

Ground Level Particulate Notification Report - 13 July, 2020

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 13 July, 2020 is shown in [Table 1](#) below. The data indicates that:

- The 24-hour average PM_{2.5} concentration measured at Community Park of 36.2 µg/m³ exceeded the EPP Air criterion of 25 µg/m³
- The 24-hour average PM_{2.5} concentration measured at Gunn Street of 27.5 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	38.7	50
	PM _{2.5}	36.2	25
Gunn Street	PM ₁₀	27.6	50
	PM _{2.5}	27.5	25

All ABC monitors (on site and off site), showed similar particulate levels and trends. This indicates the particulate level was from a localised airshed condition, rather than related to any specific site activity. Air with high relative humidity (~ 97%), and temperature lower than the dew point, combined with calm to light wind conditions creating fog that persisted from early morning, gradually dispersing towards midday as air temperatures increased and then reformed early evening. Conditions favourable for fog formation are also favourable for increased particulate levels, as there is reduced flushing of the air shed. The PM_{2.5} particulate levels and trends are indicative of combustion sources such as traffic, and increased use of domestic wood heaters at this time of the year. ABC notes that the clinker kiln plant was shut down at 9am on the 13/7/2020 for several days for maintenance. Unfortunately EPA monitoring data was unavailable at the time of preparing this report

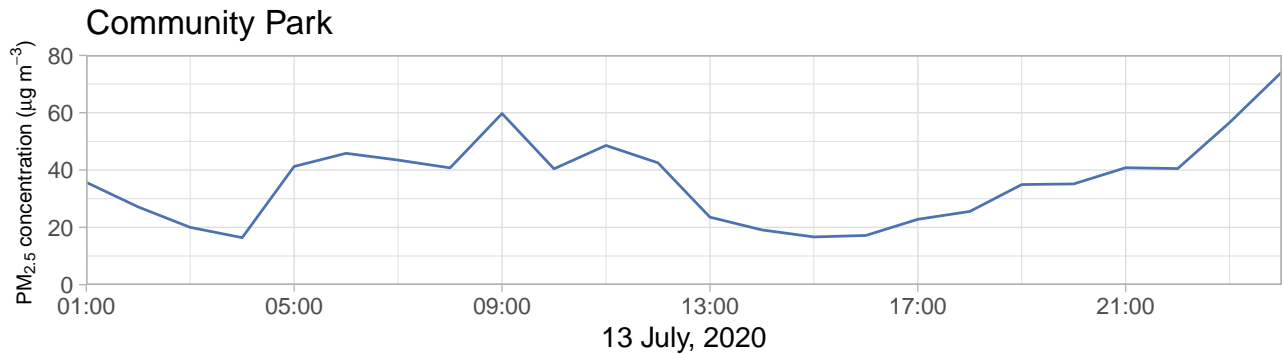
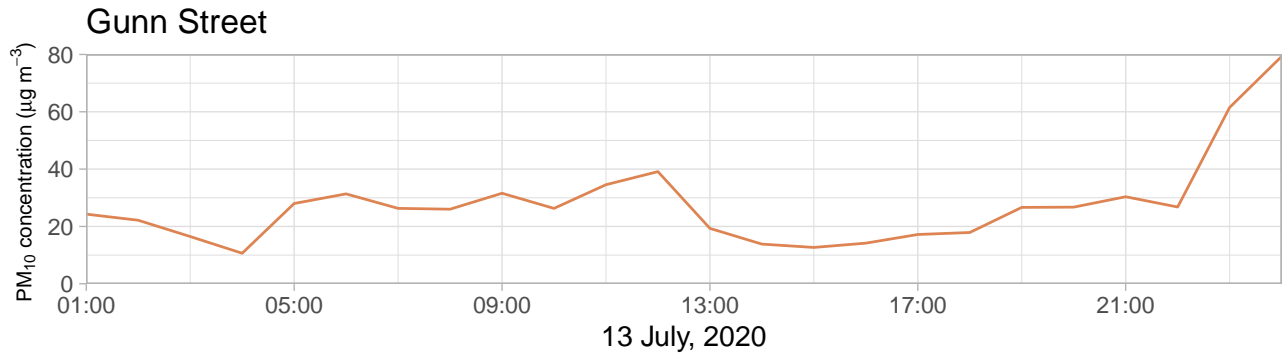
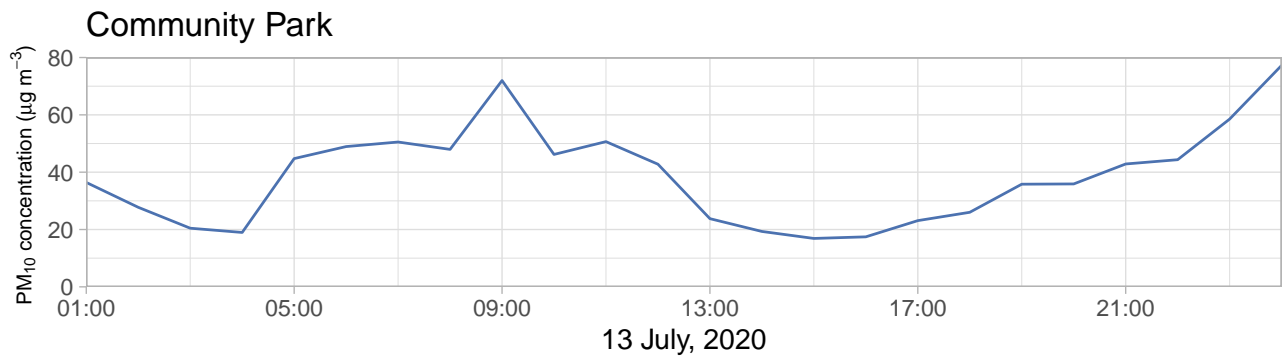
Community Monitoring

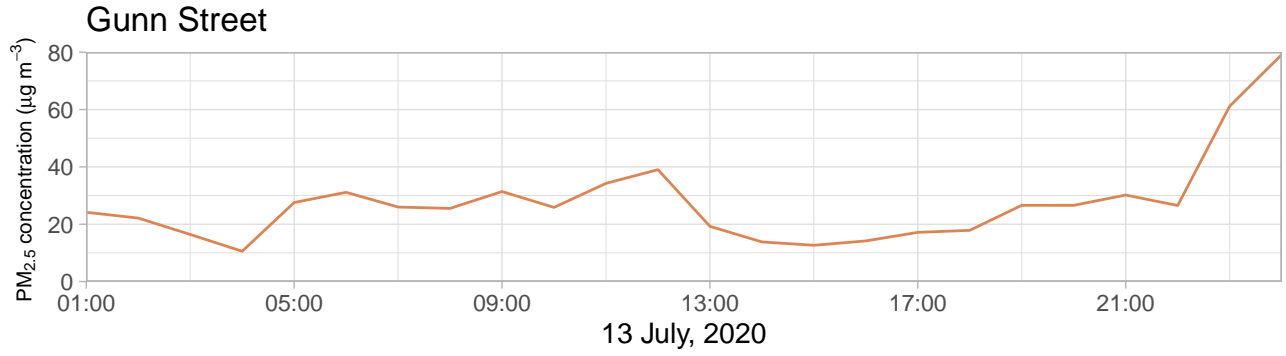
Monitoring data collected at the community monitoring sites is presented in this section.

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.

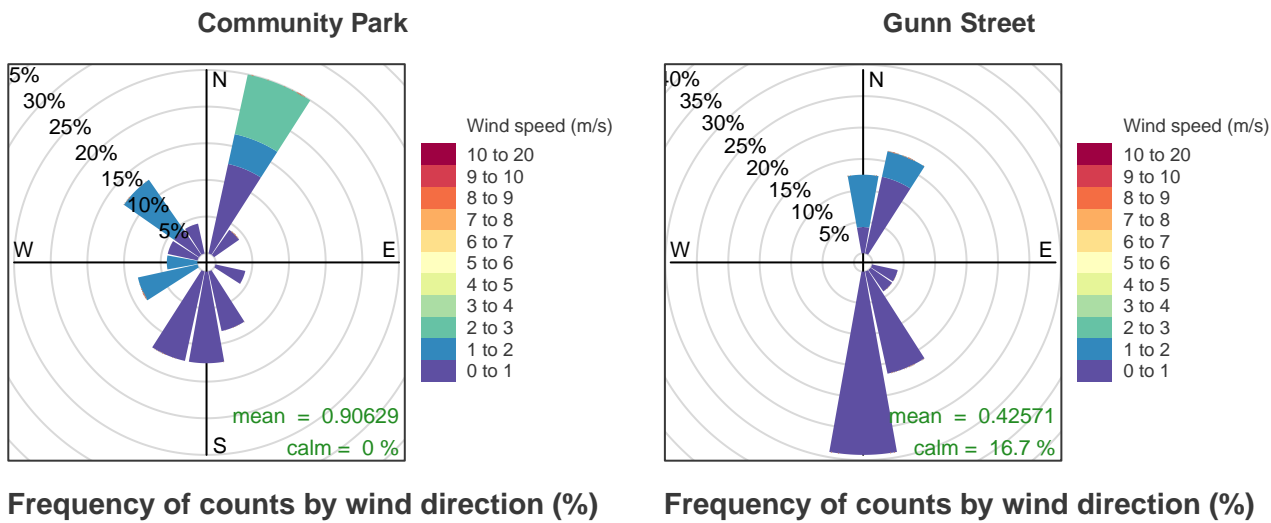
Monitoring Location	Direction	PM ₁₀ proportion (%)	PM _{2.5} proportion (%)
Community Park	From direction of ABC (WD < 180)	57	55
Community Park	From other direction (WD > 180)	43	45
Gunn Street	From direction of ABC (WD < 180)	89	89
Gunn Street	From other direction (WD > 180)	11	11

The figures below show the time series of 1-hour average measurements throughout 13 July, 2020

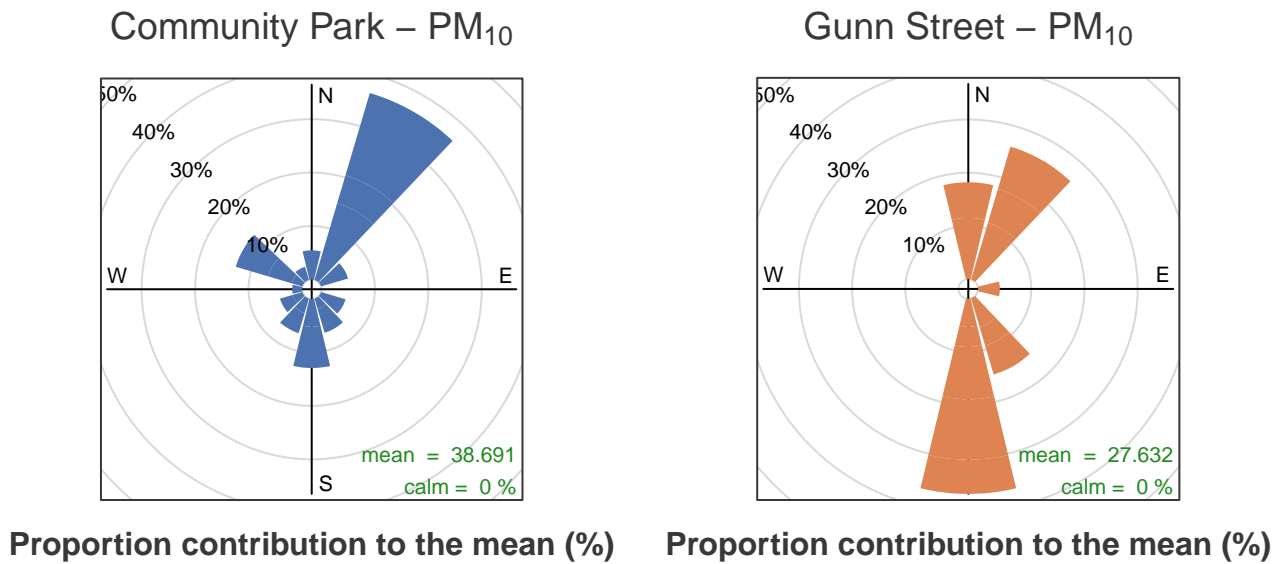




The figures below show wind roses summarising the period 13 July, 2020.

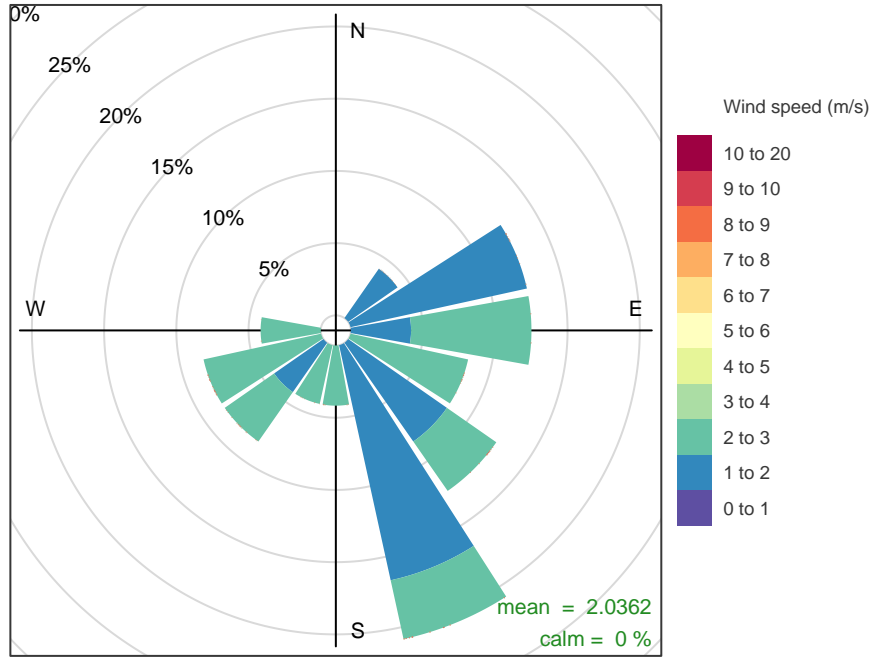


The figures below show dust roses summarising the period 13 July, 2020

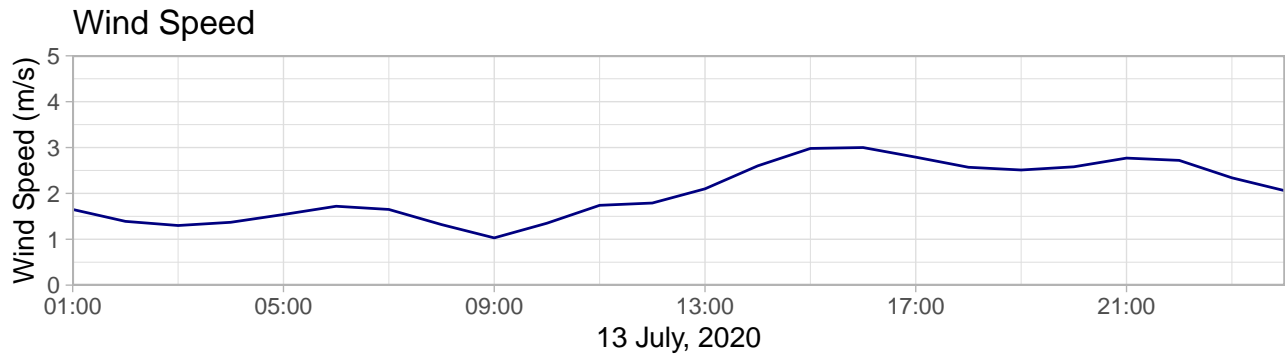


Meteorological Monitoring

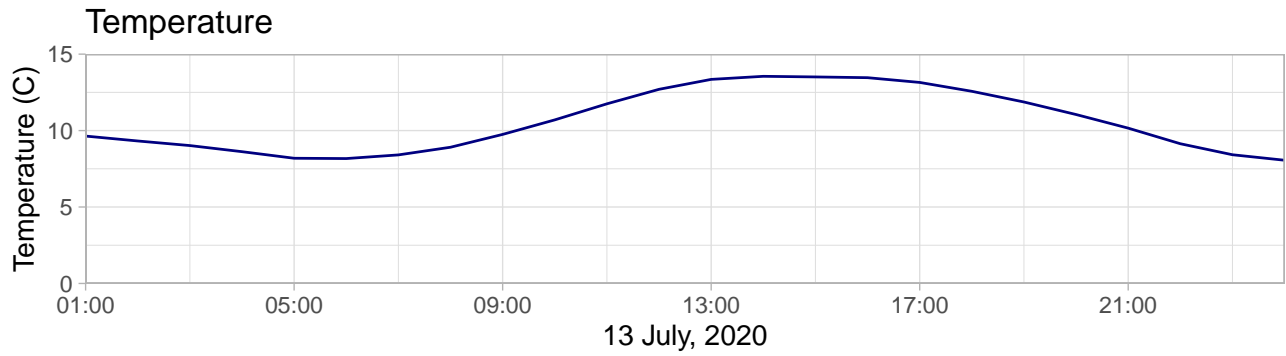
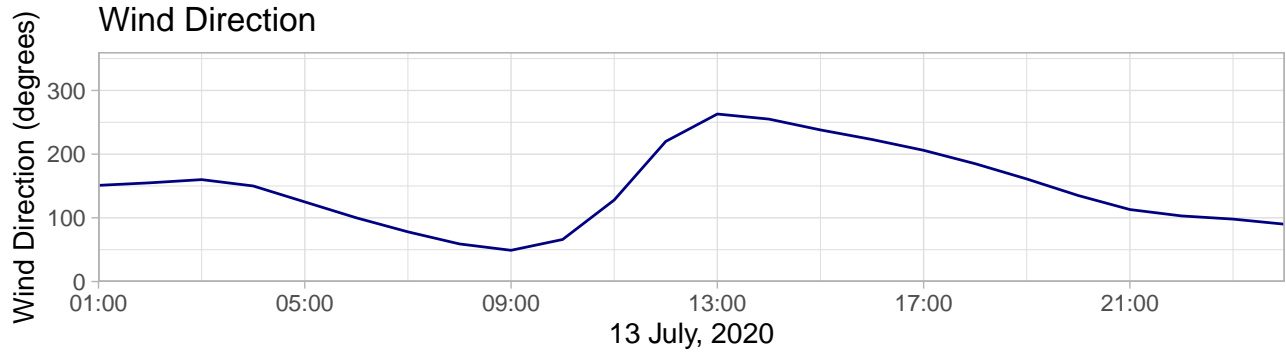
The following figures show meteorological parameters measured¹ throughout the day.



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.