

Ground Level Particulate Notification Report - 04 December, 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 04 December, 2020 is shown in [Table 1](#) below. The data indicates that:

- The 24-hour average PM₁₀ concentration measured at Community Park of 557.1 µg/m³ exceeded the EPP Air criterion of 50 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	557.1	50
	PM _{2.5}	9.6	25
Gunn Street	PM ₁₀	7.4	50
	PM _{2.5}	6.3	25

ABC has investigated the data from the Community Park, Gunn Street & on-site monitors, as well as plant operational activities and has determined that the PM₁₀ particulate data from the Community Park Monitor, between 1.34 am to 5.11 am on the 4/12/20 is anomalous data (i.e. the data is odd & not consistent with the data from the other monitors), for the following reasons: The Community Park monitor recorded very high 1-min duration intermittent spikes in PM₁₀ data, that were 1000 times higher than normal levels, between 1.34 am - 5.11 am, however, the PM_{2.5} data remained at normal levels. PM₁₀ dust levels, that are 1000 times higher than normal, would also have high levels of PM_{2.5}. High levels of PM₁₀ would last longer than a 1- min spike, & should also have been picked up on the Gunn Street and onsite monitors - this did not happen. Plant operational activities did not correlate with PM₁₀ spikes. The reason for the anomalous data is currently unknown but will be investigated further

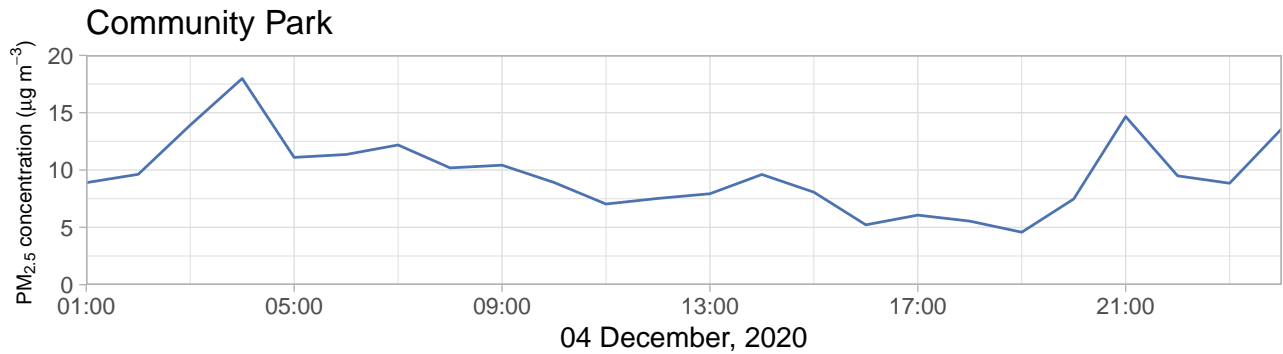
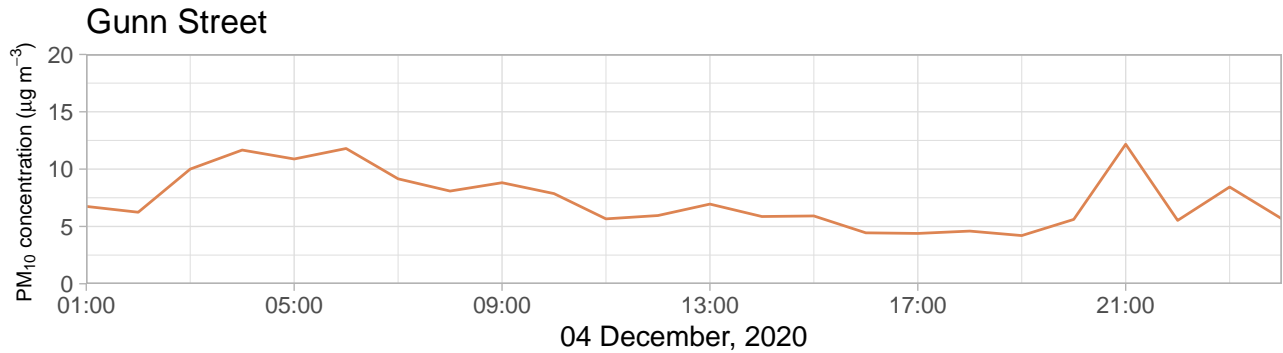
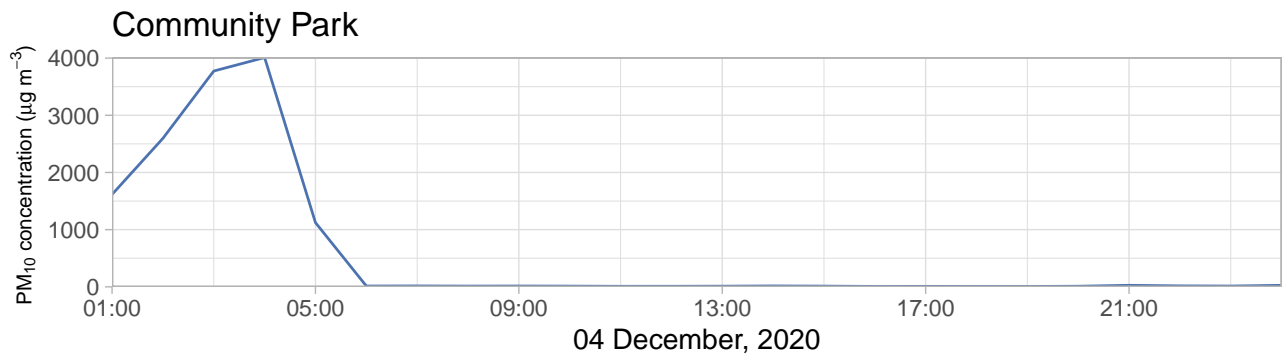
Community Monitoring

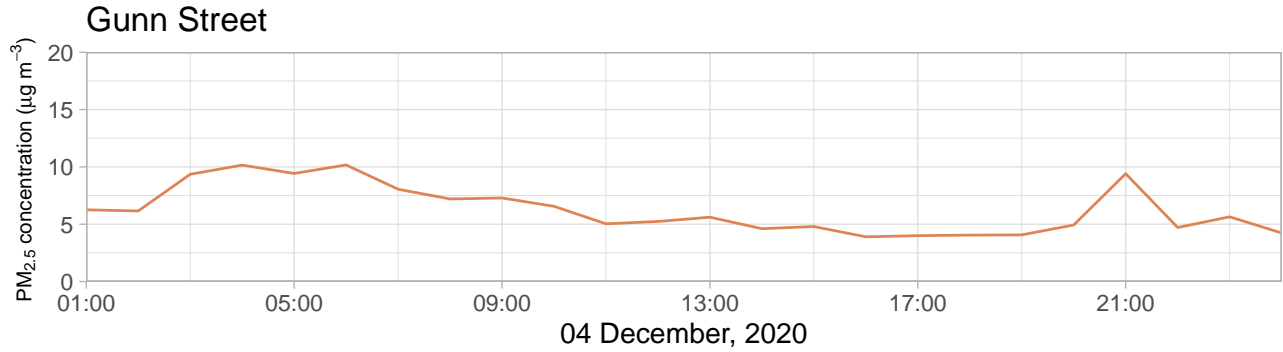
Monitoring data collected at the community monitoring sites is presented in this section.

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.

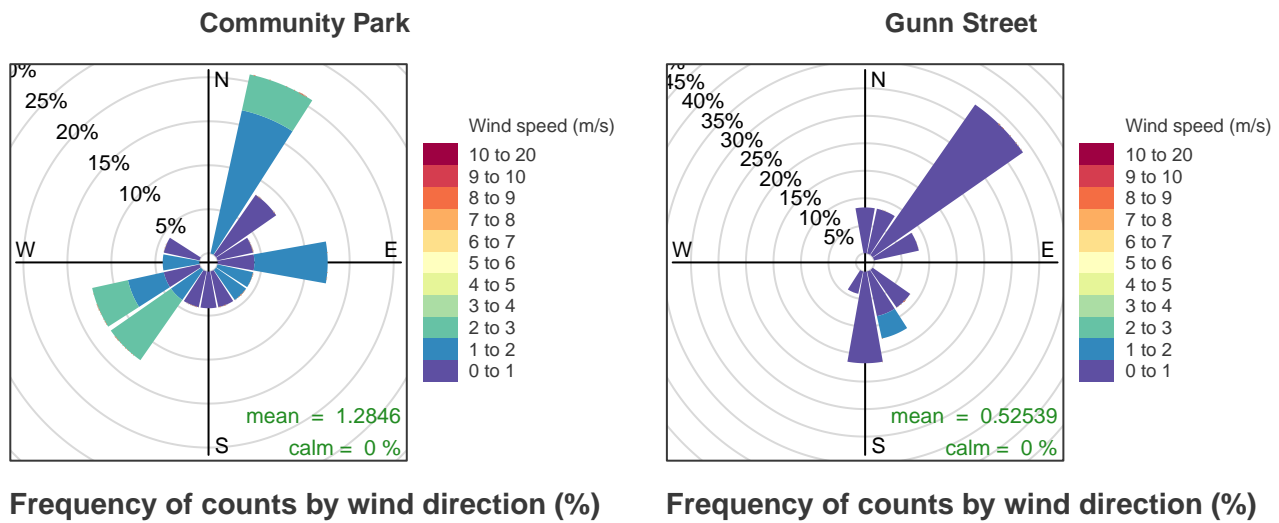
Monitoring Location	Direction	PM ₁₀ proportion (%)	PM _{2.5} proportion (%)
Community Park	From direction of ABC (WD < 180)	68	69
Community Park	From other direction (WD > 180)	32	31
Gunn Street	From direction of ABC (WD < 180)	96	96
Gunn Street	From other direction (WD > 180)	4	4

The figures below show the time series of 1-hour average measurements throughout 04 December, 2020

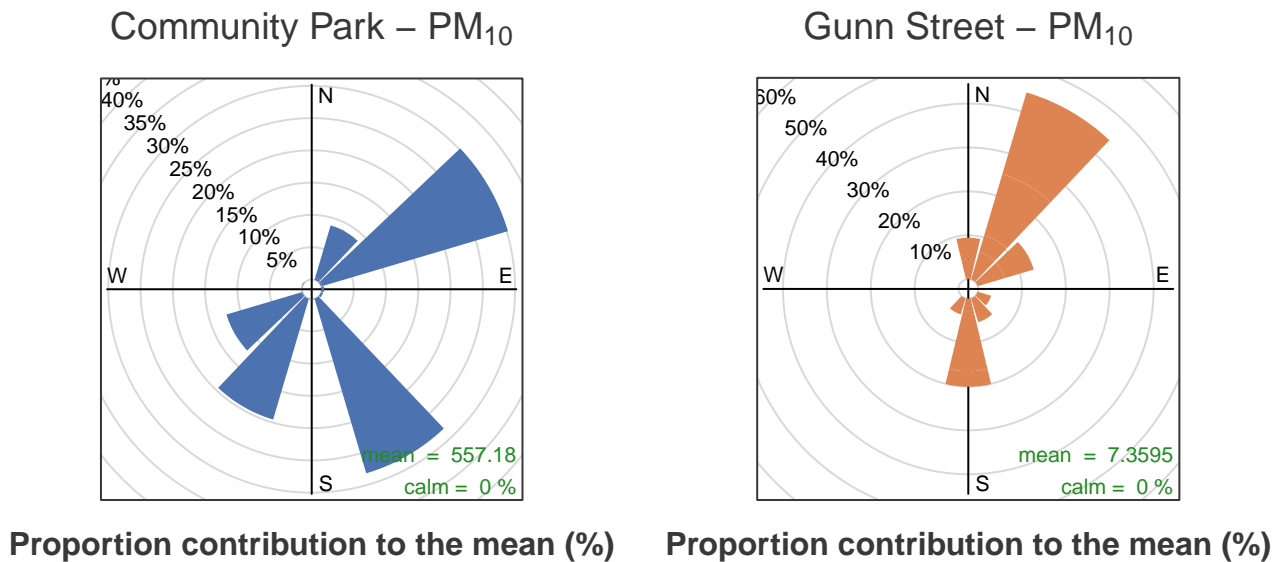




The figures below show wind roses summarising the period 04 December, 2020.



The figures below show dust roses summarising the period 04 December, 2020



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.