

Health in Hackney Scrutiny Commission

Health impacts of air pollution: evidence and responses

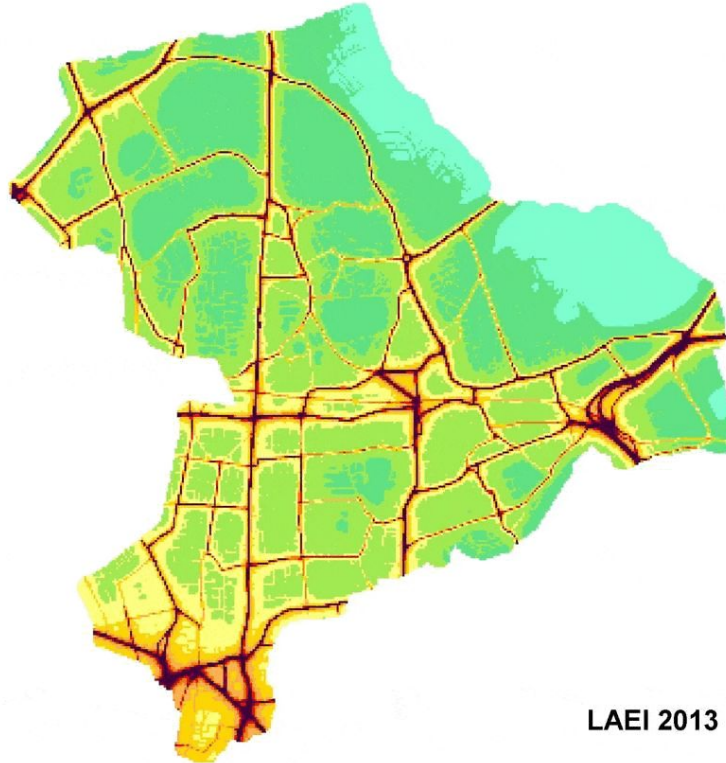
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1. Introduction

2. Air Quality in Hackney - the local picture

Annual average
NO² concentration



LAEI 2013

3. Health impacts of air pollution in Hackney

Nitrogen oxides (NO_x)

SOURCES

- Road transport: 34%*
 - Near roadsides: 80%
- Energy generation: 22%*
- Domestic & Industrial combustion: 19%*
- Other transport: 17%*

IMPACTS

- Short-term exposure to high concentrations of NO_x can cause inflammation of the airways
- Exacerbates symptoms of those already suffering from lung or heart conditions, shortening lives and reducing quality of life
- high levels of NO_x can change soil chemistry and affects biodiversity in sensitive habitats
- INCREASES susceptibility:
 - respiratory infections
 - allergens
- NO_x REACT with other pollutants → ground level ozone O₃

*Percentage of total NO_x emissions (2016) source: NAEI 2018

Primary Particulate Matter (PM_{2.5})

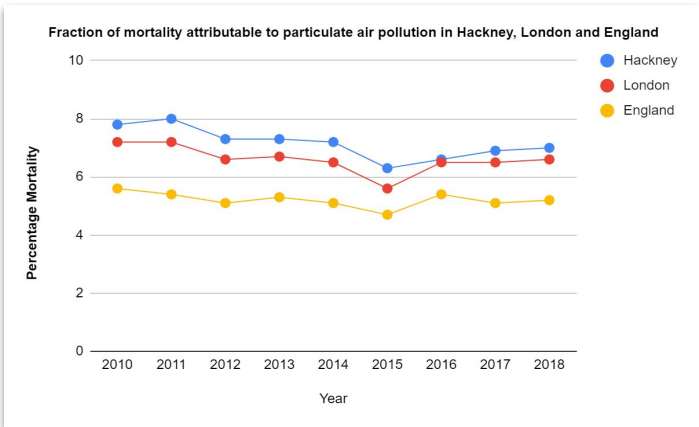
SOURCES

- Domestic wood & coal burning: 38%*
- Industrial combustion: 16%*
- Road transport: 12%*
- Use of solvents & industrial processes: 13%*

IMPACTS

- These tiny particles from smoke, soot and dust can get into the...
 - lungs and blood
 - and get embedded in organs
- PM can be transported around the body
- PM_{2.5} can shorten lifespans
- More likely to be affected are:
 - those already suffering from lung and heart conditions
 - elderly people
 - pregnant women and their unborn babies
 - and the very young

*Percentage of total PM_{2.5} emissions (2016) source: NAEI 2018



Graph 1: Fraction of mortality attributable to particulate air pollution (PHE, 2020)

	PM _{2.5}	NO ₂
Primary Care	£4.6m	£3.8m
Secondary Care	£12.0m	£5.5m
Medication	£8.6m	£5.1m
Social Care	£5.1m	£5.3m
Combined Costs	£30.3m	£19.7m

Table 1: Estimates the costs to local health and care services of PM_{2.5} and NO₂ (LBH, JSNA Draft)

4. National guidance and evidence-based recommendations for public health action on air quality

Summary of National Institute for Health and Care Excellence (NICE) Guidance NG70

- Include air pollution within local strategic plans and processes
- Consider air quality within plans for new developments or regeneration programmes
- Consider ways to reduce or mitigate road-traffic-related air pollution
- Consider the implementation of local, potentially cross-borough clean air zones, which act to promote zero or low emission travel and discourage motorised vehicular travel.
- Ensure that air quality is considered within decisions around public sector fleet procurement
- Provide information to the public and health professionals about the impacts of poor air quality on health, and how to reduce local air pollution and minimise exposure to it.
- Develop infrastructure for active travel to support and encourage cycling and other forms of active travel.

4.2 Summary of recommendations from Public Health England evidence review of interventions to improve outdoor air pollution

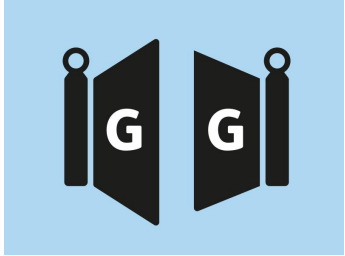
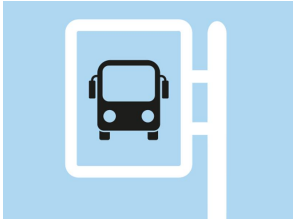
- Local authorities need to work together: joint working is needed to reduce all pollution, rather than displace it from one populated area to another
- Effective strategies require a coherent approach across partners and organisations.
- Everyone has a role to play: individuals need to change behaviours to reduce exposure to and contribution to pollution, and local authorities need to provide leadership and coordinate action.
- Implement targeted interventions to address specific local sources or issues e.g. anti-idling interventions in pollution hotspots or near vulnerable groups (including school children).
- Reduce air pollution at the source to mitigate the consequences: prevent, mitigate and avoid.

Figure 1: Air pollution intervention hierarchy



5. Local action to improve air quality

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



7. Action on air quality in partnership with our neighbours and at London level

- Hackney regularly collaborates with our neighbours.
- Hackney has recently been awarded funding from Defra for an air quality and public health project.
- London wide initiatives.



GREATER
LONDON
AUTHORITY



8. Next Steps and Conclusion

- Continued delivery of the Air Quality Action Plan.
- Update of Hackney and City of London Joint Strategic Needs Assessment.
- Ensuring public health forms an integral part of air quality management in the borough.