

Health in Hackney Scrutiny Commission

Health Impacts of Air Pollution: Progress update

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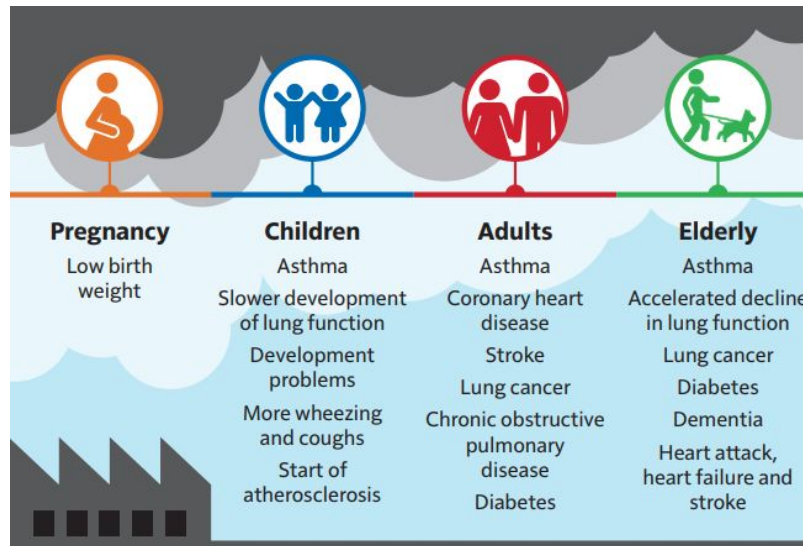
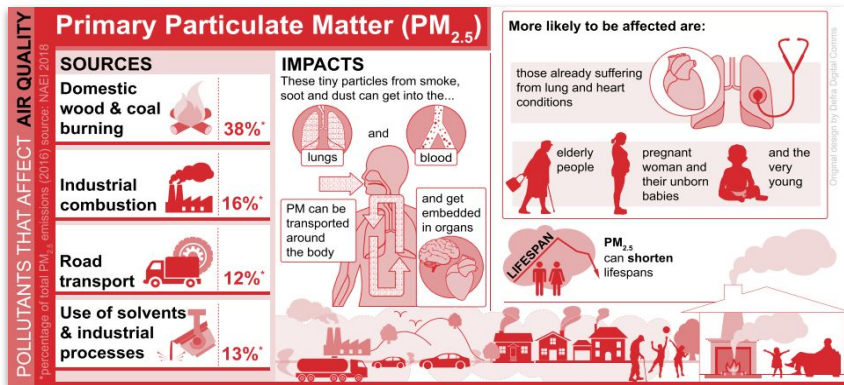
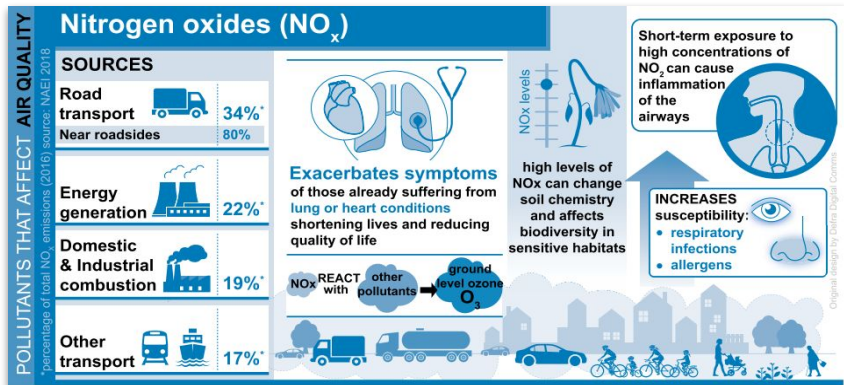
Health in Hackney Scrutiny Commission

Health Impacts of Air Pollution: Evidence and Responses

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Health impacts of air pollution

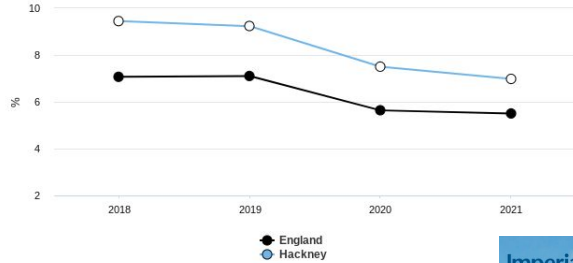


Chief Medical Officer's Annual Report 2022: Air pollution.
 Adapted from Public Health England

Health impacts of air pollution

Fraction of mortality attributable to particulate air pollution (new method)

[Show confidence intervals](#) [Show 99.8% CI values](#)



Public Health Outcomes Framework,
Office for Health Improvements &
Disparities

There is **no safe threshold** of exposure to PM2.5

Sources and Effects of PM2.5, Defra



Children living in London are at risk of developing **lifelong conditions** including poorly developed lungs, asthma, high blood pressure, inattention and hyperactivity and mental illness (Fuller, Friedman and Mudway, 2023)

A recent study looked at air pollution across European cities. They found that complying with WHO guidelines in reducing PM2.5 levels could **prevent over 50,000 deaths** and reducing NO2 could **prevent almost 80,000 deaths** per year (Khomenko et al., 2021)

Data is emerging that suggests being exposed to high levels of air pollution can **adversely affect cognitive function** (Delgado-Soborit et al., 2021)

WHO guideline values

- Hackney's commitment to meet WHO guideline values for NO₂, PM₁₀ and PM_{2.5} by 2030
- WHO revised down guidelines in light of new evidence of health effects
- WHO guidelines include **interim targets** feeding into policy/target setting

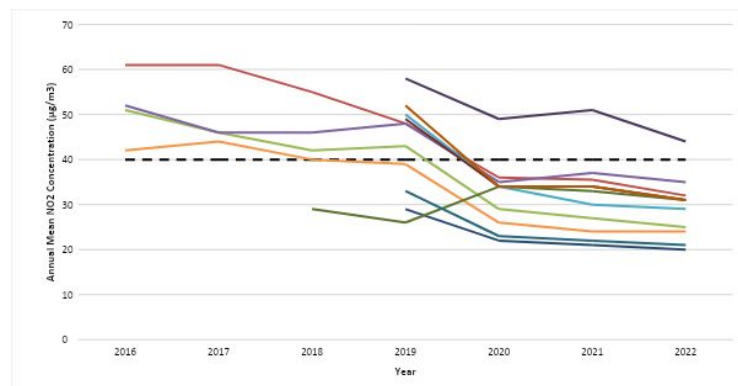
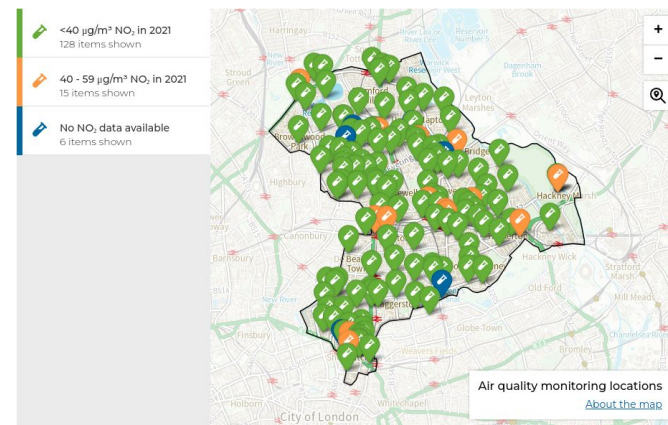


Recommended 2021 AQG levels compared to 2005 air quality guidelines

Pollutant	Averaging Time	2005 AQGs	2021 AQGs
PM _{2.5} , µg/m ³	Annual	10	5
	24-hour ^a	25	15
PM ₁₀ , µg/m ³	Annual	20	15
	24-hour ^a	50	45
O ₃ , µg/m ³	Peak season ^b	-	60
	8-hour ^a	100	100
NO ₂ , µg/m ³	Annual	40	10
	24-hour ^a	-	25
SO ₂ , µg/m ³	24-hour ^a	20	40
CO, mg/m ³	24-hour ^a	-	4

Air quality in Hackney - how did 2022 compare?

- Trends in air quality over time - improving
- Almost all monitoring sites showed **steady or reducing** levels of NO₂ between 2021 and 2022, despite easing of lockdown restrictions
- Only **one** site exceeded NO₂ air quality objective in 2022
- PM10 at four sites **at or slightly above** (20-22 µg/m³) the adopted WHO guideline value, to be met by 2030
- PM2.5 at the Old Street monitor was **just below** (9 µg/m³) the adopted WHO guideline value



Example of trends in roadside NO₂ from our 2022 AQ Annual Status Report

Government legislative and guidance updates

Environment Act 2021

- Legal requirement to set new PM2.5 targets
- Consultation - Hackney's response questioned the ambition & **timeframe**
- Feasibility of the **exposure reduction target**
- October deadline was missed

Environmental Targets Regulations 2022

- Annual mean concentration of PM2.5 - 10 $\mu\text{g}/\text{m}^3$ by 2040
- Population exposure reduction target of 35% by 2040 (2018 baseline)

Air Quality Strategy: Framework for Local Authority Delivery

- Published April 2023 following very short consultation (11th - 21st April)
- Lack of detail
- Commitments to strengthen **Smoke Control** regulations and improved communication channels
- **Indoor air quality** considerations



Hackney's Air Quality Action Plan (AQAP) 2021-2025 - Achievements

1



Commitment to WHO guidelines for particulate matter by 2030

4



Reducing solid fuel burning by raising awareness during cold weather and visiting suppliers

7



51 street signs installed to discourage engine idling

10



42 permanent School Streets in place and a further six being trialled

2



Five new automatic air quality monitoring stations installed

5



Launched a new cargo bike sharing scheme

8



Increased parking spaces for cycles and scooters on streets and in schools

3



New online air quality map available

6



Pavements widened and trees planted in new Low Emission Neighbourhood

9



New entrance to Hackney Central station to improve access for passengers

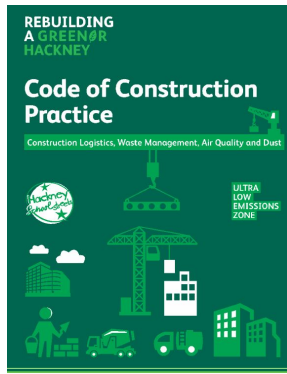
Public Health England (PHE) evidence review and NICE guidance

NICE Guidance NG70 and PHE evidence review of interventions to improve outdoor air pollution

Some examples



‘Develop infrastructure and support active travel’



Hackney

‘Consider Air Quality in plans for new developments’

Figure 1: Air pollution intervention hierarchy



‘Implement targeted interventions to address specific local issues’

Expansion of AQ monitoring and assessment of LTNs/LENs



- Increased number of PM₁₀ and NO_x monitors
- Automatic monitoring - data on website
- Assessment of impacts within and outside LTNs - [modelled data](#)



- Modelling carried out of impacts of Stoke Newington LEN
- Analysis of monitoring data around LTNs

Development of web-based tool to reduce exposure to air pollution

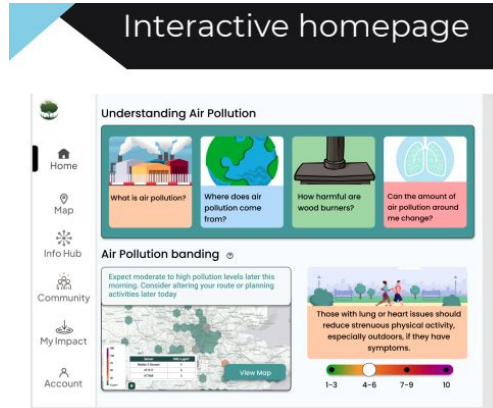
- Over £300k funding awarded by DEFRA
- Recruitment of volunteers and workshops held

Survey of residents



In November 2022, GAP surveyed 256 residents across Hackney, Newham, Tower Hamlets & City of London councils

Web Tool Prototype



Training of Champions



Environment JSNA and creation of factsheet

- The [Quality of the Local Environment JSNA](#) is published on Hackney and the City of London's [Health and Wellbeing Website](#). This was written in 2019 and based on older data/evidence.
- A new factsheet will be produced in summer 2023, which will include updated data on key indicators relating to outdoor air quality.

Next Steps

- Overall - continue delivery of the Air Quality Action Plan
- Annual Status Report for 2022 - address comments and feedback from GLA and publish once approved
- Publish an air quality update factsheet to complement the JSNA, with new data and evidence relating to air quality.
- Defra project - launch information tool and train cohort of volunteers
- Ensure air quality integrated into streetscene projects, including establishing new permanent AQ monitors to assess impacts