



Transurban Queensland

AirportlinkM7 Ambient Air Quality Monitoring Report

July 2018

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Norditech Pty Ltd
Unit 36/70 Holbeche Road
Arndell Park NSW 2148

m: [+61 403 248 038](tel:+61403248038)
p: [+ 61 2 9622 6327](tel:+61296226327)
f: [+61 2 9622 6340](tel:+61296226340)
bruno.nourdine@norditech.com.au
www.norditech.com.au

NORDITECH
ENVIRONMENTAL MONITORING TECHNOLOGIES

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Prepared by



Tim Allfrey
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Approved by



Bruno Nourdine
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Glossary

The following terms and abbreviations may be found throughout this report:

AQMS – Air Quality Monitoring Station
EPA – Environment Protection Authority
NO – Nitric Oxide
NO₂ – Nitrogen Dioxide
NO_x – Nitrogen Oxides
CO – Carbon Monoxide
PM₁₀ – Particulate matter of 10 microns or less aerodynamic equivalent size
PM_{2.5} – Particulate matter of 2.5 microns or less aerodynamic equivalent size
TSP – Total Suspended Particulate
HVAS – High Volume Air Sampler
ppm – Parts Per Million
µg/m³ – micrograms per cubic meter
AHS – Aviation High School
KSHS – Kedron State High School
LS – Lewis Street
ALOC – Airportlink Operation Centre
CS – Cartwright St

Executive Summary

Exceedance Reporting

There were no readings over the relevant Air Quality Standards during the reporting period. It should be noted that the yearly averages are cumulative from the 1st of January and are an indication only until the December report.

AirportlinkM7 AQMS Exceedance Reporting July 2018							
Pollutant	Averaging period	Maximum Allowed Concentration	Number of Exceedences July 2018				
			Station 1 (AHS)	Station 2 (KSHS)	Station 3 (LS)	Station 4 (ALOC)	Station 5 (CS)
Carbon Monoxide	8 hour (rolling average)	8 ppm	0	0	0	0	0
Nitrogen dioxide	1 hour	0.120 ppm	0	0	0	0	0
	1 year	0.030 ppm	0	0	0	0	0
PM2.5	24 hour	25 µg/m ³	0	0	0	0	0
	1 year	8 µg/m ³	0	0	0	0	0
PM10	24 hour	50 µg/m ³	0	0	0	0	0
	1 Year	50 µg/m ³	0	0	0	0	0
TSP	1 Year	90 µg/m ³	0	0	0	0	0

Table 1 Exceedance Reporting

Maximum allowed concentration criteria are as specified in Condition 19(k) of the Conditions of Approval.

Introduction

Norditech Pty Ltd was appointed by Ventia Pty Limited in February 2015 to operate, maintain and report on the AirportlinkM7 Air Quality Monitoring Network.

The AirportlinkM7 Air Quality Monitoring Network consists of five sites located in close proximity to key locations of the Airportlink project and is a requirement of the Conditions of Approval issued by the Coordinator General.

The addresses of the two parties are as follows

AirportlinkM7
PO Box 412
Lutwyche QLD 4030

Norditech Pty Ltd
Unit 36/70 Holbeche Rd
Arndell Park NSW 2148

Monitoring

Site Locations

AirportlinkM7 Site Location Coordinates		
	Latitude	Longitude
Station 1 (Aviation High School)	-27° 24' 46.5084"	153° 3' 48.0744"
Station 2 (Kedron State High School)	-27° 24' 47.5344"	153° 2' 17.8476"
Station 3 (Lewis Street)	-27° 24' 39.5532"	153° 3' 18.18"
Station 4 (Airportlink Operation Centre)	-27° 24' 43.2252"	153° 1' 58.3104"
Station 5 (Cartwright Street)	-27° 26' 22.5852"	153° 2' 5.784"

Table 2 Site Location Coordinates

Station Instrumentation Details

Each station continuously monitors the following pollutants:

- NO (Nitrogen Oxide)
- NO₂ (Nitrogen Dioxide)
- NO_x (Total Oxides of Nitrogen)
- CO (Carbon Monoxide)
- PM₁₀
- PM_{2.5}
- TSP (Samples on a 1 in 6 day cycle)

Monthly validated data for each site are provided in the following Microsoft® Excel™ spreadsheet

- 201807 ALM7 Monthly Validated Data Spreadsheet.xlsx
 - Sheet 1 – 5 minute average data
 - Sheet 2 – 1 hour average data
 - Sheet 3 – 8 hour average data
 - Sheet 4 – 24 hour average data

Instrumentation Details								
Parameter	Units	Uncertainty	Method	Station 1	Station 2	Station 3	Station 4	Station 5
NO NO ₂ NO _x	ppm	2.78%	AS 3580.5.1	26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
CO	ppm	2.56%	AS 3580.7.1	26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018
PM ₁₀	µg/m ³	3.21 µg/m ³	AS 3580.9.11	31/05/2018	31/05/2018	31/05/2018	31/05/2018	31/05/2018
PM _{2.5}	µg/m ³	3.21 µg/m ³	AS 3580.9.11 / EQPM 0308- 170	31/05/2018	31/05/2018	31/05/2018	31/05/2018	31/05/2018
TSP	µg/m ³	7.34%	AS 3580.9.3	26/07/2018	26/07/2018	26/07/2018	26/07/2018	26/07/2018

Table 3 Instrumentation Details

* These sites have TEOMs installed operating under method AS 3580.9.8

Data Logging

Data are recorded to a WinAQMS data logger located at each site at 5 minute averaging periods, calculated from 10 second samples. All data are retrieved periodically, approximately on an hourly basis, over a private 3G network, to a central WinCollect database, where data validation is performed to remove any data not deemed as valid prior to reporting. Data validation is performed as per the relevant standard, and/or as per the instrument manufacturers recommended guidelines.

All averages greater than 5 minute averages are calculated from the 5 minute average data set. 75% valid data must be available to calculate re-averaged data. For example, to calculate a 1hr average from 5 minute data, there must be a minimum of 9 out of 12 valid 5 minute average data points available.

Annual averages start from January 1st and contain the average of the current year's data.

All data is recorded to Australian Eastern Standard Time.

Data capture rates are calculated as per the following formula:

$$\text{Data Capture Rate \%} = \frac{\text{Available data points}}{\text{Total data points}} * 100$$

where:

Available data points = total number of 5 minute averages for the reporting period in which valid data was recorded

Total data points = total number of 5 minute averages for the reporting period inclusive of invalid data

Results

Station 1 (Aviation High School)

Summary

Station 1 Aviation High School Ambient AQMS Summary July 2018						
Parameter	Unit	EPP Goal	Averaging Period	Maximum Value	Date & Time	Capture Rate
NO ₂	ppm	0.120	1 Hour	0.046	18/07/2018 18:00	97.1
NO ₂	ppm	0.030	12 Months	0.007	--	96.1
CO	ppm	8	8 Hours	0.9	23/07/2018 01:00	90.4
PM _{2.5}	µg/m3	25	24 Hours	21.4	19/07/2018	96.9
PM _{2.5}	µg/m3	8	12 Months	5.9	--	93.7
PM ₁₀	µg/m3	50	24 Hours	30.4	25/07/2018	99.6
PM ₁₀	µg/m3	50	12 Months	15.4	--	95.0
TSP	µg/m3	--	24 Hours	38.3	27/07/2018 1	83.3
TSP	µg/m3	90	12 Months	25.5	--	100.0

Table 4 Station 1 Monthly Summary

Graphical Representations

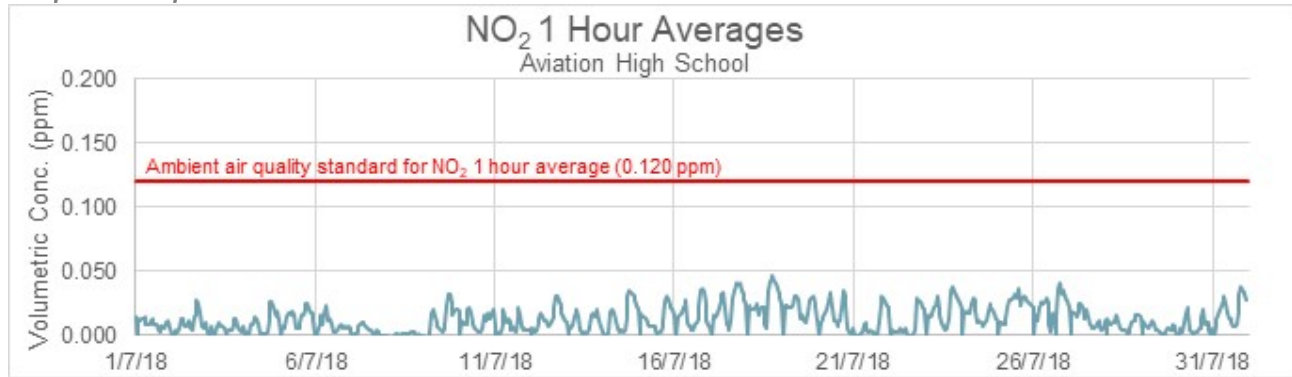


Figure 1 Station 1 Nitrogen Dioxide 1hr averages

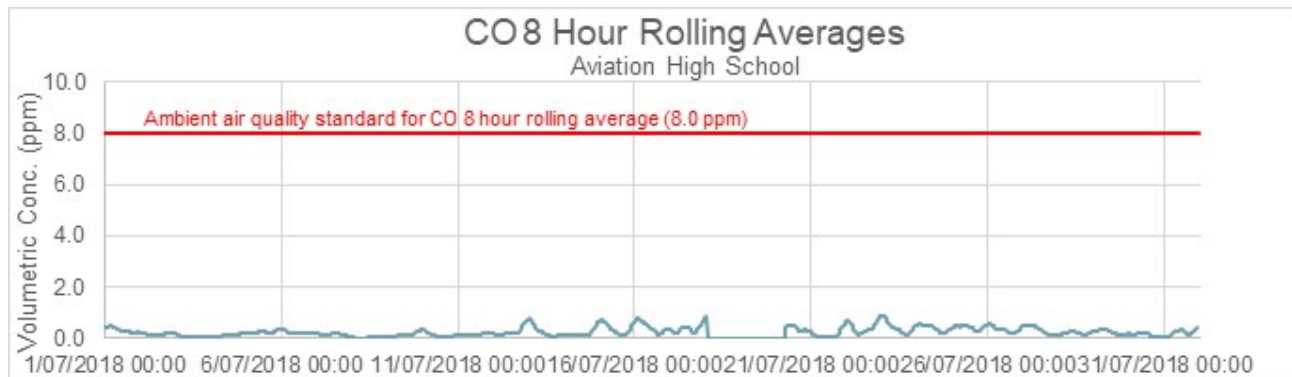


Figure 2 Station 1 Carbon Monoxide 8hr rolling averages

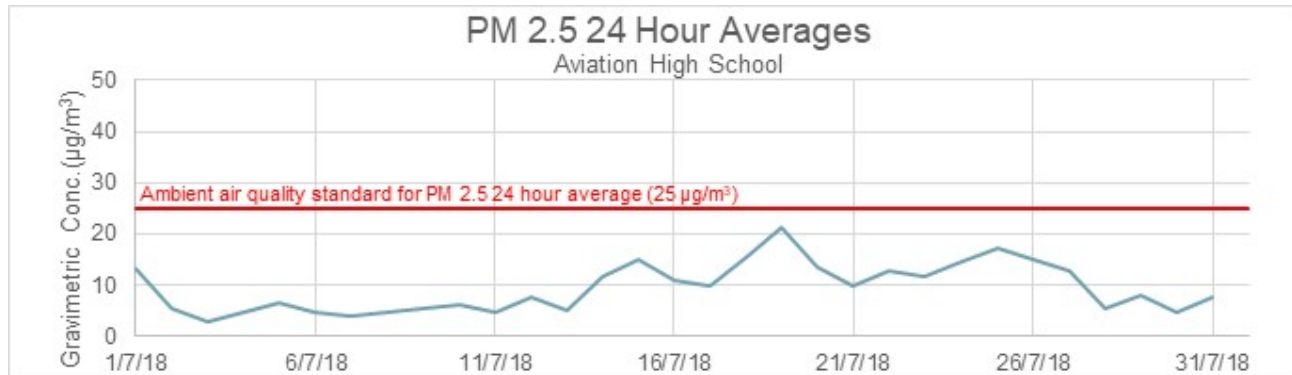


Figure 3 Station 1 PM2.5 24hr averages

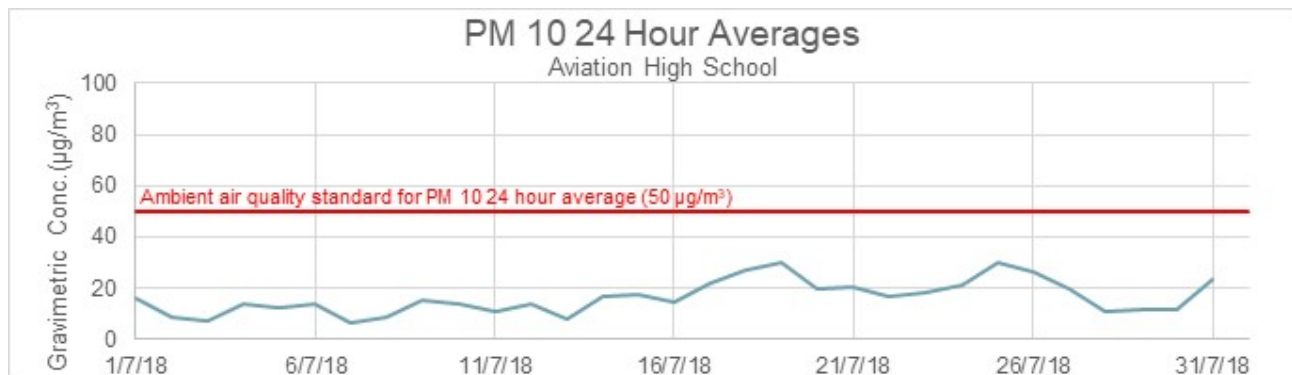


Figure 4 Station 1 PM10 24hr averages

Nitrogen Dioxide Summary

Station 1 Aviation High School Ambient AQMS Nitrogen Dioxide Summary July 2018						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/07/2018	0.010	0.003	0.015	00:00	0	97.2
2/07/2018	0.010	0.001	0.028	17:00	0	97.2
3/07/2018	0.006	0.001	0.013	19:00	0	97.2
4/07/2018	0.010	0.001	0.027	19:00	0	97.2
5/07/2018	0.014	0.006	0.024	18:00	0	97.2
6/07/2018	0.008	0.001	0.023	07:00	0	97.2
7/07/2018	0.004	0.000	0.011	08:00	0	97.2
8/07/2018	0.001	-0.002	0.003	17:00	0	97.2
9/07/2018	0.012	-0.001	0.032	18:00	0	97.2
10/07/2018	0.012	0.002	0.023	07:00	0	97.2
11/07/2018	0.008	0.002	0.021	16:00	0	97.2
12/07/2018	0.014	0.003	0.031	17:00	0	97.2
13/07/2018	0.010	0.001	0.021	20:00	0	97.2
14/07/2018	0.015	0.000	0.034	18:00	0	97.2
15/07/2018	0.014	0.002	0.030	19:00	0	97.2
16/07/2018	0.017	0.004	0.037	19:00	0	97.2
17/07/2018	0.024	0.004	0.041	18:00	0	97.2
18/07/2018	0.027	0.006	0.046	18:00	0	97.2
19/07/2018	0.022	0.011	0.031	10:00	0	97.2
20/07/2018	0.016	0.002	0.035	17:00	0	97.2
21/07/2018	0.009	-0.001	0.031	19:00	0	97.2
22/07/2018	0.009	-0.001	0.030	19:00	0	97.2
23/07/2018	0.020	0.004	0.038	18:00	0	97.2
24/07/2018	0.017	0.007	0.029	08:00	0	97.2
25/07/2018	0.023	0.009	0.037	14:00	0	97.2
26/07/2018	0.023	0.003	0.041	18:00	0	94.8
27/07/2018	0.014	0.004	0.025	07:00	0	97.2
28/07/2018	0.009	0.001	0.016	22:00	0	97.2
29/07/2018	0.006	0.001	0.015	00:00	0	97.2
30/07/2018	0.007	0.000	0.022	07:00	0	97.2
31/07/2018	0.020	0.005	0.039	19:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 5 Station 1 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 1 Aviation High School Ambient AQMS Carbon Monoxide Summary July 2018								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/07/2018	0.3	0.2	0.5	03:00	0.5	04:00	0	96.5
2/07/2018	0.2	0.1	0.3	18:00	0.2	00:00	0	96.5
3/07/2018	0.0	0.0	0.1	19:00	0.2	00:00	0	96.5
4/07/2018	0.2	0.1	0.3	19:00	0.2	23:00	0	96.5
5/07/2018	0.3	0.1	0.6	21:00	0.4	23:00	0	96.5
6/07/2018	0.2	0.1	0.3	07:00	0.4	01:00	0	96.5
7/07/2018	0.1	0.0	0.2	09:00	0.2	14:00	0	96.5
8/07/2018	0.0	0.0	0.1	18:00	0.1	20:00	0	96.5
9/07/2018	0.2	0.1	0.7	18:00	0.3	23:00	0	96.5
10/07/2018	0.1	0.1	0.3	00:00	0.3	00:00	0	96.5
11/07/2018	0.2	0.1	0.4	16:00	0.2	22:00	0	96.5
12/07/2018	0.4	0.1	1.0	19:00	0.7	23:00	0	96.9
13/07/2018	0.2	0.0	0.4	00:00	0.8	01:00	0	96.9
14/07/2018	0.3	0.1	1.0	19:00	0.6	23:00	0	96.9
15/07/2018	0.4	0.1	0.9	20:00	0.8	02:00	0	96.9
16/07/2018	0.4	0.1	0.9	00:00	0.8	02:00	0	96.9
17/07/2018	0.4	0.1	1.0	22:00	0.7	23:00	0	96.9
¹ 18/07/2018	-	0.8	0.8	00:00	0.8	01:00	0	4.2
¹ 19/07/2018	-	-	-	-	-	-	0	0.0
20/07/2018	0.3	0.1	0.8	07:00	0.5	11:00	0	92.7
21/07/2018	0.3	0.0	1.0	20:00	0.6	23:00	0	96.9
22/07/2018	0.5	0.1	1.1	19:00	0.9	23:00	0	96.9
23/07/2018	0.4	0.1	0.7	20:00	0.9	01:00	0	96.9
24/07/2018	0.4	0.2	0.7	07:00	0.6	02:00	0	96.9
25/07/2018	0.5	0.2	0.7	22:00	0.5	23:00	0	96.9
26/07/2018	0.3	0.1	0.7	22:00	0.6	01:00	0	94.4
27/07/2018	0.3	0.1	0.6	07:00	0.5	03:00	0	96.9
28/07/2018	0.2	0.1	0.4	07:00	0.3	08:00	0	96.9
29/07/2018	0.2	0.1	0.4	05:00	0.3	05:00	0	96.9
30/07/2018	0.1	0.0	0.5	07:00	0.2	08:00	0	96.9
31/07/2018	0.3	0.1	0.6	20:00	0.5	23:00	0	96.9

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

Table 6 Station 1 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 1 Aviation High School Ambient AQMS Particulate PM _{2.5} Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves			No. of exceedences 24hr Avg > 25.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)	Time of Max		
1/07/2018	13.2	5.2	22.5	00:00	0	100.0
2/07/2018	5.4	0.2	9.7	00:00	0	100.0
3/07/2018	3.0	-0.9	6.8	15:00	0	100.0
4/07/2018	4.6	-0.6	11.9	20:00	0	100.0
5/07/2018	6.7	3.1	9.7	10:00	0	100.0
6/07/2018	4.8	0.0	9.8	18:00	0	100.0
7/07/2018	4.2	-2.0	32.0	01:00	0	87.5
8/07/2018	4.8	0.3	22.8	10:00	0	100.0
9/07/2018	5.6	1.0	11.0	19:00	0	100.0
10/07/2018	6.1	2.4	10.8	00:00	0	100.0
11/07/2018	4.9	0.0	11.6	04:00	0	100.0
12/07/2018	7.6	3.0	24.5	21:00	0	100.0
13/07/2018	5.1	0.0	13.3	00:00	0	100.0
14/07/2018	11.7	3.0	44.1	21:00	0	100.0
15/07/2018	15.2	1.3	32.3	00:00	0	91.7
16/07/2018	10.9	3.0	25.5	00:00	0	95.8
17/07/2018	10.1	2.1	26.5	21:00	0	87.5
18/07/2018	15.5	6.1	31.5	22:00	0	100.0
19/07/2018	21.4	7.0	54.7	22:00	0	91.7
20/07/2018	13.6	2.1	22.7	01:00	0	87.5
21/07/2018	9.9	2.3	41.9	22:00	0	100.0
22/07/2018	12.9	4.0	37.3	20:00	0	91.7
23/07/2018	11.6	3.1	21.6	01:00	0	100.0
24/07/2018	14.7	4.1	63.0	15:00	0	100.0
25/07/2018	17.1	7.1	26.6	04:00	0	95.8
26/07/2018	14.9	7.0	19.8	05:00	0	95.8
27/07/2018	12.7	1.4	30.4	09:00	0	100.0
28/07/2018	5.4	2.0	11.2	23:00	0	91.7
29/07/2018	7.9	2.3	17.0	09:00	0	91.7
30/07/2018	4.6	1.0	11.6	08:00	0	100.0
31/07/2018	7.7	3.0	21.1	22:00	0	95.8

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 7 Station 1 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 1 Aviation High School Ambient AQMS Particulate PM ₁₀ Summary July 2018						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Aves			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/07/2018	16.2	5.9	22.1	04:00	0	100.0
2/07/2018	8.8	3.2	22.5	17:00	0	100.0
3/07/2018	7.1	2.0	13.1	13:00	0	100.0
4/07/2018	13.8	4.2	23.6	19:00	0	100.0
5/07/2018	12.6	5.8	22.7	10:00	0	100.0
6/07/2018	13.8	2.9	22.3	17:00	0	100.0
7/07/2018	6.3	2.0	10.4	07:00	0	100.0
8/07/2018	8.8	6.3	11.6	19:00	0	100.0
9/07/2018	15.2	8.4	27.7	18:00	0	100.0
10/07/2018	14.1	9.2	21.9	19:00	0	100.0
11/07/2018	10.6	4.5	20.1	10:00	0	100.0
12/07/2018	13.8	4.6	31.6	20:00	0	100.0
13/07/2018	8.2	0.4	16.3	00:00	0	100.0
14/07/2018	17.0	5.8	47.7	20:00	0	100.0
15/07/2018	17.3	4.6	29.8	20:00	0	100.0
16/07/2018	14.3	2.3	27.6	17:00	0	100.0
17/07/2018	22.1	5.1	45.5	20:00	0	100.0
18/07/2018	27.1	4.2	51.6	15:00	0	100.0
19/07/2018	30.0	17.5	59.2	21:00	0	100.0
20/07/2018	19.4	-2.0	35.2	23:00	0	100.0
21/07/2018	20.1	5.1	48.3	20:00	0	100.0
22/07/2018	16.9	7.7	50.9	19:00	0	100.0
23/07/2018	18.1	9.0	32.6	20:00	0	100.0
24/07/2018	20.9	12.3	37.6	08:00	0	100.0
25/07/2018	30.4	20.6	48.8	14:00	0	100.0
26/07/2018	26.4	4.7	44.9	17:00	0	95.8
27/07/2018	20.0	2.6	43.1	07:00	0	100.0
28/07/2018	10.6	4.6	19.9	07:00	0	100.0
29/07/2018	11.8	-1.7	29.5	07:00	0	100.0
30/07/2018	11.7	-9.5	44.7	18:00	0	91.7
31/07/2018	23.1	15.8	38.6	08:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 8 Station 1 PM₁₀ Monthly Summary

Station 2 (Kedron State High School)

Summary

Station 2 Kedron State High School Ambient AQMS Summary July 2018						
Parameter	Unit	EPP Goal	Averaging Period	Maximum Value	Date & Time	Capture Rate
NO ₂	ppm	0.120	1 Hour	0.043	18/07/2018 19:00	90.4
NO ₂	ppm	0.030	12 Months	0.009	--	92.2
CO	ppm	8	8 Hours	0.6	19/07/2018 02:00	90.1
PM _{2.5}	µg/m3	25	24 Hours	18.2	25/07/2018	93.3
PM _{2.5}	µg/m3	8	12 Months	7.2	--	91.8
PM ₁₀	µg/m3	50	24 Hours	36.2	25/07/2018	93.3
PM ₁₀	µg/m3	50	12 Months	15.0	--	93.4
TSP	µg/m3	--	24 Hours	31.1	27/07/2018 1	83.3
TSP	µg/m3	90	12 Months	24.4	--	97.1

Table 9 Station 2 Monthly Summary

Graphical Representations

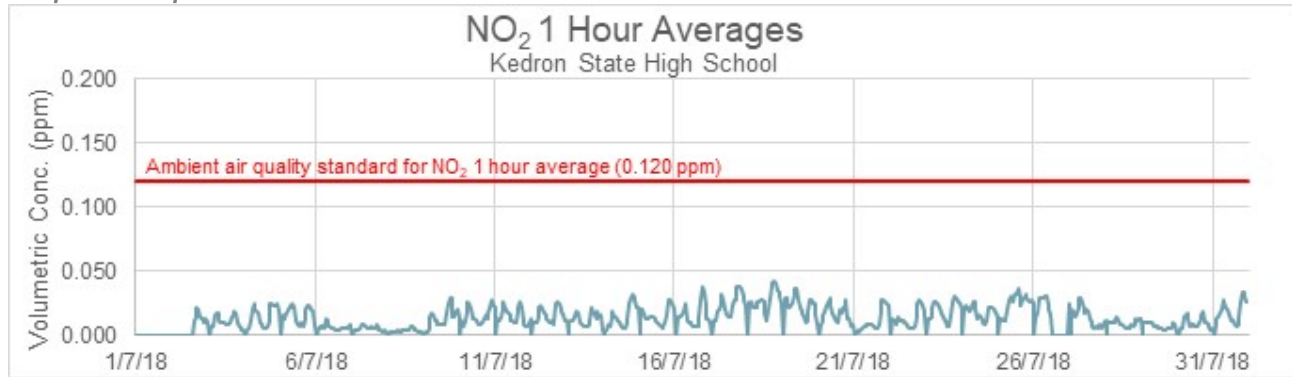


Figure 5 Station 2 Dioxide 1hr averages

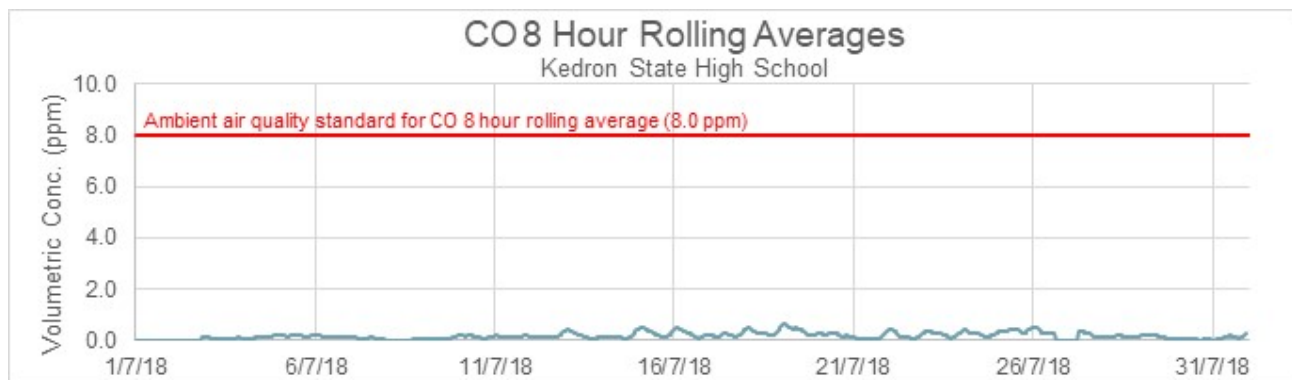


Figure 6 Station 2 Carbon Monoxide 8hr rolling averages

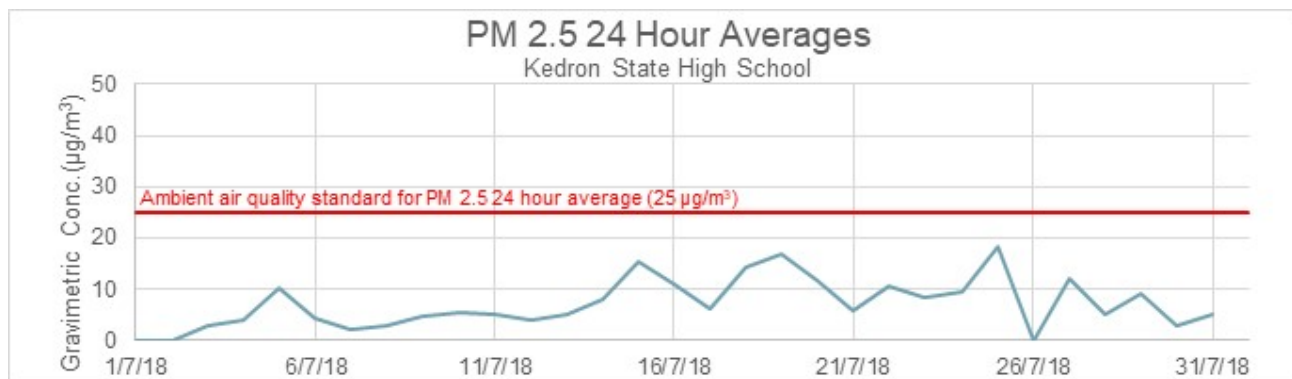


Figure 7 Station 2 PM2.5 24hr averages

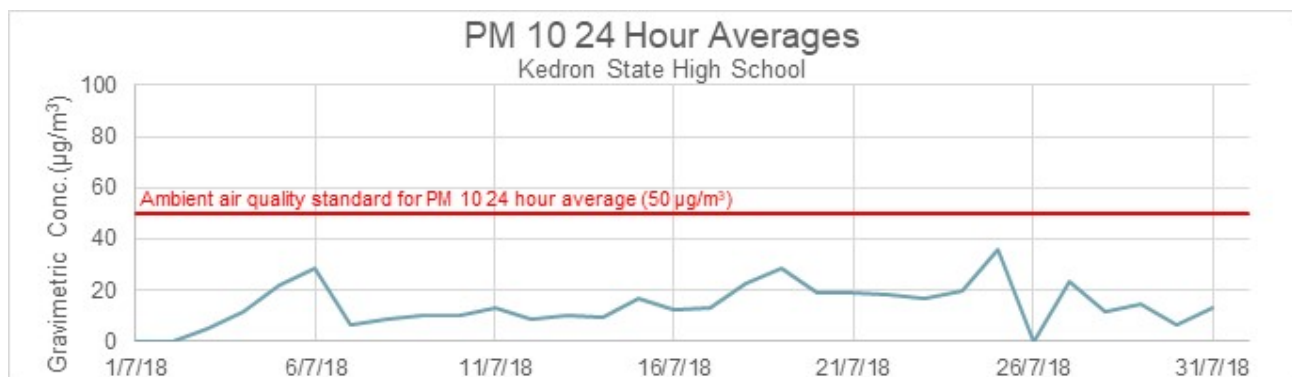


Figure 8 Station 2 PM10 24hr averages

Nitrogen Dioxide Summary

Station 2 KSHS Ambient AQMS Nitrogen Dioxide Summary July 2018						
Date	24hr Avg (ppm)	Min (ppm)	1 hr Aves Max (ppm)	Time of Max	Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
¹ 1/07/2018	-	-	-	-	0	0.0
¹ 2/07/2018	-	0.011	0.022	17:00	0	38.5
3/07/2018	0.011	0.004	0.019	18:00	0	96.9
4/07/2018	0.014	0.004	0.025	19:00	0	96.9
5/07/2018	0.017	0.007	0.025	09:00	0	96.9
6/07/2018	0.006	0.004	0.013	07:00	0	96.9
7/07/2018	0.006	0.003	0.009	07:00	0	96.9
8/07/2018	0.004	0.002	0.007	17:00	0	96.9
9/07/2018	0.013	0.002	0.030	18:00	0	96.9
10/07/2018	0.015	0.007	0.028	22:00	0	96.9
11/07/2018	0.015	0.007	0.027	17:00	0	96.9
12/07/2018	0.016	0.009	0.026	18:00	0	96.9
13/07/2018	0.013	0.007	0.022	17:00	0	96.9
14/07/2018	0.014	0.003	0.032	20:00	0	96.9
15/07/2018	0.016	0.006	0.028	20:00	0	96.9
16/07/2018	0.016	0.006	0.038	19:00	0	96.9
17/07/2018	0.023	0.010	0.038	19:00	0	96.9
18/07/2018	0.028	0.012	0.043	19:00	0	96.9
19/07/2018	0.024	0.010	0.037	10:00	0	96.9
20/07/2018	0.016	0.006	0.029	08:00	0	96.9
21/07/2018	0.011	0.003	0.028	19:00	0	96.9
22/07/2018	0.013	0.005	0.027	20:00	0	96.5
23/07/2018	0.019	0.007	0.031	19:00	0	96.9
24/07/2018	0.019	0.009	0.027	09:00	0	96.9
25/07/2018	0.024	0.012	0.036	14:00	0	96.9
¹ 26/07/2018	-	0.014	0.030	09:00	0	51.7
27/07/2018	0.016	0.005	0.029	07:00	0	96.9
28/07/2018	0.010	0.005	0.015	08:00	0	96.9
29/07/2018	0.008	0.004	0.014	00:00	0	96.9
30/07/2018	0.010	0.003	0.018	18:00	0	96.9
31/07/2018	0.018	0.005	0.034	20:00	0	96.9

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to data logger fault

Table 10 Station 2 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 2 KSHS Ambient AQMS Carbon Monoxide Summary July 2018								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
¹ 1/07/2018	-	-	-	-	-	-	0	0.0
¹ 2/07/2018	-	0.1	0.2	17:00	0.1	20:00	0	37.8
3/07/2018	0.1	0.0	0.1	18:00	0.1	00:00	0	96.5
4/07/2018	0.2	0.1	0.3	19:00	0.2	23:00	0	96.5
5/07/2018	0.2	0.1	0.4	22:00	0.2	01:00	0	96.5
6/07/2018	0.1	0.1	0.1	00:00	0.2	01:00	0	96.5
7/07/2018	0.1	0.0	0.1	09:00	0.1	00:00	0	96.5
8/07/2018	0.0	0.0	0.1	17:00	0.0	21:00	0	96.5
9/07/2018	0.1	0.0	0.3	19:00	0.2	23:00	0	96.5
10/07/2018	0.2	0.1	0.3	07:00	0.2	01:00	0	96.5
11/07/2018	0.1	0.1	0.3	17:00	0.2	01:00	0	96.5
12/07/2018	0.2	0.1	0.5	20:00	0.4	23:00	0	96.5
13/07/2018	0.2	0.0	0.4	07:00	0.4	01:00	0	96.5
14/07/2018	0.2	0.1	0.7	21:00	0.4	23:00	0	96.5
15/07/2018	0.3	0.1	0.6	23:00	0.5	02:00	0	96.5
16/07/2018	0.2	0.1	0.6	00:00	0.5	02:00	0	96.5
17/07/2018	0.3	0.1	0.7	22:00	0.4	23:00	0	96.5
18/07/2018	0.4	0.1	0.8	23:00	0.5	23:00	0	96.5
19/07/2018	0.3	0.1	0.6	08:00	0.6	02:00	0	96.5
20/07/2018	0.2	0.0	0.5	08:00	0.3	09:00	0	96.5
21/07/2018	0.2	0.0	0.6	22:00	0.4	23:00	0	96.5
22/07/2018	0.2	0.1	0.5	22:00	0.5	01:00	0	95.8
23/07/2018	0.2	0.1	0.5	22:00	0.4	02:00	0	96.5
24/07/2018	0.3	0.1	0.4	00:00	0.4	02:00	0	96.5
25/07/2018	0.4	0.2	0.7	22:00	0.5	23:00	0	96.5
¹ 26/07/2018	-	0.1	0.5	00:00	0.5	01:00	0	51.7
27/07/2018	0.2	0.1	0.5	02:00	0.4	07:00	0	96.5
28/07/2018	0.2	0.1	0.3	08:00	0.2	08:00	0	96.5
29/07/2018	0.2	0.1	0.3	00:00	0.2	06:00	0	96.5
30/07/2018	0.0	0.0	0.2	07:00	0.1	00:00	0	96.5
31/07/2018	0.2	0.1	0.4	23:00	0.3	23:00	0	96.5

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to data logger fault

Table 11 Station 2 Carbon Monoxide Monthly Summary

PM2.5 Summary

Station 2 KSHS Ambient AQMS Particulate PM2.5 Summary July 2018						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Aves			No. of exceedences 24hr Avg > 25.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
¹ 1/07/2018	-	-	-	-	0	0.0
¹ 2/07/2018	-	1.4	3.4	15:00	0	37.5
3/07/2018	2.7	0.7	7.3	20:00	0	100.0
4/07/2018	3.9	0.7	9.7	08:00	0	100.0
5/07/2018	10.1	5.6	20.8	10:00	0	100.0
6/07/2018	4.4	1.8	7.5	20:00	0	100.0
7/07/2018	2.3	0.5	5.8	00:00	0	100.0
8/07/2018	3.0	1.0	5.6	10:00	0	100.0
9/07/2018	4.7	1.7	10.6	20:00	0	100.0
10/07/2018	5.6	2.7	9.4	04:00	0	100.0
11/07/2018	5.1	2.4	7.0	08:00	0	100.0
12/07/2018	4.1	0.8	7.7	00:00	0	100.0
13/07/2018	5.1	1.0	9.5	06:00	0	100.0
14/07/2018	8.0	2.9	25.1	23:00	0	100.0
15/07/2018	15.3	2.4	27.9	00:00	0	100.0
16/07/2018	10.8	1.6	22.8	00:00	0	100.0
17/07/2018	6.2	2.6	13.1	23:00	0	100.0
18/07/2018	14.2	5.7	18.0	00:00	0	100.0
19/07/2018	16.8	7.2	30.4	10:00	0	100.0
20/07/2018	11.8	2.3	22.8	10:00	0	100.0
21/07/2018	5.7	1.7	18.8	23:00	0	100.0
22/07/2018	10.6	2.4	23.8	00:00	0	100.0
23/07/2018	8.5	2.5	16.2	08:00	0	100.0
24/07/2018	9.4	4.6	16.7	23:00	0	100.0
25/07/2018	18.2	8.9	26.0	10:00	0	100.0
¹ 26/07/2018	-	8.3	22.7	00:00	0	54.2
27/07/2018	12.2	3.5	27.6	10:00	0	100.0
28/07/2018	5.2	1.9	10.5	18:00	0	100.0
29/07/2018	9.3	2.9	17.9	08:00	0	100.0
30/07/2018	3.1	0.3	8.9	00:00	0	100.0
31/07/2018	5.3	1.9	12.7	22:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to data logger fault

Table 12 Station 2 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 2 KSHS Ambient AQMS Particulate PM ₁₀ Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves			No. of exceedences 24hr Avg > 50.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)	Time of Max		
¹ 1/07/2018	-	-	-	-	0	0.0
¹ 2/07/2018	-	3.6	13.4	18:00	0	37.5
3/07/2018	5.3	2.1	9.6	18:00	0	100.0
4/07/2018	11.7	4.0	20.4	23:00	0	100.0
5/07/2018	21.7	13.5	53.6	16:00	0	100.0
6/07/2018	28.6	7.7	74.3	18:00	0	100.0
7/07/2018	6.5	0.6	26.7	00:00	0	100.0
8/07/2018	8.5	4.4	15.2	12:00	0	100.0
9/07/2018	9.9	3.8	20.1	22:00	0	100.0
10/07/2018	10.4	6.5	14.3	18:00	0	100.0
11/07/2018	13.1	8.9	25.2	18:00	0	100.0
12/07/2018	8.4	2.9	19.9	22:00	0	100.0
13/07/2018	9.9	3.4	18.6	00:00	0	100.0
14/07/2018	9.5	3.8	23.4	23:00	0	100.0
15/07/2018	16.6	3.3	26.3	06:00	0	100.0
16/07/2018	12.6	5.1	24.9	02:00	0	100.0
17/07/2018	13.1	9.7	18.6	18:00	0	100.0
18/07/2018	22.8	10.8	30.4	20:00	0	100.0
19/07/2018	28.3	19.3	49.3	10:00	0	100.0
20/07/2018	19.0	11.7	28.3	10:00	0	100.0
21/07/2018	19.2	9.6	29.9	02:00	0	100.0
22/07/2018	18.4	11.2	29.5	00:00	0	100.0
23/07/2018	16.7	11.2	23.2	12:00	0	100.0
24/07/2018	19.6	12.9	30.0	20:00	0	100.0
25/07/2018	36.2	15.1	75.7	17:00	0	100.0
¹ 26/07/2018	-	17.0	41.7	00:00	0	54.2
27/07/2018	23.7	14.1	32.9	08:00	0	100.0
28/07/2018	11.7	2.0	30.4	18:00	0	100.0
29/07/2018	14.3	4.1	27.6	18:00	0	100.0
30/07/2018	6.5	1.5	13.6	00:00	0	100.0
31/07/2018	13.0	6.3	24.9	10:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to data logger fault

Table 13 Station 2 PM₁₀ Monthly Summary

Station 3 (Lewis Street)

Summary

Station 3 Lewis St Ambient AQMS Summary July 2018						
Parameter	Unit	EPP Goal	Averaging Period	Maximum Value	Date & Time	Capture Rate
NO ₂	ppm	0.120	1 Hour	0.041	18/07/2018 17:00	68.7
NO ₂	ppm	0.030	12 Months	0.009	--	86.6
CO	ppm	8	8 Hours	1.2	15/07/2018 01:00	75.0
PM _{2.5}	µg/m3	25	24 Hours	18.0	25/07/2018	76.2
PM _{2.5}	µg/m3	8	12 Months	7.4	--	88.9
PM ₁₀	µg/m3	50	24 Hours	35.3	25/07/2018	73.7
PM ₁₀	µg/m3	50	12 Months	17.7	--	85.9
TSP	µg/m3	--	24 Hours	28.4	27/07/2018 1	83.3
TSP	µg/m3	90	12 Months	22.7	--	100.0

Table 14 Station 3 Monthly Summary

Graphical Representations

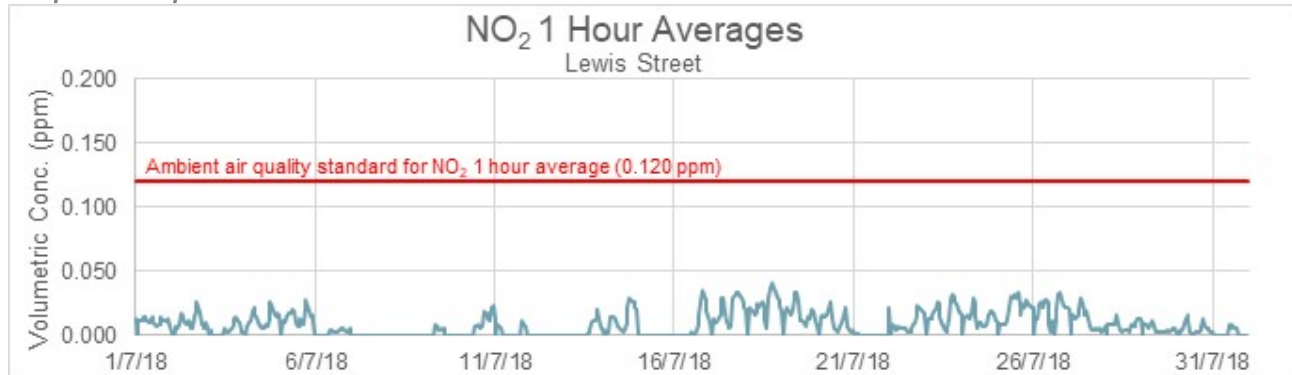


Figure 9 Station 3 Nitrogen Dioxide 1hr averages

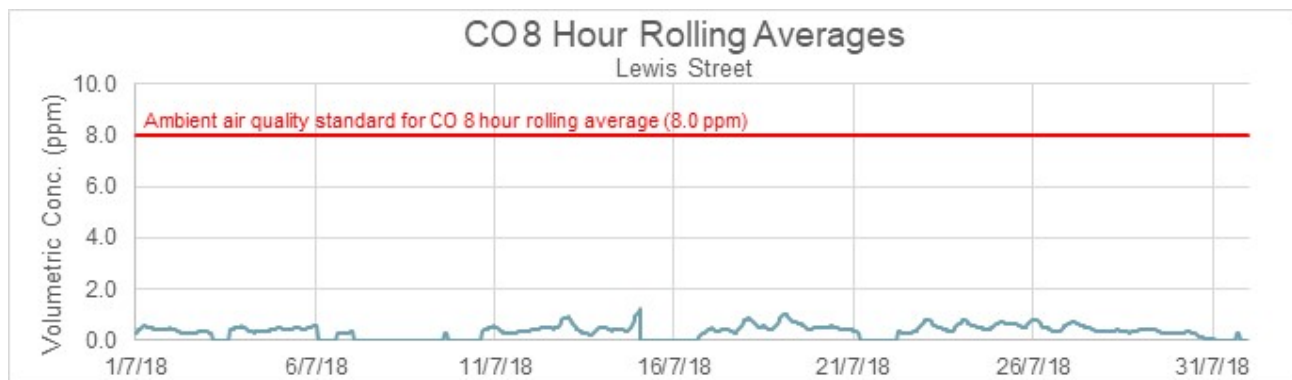


Figure 10 Station 3 Carbon Monoxide 8hr rolling averages

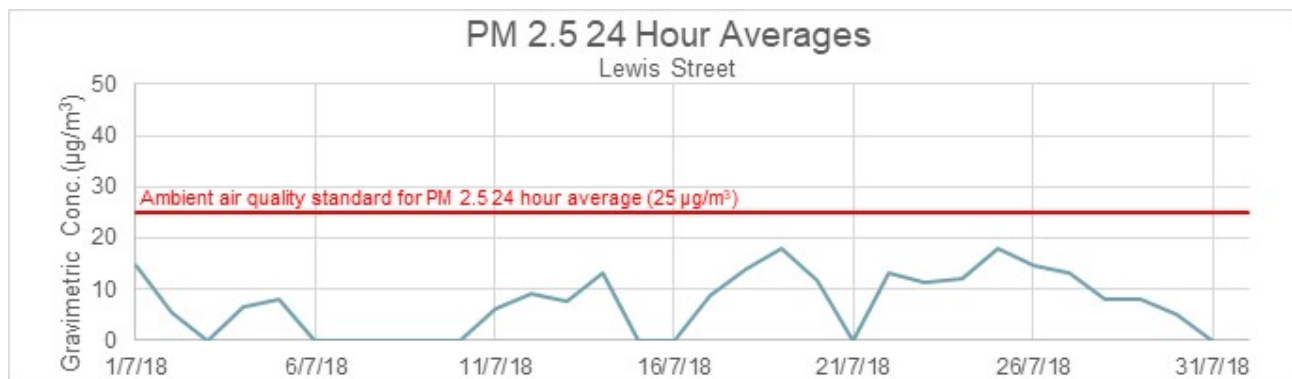


Figure 11 Station 3 PM2.5 24hr averages



Figure 12 Station 3 PM10 24hr averages

Nitrogen Dioxide Summary

Station 3 Lewis St Ambient AQMS Nitrogen Dioxide Summary July 2018						
Date	24hr Avg (ppm)	Min (ppm)	1 hr Aves Max (ppm)	Time of Max	Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
1/07/2018	0.011	0.007	0.015	11:00	0	97.2
2/07/2018	0.011	0.003	0.026	17:00	0	97.2
¹ 3/07/2018	-	0.003	0.014	19:00	0	68.4
4/07/2018	0.013	0.003	0.026	18:00	0	97.2
5/07/2018	0.015	0.007	0.027	18:00	0	97.2
¹ 6/07/2018	-	0.003	0.006	17:00	0	59.7
¹ 7/07/2018	-	-	-	-	0	0.0
¹ 8/07/2018	-	-	-	-	0	0.0
² 9/07/2018	-	0.004	0.009	08:00	0	28.8
² 10/07/2018	-	0.006	0.023	23:00	0	55.2
² 11/07/2018	-	0.005	0.013	00:00	0	38.2
¹ 12/07/2018	-	-	-	-	0	0.0
¹ 13/07/2018	-	0.001	0.021	21:00	0	40.6
14/07/2018	0.013	0.002	0.030	18:00	0	97.2
¹ 15/07/2018	-	-	-	-	0	0.0
² 16/07/2018	-	0.001	0.035	19:00	0	56.9
17/07/2018	0.020	0.005	0.034	18:00	0	96.9
18/07/2018	0.025	0.006	0.041	17:00	0	96.9
19/07/2018	0.018	0.007	0.034	10:00	0	96.2
20/07/2018	0.012	0.002	0.027	08:00	0	96.2
¹ 21/07/2018	-	0.001	0.004	00:00	0	12.8
22/07/2018	0.010	0.003	0.023	19:00	0	96.2
23/07/2018	0.017	0.003	0.032	18:00	0	96.9
24/07/2018	0.014	0.006	0.029	08:00	0	96.9
25/07/2018	0.021	0.008	0.034	14:00	0	96.9
26/07/2018	0.021	0.003	0.033	18:00	0	92.0
27/07/2018	0.012	0.003	0.029	08:00	0	96.2
28/07/2018	0.007	0.003	0.015	08:00	0	96.9
29/07/2018	0.006	0.002	0.013	00:00	0	96.9
30/07/2018	0.006	0.002	0.016	07:00	0	96.9
¹ 31/07/2018	-	0.003	0.009	11:00	0	31.3

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to WinAQMS fault

² Loss of data due to instrument fault

Table 15 Station 3 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 3 Lewis St Ambient AQMS Carbon Monoxide Summary July 2018								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/07/2018	0.5	0.4	0.7	00:00	0.6	07:00	0	96.9
2/07/2018	0.3	0.3	0.4	17:00	0.5	00:00	0	96.9
¹ 3/07/2018	-	0.3	0.6	18:00	0.5	23:00	0	67.7
4/07/2018	0.4	0.3	0.6	18:00	0.5	00:00	0	96.9
5/07/2018	0.5	0.4	0.7	22:00	0.6	23:00	0	96.9
¹ 6/07/2018	-	0.3	0.3	23:00	0.6	01:00	0	59.7
¹ 7/07/2018	-	-	-	-	0.3	01:00	0	0.0
¹ 8/07/2018	-	-	-	-	-	-	0	0.0
¹ 9/07/2018	-	0.3	0.3	08:00	0.3	14:00	0	28.8
¹ 10/07/2018	-	0.4	0.6	23:00	0.6	23:00	0	55.2
11/07/2018	0.3	0.2	0.4	20:00	0.5	00:00	0	96.9
12/07/2018	0.6	0.4	1.2	20:00	0.9	23:00	0	94.8
13/07/2018	0.4	0.0	0.7	21:00	0.9	01:00	0	89.2
14/07/2018	0.6	0.3	1.4	22:00	1.0	23:00	0	96.9
15/07/2018	-	-	-	-	1.2	01:00	0	0.0
² 16/07/2018	-	0.1	0.6	21:00	0.4	23:00	0	56.9
17/07/2018	0.5	0.2	1.0	22:00	0.8	23:00	0	96.5
18/07/2018	0.6	0.2	1.2	23:00	0.9	01:00	0	96.5
19/07/2018	0.6	0.4	1.2	00:00	1.0	02:00	0	96.2
20/07/2018	0.4	0.2	0.8	08:00	0.5	10:00	0	96.2
¹ 21/07/2018	-	0.2	0.3	00:00	0.4	00:00	0	12.8
22/07/2018	0.5	0.3	0.9	22:00	0.7	23:00	0	96.2
23/07/2018	0.5	0.3	0.9	22:00	0.8	02:00	0	96.5
24/07/2018	0.6	0.4	0.8	21:00	0.8	02:00	0	96.5
25/07/2018	0.7	0.5	1.0	22:00	0.8	23:00	0	96.5
26/07/2018	0.5	0.2	0.9	23:00	0.8	01:00	0	91.3
27/07/2018	0.5	0.4	0.7	02:00	0.7	03:00	0	95.8
28/07/2018	0.4	0.3	0.5	21:00	0.4	23:00	0	96.5
29/07/2018	0.3	0.2	0.5	02:00	0.5	04:00	0	96.5
30/07/2018	0.2	0.0	0.4	07:00	0.3	08:00	0	96.5
¹ 31/07/2018	-	0.2	0.3	11:00	0.3	16:00	0	31.3

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to WinAQMS fault

² Loss of data due to power interruption

Table 16 Station 3 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 3 Lewis St Ambient AQMS Particulate PM _{2.5} Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves			No. of exceedences 24hr Avg > 25.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)	Time of Max		
1/07/2018	14.5	6.1	23.4	01:00	0	100.0
2/07/2018	5.6	2.0	13.1	07:00	0	100.0
¹ 3/07/2018	-	1.2	6.0	13:00	0	62.5
4/07/2018	6.5	2.1	13.4	19:00	0	95.8
5/07/2018	8.0	4.0	13.1	11:00	0	100.0
¹ 6/07/2018	-	3.5	12.5	18:00	0	58.3
¹ 7/07/2018	-	-	-	-	0	0.0
¹ 8/07/2018	-	-	-	-	0	0.0
¹ 9/07/2018	-	3.9	6.9	08:00	0	29.2
¹ 10/07/2018	-	3.0	11.7	12:00	0	54.2
11/07/2018	6.1	0.5	9.7	00:00	0	100.0
12/07/2018	9.1	3.3	25.8	21:00	0	95.8
13/07/2018	7.8	1.3	16.3	00:00	0	87.5
14/07/2018	13.1	1.4	55.3	21:00	0	100.0
15/07/2018	-	-	-	-	0	0.0
¹ 16/07/2018	-	3.2	15.5	20:00	0	58.3
17/07/2018	8.9	1.4	25.3	23:00	0	100.0
18/07/2018	14.0	5.5	26.5	22:00	0	100.0
19/07/2018	18.0	8.0	37.9	22:00	0	95.8
20/07/2018	11.6	1.3	19.0	08:00	0	95.8
¹ 21/07/2018	-	3.2	6.7	00:00	0	16.7
22/07/2018	13.0	3.6	29.5	20:00	0	95.8
23/07/2018	11.5	2.5	18.0	22:00	0	100.0
24/07/2018	12.1	2.3	23.6	22:00	0	100.0
25/07/2018	18.0	11.2	22.9	00:00	0	100.0
26/07/2018	14.5	4.8	21.5	21:00	0	95.8
27/07/2018	13.2	4.1	34.1	09:00	0	95.8
28/07/2018	8.2	3.2	14.4	23:00	0	100.0
29/07/2018	8.1	1.3	17.4	09:00	0	100.0
30/07/2018	5.1	1.3	8.0	04:00	0	95.8
¹ 31/07/2018	-	3.1	7.7	11:00	0	29.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to WinAQMS fault

Table 17 Station 3 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 3 Lewis St Ambient AQMS Particulate PM ₁₀ Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves		Time of Max	No. of exceedences 24hr Avg > 50.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)			
1/07/2018	23.7	17.4	29.6	00:00	0	100.0
2/07/2018	12.1	3.9	20.9	17:00	0	100.0
¹ 3/07/2018	-	3.3	21.8	13:00	0	62.5
4/07/2018	17.6	6.5	33.6	19:00	0	95.8
5/07/2018	15.5	8.2	27.3	11:00	0	100.0
¹ 6/07/2018	-	11.8	27.9	18:00	0	58.3
¹ 7/07/2018	-	-	-	-	0	0.0
¹ 8/07/2018	-	-	-	-	0	0.0
¹ 9/07/2018	-	10.8	18.8	09:00	0	29.2
¹ 10/07/2018	-	15.1	28.4	19:00	0	54.2
11/07/2018	13.7	7.0	21.0	00:00	0	95.8
12/07/2018	16.1	6.1	37.7	21:00	0	95.8
13/07/2018	14.3	6.0	31.0	00:00	0	87.5
14/07/2018	23.4	5.4	72.8	21:00	0	91.7
15/07/2018	-	-	-	-	0	0.0
¹ 16/07/2018	-	10.0	26.9	21:00	0	50.0
17/07/2018	20.3	6.2	42.8	16:00	0	95.8
18/07/2018	30.5	14.9	46.7	16:00	0	95.8
19/07/2018	32.6	14.1	57.9	09:00	0	95.8
20/07/2018	25.3	11.6	46.4	22:00	0	91.7
¹ 21/07/2018	-	23.8	33.8	02:00	0	8.3
22/07/2018	28.1	14.3	101.2	02:00	0	95.8
23/07/2018	23.5	14.3	39.5	09:00	0	95.8
24/07/2018	24.5	11.1	42.0	22:00	0	95.8
25/07/2018	35.3	21.3	51.6	11:00	0	95.8
26/07/2018	33.8	16.7	46.1	10:00	0	87.5
27/07/2018	24.3	9.0	63.5	09:00	0	95.8
28/07/2018	13.3	5.3	23.5	22:00	0	95.8
29/07/2018	16.3	9.0	31.1	09:00	0	95.8
30/07/2018	13.6	8.1	21.8	15:00	0	87.5
31/07/2018	-	12.0	28.4	11:00	0	29.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to WinAQMS fault

Table 18 Station 3 PM₁₀ Monthly Summary

Station 4 (Airportlink Operation Centre)

Summary

Station 4 Airportlink Operation Centre Ambient AQMS Summary July 2018						
Parameter	Unit	EPP Goal	Averaging Period	Maximum Value	Date & Time	Capture Rate
NO ₂	ppm	0.120	1 Hour	0.051	18/07/2018 19:00	97.1
NO ₂	ppm	0.030	12 Months	0.011	--	97.0
CO	ppm	8	8 Hours	0.7	19/07/2018 01:00	96.8
PM _{2.5}	µg/m3	25	24 Hours	17.7	25/07/2018	99.9
PM _{2.5}	µg/m3	8	12 Months	6.8	--	98.7
PM ₁₀	µg/m3	50	24 Hours	33.4	25/07/2018	99.9
PM ₁₀	µg/m3	50	12 Months	20.3	--	99.3
TSP	µg/m3	--	24 Hours	31.1	27/07/2018 1	83.3
TSP	µg/m3	90	12 Months	26.0	--	100.0

Table 19 Station 4 Monthly Summary

Graphical Representations

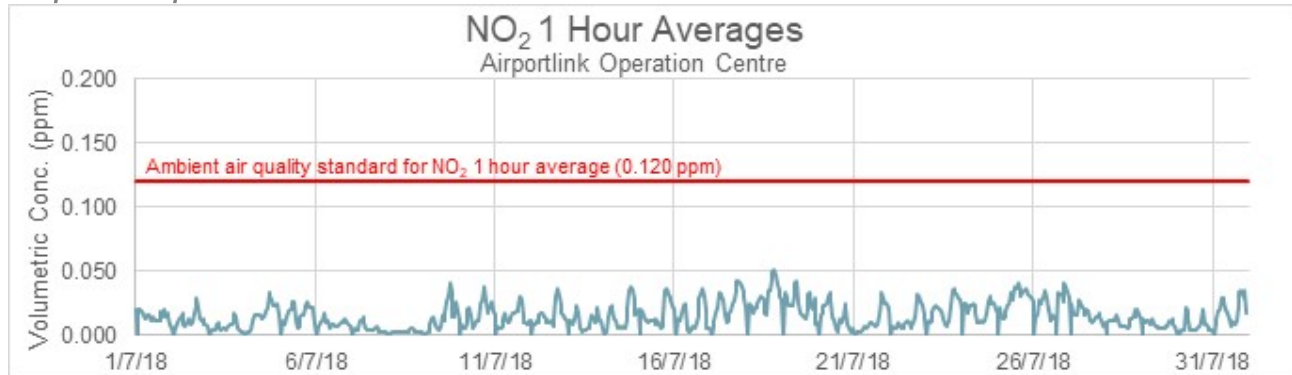


Figure 13 Station 4 Nitrogen Dioxide 1hr averages

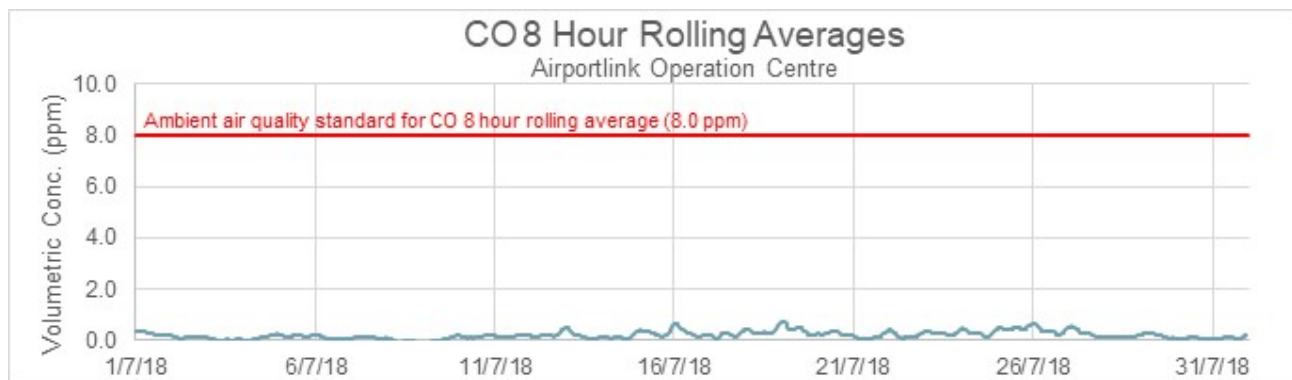


Figure 14 Station 4 Carbon Monoxide 8hr rolling averages

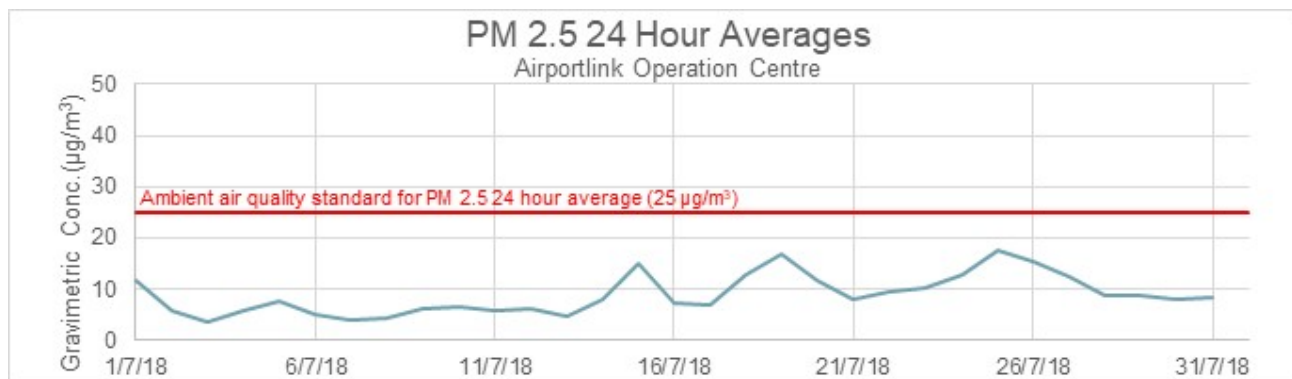


Figure 15 Station 4 PM2.5 24hr averages

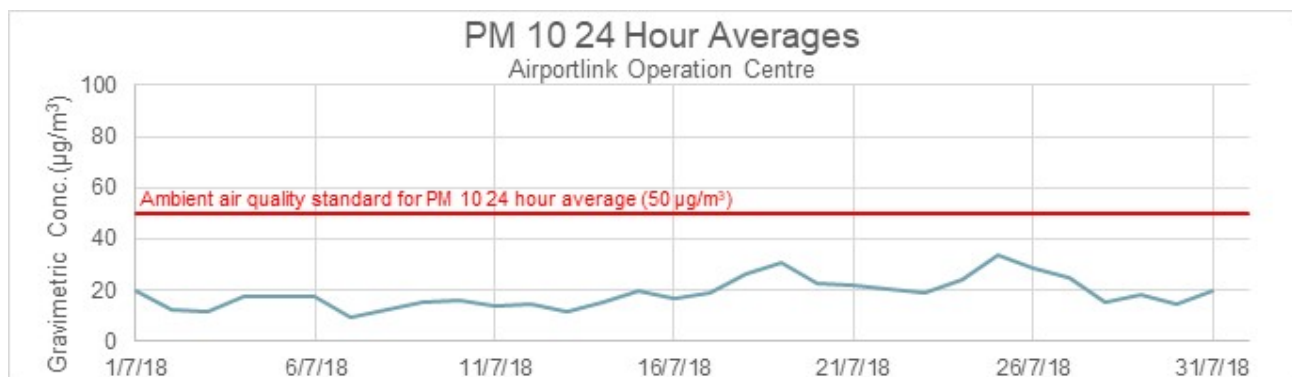


Figure 16 Station 4 PM10 24hr averages

Nitrogen Dioxide Summary

Station 4 Airportlink Operation Centre Ambient AQMS Nitrogen Dioxide Summary July 2018						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/07/2018	0.015	0.009	0.020	03:00	0	97.2
2/07/2018	0.012	0.006	0.029	17:00	0	97.2
3/07/2018	0.007	0.002	0.017	18:00	0	97.2
4/07/2018	0.016	0.002	0.034	17:00	0	97.2
5/07/2018	0.017	0.006	0.026	19:00	0	97.2
6/07/2018	0.009	0.005	0.017	06:00	0	97.2
7/07/2018	0.006	0.002	0.014	08:00	0	97.2
8/07/2018	0.003	0.002	0.006	17:00	0	97.2
9/07/2018	0.014	0.002	0.040	18:00	0	97.2
10/07/2018	0.017	0.005	0.038	17:00	0	97.2
11/07/2018	0.014	0.005	0.031	17:00	0	97.2
12/07/2018	0.016	0.008	0.037	18:00	0	97.2
13/07/2018	0.011	0.003	0.023	07:00	0	97.2
14/07/2018	0.015	0.002	0.038	19:00	0	97.2
15/07/2018	0.017	0.006	0.037	19:00	0	97.2
16/07/2018	0.015	0.003	0.036	19:00	0	97.2
17/07/2018	0.025	0.006	0.042	19:00	0	97.2
18/07/2018	0.030	0.016	0.051	19:00	0	97.2
19/07/2018	0.025	0.008	0.043	10:00	0	97.2
20/07/2018	0.015	0.003	0.034	08:00	0	97.2
21/07/2018	0.012	0.002	0.033	19:00	0	97.2
22/07/2018	0.013	0.005	0.032	19:00	0	97.2
23/07/2018	0.020	0.008	0.037	19:00	0	97.2
24/07/2018	0.020	0.009	0.031	19:00	0	97.2
25/07/2018	0.028	0.014	0.041	14:00	0	97.2
26/07/2018	0.025	0.011	0.041	21:00	0	94.8
27/07/2018	0.018	0.007	0.029	00:00	0	97.2
28/07/2018	0.012	0.006	0.020	20:00	0	97.2
29/07/2018	0.009	0.005	0.013	00:00	0	97.2
30/07/2018	0.008	0.003	0.021	06:00	0	97.2
31/07/2018	0.020	0.004	0.035	19:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 20 Station 4 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 4 Airportlink Operation Centre Ambient AQMS Carbon Monoxide Summary July 2018								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/07/2018	0.2	0.1	0.4	02:00	0.4	04:00	0	96.9
2/07/2018	0.1	0.1	0.3	17:00	0.2	00:00	0	96.9
3/07/2018	0.0	0.0	0.1	19:00	0.1	00:00	0	96.9
4/07/2018	0.2	0.0	0.4	17:00	0.3	23:00	0	96.9
5/07/2018	0.2	0.1	0.3	09:00	0.2	00:00	0	96.9
6/07/2018	0.1	0.1	0.1	20:00	0.2	00:00	0	96.2
7/07/2018	0.1	0.1	0.2	08:00	0.2	09:00	0	96.9
8/07/2018	-0.1	-0.1	0.0	09:00	0.1	00:00	0	96.9
9/07/2018	0.1	-0.1	0.5	18:00	0.2	23:00	0	96.9
10/07/2018	0.2	0.0	0.4	17:00	0.2	22:00	0	96.9
11/07/2018	0.2	0.1	0.4	17:00	0.2	18:00	0	96.9
12/07/2018	0.3	0.1	0.8	19:00	0.5	23:00	0	96.9
13/07/2018	0.1	0.0	0.3	21:00	0.5	01:00	0	96.9
14/07/2018	0.2	0.0	0.6	19:00	0.3	23:00	0	96.9
15/07/2018	0.4	0.1	0.9	22:00	0.5	23:00	0	96.9
16/07/2018	0.2	0.1	0.7	00:00	0.7	01:00	0	96.9
17/07/2018	0.3	0.0	0.7	21:00	0.4	23:00	0	96.9
18/07/2018	0.4	0.1	1.1	20:00	0.7	23:00	0	96.9
19/07/2018	0.3	0.1	0.7	09:00	0.7	01:00	0	96.9
20/07/2018	0.3	0.1	0.7	08:00	0.4	09:00	0	96.9
21/07/2018	0.2	0.0	0.6	19:00	0.4	23:00	0	96.9
22/07/2018	0.2	0.1	0.5	20:00	0.4	01:00	0	96.9
23/07/2018	0.3	0.1	0.6	23:00	0.4	23:00	0	96.9
24/07/2018	0.3	0.1	0.6	22:00	0.5	01:00	0	96.9
25/07/2018	0.5	0.3	0.9	20:00	0.6	23:00	0	96.9
26/07/2018	0.4	0.2	0.8	23:00	0.7	01:00	0	94.4
27/07/2018	0.2	0.1	0.7	00:00	0.5	02:00	0	96.9
28/07/2018	0.2	0.1	0.3	22:00	0.2	23:00	0	96.9
29/07/2018	0.2	0.1	0.4	08:00	0.3	08:00	0	96.9
30/07/2018	0.1	0.0	0.2	07:00	0.1	13:00	0	96.9
31/07/2018	0.1	0.0	0.5	22:00	0.2	23:00	0	96.9

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 21 Station 4 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 4 Airportlink Operation Centre Ambient AQMS Particulate PM _{2.5} Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves			No. of exceedences 24hr Avg > 25.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)	Time of Max		
1/07/2018	11.7	0.0	21.6	05:00	0	100.0
2/07/2018	5.8	-1.7	11.5	09:00	0	100.0
3/07/2018	3.6	-2.8	16.5	13:00	0	100.0
4/07/2018	5.7	-0.9	11.0	12:00	0	100.0
5/07/2018	7.8	0.2	18.4	11:00	0	100.0
6/07/2018	5.1	-4.1	9.7	10:00	0	100.0
7/07/2018	4.1	0.3	10.6	14:00	0	100.0
8/07/2018	4.3	-1.8	7.9	19:00	0	100.0
9/07/2018	6.2	0.3	19.0	19:00	0	100.0
10/07/2018	6.5	1.2	10.6	19:00	0	100.0
11/07/2018	5.8	3.0	8.0	08:00	0	100.0
12/07/2018	6.3	1.0	14.6	22:00	0	100.0
13/07/2018	4.7	0.1	9.8	00:00	0	100.0
14/07/2018	7.9	-1.5	27.7	20:00	0	100.0
15/07/2018	15.1	6.2	25.0	21:00	0	100.0
16/07/2018	7.5	0.3	23.0	00:00	0	100.0
17/07/2018	6.9	-1.0	16.0	21:00	0	100.0
18/07/2018	13.0	6.3	26.0	21:00	0	100.0
19/07/2018	17.0	3.5	36.0	10:00	0	100.0
20/07/2018	11.9	4.5	25.1	01:00	0	100.0
21/07/2018	8.0	1.0	28.6	22:00	0	100.0
22/07/2018	9.6	2.5	21.0	20:00	0	100.0
23/07/2018	10.3	2.1	19.8	00:00	0	100.0
24/07/2018	12.9	7.2	28.3	21:00	0	100.0
25/07/2018	17.7	8.1	31.7	00:00	0	100.0
26/07/2018	15.5	6.0	27.3	23:00	0	95.8
27/07/2018	12.6	4.1	29.0	00:00	0	100.0
28/07/2018	8.7	1.7	23.4	13:00	0	100.0
29/07/2018	8.8	2.0	15.7	02:00	0	100.0
30/07/2018	7.9	2.0	17.3	16:00	0	100.0
31/07/2018	8.4	2.5	15.4	15:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 22 Station 4 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 4 Airportlink Operation Centre Ambient AQMS Particulate PM10 Summary July 2018						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Aves			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/07/2018	20.0	14.5	24.9	09:00	0	100.0
2/07/2018	12.2	7.1	18.2	13:00	0	100.0
3/07/2018	11.9	6.0	23.6	16:00	0	100.0
4/07/2018	17.2	8.2	26.4	23:00	0	100.0
5/07/2018	17.6	10.0	23.8	11:00	0	100.0
6/07/2018	17.7	3.2	29.6	15:00	0	100.0
7/07/2018	9.4	1.3	20.5	21:00	0	100.0
8/07/2018	12.3	8.2	17.3	15:00	0	100.0
9/07/2018	15.0	10.0	26.8	19:00	0	100.0
10/07/2018	16.4	9.0	22.7	19:00	0	100.0
11/07/2018	13.6	5.1	17.6	03:00	0	100.0
12/07/2018	14.3	6.2	43.1	22:00	0	100.0
13/07/2018	11.3	7.2	21.5	00:00	0	100.0
14/07/2018	15.5	6.1	32.0	21:00	0	100.0
15/07/2018	19.6	8.9	32.7	21:00	0	100.0
16/07/2018	16.5	10.1	27.4	00:00	0	100.0
17/07/2018	18.8	8.0	30.9	21:00	0	100.0
18/07/2018	26.5	14.3	42.8	20:00	0	100.0
19/07/2018	30.5	19.5	60.9	10:00	0	100.0
20/07/2018	22.8	12.5	41.8	23:00	0	100.0
21/07/2018	22.1	11.0	40.2	01:00	0	100.0
22/07/2018	20.6	10.0	38.1	20:00	0	100.0
23/07/2018	19.1	12.3	25.1	10:00	0	100.0
24/07/2018	24.3	18.1	40.5	22:00	0	100.0
25/07/2018	33.4	23.1	48.1	10:00	0	100.0
26/07/2018	28.6	15.5	38.3	23:00	0	95.8
27/07/2018	24.7	11.1	42.0	08:00	0	100.0
28/07/2018	15.2	6.3	32.3	14:00	0	100.0
29/07/2018	18.1	11.0	26.8	02:00	0	100.0
30/07/2018	14.7	8.8	20.3	03:00	0	100.0
31/07/2018	19.8	10.6	29.3	15:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 23 Station 4 PM₁₀ Monthly Summary

Station 5 (Cartwright Street)

Summary

Station 5 Cartwright St Ambient AQMS Summary July 2018						
Parameter	Unit	EPP Goal	Averaging Period	Maximum Value	Date & Time	Capture Rate
NO ₂	ppm	0.120	1 Hour	0.054	18/07/2018 19:00	97.1
NO ₂	ppm	0.030	12 Months	0.011	--	92.5
CO	ppm	8	8 Hours	0.7	19/07/2018 01:00	82.7
PM _{2.5}	µg/m3	25	24 Hours	22.7	19/07/2018	90.7
PM _{2.5}	µg/m3	8	12 Months	6.8	--	96.1
PM ₁₀	µg/m3	50	24 Hours	35.1	19/07/2018	99.1
PM ₁₀	µg/m3	50	12 Months	19.1	--	98.3
TSP	µg/m3	--	24 Hours	28.0	31/07/2018	83.3
TSP	µg/m3	90	12 Months	21.9	--	100.0

Table 24 Station 5 Monthly Summary

Graphical Representations

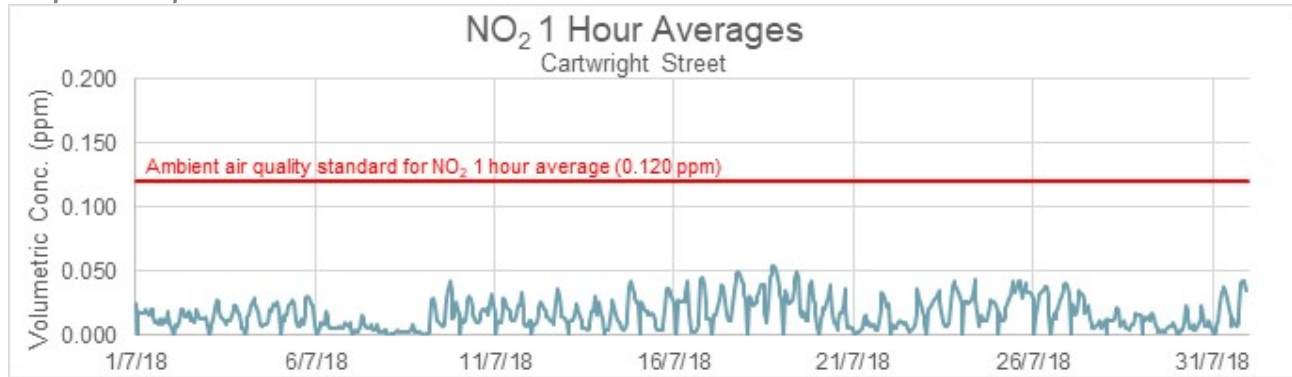


Figure 17 Station 5 Dioxide 1hr averages

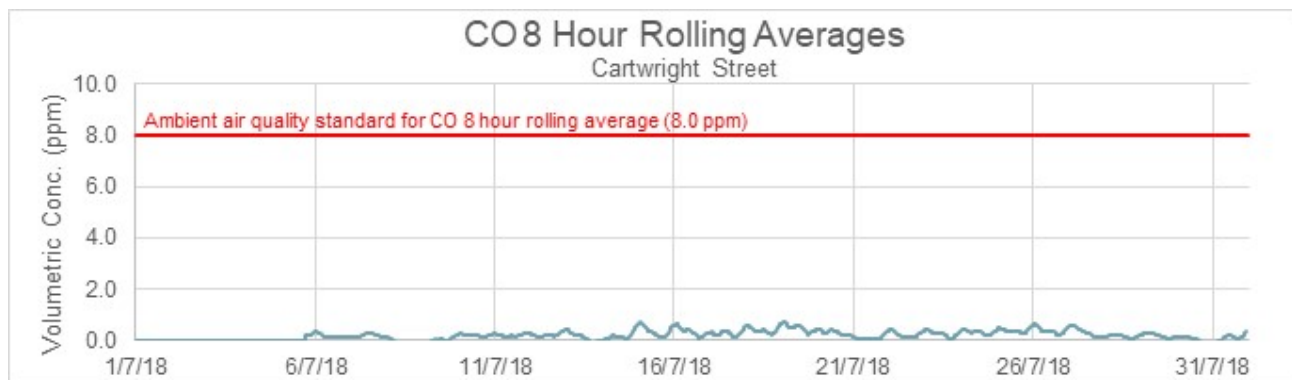


Figure 18 Station 5 Carbon Monoxide 8hr rolling averages

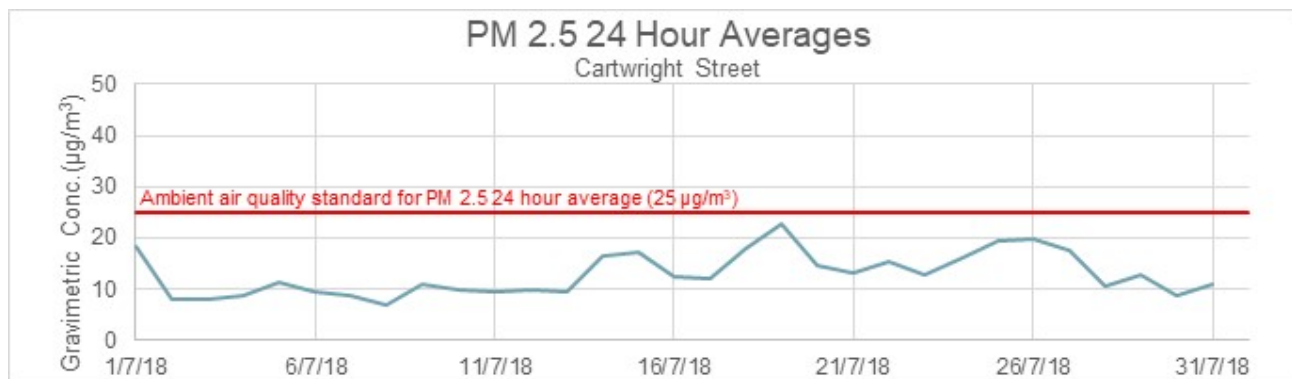


Figure 19 Station 5 PM2.5 24hr averages

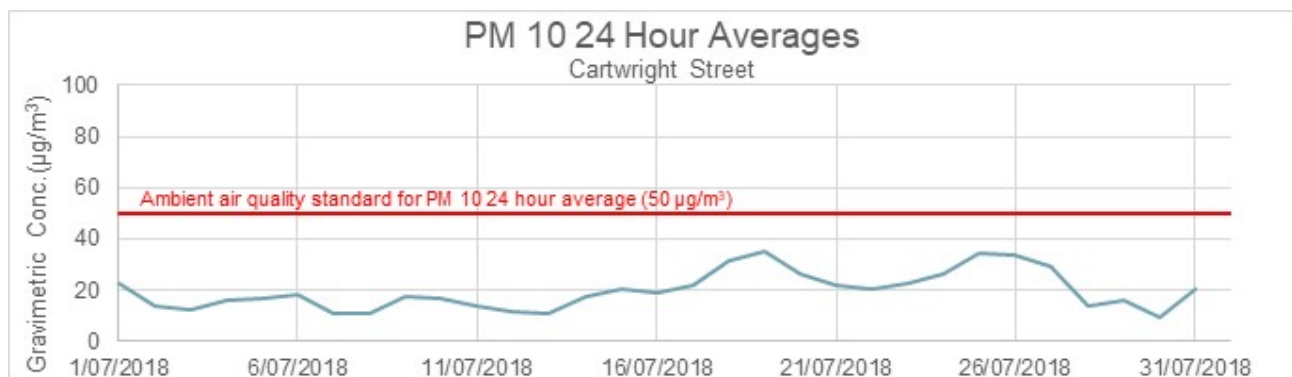


Figure 20 Station 5 PM10 24hr averages

Nitrogen Dioxide Summary

Station 5 Cartwright St Ambient AQMS Nitrogen Dioxide Summary July 2018						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/07/2018	0.016	0.008	0.024	00:00	0	97.2
2/07/2018	0.014	0.006	0.021	06:00	0	97.2
3/07/2018	0.015	0.006	0.027	06:00	0	97.2
4/07/2018	0.017	0.006	0.029	07:00	0	97.2
5/07/2018	0.019	0.007	0.030	19:00	0	97.2
6/07/2018	0.008	0.004	0.019	07:00	0	97.2
7/07/2018	0.006	0.002	0.015	07:00	0	97.2
8/07/2018	0.003	0.001	0.009	17:00	0	97.2
9/07/2018	0.016	0.001	0.042	18:00	0	97.2
10/07/2018	0.019	0.010	0.032	22:00	0	97.2
11/07/2018	0.017	0.007	0.033	18:00	0	97.2
12/07/2018	0.017	0.008	0.036	18:00	0	96.9
13/07/2018	0.015	0.005	0.030	19:00	0	97.2
14/07/2018	0.018	0.004	0.042	19:00	0	97.2
15/07/2018	0.019	0.004	0.037	19:00	0	97.2
16/07/2018	0.021	0.002	0.045	19:00	0	97.2
17/07/2018	0.029	0.012	0.049	19:00	0	97.2
18/07/2018	0.034	0.009	0.054	19:00	0	97.2
19/07/2018	0.028	0.011	0.049	10:00	0	97.2
20/07/2018	0.017	0.005	0.039	08:00	0	97.2
21/07/2018	0.012	0.002	0.034	19:00	0	97.2
22/07/2018	0.012	0.003	0.037	19:00	0	97.2
23/07/2018	0.024	0.007	0.042	19:00	0	97.2
24/07/2018	0.023	0.007	0.044	09:00	0	97.2
25/07/2018	0.030	0.012	0.043	15:00	0	97.2
26/07/2018	0.028	0.012	0.041	22:00	0	94.4
27/07/2018	0.018	0.006	0.035	07:00	0	97.2
28/07/2018	0.012	0.004	0.022	08:00	0	97.2
29/07/2018	0.009	0.002	0.017	08:00	0	97.2
30/07/2018	0.009	0.003	0.023	06:00	0	97.2
31/07/2018	0.023	0.004	0.043	21:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 25 Station 5 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 5 Cartwright St Ambient AQMS Carbon Monoxide Summary July 2018								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
¹ 1/07/2018	-	-	-	-	-	-	0	0.0
¹ 2/07/2018	-	-	-	-	-	-	0	0.0
¹ 3/07/2018	-	-	-	-	-	-	0	0.0
¹ 4/07/2018	-	-	-	-	-	-	0	0.0
¹ 5/07/2018	-	0.1	0.5	22:00	0.3	23:00	0	48.3
6/07/2018	0.1	0.1	0.2	08:00	0.3	01:00	0	96.9
7/07/2018	0.2	0.1	0.4	09:00	0.3	12:00	0	96.9
8/07/2018	-0.1	-0.2	0.0	00:00	0.1	00:00	0	96.9
9/07/2018	0.1	-0.1	0.5	19:00	0.2	23:00	0	96.5
10/07/2018	0.2	0.1	0.3	22:00	0.3	01:00	0	96.5
11/07/2018	0.2	0.1	0.4	18:00	0.3	22:00	0	96.5
12/07/2018	0.2	0.1	0.7	19:00	0.4	23:00	0	96.2
13/07/2018	0.1	-0.1	0.3	06:00	0.4	01:00	0	96.5
14/07/2018	0.3	0.1	0.9	20:00	0.6	23:00	0	96.9
15/07/2018	0.4	0.1	0.9	21:00	0.7	02:00	0	96.9
16/07/2018	0.3	0.0	0.7	08:00	0.6	01:00	0	96.9
17/07/2018	0.3	0.0	0.7	22:00	0.5	23:00	0	96.9
18/07/2018	0.4	0.1	1.0	21:00	0.6	23:00	0	96.9
19/07/2018	0.4	0.2	0.7	08:00	0.7	01:00	0	96.9
20/07/2018	0.3	0.0	0.8	08:00	0.4	01:00	0	96.9
21/07/2018	0.2	0.0	0.6	19:00	0.4	23:00	0	96.9
22/07/2018	0.2	0.1	0.6	19:00	0.4	01:00	0	96.9
23/07/2018	0.3	0.0	0.7	20:00	0.4	02:00	0	96.9
24/07/2018	0.3	0.1	0.7	23:00	0.5	02:00	0	96.9
25/07/2018	0.4	0.2	0.8	20:00	0.6	23:00	0	96.9
26/07/2018	0.4	0.2	0.8	22:00	0.6	01:00	0	94.1
27/07/2018	0.3	0.1	0.6	00:00	0.6	02:00	0	96.9
28/07/2018	0.2	0.1	0.4	08:00	0.2	09:00	0	96.9
29/07/2018	0.2	0.1	0.3	02:00	0.3	04:00	0	96.9
30/07/2018	0.0	-0.1	0.2	07:00	0.1	01:00	0	96.9
31/07/2018	0.2	0.0	0.5	21:00	0.3	23:00	0	96.9

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to temperature instability

Table 26 Station 5 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 5 Cartwright St Ambient AQMS Particulate PM _{2.5} Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves			No. of exceedences 24hr Avg > 25.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)	Time of Max		
1/07/2018	18.2	9.0	31.0	00:00	0	100.0
2/07/2018	7.9	5.3	11.5	00:00	0	100.0
3/07/2018	8.2	4.3	13.5	12:00	0	100.0
4/07/2018	8.9	5.0	16.5	21:00	0	95.8
5/07/2018	11.5	6.2	15.6	18:00	0	95.8
6/07/2018	9.5	4.5	15.0	18:00	0	100.0
7/07/2018	8.9	5.1	14.5	02:00	0	100.0
8/07/2018	6.8	4.1	11.5	09:00	0	100.0
9/07/2018	11.0	3.5	27.0	06:00	0	91.7
10/07/2018	9.9	6.1	14.6	23:00	0	100.0
11/07/2018	9.6	6.1	31.0	09:00	0	87.5
12/07/2018	9.9	5.1	17.7	22:00	0	100.0
13/07/2018	9.4	4.3	15.5	21:00	0	95.8
14/07/2018	16.7	3.5	37.7	23:00	0	87.5
15/07/2018	17.4	6.0	28.8	21:00	0	75.0
16/07/2018	12.6	6.1	19.3	05:00	0	79.2
17/07/2018	12.2	4.0	23.7	22:00	0	83.3
18/07/2018	17.9	9.1	27.8	21:00	0	83.3
19/07/2018	22.7	13.0	68.0	09:00	0	83.3
20/07/2018	14.7	6.0	24.8	01:00	0	95.8
21/07/2018	13.2	5.1	32.0	21:00	0	79.2
22/07/2018	15.4	9.0	28.0	20:00	0	75.0
23/07/2018	12.8	6.3	21.0	09:00	0	75.0
24/07/2018	16.0	7.0	31.0	22:00	0	83.3
25/07/2018	19.5	14.8	27.0	01:00	0	83.3
26/07/2018	19.9	10.0	29.5	23:00	0	91.7
27/07/2018	17.5	9.1	31.7	08:00	0	100.0
28/07/2018	10.8	7.0	20.5	23:00	0	100.0
29/07/2018	12.8	6.2	24.1	03:00	0	100.0
30/07/2018	8.6	5.1	13.6	06:00	0	95.8
31/07/2018	11.2	6.7	20.7	22:00	0	75.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 27 Station 5 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 5 Cartwright St Ambient AQMS Particulate PM10 Summary July 2018						
Date	24 hr Avg (µg/m ³)	1 hr Aves			No. of exceedences 24hr Avg > 50.0 µg/m ³	Capture Rate
		Min (µg/m ³)	Max (µg/m ³)	Time of Max		
1/07/2018	22.8	14.4	38.3	00:00	0	100.0
2/07/2018	13.8	7.0	23.3	17:00	0	95.8
3/07/2018	12.1	4.4	17.8	13:00	0	100.0
4/07/2018	15.8	8.2	25.3	21:00	0	100.0
5/07/2018	16.6	9.6	31.6	11:00	0	100.0
6/07/2018	18.0	8.1	52.3	11:00	0	100.0
7/07/2018	10.9	4.4	18.0	17:00	0	100.0
8/07/2018	11.0	4.1	22.4	08:00	0	100.0
9/07/2018	17.8	10.7	48.3	17:00	0	95.8
10/07/2018	16.5	10.0	27.3	23:00	0	100.0
11/07/2018	14.1	4.9	22.3	11:00	0	100.0
12/07/2018	11.5	4.0	25.5	20:00	0	83.3
13/07/2018	11.2	5.3	21.8	08:00	0	100.0
14/07/2018	17.4	2.2	45.0	20:00	0	100.0
15/07/2018	20.7	6.3	37.1	22:00	0	100.0
16/07/2018	19.2	8.0	43.5	10:00	0	100.0
17/07/2018	22.1	7.0	48.7	08:00	0	100.0
18/07/2018	31.7	11.4	98.8	08:00	0	100.0
19/07/2018	35.1	15.7	75.1	10:00	0	100.0
20/07/2018	26.3	14.0	57.8	09:00	0	100.0
21/07/2018	22.2	9.0	43.0	00:00	0	100.0
22/07/2018	20.6	11.4	36.3	20:00	0	100.0
23/07/2018	22.6	14.5	34.2	09:00	0	100.0
24/07/2018	26.6	15.0	45.0	10:00	0	100.0
25/07/2018	34.5	16.5	53.2	10:00	0	100.0
26/07/2018	33.6	8.8	54.6	09:00	0	95.8
27/07/2018	29.6	12.0	131.9	09:00	0	100.0
28/07/2018	13.8	7.1	25.9	09:00	0	100.0
29/07/2018	16.2	8.2	29.5	09:00	0	100.0
30/07/2018	9.5	2.3	19.0	12:00	0	100.0
31/07/2018	20.2	9.0	39.0	09:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
There will be no daily results if there is less than 75% valid data for that day

Table 28 Station 5 PM₁₀ Monthly Summary

TSP High Volume Air Sampler Results

Total Suspended Particulate High Volume Air Sampler results are presented in Table 29 below. The HVAS are run on a one in six day cycle.

The Coordinator General's criterion of 90 µg/m³ was not exceeded during the reporting period at any of the five sites.

TSP Results July 2018					
Sample Date	Station 1 AHS (µg/m ³)	Station 2 KSHS (µg/m ³)	Station 3 LS (µg/m ³)	Station 4 ALOC (µg/m ³)	Station 5 CS (µg/m ³)
01/07/2018	24.1	22.1	24.7	26.3	22.8
7/07/2018	15.3	10.9	12.4	13.3	9.5
13/07/2018	18.9	13.3	15.2	14.4	14.0
19/07/2018	-	-	-	-	-
25/07/2018	-	-	-	-	-
27/07/2018 ¹	38.3	31.1	28.4	31.1	18.7
31/07/2018	34.4	27.5	23.1	28.8	28.0
Monthly Average	26.2	21.0	20.8	22.8	18.6
Annual Average	25.5	24.4	22.7	26.0	21.9

Table 29 TSP High Volume Air Sampler Results

¹ There are no results available for TSP for any of the five stations for the scheduled run days of 19/07/2018 and 25/07/2018, due to no access to the sites. A catchup day was run on 27/07/2018

Validation Tables

The following tables outline any data removed during the data validation process, or automatically invalidated by the data acquisition system.

Station 1 Aviation High School

Station 1 Aviation High School Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/07/2018 00:15:00	31/07/2018 23:55:00	PM _{2.5}	Intermittent instrument faults	20/08/2018	TA
18/07/2018 01:40:00	20/07/2018 00:55:00	CO	Nightly calibration check out of tolerance	20/08/2018	TA
26/07/2018 15:30:00	26/07/2018 16:00:00	All parameters	Maintenance	20/08/2018	TA
30/07/2018 16:40:00	30/07/2018 17:15:00	PM ₁₀	Maintenance	20/08/2018	TA

Table 30 Station 1 Aviation High School AQMS Data Validation Table

Station 2 Kedron State High School

Station 2 Kedron State High School Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/7/2018 00:00:00	2/07/2018 14:35:00	All parameters	Data logger fault	20/08/2018	TA
2/07/2018 14:50:00	31/07/2018 00:00:00	All parameters	Intermittent data communication errors	20/08/2018	TA
26/07/2018 13:05:00	26/07/2018 13:50:00	All parameters	Maintenance	20/08/2018	TA
26/07/2018 13:55:00	27/07/2018 00:00:00	All parameters	Data logger fault	20/08/2018	TA

Table 31 Station 2 Kedron High School AQMS Data Validation Table

Station 3 Lewis Street

Station 3 Lewis Street Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/07/2018 00:05:00	31/07/2018 16:55:00	CO	Offset applied to data. Offset A: 0.4ppm; Offset B: 0.4ppm		
1/07/2018 00:30:00	31/07/2018 16:55:00	PM _{2.5} , PM ₁₀	Intermittent instrument faults	20/08/2018	TA
3/07/2018 02:55:00	3/07/2018 08:25:00	All parameters	Data logger fault	20/08/2018	TA
3/07/2018 08:55:00	3/07/2018 11:50:00	PM _{2.5} , PM ₁₀	Maintenance	20/08/2018	TA
3/07/2018 09:30:00	3/07/2018 10:50:00	All parameters	Maintenance	20/08/2018	TA
11/07/2018 05:00:00	11/07/2018 11:45:00	NO, NO ₂ , NO _x	Instrument fault – cooler failure	20/08/2018	TA
11/07/2018 12:15:00	11/07/2018 18:05:00	NO, NO ₂ , NO _x	Instrument fault – cooler failure	20/08/2018	TA
11/07/2018 22:35:00	13/07/2018 12:20:00	NO, NO ₂ , NO _x	Instrument fault – cooler failure	20/08/2018	TA
13/07/2018 12:25:00	13/07/2018 14:10:00	All parameters	Maintenance	20/08/2018	TA
14/07/2018 23:55:00	16/07/2018 10:15:00	All parameters	Data logger fault	20/08/2018	TA
21/07/2018 03:55:00	22/07/2018 00:10:00	All parameters	Data logger fault	20/08/2018	TA
26/07/2018 14:05:00	26/07/2018 15:10:00	All parameters	Maintenance	20/08/2018	TA
31/07/2018 16:55:00	31/07/2018 23:55:00	All parameters	Data logger fault	20/08/2018	TA

Table 32 Station 3 Lewis St AQMS Data Validation Table

Station 4 Airport Link Operation Centre

Station 4 Airport Link Operation Centre Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/07/2018 01:05:00	31/07/2018 23:05:00	PM _{2.5} , PM ₁₀	Intermittent instrument faults	20/08/2018	TA
26/07/2018 16:35:00	26/07/2018 17:05:00	All parameters	Maintenance	20/08/2018	TA

Table 33 Station 4 Airport Link Operation Centre AQMS Data Validation Table

Station 5 Cartwright St

Station 5 Cartwright Street Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/07/2018 00:00:00	5/07/2018 12:05:00	CO	Instrument fault due to unstable temperatures post air conditioner repairs	20/08/2018	TA
1/07/2018 00:55:00	31/07/2018 23:55:00	PM ₁₀ , PM _{2.5}	Intermittent instrument faults	20/08/2018	TA
5/07/2018 12:10:00	26/07/2018 12:00:00	NO, NO ₂ , NO _x	Multiplier applied to data. Multiplier A: 1.056134; Multiplier B: 1.056134.	20/08/2018	TA
9/07/2018 06:55:00	31/07/2018 20:50:00	PM _{2.5}	Intermittent noisy data	20/08/2018	TA
26/07/2018 12:05:00	26/07/2018 12:40:00	All parameters	Maintenance	20/08/2018	TA

Table 34 Station 5 Cartwright St AQMS Data Validation Table