

Ground Level Particulate Notification Report - 21 November, 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 21 November, 2019 is shown in [Table 1](#) below. The data indicates that:

- The 24-hour average PM_{2.5} concentration measured at Community Park of 25.5 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	30.4	50
	PM _{2.5}	25.5	25
Gunn Street	PM ₁₀	19.5	50
	PM _{2.5}	17.5	25

The exceedance was due to a regional increase in particulate levels due to strong winds and smoke from the Yorketown bush fire. As the wind direction changed from a Northerly to West South West direction, it brought dust and smoke from the bush fires which covered the metropolitan area.

Community Monitoring

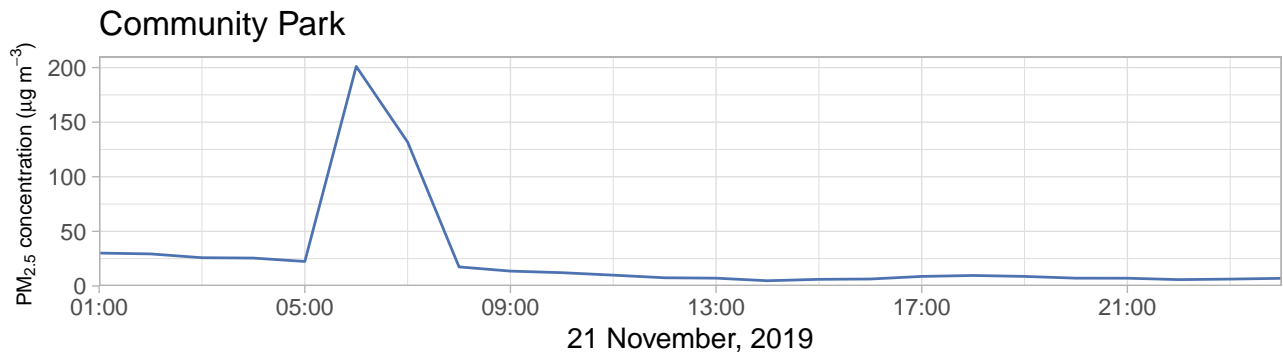
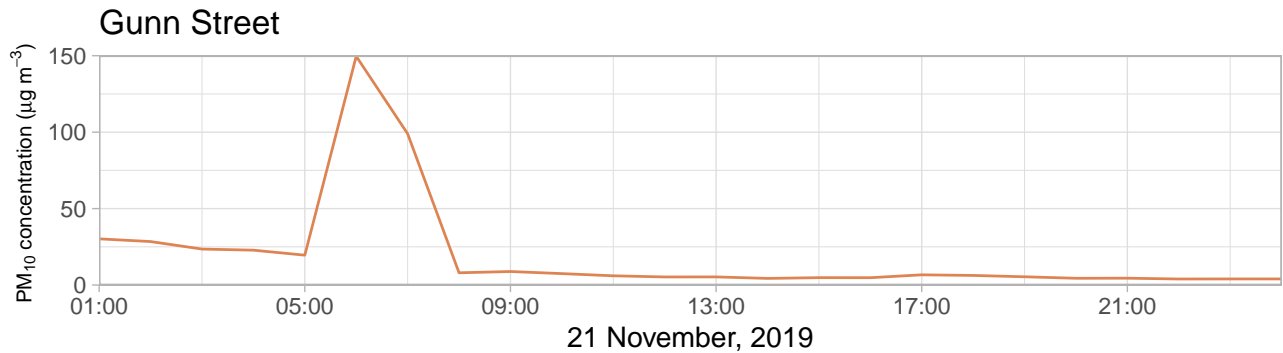
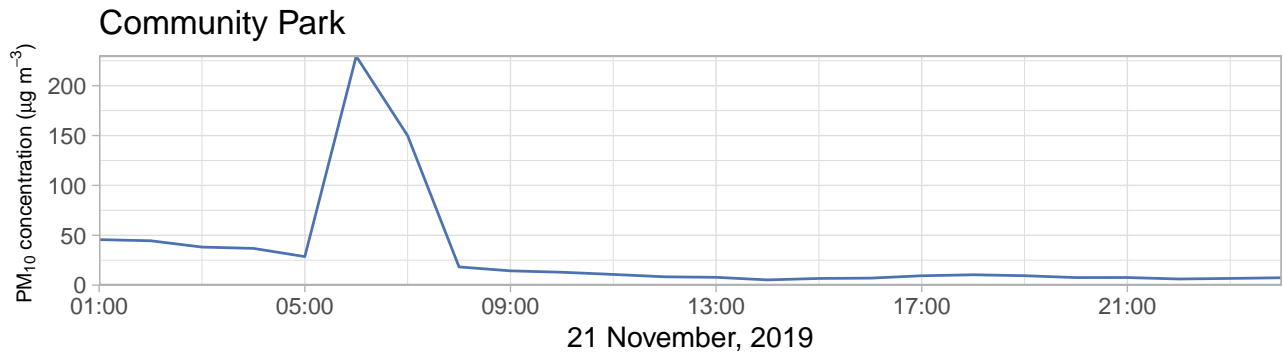
Monitoring data collected at the community monitoring sites is presented in this section.

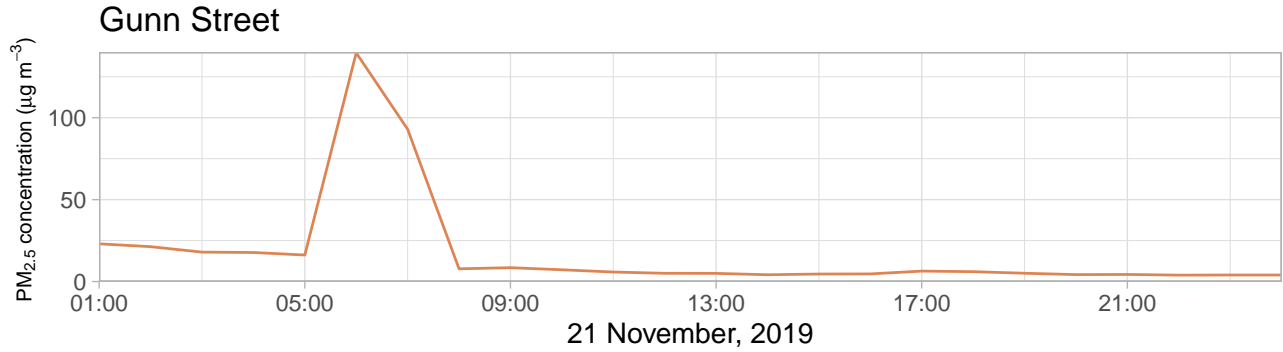
The graphs show the increase in dust levels and correlates with the change in wind direction bringing smoke and dust from the Yorketown bush fires to the Adelaide metropolitan region.

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.

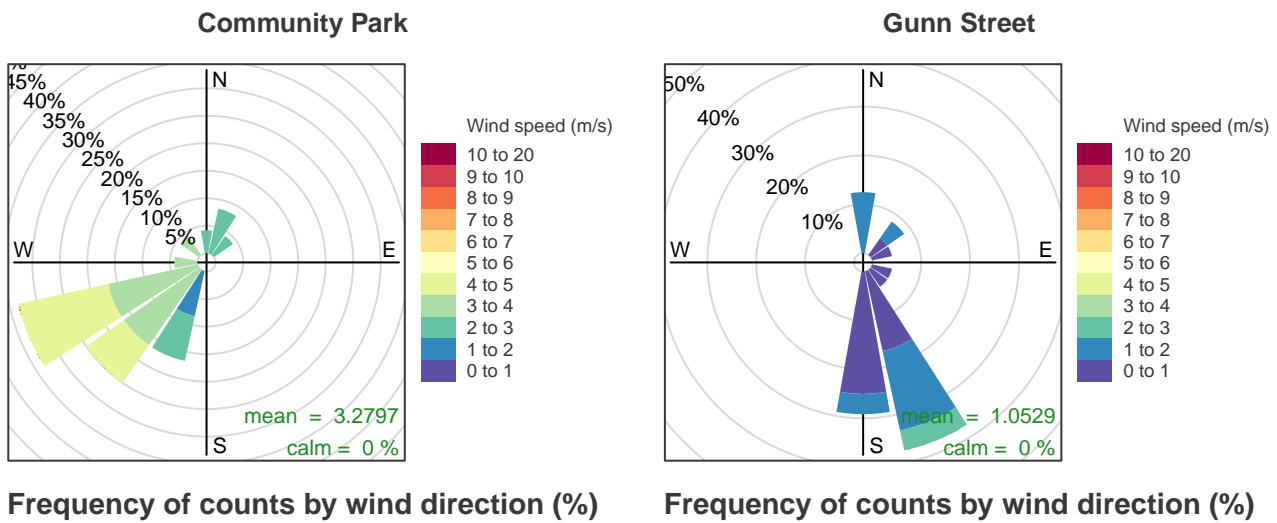
Monitoring Location	Direction	PM ₁₀ proportion (%)	PM _{2.5} proportion (%)
Community Park	From direction of ABC (WD < 180)	18	14
Community Park	From other direction (WD > 180)	82	86
Gunn Street	From direction of ABC (WD < 180)	92	93
Gunn Street	From other direction (WD > 180)	8	7

The figures below show the time series of 1-hour average measurements throughout 21 November, 2019

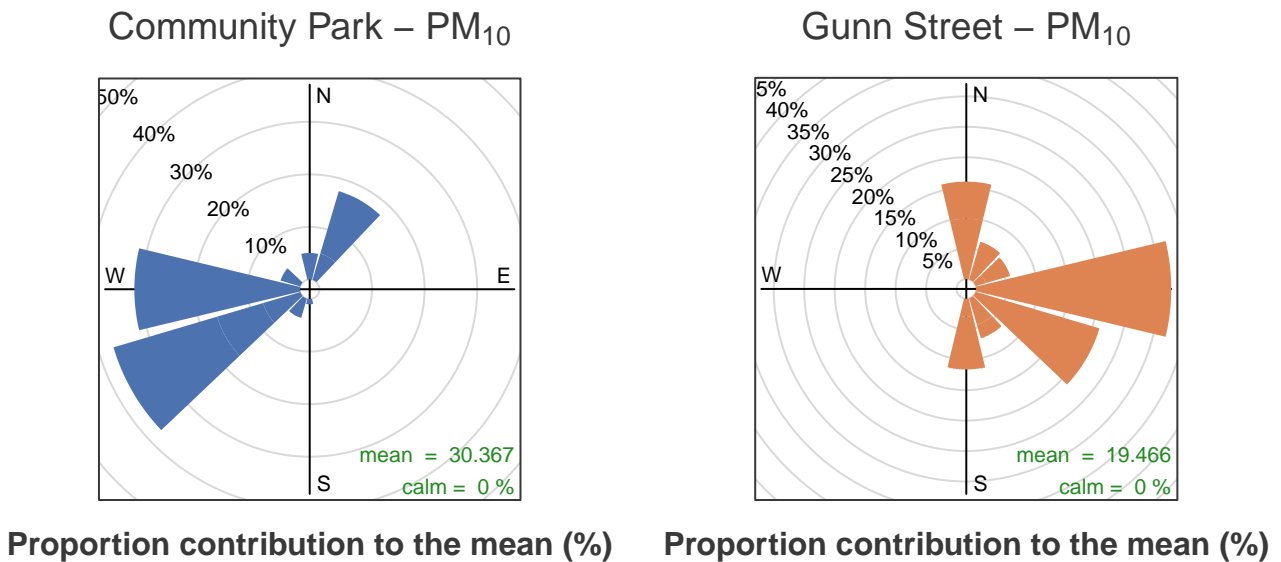




The figures below show wind roses summarising the period 21 November, 2019.



The figures below show dust roses summarising the period 21 November, 2019



EPA Monitoring

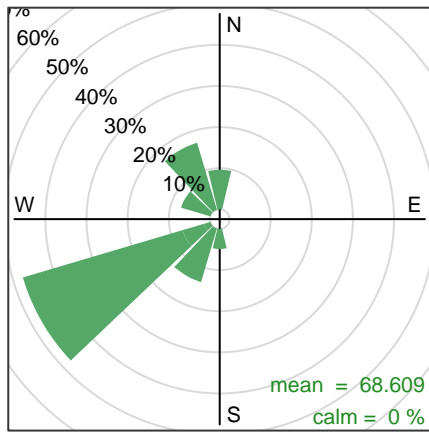
The 24-hour average PM₁₀ and PM_{2.5} concentrations measured at the EPA monitoring sites are shown in the table below. Note that the data has not been validated.

Site	Region	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)
CBD	Adelaide CBD	83	16
Christies	Southern Adelaide	51	-
Elizabeth	Northern Adelaide	86	22
Kensington	Eastern Adelaide	84	-
Le Fevre 1	Northwestern Adelaide	72	14
Le Fevre 2	Northwestern Adelaide	71	13
Netley	Western Adelaide	67	17
Port Augusta	Mobile Station	69	17
Port Pirie Oliver St	Spencer Gulf	47	-
Whyalla Schulz Res	Spencer Gulf	53	-
Whyalla Walls St	Spencer Gulf	53	-

EPA monitors confirm this was a regional dust event

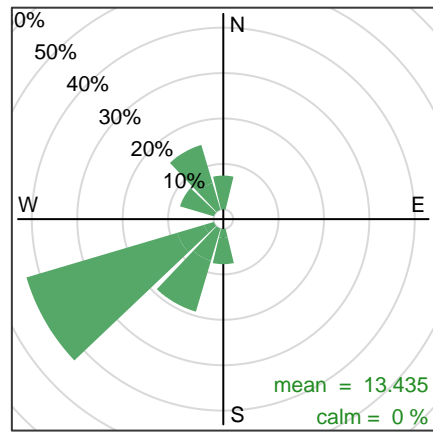
The dust roses below show the distribution of PM₁₀ and PM_{2.5} measured at Le Fevre 1 for the period 21 November, 2019 .

Le Fevre 1 – PM₁₀



Proportion contribution to the mean (%)

Le Fevre 1 – PM_{2.5}

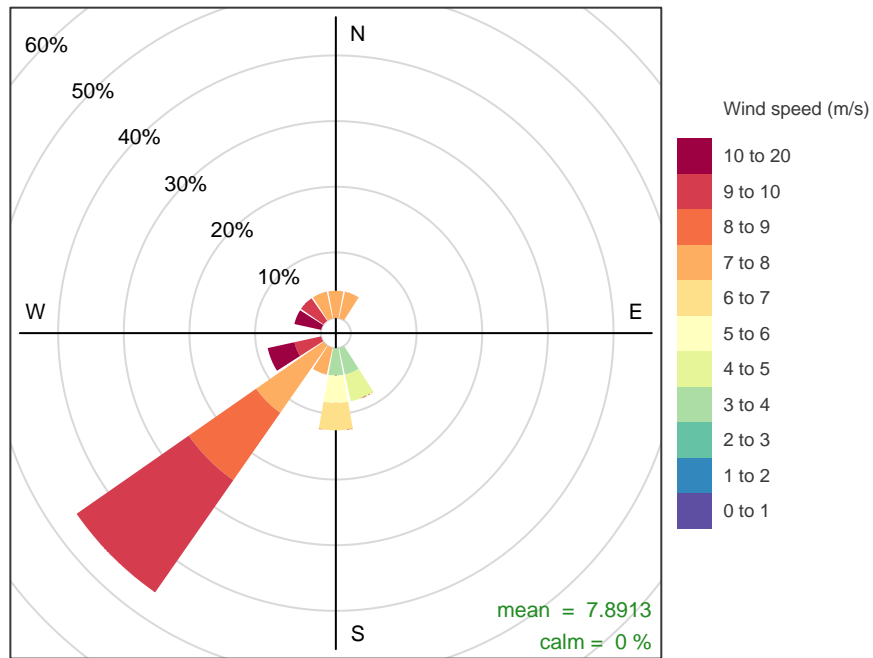


Proportion contribution to the mean (%)

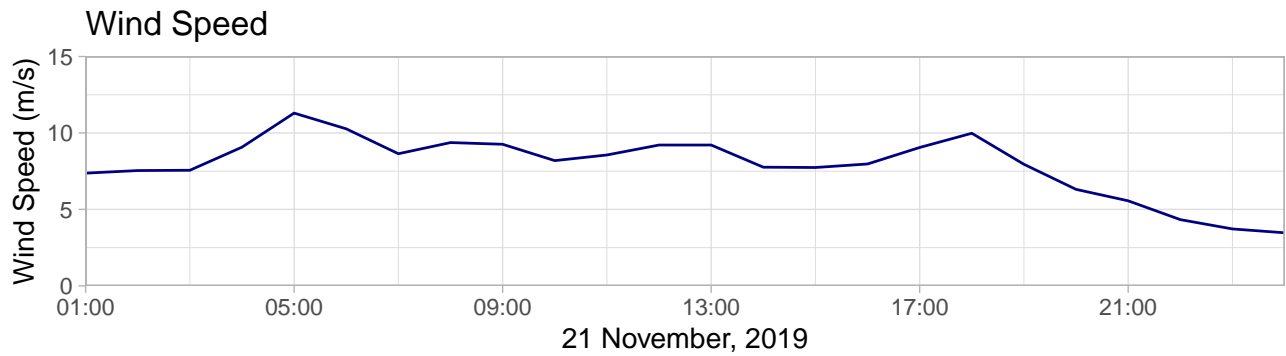
Meteorological Monitoring

The following figures show meteorological parameters measured¹ throughout the day.

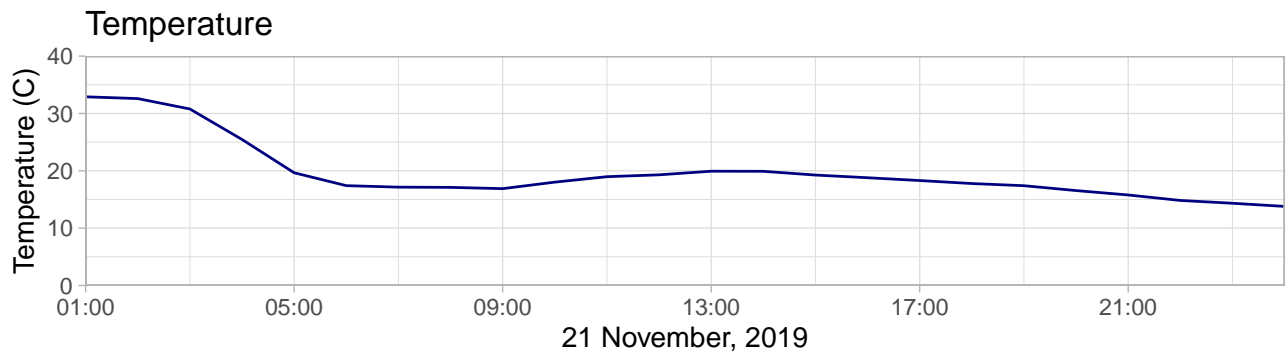
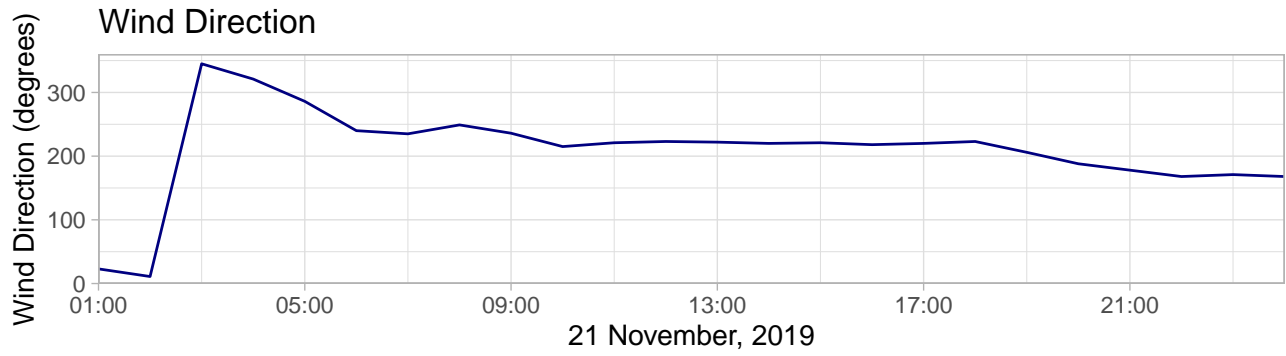
These graphs show the strong winds and change in wind direction to the West South West (250 degrees) that brought smoke and dust from the Yorke town bush fires to metropolitan Adelaide.



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.