CLEANING LONDON'S AIR – DELIVERY PLAN

Introduction

The GLA has defined several London-level, long-term outcomes which reflect Londoners' aspirations for the city and towards which the GLA, in partnership with others, is working. The Mayoral mandate for this programme makes it clear that the core London-level outcome to which this programme should contribute is:

• Londoners are breathing clean air.

This London-level outcome will be measured by:

Londoners are breathing clean air

• Annual mean concentrations of nitrogen dioxide (NO₂)

• Annual mean concentrations of particulate matter (PM_{2.5})

The mandate also makes it clear that this programme should make a substantive contribution to a wider set of London-level outcomes: All Londoners live in a city that supports their mental and physical health; children and young Londoners achieve the health and learning outcomes they need to thrive at every stage of development; London is a world-leading global city; and London is a net zero-carbon city.

Setting out the scale of the challenge

Despite huge progress, London still exceeds the World Health Organization's (WHO's) recommended health-based guideline of $10~(\mu g/m^3)~$ for $NO_2~$ and $5~(\mu g/m^3)~$ for $PM_{2.5}$. This means Londoners are not breathing clean air. In 2024, average annual mean $NO_2~$ ($\mu g/m^3$) concentrations were 24.5 ($\mu g/m^3$) at roadside, and 17.7 ($\mu g/m^3$) at urban background air-quality monitoring sites. For $PM_{2.5}$, average annual mean particulate concentrations were 8.7 ($\mu g/m^3$) at roadside and 8.2 ($\mu g/m^3$) at urban background air-quality monitoring sites. Furthermore, some areas are still exceeding the interim target of $10~(\mu g/m^3)$.

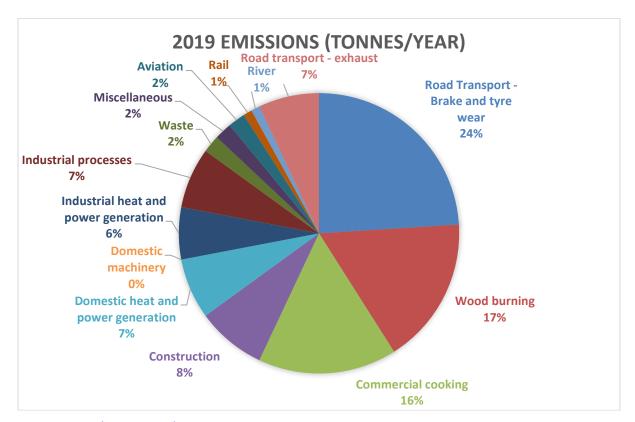
These pollutants impact us across the whole of our lives. They are also linked to asthma, cancer, maternal health issues, and even mental health problems, with emerging evidence of links to dementia. These impacts do not fall equally across the city; poorer and Black, Asian and Minority Ethnic communities are affected more severely. Younger and older people are particularly vulnerable to the effects of air pollution: every school in London is in an area that exceeds the WHO-recommended guidelines. The death of Ella Adoo-Kissi-Debrah, and the subsequent inquest into her death, resulted in the Prevention of Future Deaths report. This has established specific actions that the GLA and other bodies should take. It is therefore essential that we continue the ground-breaking work, delivered over the past nine years, to clean up our air and ensure it is healthy and safe for all. To make further progress on improving London's air quality, we must use the unique delivery statutory and convening power of the GLA to address several barriers.

First, the action already taken – e.g., through the Ultra Low Emission Zone (ULEZ) – has had a huge impact, and shows what can be achieved using the Mayor's voice, influence and powers allied with the right partners and resources. Air pollution from road transport has reduced dramatically, but remains a major source of emissions and a crucial area of focus. We need to continue delivering emission reductions in this area. This includes future-proofing London's

transport system with a world-class electric-vehicle (EV) charging network; and a fully zeroemission bus fleet by 2030 (note that transport emissions are being addressed through the Decarbonising Transport programme). However, there is a lack of financial investment available from national, regional and local government and other partners. Given government financial constraints, new and innovative finance and delivery mechanisms will need to be developed.

Second, while the Mayor has extensive powers to tackle air pollution from transport sources, his and other bodies' powers over non-transport sources of pollution are much weaker. Yet these need to be effectively addressed if WHO guidelines for air quality are to be met. After road transport, the highest contributors of PM_{2.5} emissions in London are biomass (solid fuel) burning, commercial cooking, and construction. This is illustrated in the chart below:

Sectors contributing to PM_{2.5} emissions in London



Source: London Atmospheric Emissions Inventory 2019

Third, some of the technologies required to transition to zero-emission do not yet exist at the scale or price needed. This is a particular issue for the non-road mobile machinery (NRMM) that drives construction sector emissions. Solutions to zero-emission machinery include electrification and hydrogen, which are seen as new concepts. With London being the only UK city that has committed to these ambitious targets, securing industry support and investment to ensure that green technology can be scaled up in ways that are both socially equitable and economically viable is challenging.

Delivering the outcomes through Cleaning London's Air

Having systematically evaluated the challenges and barriers we face in Cleaning London's Air, we have identified the actions needed to achieve the Mayor's ambitious goals. The GLA believes there are four core elements to the response. These are laid out across this delivery plan:

- Understanding the policies, interventions, powers and resources needed to make London's air the cleanest of any major world city as quickly as possible.
- Cutting pollution from all sources to improve health outcomes and reduce health inequality for Londoners.
- Working with London boroughs, and other partners, to take effective action to reduce exposure and emissions.
- Raising awareness amongst London's communities of the health impacts of air pollution and empowering them to advocate for local action.

We have identified these elements in recognition of the challenge in achieving WHO-recommended guidelines and tackling the complex set of barriers that, unless addressed, will prevent further progress. They also build on our track record of successfully improving health and reducing health inequalities.

The GLA is uniquely positioned to drive further action and innovation to ensure all Londoners are breathing cleaner air. It will do this by:

- using its comprehensive understanding of air pollution to inform and influence Londoners and stakeholders
- working with TfL; and mobilising and coordinating partners such as boroughs and universities
- using statutory powers (e.g., over planning)
- delivering its own programmes.

The four delivery strands have been chosen because they offer a holistic path to addressing the negative impacts of air pollution.

First, we will work to identify the next generation of air-quality interventions required to ensure Londoners are breathing clean air. This will be supported by an updated London Atmospheric Emissions Inventory (LAEI) and ongoing work to understand the impact of the ULEZ.

Secondly, addressing pollution is about improving health. To do this, we not only need to reduce pollution itself by targeting key sources such as transport and construction machinery; we also need to reduce exposure to pollution until London's air reaches safe and healthy levels. This is especially important for the most vulnerable in society, including schoolchildren.

Thirdly, the GLA will influence and deliver through others – using its existing statutory powers to ensure that London boroughs and other partners take effective action, while making the case to government for additional powers and funds where needed.

Finally, we will continue to raise awareness of air pollution amongst Londoners. The benefits of this are threefold: it helps make the case for the required action; it shows the benefit of action already taken; and it allows people to take steps to protect themselves and their families.

GLA delivery plan

This delivery plan has four key strands:

- 1. Understanding the policies, interventions, powers and resources needed to make London's air the cleanest of any major world city as quickly as possible.
- 2. Cutting pollution from all sources to improve health outcomes and reduce health inequality for Londoners.
- 3. Working with London boroughs, and other partners, to take effective action to reduce exposure and emissions.
- 4. Raising awareness amongst London's communities of the health impacts of air pollution and empowering them to advocate for local action.
- 1. Understanding the policies, interventions, powers and resources needed to make London's air the cleanest of any major world city as quickly as possible.
- 1.1. *Understanding how and when London could meet WHO air-quality guidelines*. This work will be delivered via a research and engagement project. It will then inform internal policy development, and the convening and influencing of stakeholders.

We will know this project has succeeded when:

a) a report is published that outlines a pathway to meeting WHO targets, including the opportunities and challenges of meeting the WHO guidelines.

Expected delivery:

- a) publication of report: 2026.
- 1.2. Maintaining the LAEI, and associated data analysis and research, to enable the GLA to track London's progress in tackling major sources of pollution. This work will identify the major sources of pollution, and how they are forecast to change. This will be delivered via analysis of London's monitoring stations and air-quality modelling, which will be published in subsequent updates to the LAEI.

We will know this project has succeeded when:

a) the LAEI 2022 baseline data and updated health impact modelling is published.

Expected delivery:

- a) publication of LAEI 2022 baseline concentrations and exposure modelling: June 2025
- b) publication of updated health modelling based on LAEI 2022 baseline: Summer 2025.
- 1.3. Evaluating the ULEZ programme to understand the reduction in nitrogen oxide (NOx) emissions from transport, enabling Londoners to breathe cleaner air. This will be achieved by continuing to raise awareness of the successes of the scheme, as outlined in the ULEZ One Year On Report; and by publishing the ULEZ Scrappage Scheme evaluation report.

We will know this project has succeeded when:

a) the Scrappage Evaluation Report, and the metrics on the health and NHS benefits of the ULEZ, are published.

Expected delivery:

- a) publication of the London-wide ULEZ Scrappage Evaluation Report: June 2025
- b) health impact study: date TBC.
- 2. Cutting pollution from all sources to improve health outcomes and reduce health inequality for Londoners.
- 2.1. Delivering the School Filters Project, improving the air quality in classrooms across 200 London schools. Procurement and appointment of delivery partner to install filters by end of 2024-25, with filters installed in schools during Summer 2025.

We will know this project has succeeded when:

a) filters have been installed in 200 London schools, the efficacy of the programme has been assessed, and a decision has been made about any future delivery or influencing.

Expected delivery:

- a) contract awarded by end 2024-25: completed
- b) filters installed in 200 schools: Summer 2025
- c) monitoring and evaluation report: 2027.
- 2.2. Delivering, tightening, and enforcing the NRMM LEZ. Compliance will be ensured through: an ongoing audit of construction sites as part of the pan-London NRMM programme; maintenance of the NRMM register and exemption system; annual meetings with the NRMM expert working group; and participation in the C40 construction accelerator programme.

We will know this project has succeeded when:

a) NRMM exhaust emissions across London continue to fall due to the use of low- and zero-emission machinery, as measured through estimated emissions reductions (PM, NO₂ and carbon dioxide).

Expected delivery:

- a) uniform standards implemented: January 2025, completed.
- 2.3. Using the planning system to promote air-quality improvements. This programme ensures that the Mayor uses his planning and convening powers to ensure local authorities embed best practice for all new developments. This ensures emissions from new developments are reduced without compromising the overriding priority of house-building. This will be delivered through: reviewing GLA-referrable planning applications (using planning consultants); coordinating with the London Plan team to ensure air quality is accurately reflected in the London Plan update; and providing borough support for Air Quality Neutral and Air Quality Positive implementation.

We will know this project has succeeded when:

a) all relevant applications are reviewed by our air quality consultants, and recommendations made, within the 21-day consultation period to support house-building whilst limiting pollution.

Expected delivery:

- a) review of GLA referrable planning applications: ongoing
- b) all applications turned around within the 21-day consultation period.
- 2.4. Transport Emissions Reduction. The fleet-electrification aims of this work will be delivered through work with TfL to deliver a range of programmes to support the switch to cleaner vehicles, including the delivery of EV infrastructure. The other aim of this work, to reduce vehicle use, will be delivered through work with TfL to identify and deliver policies (within the constraints of the TfL budget) that incentivise and enable more people to walk and use public transport for more journeys. This work is delivered through the Decarbonising Transport programme, so all targets are contained in that Delivery Plan.
- 3. Working with London boroughs, and other partners, to take effective action to reduce exposure and emissions.
- 3.1. Providing borough oversight and support to ensure boroughs are delivering Mayoral airquality policies, taking action on air quality and fulfilling their statutory duties. This will be done through the London Local Air Quality Management (LLAQM) Framework and delivering the Mayor's Air Quality Fund (MAQF), enabling local authorities to take effective action to reduce pollution from all sources. Running the LLAQM Framework and MAQF programmes ensures that borough action and resource on air quality is protected. This, in turn, will protect a host of vital projects that are fully or part funded by boroughs.

We will know this project has succeeded when:

- a) 17 projects supported by the MAQF Round 4 are successfully completed
- b) all Annual Status Reports (ASRs) for 2025 submitted by London local authorities have been reviewed and, where necessary, recommendations given, to ensure they are effective
- c) all Air Quality Action Plans submitted by London local authorities have been reviewed and recommendations given to ensure that they are effective
- d) local authorities are demonstrably delivering the actions committed to in their plans.

Expected delivery:

- a) delivery of the MAQF Round 4: December 2027
- b) review of borough statutory ASRs for 2025 reporting cycle: September 2025
- c) review of borough Air Quality Action Plans: ongoing.
- 3.2. Providing leadership, and working with other cities and organisations within the UK, mainland Europe and further afield, to build stakeholder support for further action to reduce pollution. This involves engaging with key stakeholder groups at local, national and international levels using the Mayor's convening powers. This work helps to support London's status as a healthy and innovative place to live, work and do business; and allows us to learn from other cities, and access a range of funding and support from national and international funding bodies. It also helps to address transboundary

pollution blowing into London from elsewhere, which is a major source of particulate pollution in the capital.

We will know this project has succeeded when:

a) London continues to participate in air-quality initiatives and forums, and leverages learning from the best practice of others.

Expected delivery:

- a) includes hosting high-level events, including a second Air Quality Summit in Autumn 2025
- b) C40 Accelerator reports submitted annually.
- 4. Raising awareness amongst London's communities of the health impacts of air pollution and empowering them to advocate for local action.
- 4.1. Pollution forecasting and issuing of the Mayor's pollution alerts during days of predicted elevated pollution. Alerts are disseminated across London through social media, bus stops, tube stations and roadside signs. The alerts are also shared and amplified through our partners, including schools and borough officers as well as the NHS, who share the messaging with all GPs and emergency department consultants across the city. This health information enables Londoners to reduce their exposure to air pollution, especially those most vulnerable to its impacts. This programme will be delivered through the Mayor's existing alert forecasting and alert system; this includes daily pollution forecasting. We will work with the NHS, boroughs, the London Resilience Unit and other partners to ensure we are targeting alerts to those most vulnerable.

We will know this project has succeeded when:

- a) as a result of improved and enhanced dissemination through the Mayor's Air Quality Alerts System and via partners like schools, boroughs and the NHS, Londoners receive alerts and are aware of high and moderate pollution incidents.
- b) in response to receiving an air pollution alert, Londoners follow recommended actions to protect their health and reduce their exposure, and know how to find out more information.

Expected delivery:

- a) issue pollution alerts on all forecast moderate and high pollution days, utilising social media, TfL infrastructure (e.g. bus stops, tube stations and roadside signs), boroughs and the NHS to share and amplify the alerts: ongoing.
- b) work with the London Resilience Unit to improve and enhance the dissemination of air pollution alerts across London using resilience channels: October 2025.
- 4.2. Delivery of Breathe London. This programme enables us to monitor localised pollution, and empowers London's communities to advocate for local action to improve air quality. It includes a new and improved website; rollout of sensors; and a new approach to community engagement. The work will be delivered via the new contract with a consortium led by Vodafone.

We will know this project has succeeded when:

a) all sensors have been installed; and a new website, with improved functionality, has been launched. Information will be collected on how this data improves local air quality (for example, supporting school streets and the implementation of other pollution-reducing measures).

Expected delivery:

- a) beginning of new five-year contract: December 2024, completed
- b) all new GLA sensors installed and operational: June 2025
- c) new website with improved functionality goes live: July 2025.

Delivery plan consolidated resources

Project		Revenue			Capital		
		2025-26	2026-27	2027-28	2025-26	2026-27	2027-28
		£000	£000	£000	£000	£000	£000
	derstanding the policies, on's air the cleanest of a						nake
Sub-t	otal	400	370	355			
1.1	Understanding how and when London could meet WHO air- quality guidelines	250	250	250			
1.2	LAEI	150	120	105			
1.3	Evaluation of ULEZ						
	ting pollution from all s ality for Londoners.	ources to	improve h	ealth outo	omes and	reduce he	ealth
Sub-t	otal	270	280	295			
2.1	School Filters Project						
2.2	NRMM LEZ	270	280	295			
2.3	Using the planning system to promote airquality improvements						
2.4	Transport Emissions Reduction programme						
	rking with London boro ure and emissions.	ughs, and	other part	ners, to ta	ıke effecti	ve action	to reduce
Sub-t	otal	38	38	38			
3.1	LLAQM Framework and delivering the MAQF	18	18	18			
3.2	National and international leadership	20	20	20			
	sing awareness amongst ion and empowering the					pacts of a	air
Sub-t	otal	240	260	260	300	300	
4.1	Mayor's pollution alerts	40	60	60			
4.2	Breathe London	200	200	200	300	300	
	ng to support amme delivery	782	787	791			
Clean	ing London's air						

Total 1,730 1,735 1,739 300 300

Contribution to the GLA's cross-cutting priorities

This programme will primarily contribute to delivering the following GLA cross-cutting priorities:

- **Net zero:** Many of the policies needed to reduce harmful emissions to air will lead to lower-carbon emissions, and help to make London net-zero carbon by 2030 (for example, increased walking, cycling and public transport use). Similarly, net-zero policies need to be designed in a way that ensures no detrimental impact on air quality for example, by avoiding the promotion of combined heat and power systems, which can emit extremely high levels of NO₂; and avoiding promotion of biodiesel (HVO), which emits high levels of PM_{2.5}.
- **Health in all policies:** Air pollution's damaging impacts on public health are well recognised. It is vital that work on air quality is driven by the latest evidence, and integrated with wider action across London's health system.
- **Reducing structural inequalities:** London's most disadvantaged communities are disproportionately affected by poor air quality. Ensuring policies are effectively targeted can help to address this.

Monitoring delivery

The London-level outcome – Londoners are breathing clean air – will be monitored using the following indicators, reported annually in the Mayor's State of London report:

Indicators	Source	Frequency	Lag	Availability
Annual mean concentrations of NO ₂	LAEI	3 years	3 years	Publicly available
Annual mean concentrations of PM _{2.5}	Borough ASRs	Annual	1 Year	Publicly available

This delivery plan lays out the projects we will deliver across this programme to make a positive difference to the London-level outcomes. The table below collates key programme outputs by the four work strands. We will track delivery of these to be sure that our work to contribute to the London-level outcomes is on schedule.

1	Understanding the policies, interventions, powers and resources needed to make London's air the cleanest of any major world city as quickly as possible.
1.1	Project: Understanding how and when London could meet WHO air-quality guidelines.
	Success:
	a) A report is published that outlines a pathway to meeting WHO targets, including the opportunities and challenges of meeting the WHO guidelines.
	Expected delivery:
	a) publication of report: 2026.
1.2	Project: Maintaining the LAEI, and associated data analysis and research, to enable the GLA to track London's progress in tackling major sources of pollution.
	Success:
	a) the LAEI 2022 baseline data and updated health impact modelling is published.
	Expected delivery:
	a) publication of LAEI 2022 baseline concentrations and exposure modelling: June 2025
	b) publication of updated health modelling based on LAEI 2022 baseline: Summer 2025.
1.3	Project: Evaluating the ULEZ programme to understand the reduction in NOx emissions from transport, enabling Londoners to breathe cleaner air.
	Success:
	a) Scrappage Evaluation Report, and the metrics on the health and NHS benefits of the ULEZ, are published.
	Expected delivery:
	a) publication of the London-wide ULEZ Scrappage Evaluation Report: June 2025 b) health impact study: date TBC.
2	Cutting pollution from all sources to improve health outcomes and reduce health inequality for Londoners.
2.1	Project: Delivering the School Filters Project, improving the air quality in classrooms across 200 London schools.
	Success:
	a) filters have been installed in 200 London schools, the efficacy of the programme has been assessed, and a decision has been made about any future delivery or influencing.
	Expected delivery:
	a) contract awarded by end 2024-25, completedb) filters installed in 200 schools: Summer 2025c) monitoring and evaluation report: 2027.

2.2	Project: Delivering, tightening, and enforcing the NRMM LEZ.
	Success:
	a) NRMM exhaust emissions across London continue to fall due to the use of low- and zero-emission machinery.
	Expected delivery:
	a) uniform standards implemented: January 2025, completed b) stakeholder engagement: ongoing.
2.3	Project: Using the planning system to promote air-quality improvements.
	Success:
	a) all relevant applications are reviewed by our air quality consultants, and recommendations made, within the 21-day consultation period to support house building whilst limiting pollution.
	Expected delivery:
	a) review of GLA-referrable planning applications: ongoing.
3	Working with London boroughs, and other partners, to take effective action to reduce exposure and emissions.
3.1	Project: Providing borough oversight and support to ensure boroughs are delivering Mayoral air-quality policies, taking action on air quality and fulfilling their statutory duties.
	Success:
	 a) 17 projects supported by the MAQF Round 4 are successfully completed b) all ASRs for 2025 submitted by London local authorities have been reviewed, and recommendations given, to ensure they are effective c) all Air Quality Action Plans submitted by London local authorities have been reviewed, and recommendations given, to ensure they are effective
	d) Local authorities are demonstrably delivering the actions committed to in their plans.
	Expected delivery:
	a) delivery of the MAQF Round 4: December 2027 b) review of borough statutory ASRs for 2025 reporting cycle: September 2025 c) review of borough Air Quality Action Plans: ongoing.
3.2	Project: Providing leadership, and working with other cities and organisations within the UK, mainland Europe and further afield, to build stakeholder support for further action to reduce pollution.
	Success:
	a) London continues to participate in air-quality initiatives and forums, and leverages learning from the best practice of others.
	Expected delivery:
	 a) includes hosting high-level events, including a second Air Quality Summit in Autumn 2025 b) C40 Accelerator reports submitted annually.
<u> </u>	b) 5 to Accelerator reports submitted unitidally.

4	Raising awareness amongst London's communities of the health impacts of air pollution and empowering them to advocate for local action.	
4.1	Project: Pollution forecasting and issuing of the Mayor's pollution alerts during days of predicted elevated pollution.	
	Success:	
	 a) as a result of improved and enhanced dissemination through the Mayor's Air Quality Alerts System and via partners like schools, boroughs and the NHS, Londoners receive alerts and are aware of high and moderate pollution incidents. b) in response to receiving an air pollution alert, Londoners follow recommended actions to protect their health and reduce their exposure, and know how to find out more information. 	
	Expected delivery:	
	a) issue pollution alerts on all forecast moderate and high pollution days, utilising social media, TfL infrastructure (e.g. bus stops, tube stations and roadside signs), boroughs and the NHS to share and amplify the alerts: ongoing.	
	b) work with the London Resilience Unit to improve and enhance the dissemination of air pollution alerts across London using resilience channels: October 2025.	
4.2	Project: Delivery of Breathe London.	
	Success:	
	a) all sensors have been installed; and a new website, with improved functionality, has been launched. Information will be collected on how this data improves local air quality (for example, supporting school streets and the implementation of other pollution-reducing measures).	
	Expected delivery:	
	a) beginning of new five-year contract: December 2024, completedb) all new GLA sensors installed and operational: June 2025c) new website with improved functionality live: July 2025.	