

SERVICE UPDATE

<u>Name of Function:</u>	Protective Services
<u>Date:</u>	July 2020
<u>Title of Update:</u>	Air Quality Progress
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UPDATE:

Purpose:

To update committee members on the annual air quality monitoring results for 2019.

The extent of any impact of COVID 19 lockdown and initiatives stemming from that, such as places for people, will be reported next year once all 2020 air quality data has been quality checked and verified.

1. Summary of Annual Air Quality Monitoring Result in 2019

- 1.1 The Air Quality Progress Report 2020 was published in June and is available on the council website at:

<https://www.aberdeencity.gov.uk/services/environment/environmental-health/air-quality-aberdeen>

- 1.2 The Environment Act 1995 places a statutory duty on local authorities to review and assess air quality against national objectives for 7 pollutants that have an adverse effect on health.
- 1.3 The Scottish Government has stipulated authorities must submit an annual progress report for approval by the Scottish Government and the Scottish Environmental Protection Agency (SEPA). The Scottish Government approved the 2020 report on 13 July 2020.
- 1.4 The main pollutants of concern in Aberdeen City are nitrogen dioxide (NO₂) and particulate matter (PM₁₀), related to road traffic emissions. These pollutants have a significant public health

impact , particularly the young, elderly and those with pre-existing medical conditions. In Scotland in 2010 fine particulate matter was associated with around 2000 premature deaths.¹

- 1.5 Table 1 details the air quality objectives for the purposes of Local Air Quality Management.

Table 1: Air Quality objectives

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m ³	Annual mean	31.12.2005
Particulate Matter (PM ₁₀) (gravimetric)	50 µg/m ³ , not to be exceeded more than 7 times a year	24-hour mean	31.12.2011
	18 µg/m ³	Annual mean	31.12.2011

2. Nitrogen Dioxide Monitoring Results

- 2.1 Table 2 shows the annual mean NO₂ concentrations over the period 2015-2019 at Aberdeen's six continuous monitoring sites. There is also a network of diffusion tubes recording NO₂ concentrations at 72 sites across the city.
- 2.2 All automatic monitoring site data in 2019 is comparable to 2017 and 2018 levels. Generally, NO₂ levels monitored across the city in 2019 were marginally lower than previous years and NO₂ levels have been decreasing since 2015. Concentrations at all automatic sites continued to be below the annual mean air quality objective of 40 µg/m³.
- 2.3 However, diffusion tubes located along Union Street, Market Street and King Street suggest exceedances of the objective at locations within the city centre Air Quality Management Area (AQMA) continue. Levels recorded in these locations are also comparable to levels recorded in 2017/18.

- 2.4 Within the Wellington Road AQMA the annual mean levels recorded at the Wellington Road automatic site and the 2 diffusion tube locations continued to be below the annual mean objective.
- 2.5 There were no exceedances of the annual mean objective recorded in the Anderson Drive AQMA. The diffusion tube (DT39) located at the Haudagain roundabout measured NO₂ levels below the objective for the first time since monitoring at that location began in 2009. The opening of the AWPR may have contributed to the improvement.
- 2.6 There were no exceedances of the hourly mean objective at any automatic or diffusion tube sites in 2019.
- 2.7 Nitrogen dioxide levels at monitoring locations outside the AQMAs remain well below the annual mean objective. Data for Tube DT73 located at Skene Square suggest levels continue to be just below the threshold of the annual mean objective.

Table 2: Annual mean NO₂ concentrations at continuous monitoring sites

Site	Annual mean NO ₂ concentration (ugm ⁻³)				
	2015	2016	2017	2018	2019
Errol Pl	23	21	22	20	17
Union St	46	43	40	38	36
Market St	36	35	31	33	32
Anderson Dr	22	21	19	17	21
Wellington Rd	40	46	39	39	35
King St	28	28	23	22	20
Objective Value	40	40	40	40	40

3. Particulate Monitoring Results

- 3.1 There were no exceedances of the annual mean or 24 hour mean objective at any of the continuous monitoring sites in 2019. The 24 hour mean objective has been met at all monitoring sites for the last 4 years.
- 3.2 Table 3 shows the annual mean PM₁₀ concentrations over the period 2015-2019.

Table 3: Annual mean PM₁₀ concentrations at continuous monitoring sites

Site	Annual mean concentration (ugm ⁻³)				
	2015	2016	2017	2018	2019
Erroll Pl	12	12	11	14	14
Union St	17	13	13	15	12
Market St	19	12	11	17	13
Anderson Dr	13	12	12	14	13
Wellington Rd	20	16	13	17	14
King St	17	16	12	14	14
Objective Value	18	18	18	18	18

- 3.3 There are 5 continuous monitoring sites measuring PM_{2.5} levels in Aberdeen City.
- 3.4 No exceedances of the annual mean were recorded at any of the continuous monitoring sites.

4. Conclusions

- 4.1 The 3 AQMAs in the City remain valid for NO₂ and PM₁₀ annual means.
- 4.2 New monitoring data has not identified a need for any other changes to the existing AQMAs

References

- 1. Clean Air For Scotland, The Scottish Government, November 2015.