

Air Quality in London 2016-2024

Key information

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About the report

Since 2016, London's air quality has improved dramatically, and the number of Londoners living in areas that exceed the UK's legal air pollution limits has decreased significantly. Drawing on data from London's comprehensive monitoring network and the latest modelling from the London Atmospheric Emissions Inventory (LAEI), this report evaluates how air quality in London has improved between 2016 and 2024 and assesses the ambitious policies that have contributed to these changes.

Improvements in monitored pollution levels

Average concentrations of nitrogen dioxide (NO₂) were much higher in London than the rest of the UK in 2016 – and yet have fallen much more steeply in London compared to the rest of the country. Annual average roadside NO₂ concentrations across London dropped by nearly half (49 per cent) between 2016 and 2023, compared to 35 per cent in the rest of England, 39 per cent in Scotland and 31 per cent in Wales over the same period.

Preliminary figures also indicate that average annual concentrations of NO₂ in London dropped to the lowest levels ever recorded in 2023, lower even than the first year of COVID-19 lockdowns. 2023 was also the first year since records began when annual mean particulate matter (PM_{2.5}) concentrations did not exceed the latest interim World Health Organization (WHO) air quality target across London's active air quality monitoring sites.

New data from London's more than 150 reference-grade air quality monitoring sites also show the capital has made significant progress towards reaching the UK's legal air pollution limits. The number of monitoring sites across London exceeding the UK's annual legal limit for NO₂ has decreased from 56 sites in 2016 to just five in 2023. There has also been a 99 per cent reduction in the number of hours when NO₂ concentrations exceeded the UK's hourly legal limit since 2016 – dropping from 4,130 hours in 2016, to just 22 hours in 2023.

Air quality programme achievements

The air quality monitoring and modelling presented in this report demonstrate that the clear accelerated reduction in emissions in London since 2016 has been largely driven by the introduction and expansion of key policies to reduce air pollution and protect public health. These have included:

- Introducing the world's first 24-hour [Ultra Low Emission Zone \(ULEZ\)](#) in 2019 and expanding it London-wide in 2023 to transform the capital into the world's largest clean air zone of its kind, with more than 95 per cent of vehicles seen driving in London now compliant with the ULEZ emissions standards, up from just 39 per cent in 2017.
- Accelerating TfL's transition to a cleaner bus fleet, including upgrading the entire fleet to meet or exceed the ULEZ emissions standards and delivering over 1,300 electric buses to create the [largest zero-emission bus fleet](#) in western Europe.
- Electrifying London's taxi and private hire vehicle fleets by introducing strict new emissions-based licensing requirements, with [more than half](#) (54 per cent) of London's black cabs and over a third (36 per cent) of all private hire vehicles now zero-emission capable.
- Supporting the delivery of London's electric vehicle revolution, with over a third of all UK charging points for electric vehicles (over 18,600) in London. Over 1,000 are rapid or ultra rapid, of which TfL installed over 300. This is enabling Londoners to adopt electric vehicles at a [much faster](#) rate than the rest of the UK.
- Encouraging more people to cycle more often by quadrupling the size of the London-wide cycle network by the end of March 2024, reducing danger at junctions, expanding TfL's Santander Cycle Hire scheme, and delivering high-quality cycle infrastructure, helping to drive substantial increases in journeys made by cycling and reducing emissions compared to travelling by car. These have enabled more Londoners to cycle – [from 1.06 million daily cycle journeys in 2016 to 1.26 million in 2023](#).
- Introducing a pioneering [air quality alerts](#) system to notify Londoners during the worst episodes of air pollution, and expanding these alerts in 2024 to directly notify health professionals. High pollution episodes are now a rare occurrence in London. Between 2018 and 2023, the system issued 19 high pollution alerts and 217 moderate pollution alerts, enabling Londoners to increase their awareness of high pollution episodes and take precautionary action on these days.
- Launching [Breathe London](#), a first-of-its-kind community air quality monitoring network which complements London's reference-grade analysers with over 400 hyper-local air quality sensors, helping community groups to monitor and manage their exposure to air pollution across London. Recognising the scale of air pollution as a global crisis, the Mayor called for the creation of [Breathe Cities](#) at COP26 in 2021, and all participating cities have committed to the combined aim of achieving a reduction of 30 per cent in air pollution by 2030.
- Providing £27 million in funding to support London boroughs' projects to improve air quality through the [Mayor's Air Quality Fund \(MAQF\)](#), including helping to introduce 25 new clean air routes, supporting 5,300 businesses to reduce their emissions, and creating more than 3,000 square meters of new green space.
- Delivering the world's first [Non-Road Mobile Machinery \(NRMM\) Low Emission Zone \(LEZ\)](#), helping to significantly reduce emissions from construction equipment equivalent to an annual reduction of 42 per cent in particulate matter (PM), 36 per cent in nitrogen oxides (NO_x) and 11 per cent in carbon dioxide (CO₂), with an ambitious roadmap to become zero emission.

- Requiring all new developments in London to not contribute to air pollution and major developers to consider their impact on air quality from the earliest design stages through new, world-leading [Air Quality Neutral](#) and [Air Quality Positive](#) guidelines.

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