 Elder Road, Birkenhead, SA 501
EPA Licence No: 1126

Summary

The 24-hour average particulate matter monitoring data collected at the Community Park and Gunn Street monitoring sites during 20 December, 2019 is shown in [Table 1](#) below. The data indicates that:

- The 24-hour average PM_{2.5} concentration measured at Community Park of 33.2 $\mu\text{g}/\text{m}^3$ exceeded the EPP Air criterion of 25 $\mu\text{g}/\text{m}^3$

Table 1: Monitoring Summary

Monitoring Location	Pollutant	24-hour average ($\mu\text{g}/\text{m}^3$)	EPP Air Criterion ($\mu\text{g}/\text{m}^3$)
Community Park	PM ₁₀	44.0	50
	PM _{2.5}	33.2	25
Gunn Street	PM ₁₀	27.4	50
	PM _{2.5}	23.8	25

Smoke and dust from many grass and bush fires, burning in rural and metropolitan areas of South Australia, contributed to elevated levels of particulate in the Adelaide area. The community monitors show elevated particulate levels with the 24-hour average PM_{2.5} concentration measured at the Community Park monitor, of 33.2 $\mu\text{g}/\text{m}^3$ exceeding the EPP Air criterion of 25.0 $\mu\text{g}/\text{m}^3$. The data shows that the majority of dust (63%) was carried by winds blowing towards ABC.

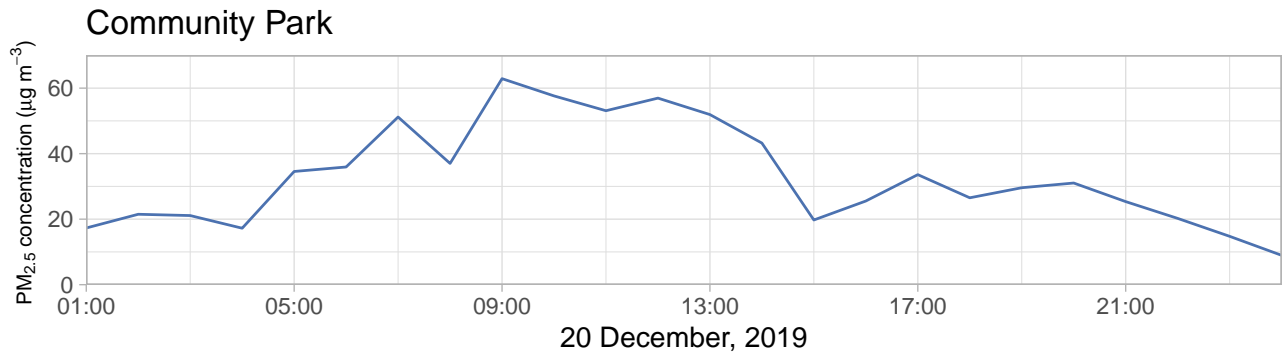
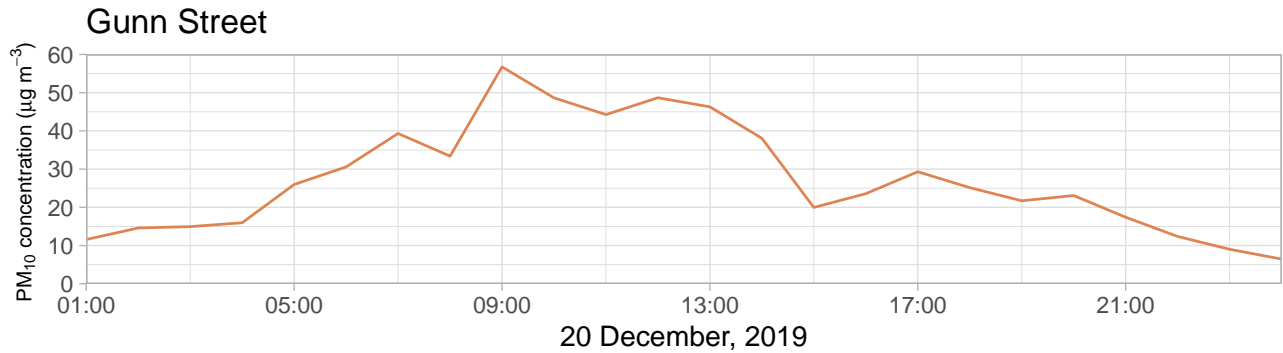
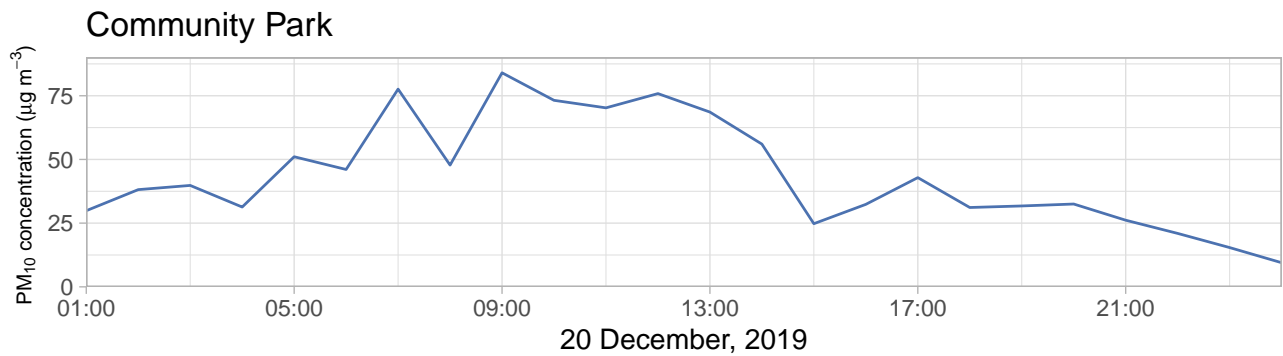
Community Monitoring

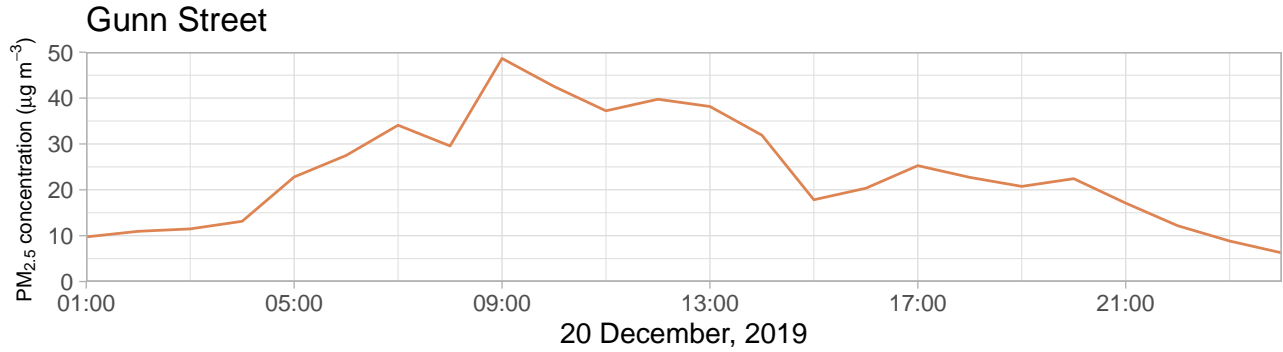
Monitoring data collected at the community monitoring sites is presented in this section.

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.

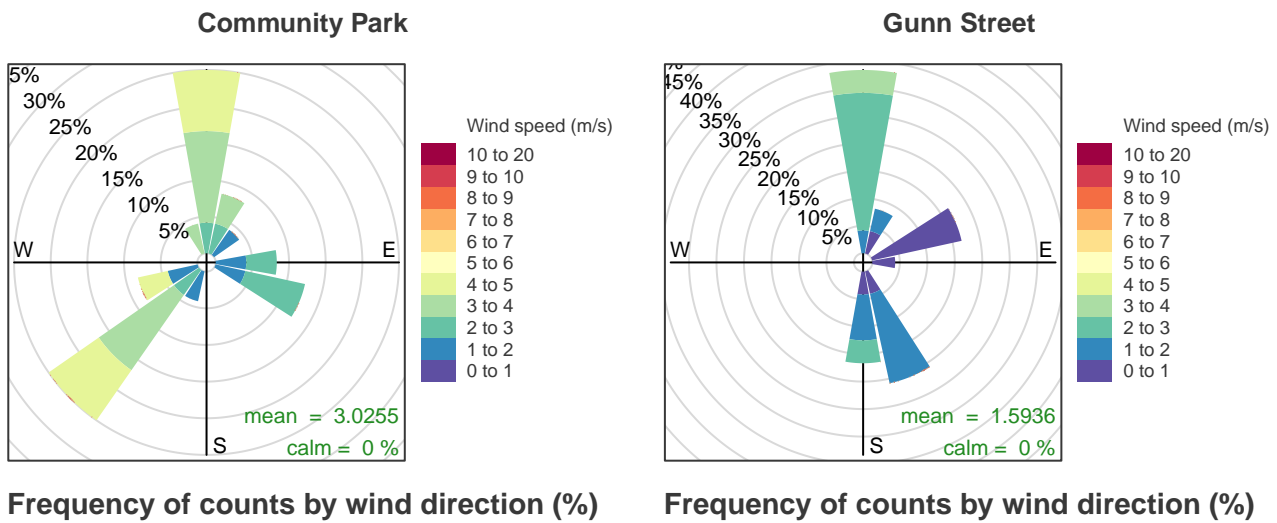
Monitoring Location	Direction	PM ₁₀ proportion (%)	PM _{2.5} proportion (%)
Community Park	From direction of ABC (WD < 180)	42	37
Community Park	From other direction (WD > 180)	58	63
Gunn Street	From direction of ABC (WD < 180)	54	55
Gunn Street	From other direction (WD > 180)	46	45

The figures below show the time series of 1-hour average measurements throughout 20 December, 2019

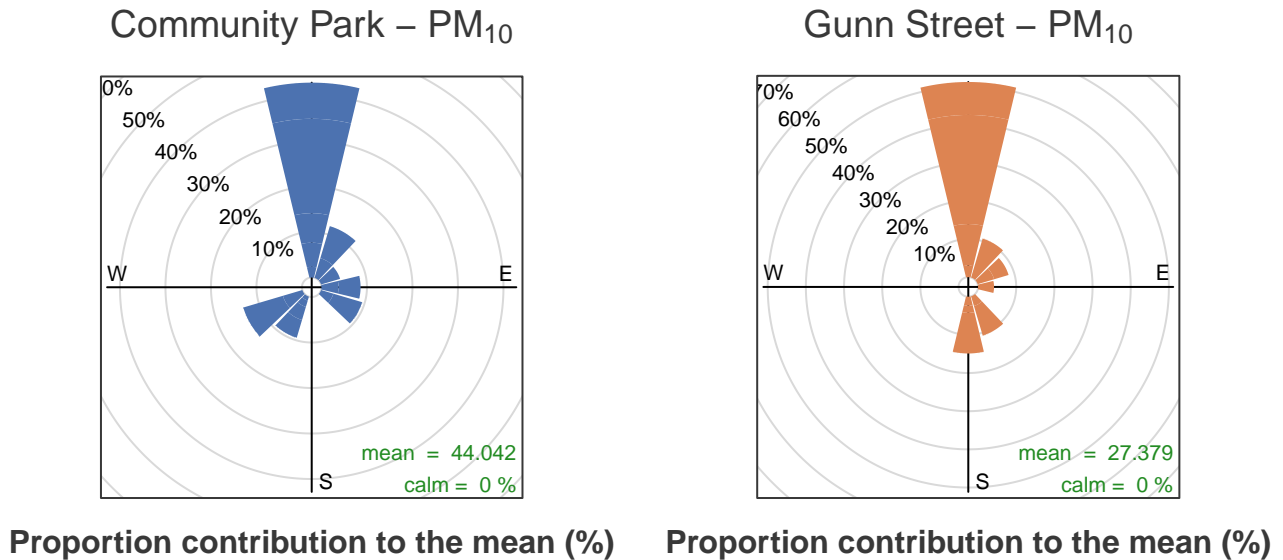




The figures below show wind roses summarising the period 20 December, 2019.



The figures below show dust roses summarising the period 20 December, 2019



EPA Monitoring

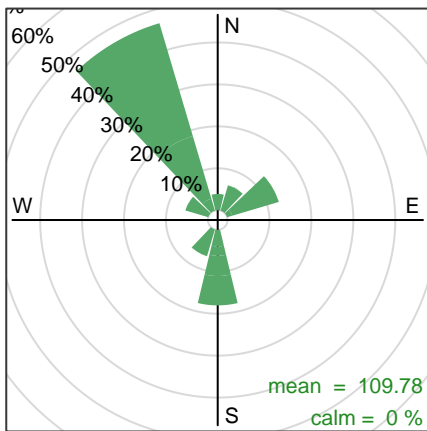
The 24-hour average PM₁₀ and PM_{2.5} concentrations measured at the EPA monitoring sites are shown in the table below. Note that the data has not been validated.

Site	Region	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
CBD	Adelaide CBD	88	21
Christies	Southern Adelaide	96	-
Elizabeth	Northern Adelaide	115	23
Kensington	Eastern Adelaide	102	-
Le Fevre 1	Northwestern Adelaide	107	-
Le Fevre 2	Northwestern Adelaide	94	19
Netley	Western Adelaide	126	20
Port Augusta	Mobile Station	140	47
Port Pirie Oliver St	Spencer Gulf	118	-
Whyalla Schulz Res	Spencer Gulf	101	-
Whyalla Walls St	Spencer Gulf	113	-

All the EPA monitors show increased levels of particulate, confirming the regional influence of smoke and dust from the many grass and bush fires burning in rural and metropolitan areas of South Australia.

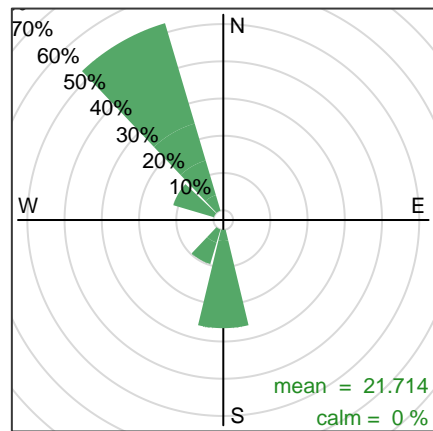
The dust roses below show the distribution of PM₁₀ and PM_{2.5} measured at Le Fevre 1 for the period 20 December, 2019 .

Le Fevre 1 – PM₁₀



Proportion contribution to the mean (%)

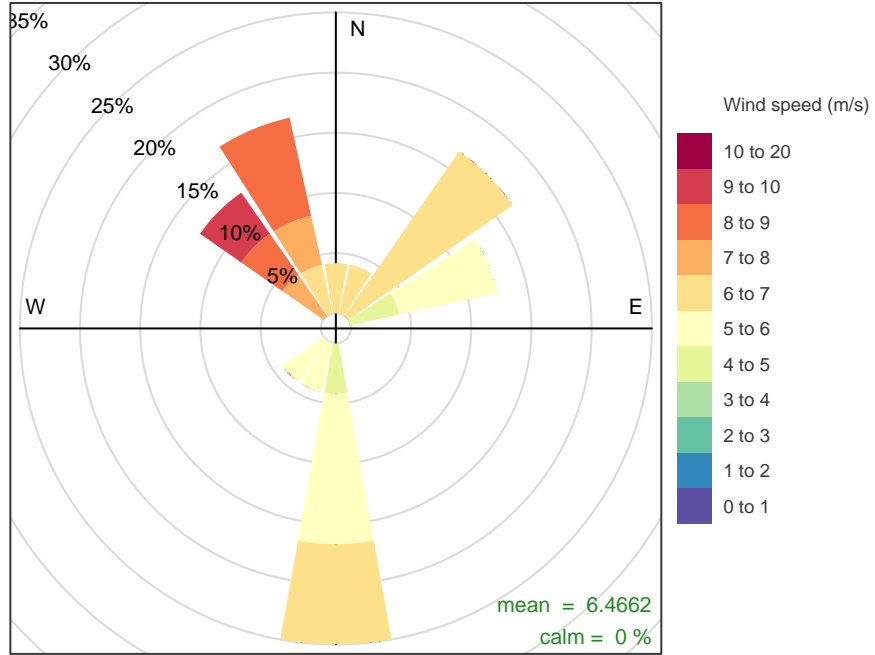
Le Fevre 1 – PM_{2.5}



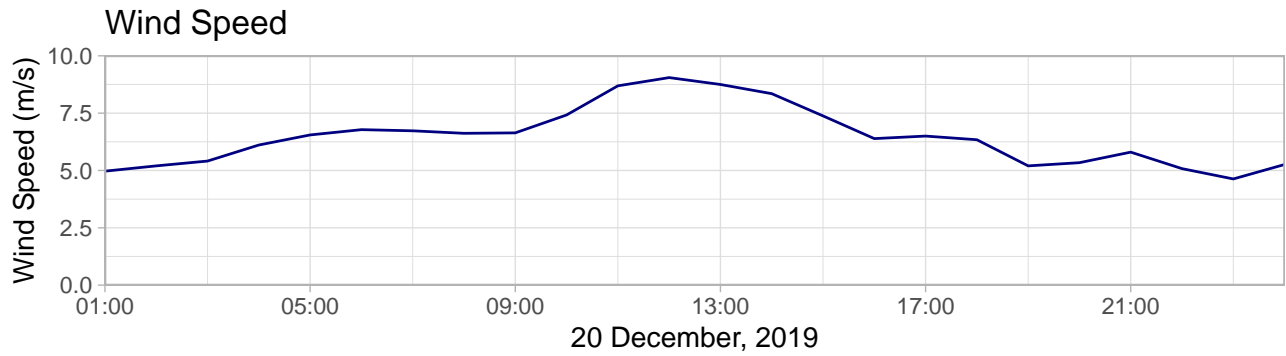
Proportion contribution to the mean (%)

Meteorological Monitoring

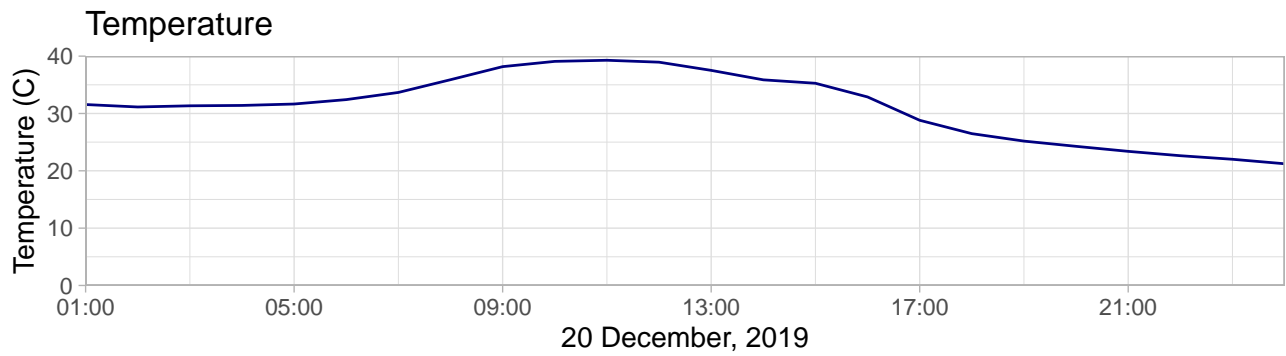
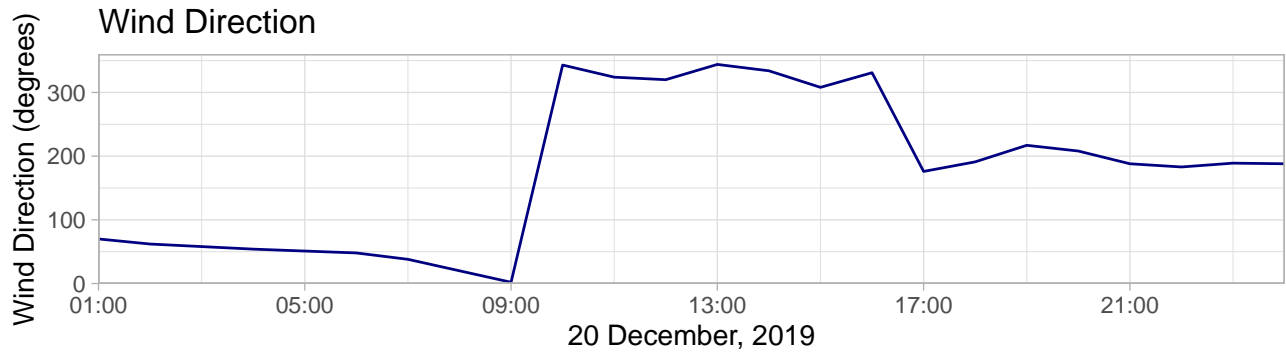
The following figures show meteorological parameters measured¹ throughout the day.



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.