

Committees: Port Health and Environmental Services Health and Wellbeing Board	Date: 9 July 2024 5 July 2024
Subject: Air Quality Annual Status Report for 2023	Public
Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?	Leading Sustainable Environment. Providing Excellent Services. Diverse Engaged Communities.
Does this proposal require extra revenue and/or capital spending?	N
Report of: Bob Roberts, Executive Director (Interim), Environment	For information
Report author: Ruth Calderwood, Air Quality Manager	

Summary

As part of its statutory duties for London Local Air Quality Management, the City of London Corporation is required to produce an Annual Status Report and submit the report to the Greater London Authority and the government.

The report is designed to demonstrate progress with actions contained within the current Air Quality Strategy and to present air quality monitoring data. A copy of the full report, which is produced using a prescribed template, is available on the City Corporation web site. A summary of the monitoring data is attached to this report as Appendix 1.

The City Corporation runs a dense and comprehensive air quality monitoring network. In 2023, data was collected using three nitrogen dioxide (NO₂) continuous monitors, three particulate PM₁₀ monitors, two particulate PM_{2.5} monitors and one ozone monitor. Nitrogen dioxide data was also collected at 86 sites in the Square Mile using low-cost diffusion tubes.

Over the past 5 years there has been a significant drop in annual average concentrations of NO₂. In 2023, 95% of the locations measured met the national standard of 40µg/m³. Particulate matter is presented as PM₁₀ or PM_{2.5} and is made up of many sources. All PM₁₀ monitoring sites have complied with the annual mean standard for the past seven years. In 2023, PM_{2.5} concentrations at Farringdon

Street and the Aldgate School met the new national standard of 10µg/m³. This is ahead of the 2040 deadline.

The improvements in air quality measured in the Square Mile are set to continue as further measures in the City Corporation's Air Quality Strategy are implemented. The existing Air Quality Strategy runs to the end of 2024. A draft Air Quality Strategy for 2025 to 2030 has been published for consultation until 26th July 2024. The proposed aims of the new strategy are to go beyond our statutory obligation and continue to take action to improve air quality in pursuit of the 2021 World Health Organisation Air Quality Guidelines. This will deliver better health outcomes for our communities as the WHO guidelines are tighter than the national standards.

Recommendation

Members are asked to:

- Note the contents of the Air Quality Annual Status Report for 2023

Main Report

Background

1. The City of London Corporation has a statutory duty to assist the Mayor of London and the UK government in taking action to reduce levels of air pollution so that concentrations of pollutants meet health-based standards. The City Corporation also has a responsibility to protect public health.
2. The City Corporation's current Air Quality Strategy 2019 – 2024 was adopted in September 2019. It outlines actions that will be taken to fulfil the City Corporation's statutory responsibility for Local Air Quality Management, and for reducing the health impact of air pollution on residents, workers, and visitors to the Square Mile.
3. The City Corporation has a statutory obligation to submit an Annual Status Report to the Mayor of London and the government. The report must outline progress towards actions within the Air Quality Strategy and provide the results of air quality monitoring undertaken over a seven-year period. A copy of the full report, which is produced using a prescribed template, is available on the City Corporation web site at: [Air Quality Report](#) . A summary of the air quality data is attached as Appendix 1.

Air Quality Data

4. In 2023, data was collected using long-term continuous monitors at three nitrogen dioxide (NO₂) sites, three particulate PM₁₀ sites, two particulate PM_{2.5} sites and one ozone site. These monitors provide hourly readings with up-to-date data being available on the web site [Air quality in England \(airqualityengland.co.uk\)](http://airqualityengland.co.uk). Data collected over the past five years for these sites, where available, is presented in Table 1.
5. An ozone (O₃) analyser was installed in the Guildhall in January 2022. Ozone is what is known as a regional pollutant over which we have no direct control. However, by measuring it, we can issue health warning alerts if concentrations are forecast to be high.
6. Concentrations of air pollution are compared to health-based standards. The national standards for nitrogen dioxide and fine particles are taken from those set by the European Union. These standards were based on 2005 World Health Organisation (WHO) Air Quality Guidelines. The Guidelines were updated in 2021 and, in most cases, tightened. The new WHO guidelines have not been incorporated into domestic legislation but are presented in Table 1 alongside the national standards for comparison. The existing annual average standard for PM_{2.5} is 20mg/m³. Given the particular health impact of this pollutant, the UK government has recently adopted a new PM_{2.5} standard of 10mg/m³ to be achieved by 2040.

Location	Pollutant (annual average unless specified)	UK standard (µg/m ³)	2021 WHO Guideline (µg/m ³)	2019 (µg/m ³)	2020 (µg/m ³)	2021 (µg/m ³)	2022 (µg/m ³)	2023 (µg/m ³)
The Aldgate School (background)	NO ₂	40	10	33	22	23	23	22
	PM ₁₀	40	15	19	16	16	17	15
	PM _{2.5}	10	5	12	12	11	12	10
*Upper Thames Street (roadside)	NO ₂	40	10	73	45	46	52	-
	PM ₁₀	40	15	27	24	19	19	-
Bell Wharf Lane (roadside)	NO ₂	40	10	-	-	-	-	32
	PM ₁₀	40	15	-	-	-	20	17
Beech Street (roadside)	NO ₂	40	10	62	29	31	41	36
	PM ₁₀	40	15	22	18	15	17	15
Farringdon Street (roadside)	PM _{2.5}	10	5	14	12	12	12	10
Guildhall (background)	O ₃ (max. daily mean)**	100	100	-	-	-	153	120

* the UTS monitors were relocated to Bell Wharf Lane due to forthcoming changes to office accommodation and an issue with the electricity supply

** the target for ozone is 100 µg/m³ as an 8 hour mean, not to be exceeded more than 10 times a year. It was exceeded on 19 occasions in 2023.

Table 1

7. There was a significant drop in levels of nitrogen dioxide across the City in 2020, when compared to 2019, largely due to the impact of the country's response to the COVID 19 pandemic. As workers have returned to the City, levels have increased but remain well below pre pandemic levels. In 2023 nitrogen dioxide was measured at 86 sites using low-cost diffusion tubes. 95% of the locations measured were at or below the annual standard of $40\mu\text{g}/\text{m}^3$.
8. The roads that breached the nitrogen dioxide standard of $40\mu\text{g}/\text{m}^3$ in 2003 were:
 - Old Bailey (north end) junction with Newgate Street
 - St Marins Le Grand (north end) junction with Aldersgate Street
 - Seething Lane/ Byward Street junction
 - Upper Thames Street at Walbrook Wharf

The data for all sites is presented in the full report and summarised in Appendix 1.

9. One of the main aims of the current Air Quality Strategy is for over 90% of the Square Mile to meet the target for nitrogen dioxide by 2025. An area compliance assessment for 2023 is underway. The area of the Square Mile to comply with the nitrogen dioxide standard in 2022 was 93%, this is a significant increase from 2019 when it was 67% and just 33% in 2018.
10. PM10 concentrations have declined since before the pandemic, with levels in 2023 being lower than 2022. PM2.5 also went down in 2023 and met the new UK annual average standard of $10\mu\text{g}/\text{m}^3$. This is likely to be due, in part, to 2023 being wetter than average.
11. The national standard for ozone is $100\text{ mg}/\text{m}^3$ as an 8-hour average, not to be exceeded more than 10 times a year. It was exceeded on 19 occasions in 2023.

Progress with Actions

12. The Air Quality Annual Status Report includes progress with each action in the City Corporation's Air Quality Strategy. Examples of action taken during 2023 are given below:
 - Used the contents of the Emissions Reduction (Local Authorities in London) Private Members Bill to influence discussions with Defra about options for new powers for local authorities;
 - Reviewed air quality action plans for five City schools and four nurseries;
 - Hosted and chaired four meetings of the London Air Quality Steering group;
 - Responded to complaints of unnecessary engine idling. In 2023, 11 warning notices and 4 Penalty Charge Notices were issued;
 - Undertook 29 audits of construction sites to ensure compliance with emission requirements for on-site equipment;
 - Inspected all shops likely to sell solid fuel to check for compliance with new Solid Fuel Regulations;

- Partnered with Clean City Award Scheme to deliver an ‘Air Quality and Climate Change’ award for business;
- Developed and promoted a new web-based tool that helps users to better manage their health by providing information about air pollution and easy access to the latest monitoring data;
- Trained healthcare professionals and pharmacists and created patient resources to provide advice on managing exposure to air pollution;
- Part of the working group that developed the British Standard Institute Code of Practice 2023 ‘Selection, deployment and quality control of low-cost air quality sensor systems in outdoor ambient air’;
- Sat on the Air Pollution Research in London (APRIL) committee which identifies priority areas for research to improve air quality in London, supports the development of new scientific research and communicates the latest research findings;
- Commissioned a case study to understand the operating regime of back-up generators used within the Square Mile;
- Hosted an event to launch the Environmental Policy Implementation Community (EPIC), which is part of the Institution of Environmental Sciences. The City Corporation chairs the EPIC steering committee;
- Detailed monitoring to assess the impact of proposed changes to the road layout around St Martin’s Le Grand including particulate monitoring adjacent to a London underground vent shaft in the locality to assess the potential impact on future users of the space;
- Provided advice through a monthly air quality e-newsletter, Twitter and LinkedIn.

Corporate & Strategic Implications

Strategic implications

13. Air quality policy and action at the City Corporation is framed in the Air Quality Strategy 2019 – 2024. It is supported by the Climate Action Strategy, Transport Strategy, Procurement Strategy, and draft City Plan.

14. The work on air quality supports the Corporate Plan outcomes:

- Leading sustainable environment
- Providing excellent services
- Diverse engaged communities

Financial implications

15. None.

Resource implications

16. None

Legal implications

17. None

Risk implications

18. Air quality is listed as a Corporate risk. The most recent Deep Dive into the risk was presented to Audit and Risk Management Committee in January 2021.

Equalities implications

19. Action to improve air quality has a positive impact on all sections of the population. The benefit is greatest for children and the elderly as they are more susceptible to the health impacts of air pollution. There is also a positive impact on individuals whose lives are affected by asthma and other respiratory and cardiovascular conditions.

Security implications

20. None

Conclusion

21. The City Corporation has completed its 2023 Air Quality Annual Status Report. This fulfils part of the City Corporation's statutory obligations for Local Air Quality Management.

22. In 2003, the national standards for particulates PM₁₀ and PM_{2.5} were met everywhere. Of 89 locations monitored for nitrogen dioxide, 4 were above the 40µg/m³ annual standard. The new draft Air Quality Strategy includes a specific action to consider additional action that can be taken in locations that continue to breach the standard.

23. Action to improve air quality is strongly supported across the organisation by a wide range of policies and strategies. This is most notable in planning policy, the Transport Strategy, and the Climate Action Strategy. The existing Air Quality Strategy runs to the end of 2024. A draft Air Quality Strategy for 2025 to 2030 has been published for consultation until 26th July 2024.

Appendices

- Appendix 1 – Air Quality Annual Status Summary Report for 2023

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