Supplementary Materials

The impact of Coronavirus Disease of 2019 (COVID-19) Lockdown Restrictions on the Criteria Pollutants

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Table S1. Data Attributes for Meteorological Parameters.

Parameter	Unit	Mean	Std. Dev.	Minimum	Median	Maximum	% Data Available
2016							
Temperature	°C	21.0	2.9	14.5	21.2	26.4	100
Wind Speed	m/s	1.9	0.8	0.9	1.6	4.9	100
Wind Direction	-	165.1	79.5	0.8	166.4	349.5	100
Relative Humidity	%	64.1	9.3	39.5	65.2	86.0	100
2017							
Temperature	°C	20.9	3.2	14.9	19.9	27.9	100
Wind Speed	m/s	1.7	0.9	0.7	1.5	5.2	100
Wind Direction	-	155.8	75.3	2.0	156.7	295.4	100
Relative Humidity	%	67.3	9.5	26.5	67.7	86.7	100
2018							
Temperature	°C	20.6	3.2	15.4	20.7	27.8	100
Wind Speed	m/s	1.8	0.7	0.7	1.7	4.4	100
Wind Direction	-	155.5	68.3	5.3	159.8	351.9	100
Relative Humidity	%	67.5	7.7	37.9	67.7	85.5	100
2019							
Temperature	°C	21.0	3.4	12.9	21.0	27.8	100
Wind Speed	m/s	1.8	0.6	0.8	1.9	3.6	100
Wind Direction	-	159.2	79.1	16.1	155.8	359.4	100
Relative Humidity	%	64.6	11.3	35.2	67.5	82.7	100
2020							
Temperature	°C	20.6	3.5	12.7	21.0	27.4	100
Wind Speed	m/s	1.6	0.7	0.5	1.4	3.6	100
Wind Direction	-	152.4	86.4	14.4	158.0	355.8	100
Relative Humidity	%	65.3	7.2	42.6	66.1	87.3	100
2021							
Temperature	°C	19.7	3.5	13.5	19.1	27.1	100
Wind Speed	m/s	1.4	0.5	0.6	1.4	3.2	100
Wind Direction	-	189.7	73.6	22.4	194.7	343.5	100

Relative Humidity	%	65.3	9.6	29.1	66.6	87.5	100

Table S2. Statistical Data Attributes for pollutant parameters.

Pollutant	Unit	Mean	Standard Deviation	Maximum	Minimum	Median	% Data Available
Pre-lockdown							
NO_2	$\mu g/m^3$	8.9	4.7	25.1	0.7	7.6	100
Ozone	$\mu g/m^3$	36.4	10.7	60.8	15.2	35.2	100
SO_2	$\mu g/m^3$	5.5	4.7	36.8	0.7	4.8	100
PM_{10}	$\mu g/m^3$	13.9	5.2	48.0	4.6	13.2	97.5
$PM_{2.5}$	$\mu g/m^3$	5.7	2.0	11.8	1.8	5.5	97.5
During-lockdown							
NO_2	$\mu g/m^3$	12.3	6.4	30.8	1.9	10.9	100
Ozone	$\mu g/m^3$	33.7	8.9	53.1	11.9	33.4	100
SO_2	$\mu g/m^3$	4.4	2.5	17.6	0.2	4.0	88.2
PM_{10}	$\mu g/m^3$	12.8	4.5	31.9	5.3	13.2	100
$PM_{2.5}$	$\mu g/m^3$	6.5	2.6	16.5	2.7	6.0	100
Post-lockdown							
NO_2	$\mu g/m^3$	11.1	5.7	27.1	1.6	10.4	100
Ozone	$\mu g/m^3$	37.9	10.7	68.1	7.4	36.8	100
SO_2	$\mu g/m^3$	4.5	2.6	22.4	0.1	3.9	97.7
PM_{10}	$\mu g/m^3$	13.0	8.0	72.4	2.4	11.6	100
$PM_{2.5}$	$\mu g/m^3$	6.0	4.0	25.6	1.1	4.9	100

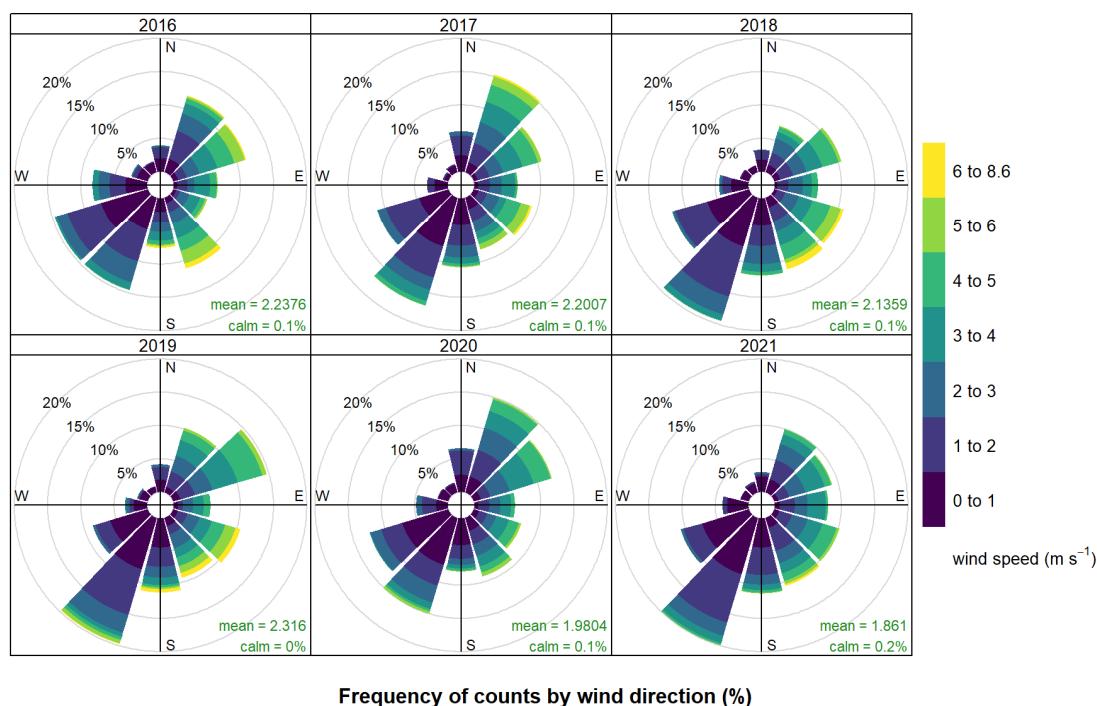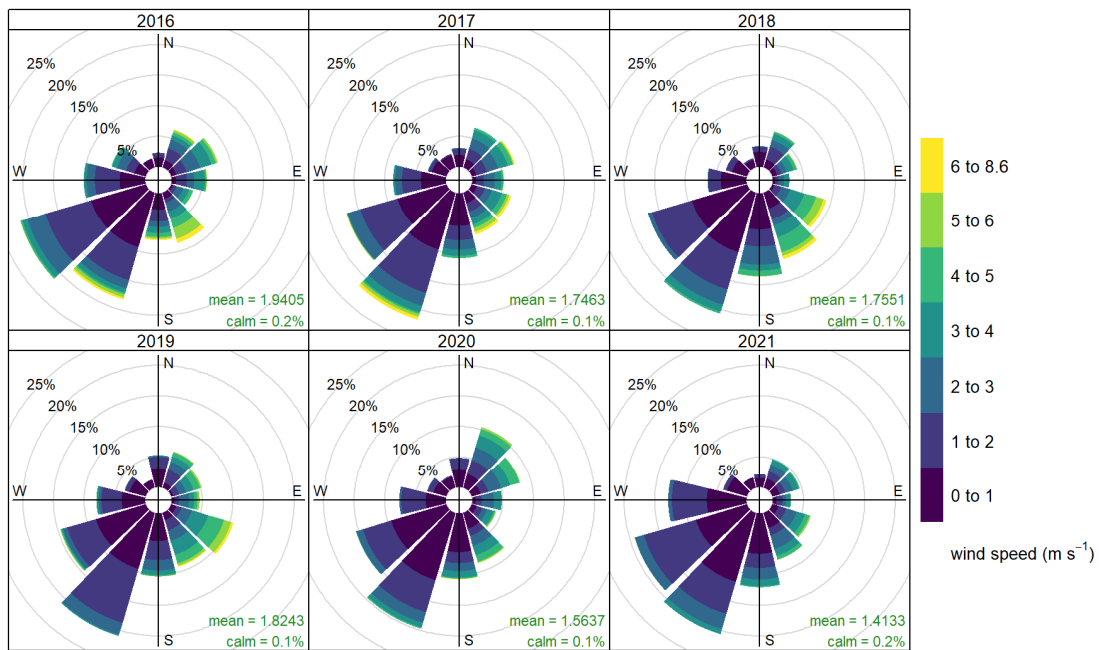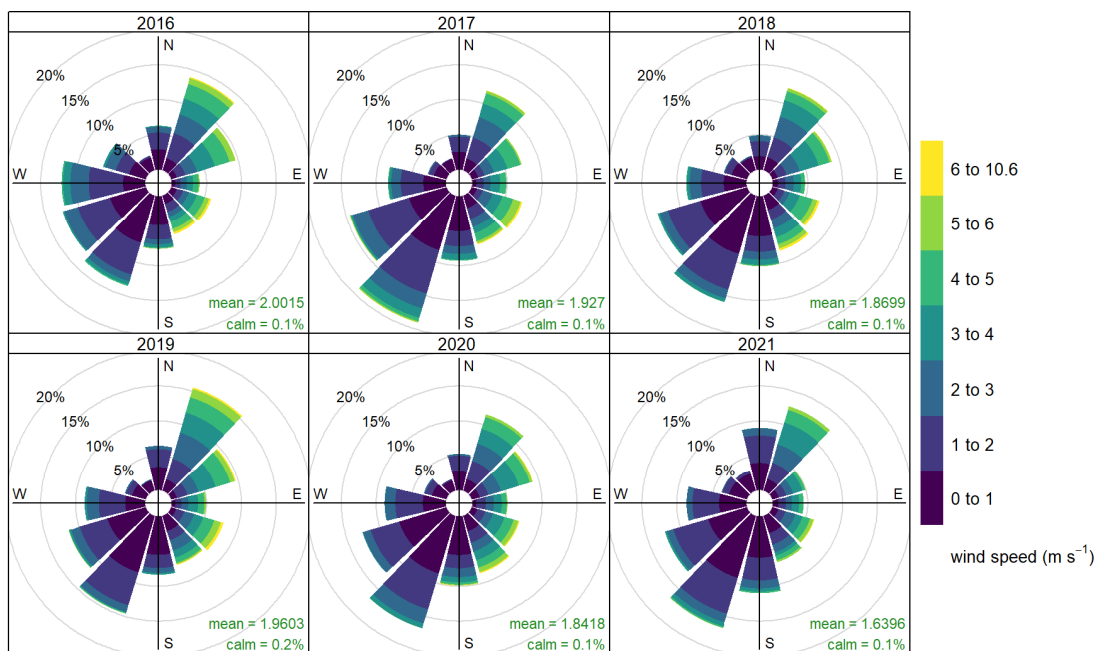

Frequency of counts by wind direction (%)

Figure S1. Windrose plots for pre-lockdown period for different years.

Frequency of counts by wind direction (%)

Figure S2. Windrose plots for during-lockdown period for different years.

Frequency of counts by wind direction (%)

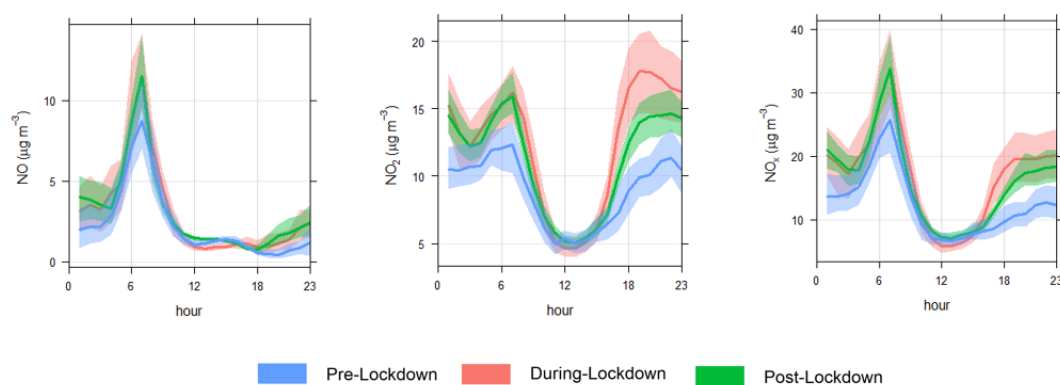**Figure S3.** Windrose plots for post-lockdown period for different years.

Figure S4. Diurnal trends of NO, NO_2 and NO_x concentration levels at Rocklea monitoring station for year 2020.
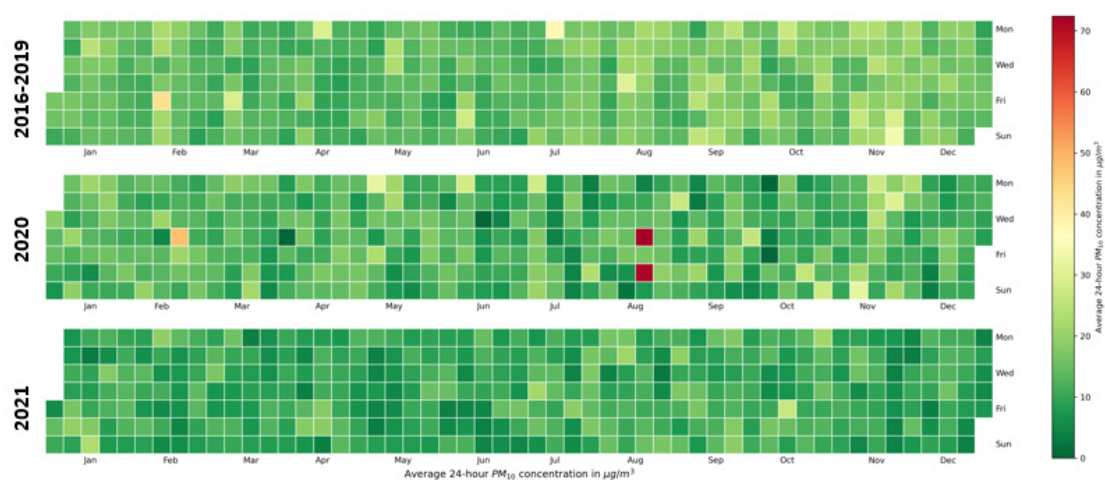

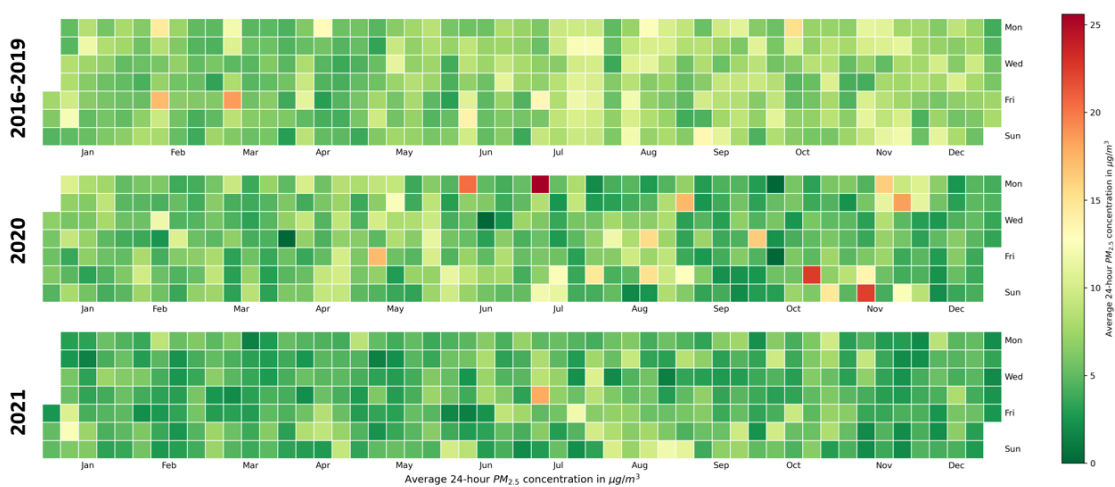**Figure S5.** Calendar plot for Average 24-hour PM_{10} concentration.

Figure S6. Calendar plot for Average 24-hour $PM_{2.5}$ concentration.
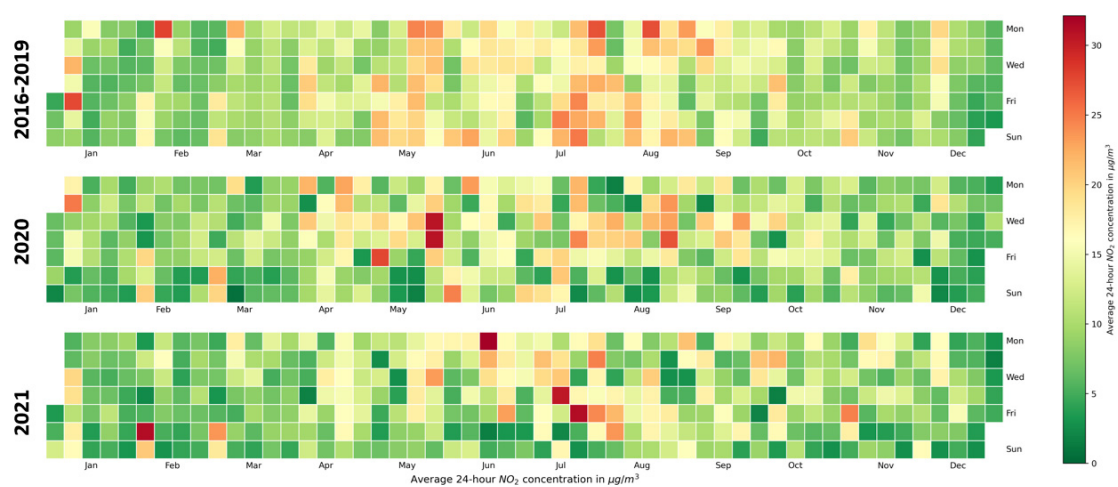
Figure S7. Calendar plot for Average 24-hour NO$_2$ concentration.
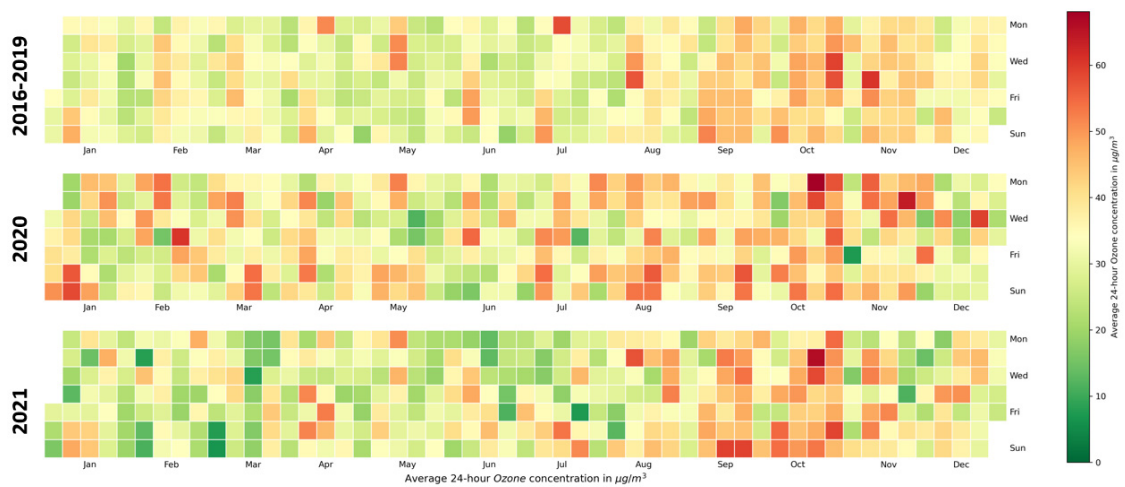

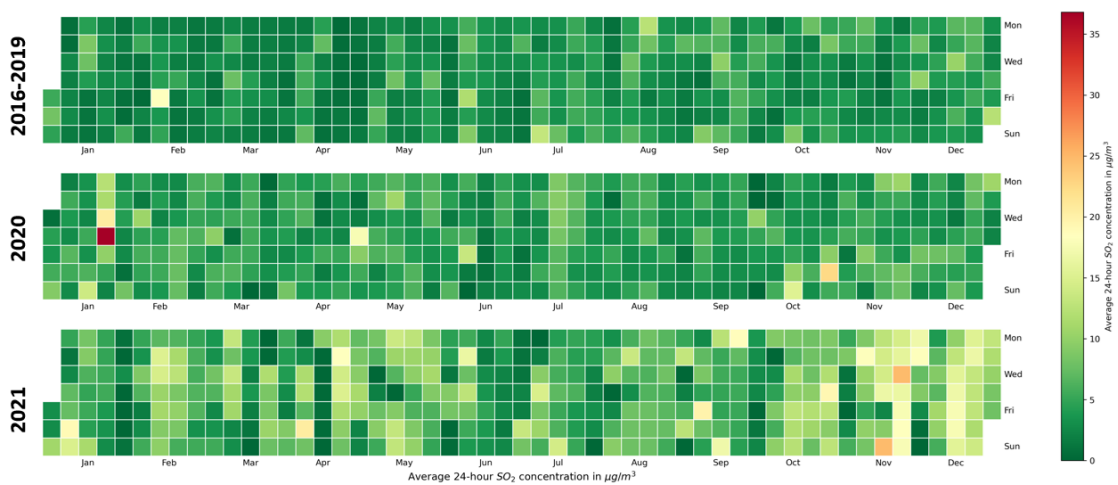**Figure S8.** Calendar plot for Average 24-hour Ozone concentration.

Figure S9. Calendar plot for Average 24-hour SO$_2$ concentration.