

# Air Quality Action Plan

2020–2025

Consultation



# **London Borough of Hackney Air Quality Action Plan 2020 - 2025**

## **Foreword**

To be inserted post-consultation.

## Summary

*Hackney's Air Quality Action Plan (AQAP) has been produced as part of the Council's duty to London Local Air Quality Management (LLAQM) and has regard to the Greater London Authority's (GLA) guidance on air quality. The plan outlines the actions we will take to improve air quality in Hackney 2020 - 2025.*

This action plan replaces the previous plan which ran from 2015-2019. Hackney has been successful in tackling air pollution in recent years and notable achievements since the publication of our last plan include:

- Establishing one of the most comprehensive air quality monitoring networks in the country with a mixture of diffusion tubes monitoring nitrogen dioxide (NO<sub>2</sub>), real time monitors and reference monitors;
- Operating one of the most sustainable vehicle fleets in London with 59 electric vehicles (EV) currently representing 19% of Hackney's light vehicle fleet and 12.3% of our total fleet,
- Collaborating with the Zero Emissions Network (ZEN), which offers sustainable transport initiatives to businesses and residents including cargo bike trials, bike maintenance workshops and scooter switches. At the time of writing, 1,430 business members and over 700 residents are part of ZEN;
- Launching the Low Emissions Neighbourhood (LEN) in the City fringe in 2017. This programme, in collaboration with Islington and Tower Hamlets, only allows Ultra Low Emission Vehicles (ULEV) in the scheme area at certain periods throughout the day;
- Pioneering the School Streets programme, thus far launched at 40 primary schools in Hackney. Moreover, developed a School Streets toolkit to support councils nationwide to implement their own School Streets;
- Lobbying national and regional government, as well as responding to consultations, in particular recent consultations on airport expansions, to ensure that air quality issues are addressed.

Hackney's 2020-2025 plan will not only build upon the achievements of past actions, but it establishes ambitious new targets that fit into the Borough's new corporate sustainability agenda. The agenda has been formulated as a response to Hackney declaring a Climate Emergency in June 2019 and takes the approach of managing the environment holistically. This means that air quality issues will not only be addressed in this plan but also in the Council's new Health & Wellbeing Strategy, Green Energy Strategy, Emergency Transport Plan, Parking Strategy, Green Infrastructure Strategy and Biodiversity Strategy.

This new integrated approach is vital as we now know air pollution is associated with a number of adverse health impacts and it is increasingly recognised as a major contributor to diseases that degrade cardiovascular and respiratory systems and, in some cases, can lead to mortality. According to the Public Health Outcomes Framework (Public Health England), as many as 7% of all deaths among people in Hackney over the age of 30 in 2018 can be attributed to particulate matter (PM<sub>2.5</sub>). This is compared to the London average of 6.6% and 5.2% in England.<sup>1</sup> Further, in 2019 the estimated costs to local health and care services

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<sup>1</sup> Public Health England 2020, Public Health Outcomes Framework, *Fraction of mortality attributable to particulate air pollution*, Dataset, viewed June 2020, <https://fingertips.phe.org.uk>

caused by air pollution in over 18s for Hackney is over £50 million.<sup>2</sup> These figures do not account for the impact the Coronavirus (Covid-19) pandemic has had on our community and due to the virus being respiratory in nature it is now more prudent than ever to manage the link between air quality and public health.

The lockdown has shown that with a reduction in the source of air pollution, such as less vehicles on the road and fewer emissions from construction activities, there can be multiple cross-cutting benefits to society. Along with the health benefits of less exposure to air pollution for the most susceptible groups, there are also wider benefits for society such as safer, cleaner streets, an increase in community interaction and greater equality.

That is why Hackney is taking a radical approach to tackling air quality and rebuilding a greener Hackney post lockdown. In order to achieve the many societal benefits a reduction in air pollution brings, this plan outlines a coherent framework for addressing air pollution, that is based upon nine key themes all working towards realising the vision of clean air for all in Hackney.

### **Themes & priorities**

Having regard for not only the environmental implications of poor air quality, but the very real public health impacts on our society, our action plan has gone above and beyond the standard Greater London Authority requirements and developed nine broad themes that will help to improve the air quality in Hackney:

***Monitoring and other core statutory duties:*** evaluating the air quality monitoring throughout Hackney to enhance compliance with our core statutory objectives;

***Emissions from development and buildings:*** emissions from construction alone accounts for approximately 37% of the PM<sub>10</sub> emissions across Hackney, and therefore work in this area is important in reducing particulate concentrations.<sup>3</sup> This will focus on air quality mitigation through the planning system and correlates with the Council's sustainability objectives;

***Public health and awareness raising:*** increasing awareness can drive behavioural change to lower emissions as well as reducing exposure to air pollution. For example, a shift in attitude with respect to solid fuel burning through increasing awareness of the impact this causes, can help facilitate overall behaviour change;

***Delivery servicing and freight:*** ensuring delivery servicing and freight vehicles are re-evaluated as these are usually heavy-duty diesel-fuelled vehicles with high primary NO<sub>2</sub> emissions;

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<sup>2</sup> Public Health England, "Air pollution: a tool to estimate healthcare costs," 2018. [Online]. Available: <https://www.gov.uk/government/publications/air-pollution-a-tool-to-estimate-healthcare-costs> [Accessed June 2020]

<sup>3</sup> Greater London Authority and TFL Air Quality, *LAEI 2016 – Borough Air Quality Data for LLAQM* [Online]. Available: <https://data.london.gov.uk/dataset/laei-2016---borough-air-quality-data-for-llaqm> [Accessed June 2020]

**Borough fleet:** Hackney's fleet includes a mixture of light and heavy-duty diesel-fuelled vehicles alongside 59 electric vehicles. Building on our 2018 Green Fleet of the Year award, we will continue to make improvements in our own fleet, thereby leading by example;

**Localised solutions:** these seek to improve the environment of neighbourhoods through a combination of measures such as Low Traffic Neighbourhoods, traffic filtering, parking schemes and biodiversity projects;

**Cleaner transport:** road transport is the main source of air pollution in London and Hackney. We have been and will continue to incentivise and facilitate a change to walking, cycling, public transport and ultra-low emission vehicles (such as electric) as far as possible;

**Schools and communities:** implementing initiatives that target the most susceptible groups in Hackney in order to ensure those most at risk are not disproportionately affected by the impacts of poor air quality;

**Lobbying:** Hackney will continue to lobby and influence regional and national organisations and stakeholders on policies and issues beyond Hackney's influence to introduce progressive measures aimed at improving air quality.

**Our 10 key priorities are:**

1. Adopt WHO guidelines for PM<sub>10</sub> and PM<sub>2.5</sub> with a compliance deadline by 2030.
2. Ensure enforcement of Non-Road Mobile Machinery (NRMM) air quality policies.
3. Minimise emissions from construction through the development of Hackney's own Supplementary Planning Document (SPD) and code of construction for air quality which goes above and beyond the GLA Supplementary Planning Guidance (SPG);
4. Run air quality campaigns to raise awareness and encourage behaviour change.
5. Assess potential impact of installing Ultra-Low Emission Vehicle (ULEV) infrastructure (electric vehicle charging points, rapid electric vehicle charging points).
6. Increase uptake of electric vehicles and ensure electric vehicle charging infrastructure is commensurate with growth in the Borough's Fleet.
7. Assess the air quality benefits of the actions in Rebuilding a Greener Hackney: Emergency Transport Plan, the Transport Strategy 2015 - 2025 and the Local Implementation Plan 2019 – 2022.
8. Provide new cycling and walking infrastructure and assess air quality impacts of new infrastructure.
9. Deliver updated Parking and Enforcement Plan.
10. Lobby Central Government to control and reduce emissions that are out of Hackney's authority.

This action plan sets out how we will effectively deliver against the above broad themes and key priorities, thereby improving air quality issues that are within our control and through leading by example. However, it is important to recognise that these are local drivers reduced at tackling air pollution and that air pollution by its very nature is transboundary.

For those areas that are outside of our control, we will continue to work with our neighbours, as well as regional and national governments to lobby and influence for impactful change for a positive outcome. By reducing air pollution, we will improve the health and well-being of

residents and visitors, whilst also simultaneously benefiting the economy and improving our environment.

In delivering this action plan Hackney Council will work with internal and external stakeholders. This work has already begun, including a stakeholder workshop which identified the priority work areas, and we wish to thank all stakeholders for the delivery of actions in the last plan, and for their help in developing this plan. We are also very much looking forward to working with new partners to deliver on actions within this plan.

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## Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LLAQM	London Local Air Quality Management
NAQO	National Air Quality Objectives
NO <sub>2</sub>	Nitrogen Dioxide
NRMM	Non-Road Mobile Machinery
PM <sub>10</sub>	Particulate matter less than 10 micron in diameter
PM <sub>2.5</sub>	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

## 1.0 Introduction

There is a clear commitment to address poor air quality in Hackney. This action plan builds on the previous action plan<sup>4</sup> and outlines the actions that Hackney will deliver between 2020-2025 in order to reduce concentrations of pollution, and exposure to pollution, thereby positively impacting on the health and quality of life for residents, businesses and visitors to the borough.

This plan has been developed in recognition of the legal requirement on the Council to work towards air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under Part IV. It also meets the requirements of the London Local Air Quality Management (LLAQM) statutory process, which is overseen by the Mayor of London. As directed under the Act if a local authority area doesn't meet its air quality objectives, then an AQMA has to be put in place. In 2006 an AQMA was declared in Hackney covering the whole of the Borough as it was not achieving the annual mean NO<sub>2</sub> NAQO and the 24hr mean PM<sub>10</sub> AQO.

Hackney is home to an estimated 275,930 people. The population is likely to grow to 310,000 people by 2028 and to 355,000 people by 2050 making Hackney the third most densely populated Borough in London. However, although Hackney is experiencing rapid population growth and a booming economy, it is also one of the greenest Boroughs in the city with 58 parks and green spaces totalling 282 hectares. Yet population increases and growth areas within Hackney can present issues for local air quality. This is particularly the case with nitrogen oxides and particulate matter from transport, heating both domestic and commercial properties, and from construction activities. Therefore, action must be taken to ensure that the concentrations of air pollutants are, as a minimum, kept within safe limits, and further reduced to ensure clean air for all.

Having reviewed Hackney's 2015-2019 action plan, undertaken stakeholder engagement exercises and accounted for the increasing evidence as to the impact of poor air quality on people's health, the vision and goals of Hackney's AQAP 2020-25 are as follows:

### **Our vision:**

- Hackney is a place for all to breathe clean air, supporting better health and enhancing the enjoyment of life, and as a borough we will continue to lead by example ensuring improved air quality for all.

### **Our goals:**

- We will adopt the WHO Air Quality Guidelines for PM<sub>10</sub> and PM<sub>2.5</sub>;
- We will comply with the National Air Quality Objective and WHO Guidelines for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> and do everything within our control to achieve compliance with these concentrations by 2030;  
\* Annual Means NO<sub>2</sub> 40 µg/m<sup>-3</sup>; PM<sub>10</sub> 20 µg/m<sup>-3</sup>; PM<sub>2.5</sub> 10 µg/m<sup>-3</sup>
- We will adopt a data-led approach to implement targeted measures to improve air quality and protect public health in parts of the Borough where air quality objectives are not being met.

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<sup>4</sup> <https://hackney.gov.uk/air-quality-action-plan>

In order to achieve the above goal, actions will be delivered across the nine themes of:

1. Monitoring and other core statutory duties
2. Emissions from development and buildings
3. Public health and awareness raising
4. Delivery servicing and freight
5. Borough fleet
6. Localised solutions
7. Cleaner transport
8. Schools and communities
9. Lobbying

Corporate strategies that support the aims and actions of this AQAP are, but not limited to:

- Transport Strategy 2015 - 2025
- Rebuilding A Greener Hackney: Emergency Transport Plan
- Parking and Enforcement Plan (in development)
- Green Infrastructure Strategy (in development)
- Biodiversity Strategy (in development)
- Green Energy Strategy (in development)
- Local Plan 33
- Joint Strategic Needs Assessment
- Sustainable Procurement Strategy 2018-2022

### **1.1 Health Impact of Poor Air Quality in Hackney**

Air pollution is the largest environmental risk to the public's health in the UK, with estimates of between 28,000 and 36,000 deaths each year attributed to human-made air pollution. Along with the association with cardiovascular and respiratory disease there is emerging evidence that other organs may also be affected by air pollution, including possible effects on dementia, low birth weight and diabetes. Further, there is evidence to suggest that children in their early years are especially at risk, including increased risks of getting asthma and poorer lung development.<sup>5</sup>

Air pollution is a major contributor to ill health and early death in Hackney and across London. In certain locations current air pollution levels exceed legal standards and have a negative impact on the health of all residents and visitors. People with existing conditions, and those who are considered socioeconomically deprived<sup>6</sup>, are particularly affected, making air pollution a key contributor to health inequality. There are chronic long-term effects on health and wellbeing, as well as more acute effects on sufferers of respiratory conditions. Evidence to show how our psychological wellbeing is impacted by air pollution is now emerging and exposure to pollutants is also associated with depression, anxiety and

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<sup>5</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/795185/Review\\_of\\_interventions\\_to\\_improve\\_air\\_quality.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/795185/Review_of_interventions_to_improve_air_quality.pdf)

<sup>6</sup> Williams ML, Beevers S, Kitwiroon N, et al. (2018). Public health air pollution impacts of pathway options to meet the 2050 UK Climate Change Act target: a modelling study. Southampton (UK): NIHR Journals Library; (Public Health Research, No. 6.7.) Chapter 8, Impact of air pollution scenarios on inequalities. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK507623>

dementia.<sup>7</sup> Whilst the impact to health from air pollution depends on multiple factors such as exposure time, age and gender; children, pregnant women, the elderly and those with certain pre-existing medical conditions such as chronic obstructive pulmonary disease (COPD) are considered at most risk.

However, if anyone is exposed to pollution for long periods of time there is an increased chance health will deteriorate. Figure 1 below outlines the source and health impacts of NO<sub>2</sub> and particulate matter, focusing on PM<sub>2.5</sub> which has the greater potential to cause damage to health due to the smaller micron particle size.

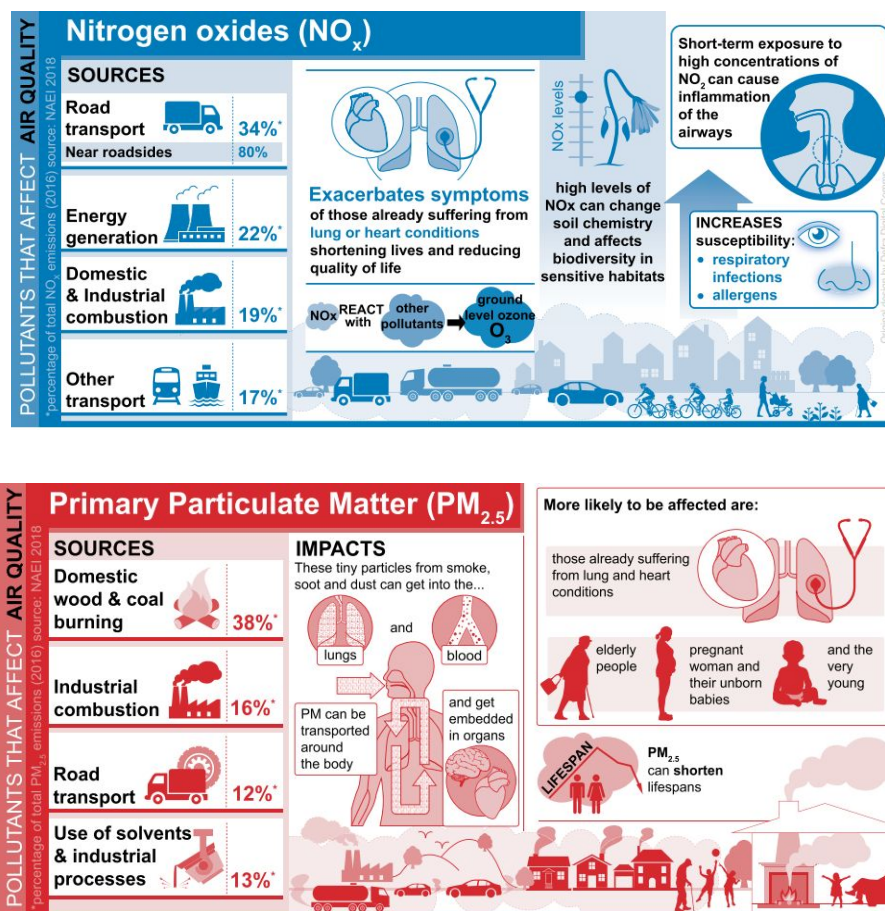


Figure 1: Air pollutants, source and potential health impacts (Clean Air Strategy 2019)<sup>8</sup>

PM<sub>2.5</sub> is a particular health risk with WHO guidelines stating there is no safe exposure limit due to the diameter of these particles they can penetrate the lung barrier and enter the bloodstream. With chronic exposure, the risk of developing cardiovascular and respiratory diseases increases along with the likelihood of strokes, heart attacks and lung cancer. Moreover, there is a strong correlation between exposure to high concentrations of small particles and increased mortality, both daily and over time.<sup>9</sup>

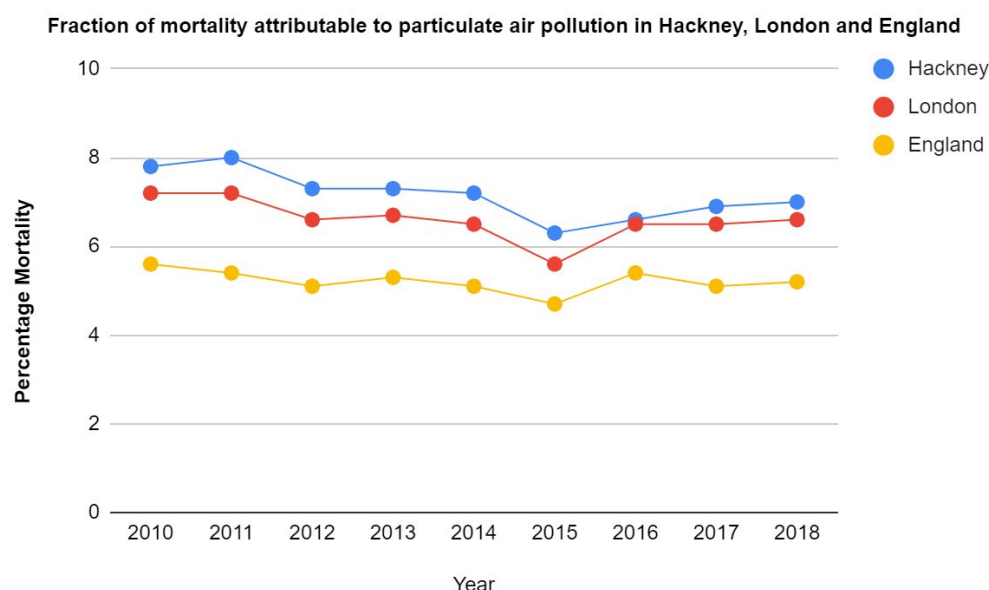
<sup>7</sup> Ali, N. A., & Khoja, A. (2019). Growing Evidence for the Impact of Air Pollution on Depression. *The Ochsner journal*, 19(1), 4. doi:10.31486/toj.19.0011

<sup>8</sup> Department for Environment, Food and Rural Affairs. (2019). *Clean Air Strategy 2019*, <https://www.gov.uk/government/publications/clean-air-strategy-2019>.

<sup>9</sup> World Health Organisation (2018) *Ambient (outdoor) air pollution*, Available at: [https://www.who.int/en/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/en/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

Based on the Global Burden of Disease Survey, which is the most comprehensive effort to date to measure epidemiological levels and trends worldwide, 54 deaths among residents of Hackney (2017) were attributable to air pollution. Moreover, calculations from the same study suggest that males are more likely than females to suffer from premature mortality in Hackney as a result of air pollution.

Furthermore, according to the Public Health Outcomes Framework (Public Health England), as many as 7% of all deaths among people in Hackney over the age of 30 in 2018 can be attributed to particulate air pollution (PM<sub>2.5</sub>). This compares to 6.6% in London as a whole and 5.2% of deaths in England (2018).<sup>10</sup> Our neighbouring boroughs, Tower Hamlets and Islington, also had 7% of deaths attributable to the same cause, which reinforces the case for joint action at the London level and among local authorities.



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

As well as the detrimental impact on health, especially for those considered more vulnerable in our society, there is an economic cost to poor air quality. The estimated costs to local health and care services caused by air pollution in 2019 for Hackney were over £50 million (£30.3 million for PM<sub>2.5</sub> and £19.9 million for NO<sub>2</sub>) and are set out in Table 1. This includes costs to primary care, secondary care, medication and social care.<sup>11</sup>

	PM <sub>2.5</sub>	NO <sub>2</sub>
Primary Care	£4.6m	£3.8m
Secondary Care	£12.0m	£5.5m
Medication	£8.6m	£5.1m
Social Care	£5.1m	£5.3m

<sup>10</sup> Public Health England 2020, Public Health Outcomes Framework, *Fraction of mortality attributable to particulate air pollution*, Dataset, viewed June 2020, <https://fingertips.phe.org.uk>

<sup>11</sup> London Borough of Hackney Draft Joint Strategic Needs Assessment

<b>Combined Costs</b>	<b>£30.3m</b>	<b>£19.7m</b>
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Table 1: Estimates the costs to local health and care services of PM<sub>2.5</sub> and NO<sub>2</sub>

## 1.2 WHO Guidelines

World Health Organisation (WHO) Air Quality Guidelines (AQG) are set out in Table 2 below, which also includes the UK National Air Quality Objectives. The AQG detail the threshold limits for key air pollutants that pose health risks and are intended as a reference for setting air pollution targets at regional and national levels to improve air quality. The WHO have provided AQG since 1987 with the most recent revisions in 2005. The AQG are selected based upon a synthesis of information from research on the health effects of each pollutant.

<b>Pollutant</b>	<b>UK National Air Quality Objectives (µg/m<sup>-3</sup>)</b>	<b>Averaging Period</b>	<b>Due Date</b>	<b>WHO Air Quality Guidelines (µg/m<sup>-3</sup>)</b>	<b>Averaging Period</b>
Nitrogen dioxide - NO <sub>2</sub>	40 µg m <sup>-3</sup>	Annual mean	31 Dec 2005	40	1 year (annual mean)
	200 µg m <sup>-3</sup> not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005	200	1 hour (hourly mean)
Particles - PM <sub>10</sub>	40 µg m <sup>-3</sup>	Annual mean	31 Dec 2004	20	1 year (annual mean)
	50 µg m <sup>-3</sup> not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004	50	24 hour (99th percentile)
Particles - PM <sub>2.5</sub>	25 µg m <sup>-3</sup>	Annual mean	2020	10	1 year (annual mean)
	Target of 15% reduction in concentration at urban background locations	3-year mean	Between 2010 and 2020	25	24 hour (99th percentile)

Table 2: WHO Air Quality Guidelines and National Air Quality Objectives

With independent studies now suggesting there is no safe exposure limits to air pollution<sup>12</sup> and the correlation between higher Covid-19 mortality rates and poor air quality<sup>13</sup>, the NAQO for PM<sub>2.5</sub> don't go far enough to protect the health of anyone who lives, visits or works in Hackney. Therefore, we commit to adopting the more stringent WHO guidelines for PM<sub>10</sub> and PM<sub>2.5</sub>.

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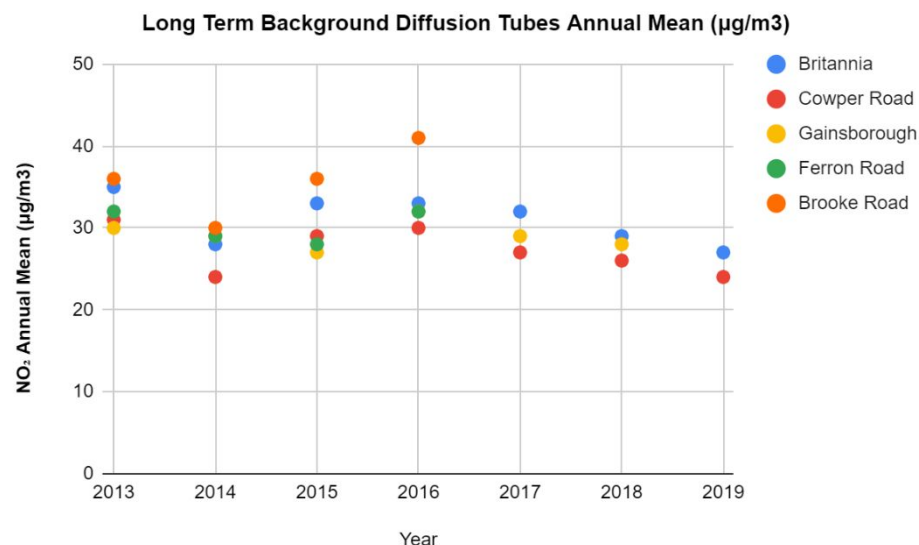
<sup>12</sup> Zhao, B., Johnson, F., Salimi, F., Kurabayashi, M. and Negishi, K., (2020). Short-term exposure to ambient fine particulate matter and out-of-hospital cardiac arrest: a nationwide case-crossover study in Japan. *The Lancet*, 4(1).

<sup>13</sup> Coker, E.S., Cavalli, L., Fabrizi, E. *et al.* (2020). The Effects of Air Pollution on COVID-19 Related Mortality in Northern Italy. *Environ Resource Econ* **76**, 611–634  
<https://doi.org/10.1007/s10640-020-00486-1>

## 2.0 Summary of Air Quality in Hackney

In Hackney we have a network of automatic monitors and diffusion tubes (passive monitoring) recording pollution concentrations throughout the borough. The network includes two automatic monitors measuring NO<sub>2</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), one kerbside location at Old Street and one at an urban background location in Hackney Marshes. In addition, we have 5 AQ Mesh Pods, 2 Osiris particulate matter monitors and over 200 diffusion tubes monitoring NO<sub>2</sub> at sensitive receptor locations across the borough, such as outside schools. All data is recorded in our annual London Local Air Quality Management (LLAQM) Annual Status Reports, which are published on the Council's website.<sup>14</sup>

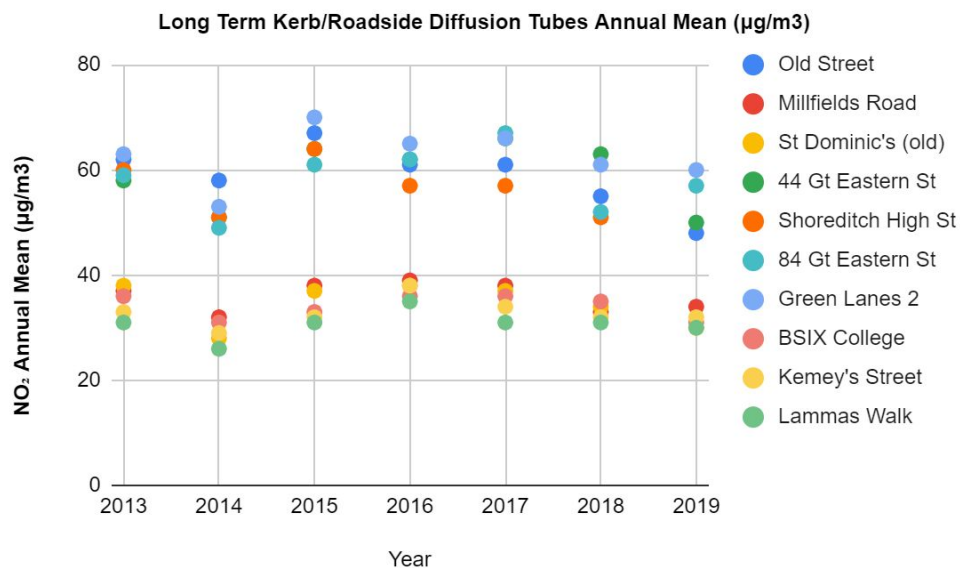
Long term diffusion tubes have been located at five sites since 2013. These have shown that at *urban background locations* there is a slow reduction in NO<sub>2</sub> concentrations and in 2019 concentrations were below the annual mean NO<sub>2</sub> NAQO, shown in Graph 2. Long term diffusion tubes at *kerbside and roadside locations* have also shown a slight reduction. However, many locations still show that the annual mean NO<sub>2</sub> air quality objectives are not being met (Graph 3).



Graph 2: Long Term Background Diffusion Tube Annual Mean (µg/m<sup>-3</sup>) 2013 - 2019

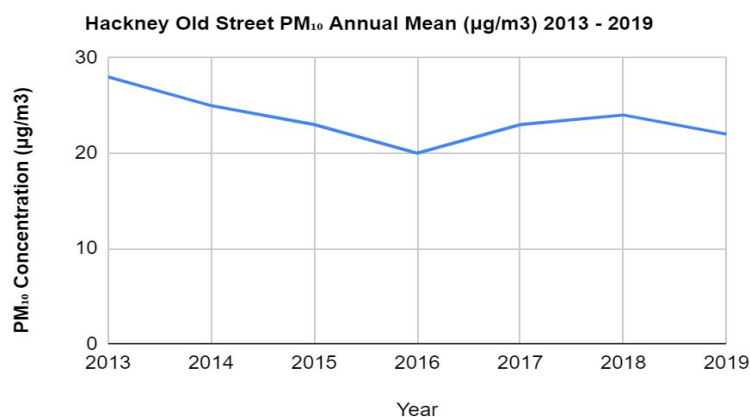
<sup>14</sup> [www.hackney.gov.uk/air-what-we-are-doing](http://www.hackney.gov.uk/air-what-we-are-doing)



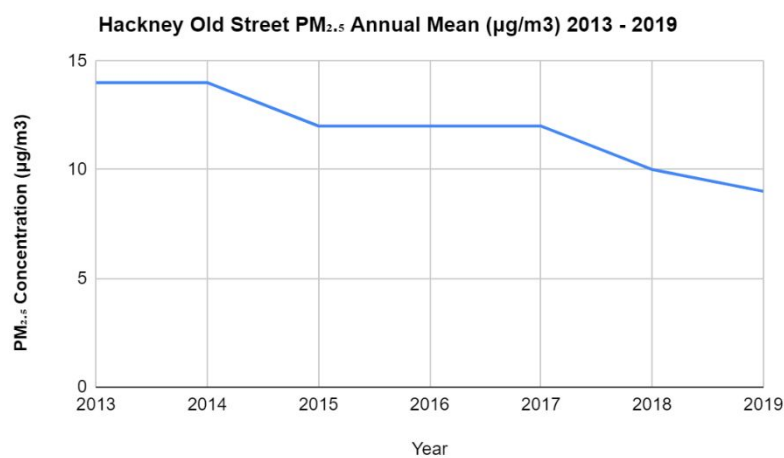


Graph 3: Long Term Kerb/Roadside Diffusion Tube Annual Mean ( $\mu\text{g}/\text{m}^3$ ) 2013 – 2019

Monitoring of particulate matter ( $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ ) at Old Street shows that air quality objectives are being met, shown in Graph 4 and 5 respectively.



Graph 4:  $\text{PM}_{10}$  Annual Mean Concentrations ( $\mu\text{g}/\text{m}^3$ ) 2013 – 2019



Graph 5:  $\text{PM}_{2.5}$  Annual Mean Concentrations at Old Street, Hackney ( $\mu\text{g}/\text{m}^3$ ) 2013 – 2019

However, modelled concentrations shown by the London Atmospheric Emissions Inventory (LAEI) 2016 show that  $PM_{2.5}$  (Figure 2),  $PM_{10}$  (Figure 3) may be exceeding the annual mean NAQO along major roads which experience regular high volumes of traffic in the borough, particularly the A12. Additional modelling undertaken as part of the LAEI shows that the daily mean  $PM_{10}$  NAQO could be breached at kerbside locations of busy roads, particularly the A12 (Figure 4). Figure 5 shows predicted 2016 annual mean  $NO_2$  concentrations are highest and are exceeding the annual mean NAQO along major roads within Hackney, including the A12 and A10. Concentrations are also shown to exceed the annual mean NAQO in the south and south western parts of the Borough away from the major roads.

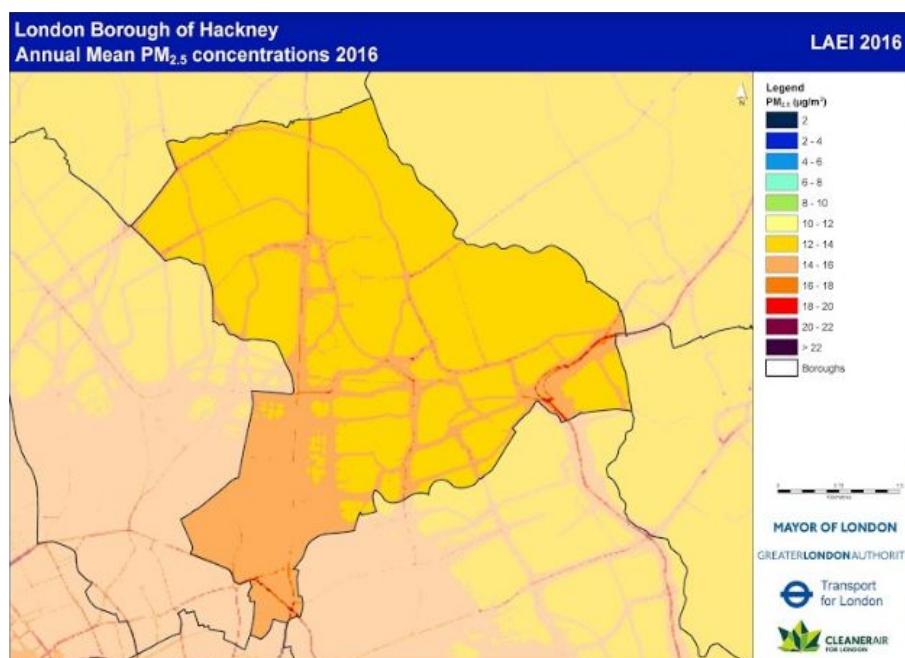


Figure 2: Mapped Annual Mean  $PM_{2.5}$  Concentrations ( $\mu g/m^3$ ), Hackney (LAEI, 2016)

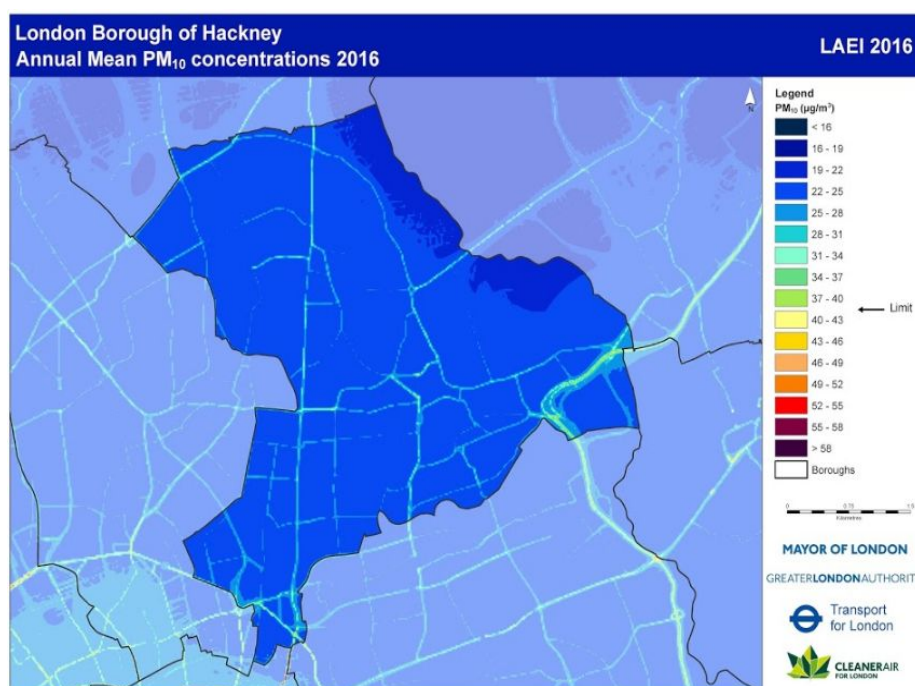


Figure 3: Mapped Annual Mean  $PM_{10}$  Concentrations ( $\mu g/m^3$ ), Hackney (LAEI, 2016)

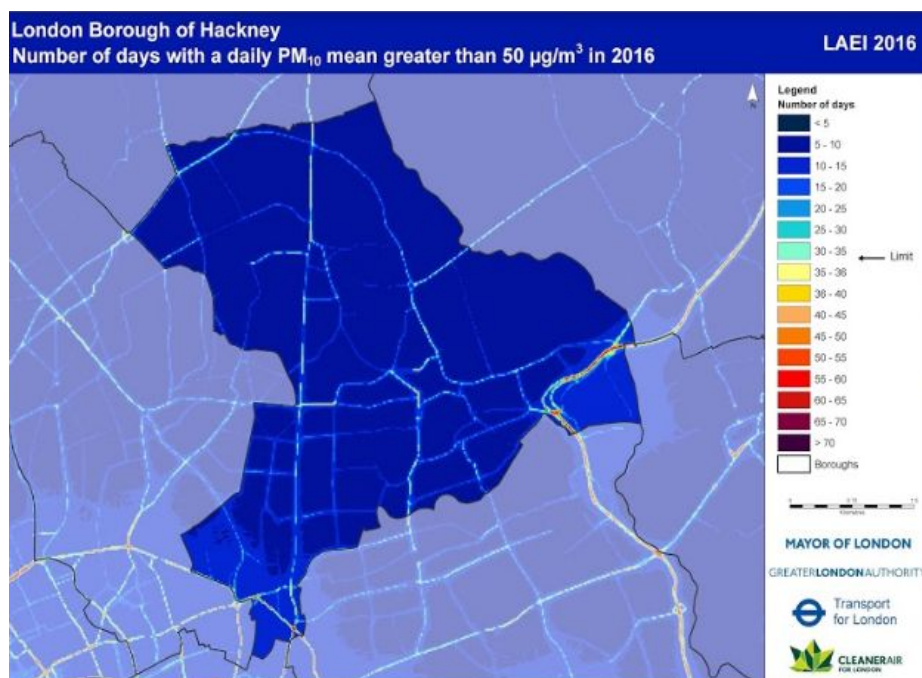


Figure 4: Mapped Number of days PM<sub>10</sub> concentrations (µg/m<sup>-3</sup>) exceeded 50µg/m<sup>-3</sup> (LAEI, 2016)

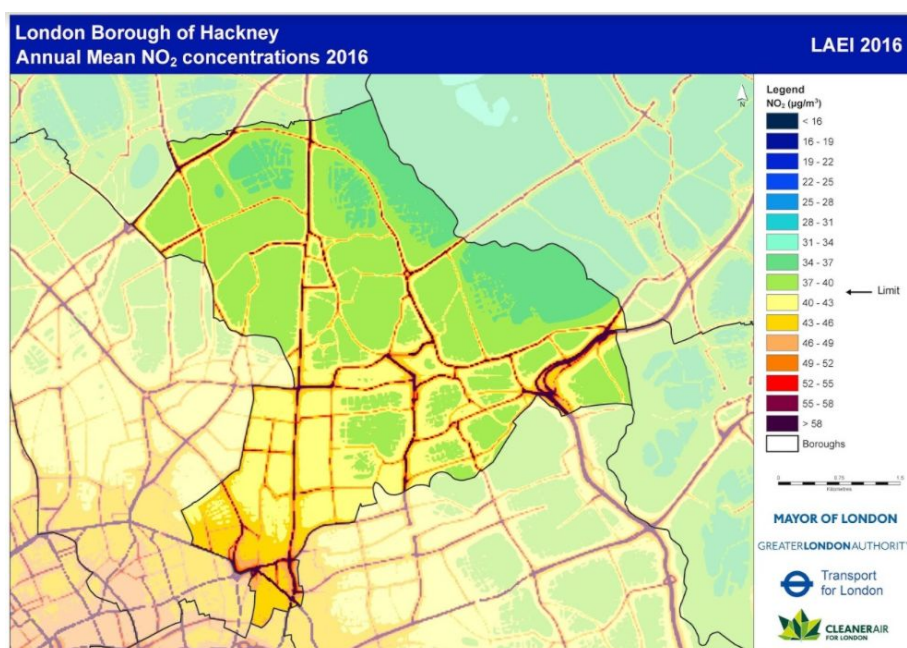


Figure 5: Mapped NO<sub>2</sub> Annual Mean Concentrations (µg/m<sup>-3</sup>), Hackney (LAEI, 2016)

Air pollution levels within Hackney are highest around main roads with hotspots mainly in the vicinity of the A10 which runs north to south of the borough, in close proximity to the A12 in the east of the borough at Hackney Wick, and in the very south of the borough within Shoreditch.

## 2.1 Air Quality Management and Focus Areas

All of Hackney has been an AQMA since 2006 as it hasn't achieved the annual mean NO<sub>2</sub> NAQO and the 24hr mean PM<sub>10</sub> NAQO. Our monitoring results show that the Borough still exceeds the NO<sub>2</sub> annual mean objective and as our commitment is to adopt the WHO



guidelines for PM<sub>10</sub> and PM<sub>2.5</sub> by 2030 we do not intend to remove the AQMA declaration for either pollutant.

A focus area is a location which is in exceedance of the annual mean NO<sub>2</sub> objective and are areas that have high human exposure. Focus areas have been defined by the GLA to inform local air quality management and assist in the development of air quality interventions and planning processes. There are 187 focus areas in London and eight are located within Hackney (Figure 6).

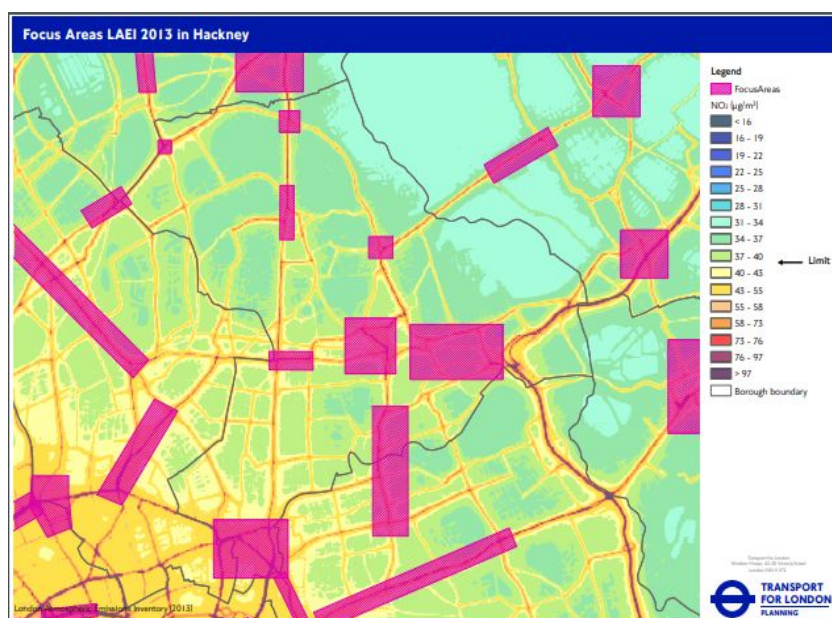


Figure 6: Focus Areas within The London Borough of Hackney (LAEI, 2013)

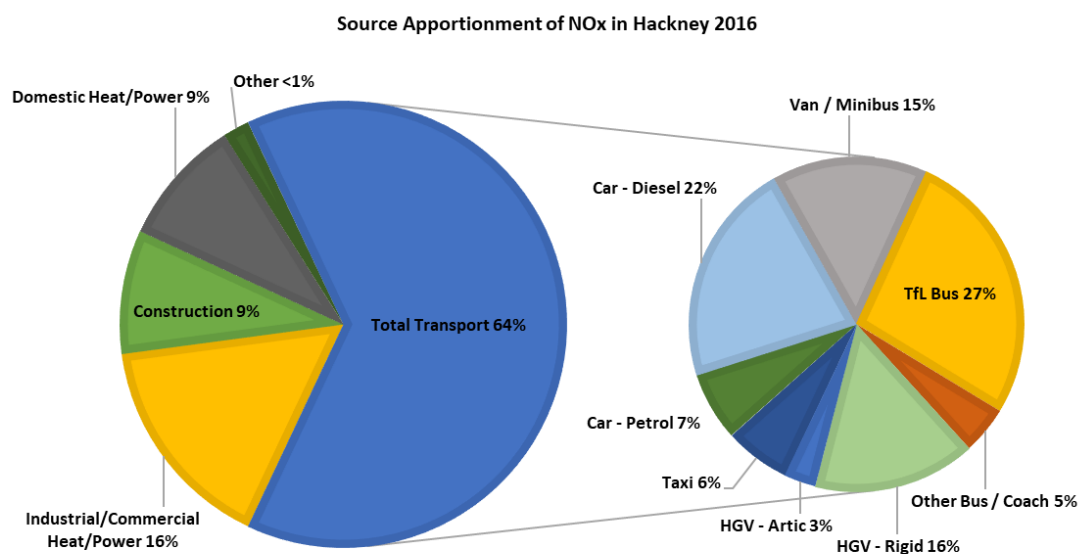
- **South** - Old Street, City Road, Greater Eastern Street and Shoreditch High Street;
- **Clapton** - Junction between Clapton Road and Lea Bridge Road;
- **Hackney Central** - Area including Amhurst Road, Dalston Lane and Mare Street;
- **Dalston** - Junction between Balls Pond Road and Kingsland Road;
- **Stoke Newington** - Area including Stoke Newington High Street, Stamford Hill and Rectory Road;
- **Stamford Hill** - Area including Amhurst Park and Stamford Hill Road;
- **Manor House** - Junction between Green Lanes and Seven Sisters Road;
- **Hackney Wick** - Area including Homerton High Street, Wick Road, Cassland Road and Victoria Park Road.

We recognise that these are key areas which must be targeted when implementing air quality mitigation and intervention measures. However, we also take into consideration exceedances in monitoring and modelling data, particularly at sensitive locations including schools and residential areas which do not necessarily fall into these focus areas. Therefore, we use multiple sources of information including focus areas from the GLA when determining the implementation of actions to tackle air pollution across the borough

## 2.2 Sources of Pollution in Hackney

As is the case with the rest of the UK, NO<sub>2</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) are the main pollutants of concern within Hackney and originates from numerous sources which vary

depending on the pollutant. As air pollution is a local and transboundary issue, pollution sources come from within the Borough as well as outside the Borough, in some instances beyond London and the UK. The following charts give sources of pollution in Hackney and specifically breakdown transport sources to give additional understanding of which vehicles

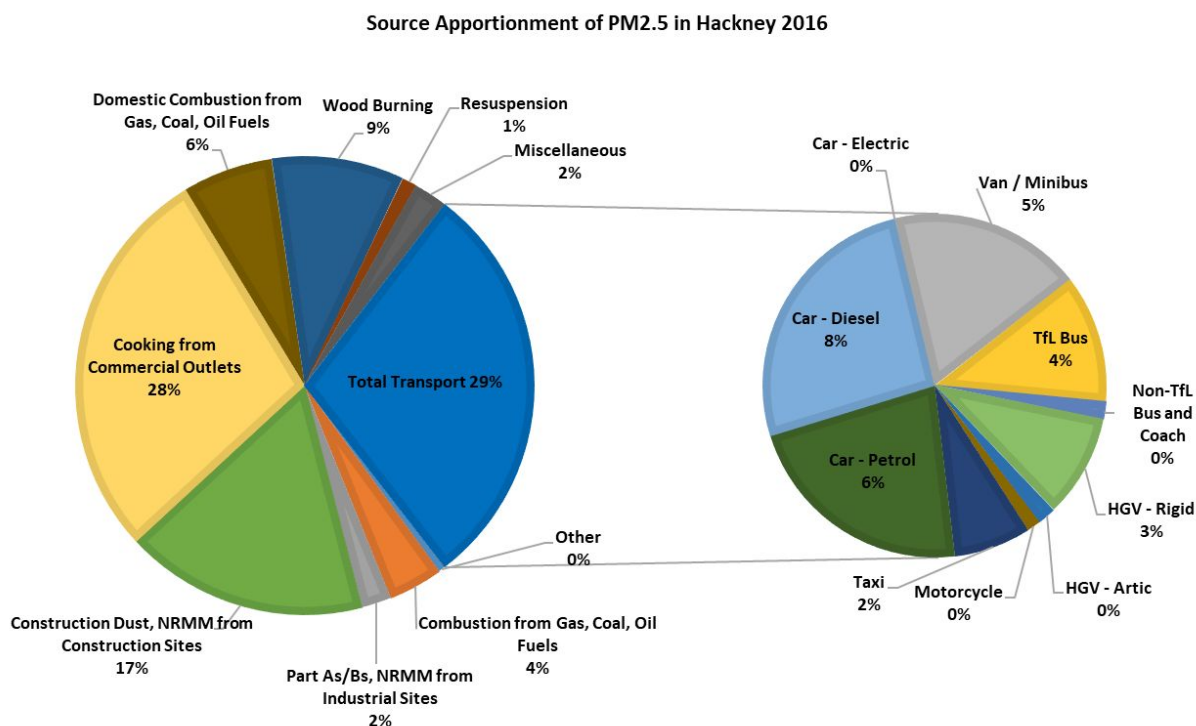


are the most polluting. In Hackney the largest emission source of nitrogen oxides (NO<sub>x</sub>) is road transport contributing to 64%. Chart 1 shows the breakdown of road transport sources with TfL buses and diesel cars making up 27% and 22% of emissions, respectively. The second highest emission source of NO<sub>x</sub> within Hackney is industrial/commercial heat and power, contributing to 16% of emissions.

Chart 1: NO<sub>x</sub> Emission Source Contribution (LAEI, 2016)

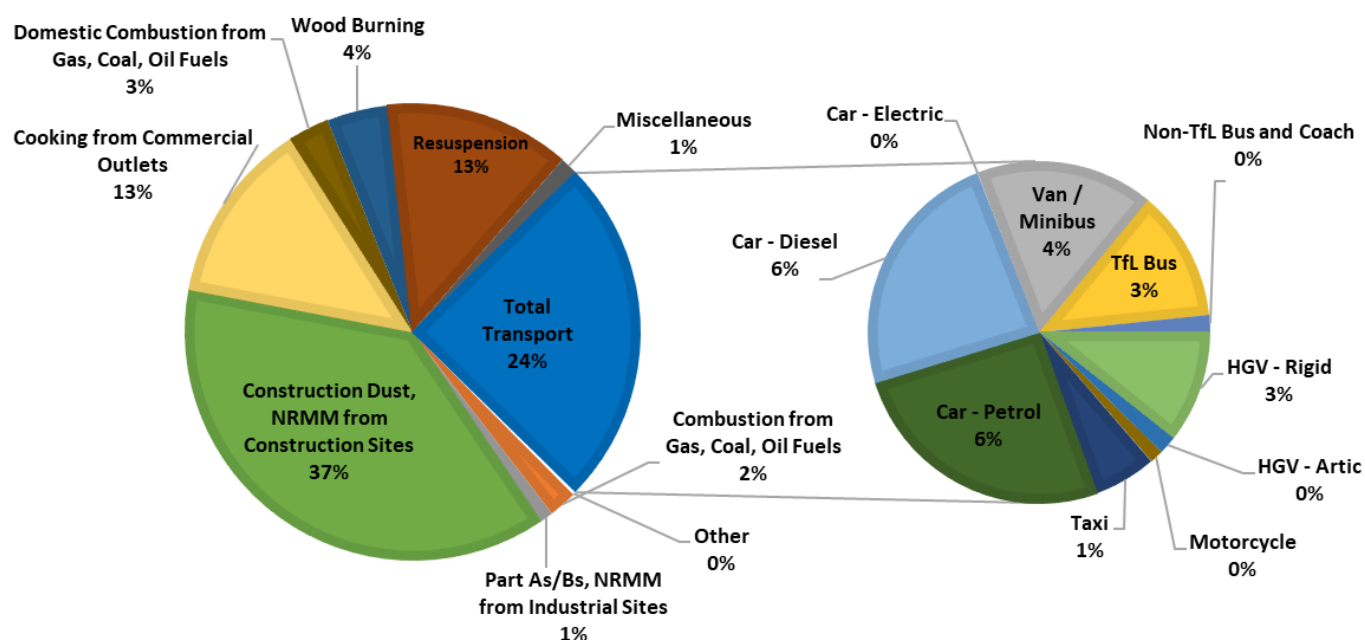
Chart 2 shows that for  $PM_{10}$ , construction is the largest contributor, at 37% and road transport is the second largest contributor, making up 25% of emissions. Within this diesel and petrol cars are both shown to contribute 6% of  $PM_{10}$ .

Chart 2:  $PM_{10}$  Emission Contribution (LAEI,2016)



Road transport is also the highest emission source of  $PM_{2.5}$  within Hackney making up 29%

Source Apportionment of  $PM_{10}$  in Hackney 2016



of emissions. Diesel and petrol cars make up the largest proportion of these transport

emissions with 8% and 6% emissions, respectively. Commercial cooking and construction activities within Hackney are also high emitters of  $PM_{2.5}$ , contributing to 28% and 17% of the total emissions (Chart 3). This shows that  $PM_{2.5}$  has multiple high emitters in comparison to  $NO_2$ , where road transport is the dominant source.

Chart 3:  $PM_{2.5}$  Emission Contribution in Hackney (LAEI, 2016)

## 2.3 Future Air Quality in Hackney

Due to improvements in vehicle emission standards, the uptake of electric vehicles (EV) through schemes such as the Ultra-Low Emission Zone (ULEZ), which the Council lobbied successfully to be extended to the entire borough from October 2021, and an increase of electric heating,  $NO_x$  concentrations within Hackney and across London are expected to decline. Chart 4 shows the LAEI emission predictions for  $NO_x$  in tonnes/year (t/year) in Hackney, there is estimated to be a steady reduction in  $NO_x$  from approximately 1159.4 t/year in 2008 to an estimated 484.5 t/year by the end of 2020 and an estimated 396 tonnes/year in 2030.

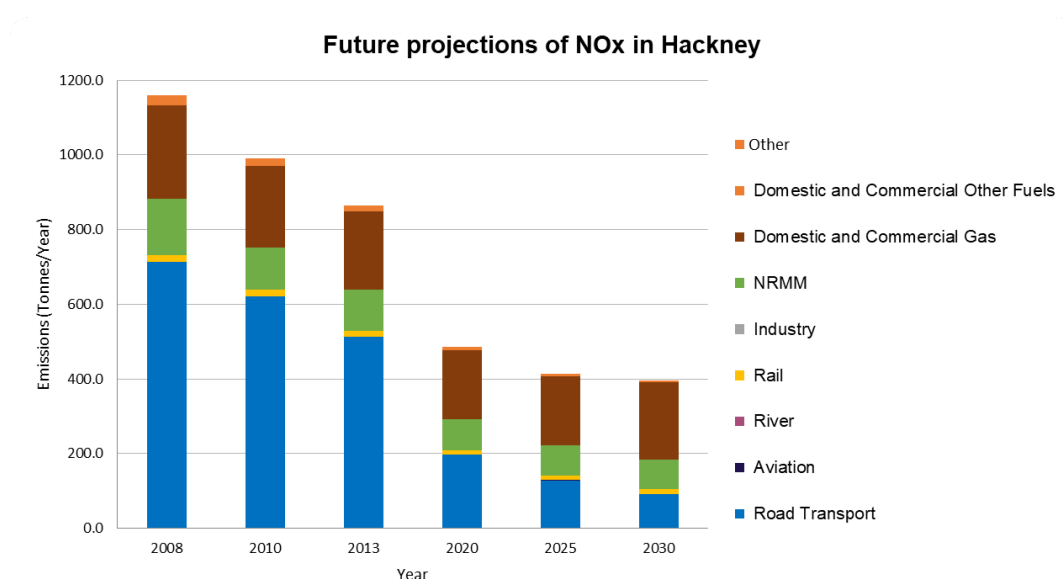
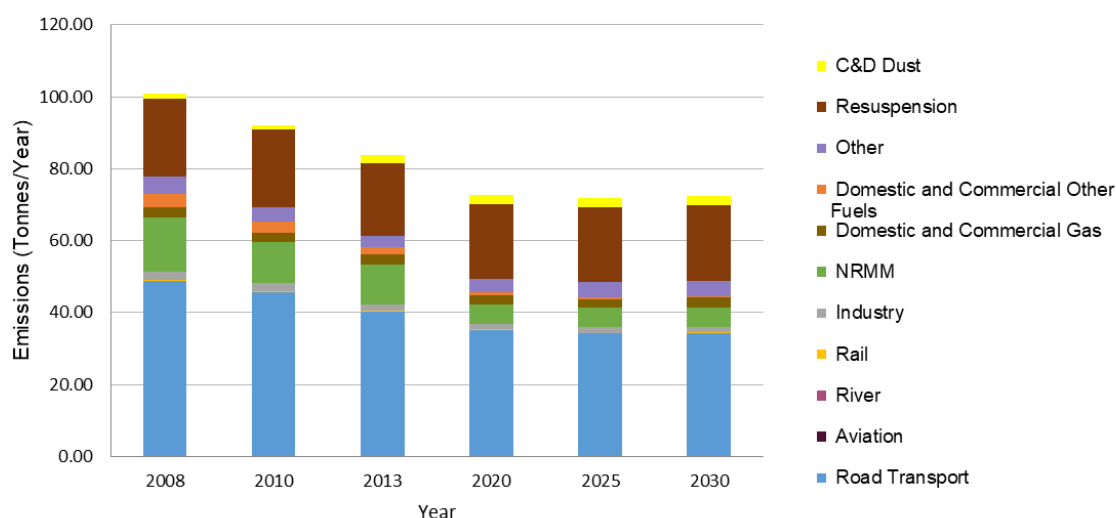


Chart 4: Future projections of  $NO_x$  (LAEI, 2013)

However, particulate matter concentrations ( $PM_{2.5}$  and  $PM_{10}$ ) are not expected to fall as much due to concentrations influenced from long range sources such as biomass emissions from

Continental Europe and emissions from EVs. It should be noted that in Chart 5 and 6 *Industry* refers to the total emissions from Part A and Part B industrial processes combined; *Non-Road Mobile Machinery (NRMM)* refers to the total emissions from construction and industrial off road machines combined, and; *Other* refers to a number of small sources

### Future projections of PM<sub>10</sub> in Hackney



including: agriculture, outdoor fires, garden emissions, forests, waste and waste transfer sites combined.

Chart 5: Future projections of PM<sub>10</sub> (LAEI, 2013)

### Future projections of PM<sub>2.5</sub> in Hackney

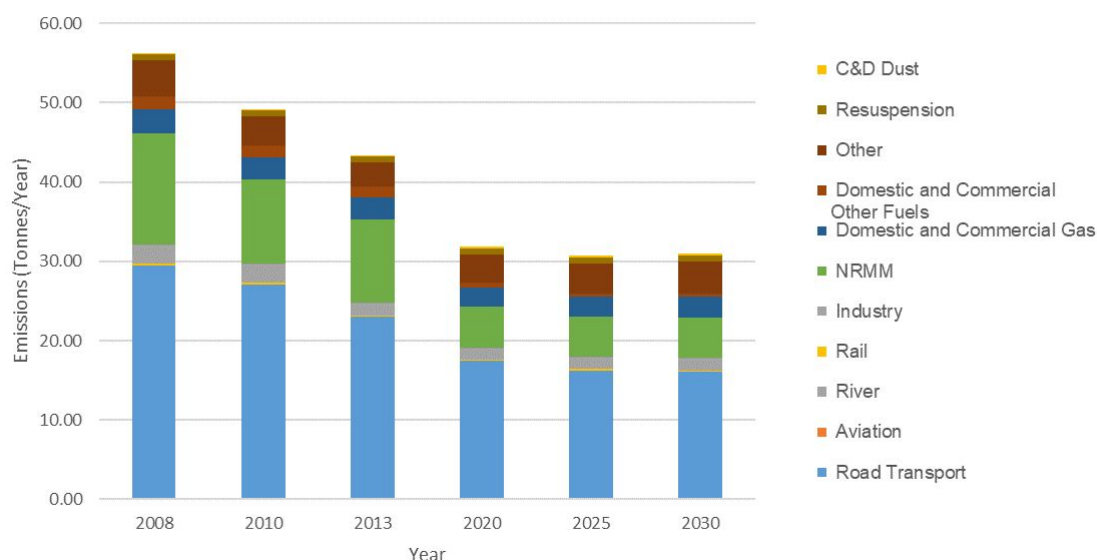


Chart 6: Future projections of PM<sub>2.5</sub> (LAEI, 2013)



PM<sub>10</sub> projected emissions are shown to reduce in chart 5 with approximately 100.1 t/year in 2008, an estimated 72.8 t/year by the end 2020 and an estimated 72.5 t/year in 2030. The reduction in projected PM<sub>2.5</sub> emissions is shown in chart 6 with approximately 56.2 t/year in 2008, an estimated 31.9 t/year by the end of 2020 and an estimated 30 t/year in 2030.

The predicted trajectory of NO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> show reductions in concentrations. NO<sub>2</sub> is predicted to have the largest decline in concentrations due to schemes including the ULEZ. Although these schemes are predicted to reduce particulate matter concentrations to some extent, these projections show the challenges still faced in tackling particulate matter concentrations, which our action plan proposes to address. This highlights the long term challenges on tackling pollutant concentrations, especially particulate matter. This suggests long term proposed national policies are expected to have little impact which is why we need to do more at a local level and lobby the Government to introduce stricter measures on a national level.

### **3.0 Hackney's Air Quality Priorities**

The following sections detail Hackney's Air Quality Action Plan commitments, whilst highlighting some key successes and our headline actions based on our nine themes.

#### **3.1 Monitoring and Other Core Statutory Duties**

##### *Our Commitment*

We will continue to monitor air quality in Hackney which will enable us to propose measures to reduce or mitigate against the impacts of poor air quality in the Borough. We will further ensure that our statutory obligations are met with regards to the requirements as set out in the LLAQM framework.

##### *Why this is important*

All local authorities have responsibilities under Part IV of the 1995 Environment Act, which requires us to review air quality in our constituencies. Where air quality objectives and limit values are not being met, an Air Quality Management Area (AQMA) must be designated. The legally binding limit values are derived from the EU Ambient Air Quality Directive 2008 and have been transposed into legislation as the Air Quality Standard Regulations 2010. We need to monitor air quality so that we can assess whether we're achieving the objectives, and where we're not, implement measures to improve the air quality, thereby creating healthier air in which we all can breathe.

##### *What we have done*

We have one of the most extensive diffusion tube monitoring networks in the country totalling over 200 tubes. Each month these diffusion tubes are changed, allowing us to monitor levels of NO<sub>2</sub> across the Borough. Along with the diffusion tubes our network includes two automatic monitors, one kerbside at Old Street and one urban background currently located in Hackney Marshes. Further to this, there are 5 AQ Mesh Pods installed to support transport related work and 2 Osiris particulate matter monitors.

The data from these monitors has been used to advise on project and policy work as exemplified by the London Fields barbeque ban. The Osiris monitors were used to assess the levels of particulate matter in London Fields and the surrounding locations. When the data showed clear association of high particulate matter levels on days when barbequing was prevalent, we were able to use this to ban barbequing in this area and subsequently protect the health of visitors and local residents.

The results from all of our monitoring are reported back to the GLA and Defra on an annual basis, and published on our website.<sup>15</sup>

#### *We will*

- Adopt WHO guidelines for PM<sub>10</sub> and PM<sub>2.5</sub> with a compliance deadline by 2030;
- Maintain air quality monitoring network (PM and NO<sub>2</sub>), review as required and provide output data in line with TG (16) timescales and guidance;
- Publish a webmap showing monitoring results;
- Undertake dispersion modelling for the Borough;
- Report health-based air quality statistics at a ward level on the Hackney website;
- Facilitate cross borough partnership to review through traffic impacts in Hackney;
- Achieve gold standard in GLAs Cleaner Air Borough (CAB) programme.

### **3.2 Emissions from Development and Buildings**

#### *Our Commitment*

We will ensure that non-transport related emissions are controlled by reducing emissions from our own buildings and housing stock, by controlling emissions from construction sites and by promoting the impact of other sources of emissions and the action that individuals can take to reduce these, improving air quality for all.

#### *Why this is important*

Substantial emissions are released from non-transport related sources in Hackney. This includes developments, construction and demolition, buildings and their heating sources, non-road mobile machinery (NRMM), solid fuel burning and commercial cooking. All these combined contribute to 246 tonnes per annum of NO<sub>x</sub> emissions, 117.3 tonnes per annum of PM<sub>10</sub> emissions and 51 tonnes per annum of PM<sub>2.5</sub><sup>16</sup> resulting in poor air quality, and actions are required to reduce these emissions.

#### *What we have done*

Targeting non-transport emissions is important, and a number of actions have been undertaken in this area.

Evidence shows that one modern wood burning stove can emit the same amount of particulate matter as 18 diesel cars. Furthermore, wood burning accounts for up to 31% of the urban derived PM<sub>2.5</sub> in London.<sup>17</sup> To combat this, the ZEN launched a behaviour change

<sup>15</sup> <https://hackney.gov.uk/air-what-we-are-doing>

<sup>16</sup> Greater London Authority and TFL Air Quality, LAEI 2016 – Borough Air Quality Data for LLAQM [Online]. Available: <https://data.london.gov.uk/dataset/laei-2016---borough-air-quality-data-for-llaqm> [Accessed June 2020]

<sup>17</sup> Department for Environment, Food and Rural Affairs (2019) *Clean Air Strategy 2019*.

campaign raising awareness of the impacts of domestic and commercial solid fuel burning in Hackney. Householders and businesses were informed of the contribution solid fuel burning has to levels of particulate air pollution and encouraged actions as to how households and businesses can eliminate or reduce their emissions from solid fuel burning.

We are a partner borough of the Mayor of London's NRMM Project and all use of NRMM in Hackney must meet emission standards set by this project. The project is monitored through regular site inspections and if standards are not met, then work on the site is halted. Working to these emission standards minimises particulate emissions from NRMM on construction sites.

We work with developers through the planning process to ensure that construction work and new developments do not add to poor air quality in the Borough and that the health of future occupiers is protected. This includes, but isn't limited to; certain developments requiring an air quality assessment before planning permission is granted; for residential developments measures must be implemented to protect residents from the impacts of air pollution, and; all new developments installing boilers have to comply with the GLA emissions limits or they must install Ultra-Low NOx boilers.

In addition, to tackle air quality and promote walking and cycling, Hackney's Local Plan 33<sup>18</sup> states that all new developments must as a minimum not exceed Air Quality Neutral standards and where possible meet Air Quality Positive standards, and must not contribute to a worsening of air quality at the construction and operation stage over the lifetime of a development. Moreover, all new major developments must be car free, with parking limited to disabled spaces or essential servicing needs.

We have controlled the release of emissions from our housing stock by upgrading and replacing on average 1,500 heating facilities each year and we'll continue to insulate our buildings through the recent launch of Hackney Light and Power.<sup>19</sup> We have established a system to monitor and control emissions released from prescribed processes, such as petrol stations and dry cleaners. For every commercial activity in the Borough that has potential to release emissions to the air, we ensure they adhere to the Environmental Permitting (England and Wales) Regulations 2016<sup>20</sup>.

#### *We will*

- Minimise emissions from construction through the development of Hackney's own Supplementary Planning Document (SPD) and code of construction for air quality which goes above and beyond the GLA Supplementary Planning Guidance (SPG);
- Minimise emissions from construction through investigating and piloting innovative solutions to reduce construction based emissions;
- Ensure enforcement of Non-Road Mobile Machinery (NRMM) air quality policies;
- Promote and enforce the borough's Smoke Control Zone (SCZ);
- Promote and deliver energy efficiency and energy supply retrofitting projects in workplaces and homes.

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<sup>18</sup> <https://hackney.gov.uk/lp33>

<sup>19</sup> <https://hackney.gov.uk/hackney-light-and-power>

<sup>20</sup> <https://hackney.gov.uk/environmental-permits>

### 3.3 Public Health and Awareness Raising

#### *Our commitment*

We will undertake surveys so we can assess what level of the public is aware of and understands the health impacts of air pollution, and we will run public health campaigns showing the consequences of motor traffic, air pollution and lack of active health leading to poor health and obesity.

#### *Why this is important*

Given the strong association between air pollution, Covid-19 and cardiovascular and respiratory illness, the quality of Hackney's response to improving air quality is vital for public health. We have a responsibility to ensure the health and wellbeing of our residents and visitors and the unequivocal link between air pollution and the degradation of public health poses a challenge to this.

As such we will bolster efforts to increase people's knowledge about the air pollution issue, encourage people to alter habits to expose themselves to less pollution or cause less pollution and build an appreciation of the importance and benefits of community-wide solutions to improving air quality. This is so we may increase resident and business receptivity to changes that we know are necessary to cut pollution.

#### *What we have done*

Our previous action plan highlighted the need to address several key areas relating to public health. Included within this was working with our schools to raise awareness of air pollution and reduce exposure at and around schools (see section 2.8).

We have undertaken cycling campaigns as well as ensuring due consideration is given to air quality in Hackney's Public Health policy documents. This includes updates to Hackney's Joint Strategic Needs Assessment and Health and Wellbeing Profile, along with delivering information to the public and the most vulnerable communities. This has been achieved through the promotion of airTEXT, which has been active since the publication of the Council's previous plan and can be easily accessed on Hackney's website<sup>21</sup>.

Moreover, Public Health and Streetscene have supported research on walking in Hackney and implemented a joint social marketing campaign in 2016-17 to increase walking and reduce car driving, especially among less physically active residents. The campaign reached over 200,000 mobile devices, 405 households in person, and participants recorded over 15,000 hours of walking.

#### *We will*

- Run air quality campaigns to raise awareness and encourage behaviour change;
- Develop a Joint Strategic Needs Assessment (JSNA) that will focus on air quality and public health;
- Develop and promote the existing high air pollution alert system;
- Continue to collaborate in the cross-borough project encouraging canal boat owners to switch from wood burning stoves and diesel engines to electric or more sustainable fuels.

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<sup>21</sup> [https://www.hackneyicare.org.uk/kb5/hackney/asch/service\\_page?id=mSRc2SfPrZU](https://www.hackneyicare.org.uk/kb5/hackney/asch/service_page?id=mSRc2SfPrZU)

### 3.4 Delivery Servicing and Freight

#### *Our commitment*

We will ensure that emissions from delivery services and freight transport is controlled and reduced in Hackney. This includes a reduction of emissions from our own fleet, plus a reduction in emissions from large good vehicles (LGVs) and heavy goods vehicles (HGVs) used for construction and delivery of goods and services.

#### *Why this is important*

Tackling emissions from freight is a key part of the Mayor's Transport Strategy and must be addressed; LAEI data in Hackney shows that LGVs and HGVs account for 21.6% of NOx emissions, 12.3% of PM<sub>10</sub> and 11.4% of PM<sub>2.5</sub> emissions<sup>22</sup>. Moreover, through reducing and consolidating the number of delivery and servicing goods vehicles congestion will be lowered and our streets will be safer.

#### *What we have done*

In an effort to control emissions from freight movements in the Borough we have introduced elements of the Construction Logistics and Community Safety Standard (CLOCS) for the Council and developers. This is controlled through the planning process and provides ways in which vehicles trips in vulnerable locations can be minimised, for example ensuring that a school is not impacted by a construction traffic route.

To minimise emissions from our own fleet, we have registered and been accredited the Bronze Standard with the Fleet Operator Recognition Scheme (FORS) for our waste services.

Further to this, 'reduced transport' now forms part of the new Sustainable Procurement Policy that was adopted in late 2018. The policy promotes the purchase of goods which have not been transported over long distances and where possible will work with local suppliers to reduce overall emissions within the supply chain. In addition, the policy outlines that when procuring for our own fleet we will choose products that cause lower levels of pollution, either through their manufacture, usage or disposal.

To further reduce the impact from freight deliveries we have worked on the reduction of and retiming of deliveries of goods and services in areas of Shoreditch and the Narrow Way in Hackney Central, with deliveries banned in this area between 10am and 6pm.

#### *We will*

- Deliver the Freight Action Plan as part of the Hackney Transport Strategy (2015-2025);
- Adopt the Construction Logistics and Community Safety Standard (CLOCS) for the council and developers;
- Develop area-wide Construction and Logistics Plan and review of local CLPs;
- Work with consumers and delivery companies to help reduce local emissions through the Zero Emissions Network.

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<sup>22</sup> Greater London Authority and TFL Air Quality, *LAEI 2016 – Borough Air Quality Data for LLAQM* [Online]. Available: <https://data.london.gov.uk/dataset/laei-2016---borough-air-quality-data-for-llaqm> [Accessed June 2020]

### 3.5 Borough Fleet

#### *Our commitment*

We will continue adding to the number of Ultra Low Emission and electric vehicles (EVs) in our fleet to reduce air pollution and ensure we have one, if not the most, environmentally friendly fleets in the country.

#### *Why this is important*

By addressing the composition of our fleet, the Council is able to reduce pollution directly at source. Our fleet now includes a range of EVs and cargo bikes and is one of the greenest in London. To ensure that we continue to lead by example, further opportunities have been identified to progress in this area.

#### *What we have done*

In 2018 we won the 'What Van? Green Fleet of the Year' award due to the sustainable development of our fleet management programme, with our fleet now contributing to an estimated yearly reduction in emission of 0.5 tonnes of NO<sub>x</sub> and 40kg of particulate matter.

This has been achieved through a programme of procuring 59 EVs and installation of 47 electric charging points across 13 Borough depots. Moreover, the majority of our non-electric fleet vehicles are Euro 6 emissions compliant with stop start technology equipped in LCVs and auto-shutdown fitted in HGVs to prevent idling<sup>23</sup>.

We have used hydrotreated vegetable oil (HVO) as an alternative fuel source with a large majority of the fleet running on HVO. To quantify emissions reduction, we worked in collaboration with TFL and developed test cycles for larger commercial Council vehicles using 100% HVO and emissions tested HVO fuel demonstrating that it emits 30%-60% less NO<sub>x</sub> than a vehicle run on standard diesel.

To further encourage more modes of sustainable transport for staff, we have implemented a Staff Travel Hierarchy to promote cycling and walking as a means of business travel. To facilitate this, we have introduced a pool bike fleet, including a cargo bike, to add to the Fleet's 30 bicycles. With this shift in travel mode we are further reducing emissions from Borough vehicles and leading from the front.

#### *We will*

- Increase uptake of electric vehicles and ensure electric vehicle charging infrastructure is commensurate with growth in the Borough's Fleet;
- Re-establish use of Hydrotreated Vegetable Oil (HVO) as an alternative fuel source through establishing a new bulk contract;
- Increase the existing number of bicycles, electric bikes and cargo bikes in the Council fleet to ensure there are enough sustainable forms of transport for staff to use;
- Collaboration with other public sectors to assess emissions in Hackney and identify funding for zero emission vehicle trials.

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<sup>23</sup> <https://hackney.gov.uk/fleet-project>

### 3.6 Localised Solutions

#### *Commitment*

Improving local air quality in Hackney is a priority, and we will continue to implement local solutions so that our residents and those who visit and work in Hackney have cleaner air to breathe.

#### *Why this is important*

One of the fundamental methods of mitigating poor air quality is by altering our local environment. These solutions seek to improve our surroundings for people and the environment through a combination of measures such as traffic calming, parklets, biodiversity projects and green infrastructure installations.

#### *What we have done*

Hackney's Low Emissions Neighbourhood (LEN) has been introduced through collaborative work with the ZEN programme to combat air pollution in the City Fringe.<sup>24</sup> LEN has introduced schemes that prioritise walking, cycling and the use of EVs. The scheme has been developed in partnership with neighbouring Boroughs Islington and Tower Hamlets and funded by the Mayor of London. Further initiatives within this programme include:

- **Public Realm Improvements:** Alterations have been made to Bowling Green Walk, Rivington Street/Charlotte Road and Garden Walk, all in Shoreditch. These alterations reduce pollution through reduction of cars and increase cycling and walking permeability through physical alterations such as removal of railings and provision of additional lighting.
- **Cycle Parking at Leonard Circus:** The addition of 10 new bike parking spaces on the East side of Leonard Circus have been installed.
- **Shoreditch Parklet:** Removal of car parking spaces and the creation of a new parklet area in Shoreditch that provides cycle parking spaces, planted vegetation and space for relaxation.
- **Vegetation and Planting:** Planted trees and added plant boxes to Rivington Street, Charlotte Road and Pitfield Street.
- **Ultra-Low Emissions Streets:** Pioneered the first ever ultra-low emissions streets that remove all but the greenest vehicles from Hackney's streets. Vehicles travelling through five streets during peak hours in Shoreditch now have to either be zero tail pipe emissions such as NO<sub>x</sub> or emit 0-75g or less of CO<sub>2</sub> per km driven.
- **Gateway Plan:** Introduced electronic gateways that signify when you are entering an area of lower pollution. The gateways consist of greening, lighting and wayfinding and are spread across the LEN area at strategic points.
- **Sustainable Transport:** Promoted alternative sustainable transport solutions such as offering businesses trials for cargo bikes, electric vans, electric cars and electric scooters plus free bike servicing.

To support policies such as the Mayor of London's Ultra Low Emissions Delivery Plan and the Office for Low Emission Vehicles (OLEV) Go Ultra Low scheme, we have installed 116 publicly accessible electric vehicle charging points at 91 locations across Hackney. We have

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<sup>24</sup> <https://zeroemissionsnetwork.com/len>

also been the first borough to install publicly accessible on-street rapid charging points, including rapid charging points for taxis.

Over 120 traffic filters have been introduced in Hackney to reduce the volume of traffic rat-running through residential streets. This forms a key part of Hackney's Transport Strategy 2015-25 and eliminates through traffic thereby improving air quality whilst also prioritising cycling and walking. Where short-term traffic displacement is encountered, we will put mitigation measures in place so that nobody in Hackney is detrimentally impacted by the Borough's decision to focus on the longer-term goal of overall traffic and subsequent air pollution reduction.

Improvements have been made to numerous streets throughout the Borough to promote the uptake of active methods of travel, such as cycling and walking, while discouraging vehicular traffic. There have been changes to pavement spaces; planting significantly more trees and traffic calming measures have been put into place to slow traffic with the majority of the borough now at a 20mph limit. Moreover, multiple changes to cycle routes such as the cycle superhighway have enabled safe passage through the Borough, which has ensured Hackney remains London's capital of cycling.

Further to this, parking spaces in Hackney have been transformed into community parklets and spaces for cycle hangers. These initiatives have reduced the dominance of cars whilst also cutting air pollution and making our communities a more pleasant place in which to live.

#### *We will*

- Assess the air quality benefits of the actions in Rebuilding a Greener Hackney: Emergency Transport Plan, the Transport Strategy 2015 - 2025 and the Local Implementation Plan 2019 – 2022;
- Deliver Britain's first 21st Century Street in Colvestone Crescent, Dalston;
- Hackney Parks Team to implement initiatives to improve air quality.

### **3.7 Cleaner Transport**

#### *Commitment*

To create a borough that provides an environment that reduces reliance on cars and stimulates the shift to more sustainable modes of transport.

#### *Why this is important*

Heavy dependency on the use of cars, in particular petrol and diesel, not only causes traffic congestion, but also increases emissions and physical inactivity. Enabling cleaner transport and ensuring that sustainable transport initiatives are introduced will stimulate the use of more environmentally friendly modes of transport, thus leading to reduced emissions throughout the Borough. To achieve this, modal shifts will need to take place so that more people walk and cycle and there needs to be a significant shift in mentality surrounding the use of diesel and petrol vehicles.

#### *What we have done*



Promoting walking and cycling is key to reducing emissions. Various approaches have been taken to enhance walking and cycling levels and to reduce and limit the use of cars, in particular petrol and diesel vehicles.

To facilitate this change, we have worked in collaboration with the Zero Emissions Network (ZEN), which has thus far delivered significant air pollution reducing initiatives many of which have encouraged businesses in the City Fringe to switch to low or zero emissions vehicles.<sup>25</sup> The network now has approximately 1,430 business members delivering over 870 measures to reduce pollution and has recruited over 900 residents delivering 470 measures contributing to pollution reduction. Initiatives include EV trials and grants for cargo bikes, and a range of behaviour change and awareness raising campaigns.

We have championed World Car Free Day for several years and delivered our largest event in 2019 on Church Street, Stoke Newington.<sup>26</sup> This event gives local residents and businesses a snapshot of what their community would be like if vehicles were not permitted to travel in their streets, by transforming busy polluting roads into a safe and clean space for all to enjoy.

We have controlled and reduced emissions through Parking by implementing emissions-based parking across the majority of Hackney. The scheme is now also active on estates and adds a surcharge for diesel vehicles and aims to discourage residents from buying the most polluting vehicles.

We have established a comprehensive anti-idling campaign to tackle engine idling within the Borough, through a behaviour change campaign. This highlights the harmful impact of idling engines, as well as the economic benefits of turning off engines when vehicles are at a standstill. For those not complying with turning engines off, enforcement action will be taken in Hackney's 'town centre' areas.

To reduce the need for privately owned vehicles, we have established car clubs that use full EVs and ULEVs to provide a safer, cleaner and greener way of using a car when needed.<sup>27</sup> There are now over 1,500 vehicles that can be hired, with every resident being in proximity to a designated bay.

Hackney has already been declared London's Borough of Cycling through having the highest rates of cycling in London. Hackney's Transport Strategies and supporting Cycle Plan delivers a platform for growth in this area, delineating how there can be a modal shift in transport from pollution creating vehicles to cycling. Highlights of this include:

- Free cycle training to residents, workers and students in the Borough plus regular servicing days to maintain bikes;
- Bike sharing schemes including the Santander operated scheme where bikes are docked in the south of the Borough. Dockless biking is now available with 70 new dockless bike bays throughout Hackney;
- Cargo bikes for businesses through the ZEN programme;

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<sup>25</sup> <https://zeroemissionsnetwork.com/>

<sup>26</sup> <https://hackney.gov.uk/car-free-day>

<sup>27</sup> <https://hackney.gov.uk/carclub>

- Cycle Superhighway 1 runs directly through the Borough and allows for direct access to Liverpool Street Station;
- Over 2,500 publicly accessible on-street cycle parking spaces, including secure lockers and hangers;
- Regular cycle awareness days including the world record breaking Bike Around the Borough which promotes cycling to and for students.

Hackney is London's leading active travel borough with the highest walking levels in London; 44.2% of people choose to travel this way. To ensure this level is increased there have been numerous public realm and placemaking schemes aimed at improving walking conditions through the Borough, including Hackney Central Narrow Way.

#### *We will*

- Provide new cycling and walking infrastructure and assess air quality impacts of new infrastructure;
- Increase on-street and off-street cycle parking;
- Roll out Hackney's anti-idling campaign to discourage vehicle users idling their engines;
- Regular temporary Car Free Days;
- Deliver updated Parking and Enforcement Plan;
- Assess potential impact of installing Ultra-Low Emission Vehicle (ULEV) infrastructure (electric vehicle charging points, rapid electric vehicle charging points);
- Develop and assess potential impact of Hackney's Motorcycle Action Plan.

### **3.8 Schools and Communities**

#### *Commitment*

We will go above and beyond to ensure that susceptible groups i.e. those in schools, care homes and medical facilities, will not suffer as a result of poor air quality.

#### *Why this is important*

Targeting the most vulnerable receptors in Hackney is required in order to ensure those most at risk are given the required attention. The most susceptible groups are identified as those who are also disproportionately affected by poor air quality, such as the elderly, pregnant women and those with pre-existing health conditions. We also believe there should be a heavy focus on schools so that children's lung and brain growth aren't hindered by the impact of air pollution whilst at school.

#### *What we have done*

In order to design strategies that protect sensitive groups, we need to understand what the air quality concentrations are at these locations, and we have re-evaluated our air quality monitoring network to primarily focus on the area's most in need of monitoring, including schools and also care homes and medical centres targeted. This enables us to identify if mitigation measures need to be implemented.

To reduce exposure to air pollution and help children actively walk or cycle to school, the Council introduced the School Streets programme in 2018 as part of the Local Implementation Plan 2019-2022. So far this has transformed 40 schools into safe and

pollution free zones where only pedestrians or cyclists can travel at opening and closing times. Further, Hackney published a toolkit, and then distributed it to every council in the country, so they too can replicate the success of this programme.<sup>28</sup>

Installing green screens at schools has been a method through which the exposure to harmful pollutants can be reduced. So far 3 green screens have been installed that lead to a reduction in exposure through blocking and absorbing harmful pollutants. Further to this, a Green Screen guide has been produced to assist with the installation of green screens at other schools.

134 Hackney schools participate in TfL's Sustainable Travel, Active, Responsible and Safe (STARS) programme. The initiative rewards schools that encourage students, parents and teachers to adopt more environmentally friendly ways of travelling to school. This includes cycling, walking and the use of public transport, all methods that contribute towards lower pollution concentrations.

In conjunction with the GLA we completed a desktop audit of all primary schools in the Borough to assess if they exceeded any of the national air quality objectives. Resulting from this, two schools received funding to implement a number of measures to improve active travel and to reduce exposure to emissions.

Reducing concentration and exposure at medical centres and care homes across the Borough is vitally important. To address this, the Council embarked on the "Low Emissions Neighbourhood for Business" project in partnership with Homerton Hospital. Funding has been secured through the GLA with the project aiming to encourage Homerton Hospital staff to use more sustainable transport modes for commuter and business trips as well as supporting patient visitors to access the site through more sustainable modes of travel.

*We will*

- Reduce air pollution near schools and protect children through the delivery of the School Streets Programme;
- Reduce air pollution at schools and protect children by delivering more green screens;
- Reduce air pollution near schools and protect children through increasing uptake of the STARS programme;
- Facilitate and lead schools auditing and improvement programme for all schools in Hackney;
- Review pollutant concentrations at all healthcare centres, hospitals, care homes and schools and where relevant implement an audit and improvement scheme.

### **3.9 Lobbying**

*Our commitment*

We will continue our successful track record of working with and lobbying regional and central government on policies and issues beyond the Council's control.

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<sup>28</sup> <https://hackney.gov.uk/school-streets>

### *Why this is important*

This plan has targeted actions we have and will undertake at a local level to ensure that air quality improves for people who live, work and visit Hackney. However, whilst a number of levers are in our control such as reducing emission from our fleet and parking enforcement, there are a large number of air quality policy areas outside our influence. These include ensuring Euro vehicle standards are adopted post-Brexit and national scrappage schemes. We know that air pollution knows no boundaries, and we will continue lobbying for change to ensure cleaner air for all.

Lobbying is vital because we will only achieve our goals of WHO Air Quality Guidelines with a cross-societal effort incorporating businesses, the public and other public sector institutions, alongside central and local government.

### *What we have done*

Hackney has a history of successfully lobbying regional and national Government, including being a lead Borough in lobbying Transport for London (TfL) to extend the Ultra-Low Emission Zone from central London to the north and south circular roads. This will be introduced in October 2021 and all vehicles within this boundary, including all Hackney, will be subject to the ULEZ standards.<sup>29</sup> We have also responded to Government consultations calling for an end to airport expansions.

### *We will*

- Lobby Central Government to control and reduce emissions that are out of Hackney's authority;
- Lobby TfL to expand Ultra Low Emission Zone (ULEZ) post 2021 and introduce more fully electric bus routes through Hackney;
- Work with others to reduce pollution that is out of our control.

## **4.0 Development and Implementation of Hackney's AQAP**

### **4.1 Consultation and Stakeholder Engagement**

Over the years we have worked with other local authorities, agencies, businesses and the local community to improve local air quality, and this has been the driving force in developing and updating the action plan.

Schedule 11 of the Environment Act 1995 requires that local authorities consult with a number of specific organisations and groups when preparing their AQAP. For Hackney relevant consultees include the Secretary of State, the Environment Agency, the Highways Authority, the Mayor of London, neighbouring local authorities, other public authorities and bodies representing local business interests and other organisations. Given the strategic importance of the AQAP, Hackney will further consult with the wider public and business community. Table 3 details those we will consult.

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<sup>29</sup> <https://tfl.gov.uk/modes/driving/ultra-low-emission-zone/ulez-where-and-when>

Yes/No	Consultee
	The Environment Agency
	Transport for London and the Mayor of London (who will provide a joint response)
	All neighbouring local authorities (Islington, Newham, Tower Hamlets, Waltham Forest, Haringey and City of London)
	Other public authorities as appropriate (The Environment Agency, Homerton Hospital)
	Bodies representing local business interests and other organisations as appropriate
	Members of the public

Table 3: Consultation groups

## 4.2 Steering Group

The Steering Group has been integral to the development of the AQAP and is made up of officers from internal departments including Public Health, Environmental Services, Streetscene, Parking, Fleet Management, Parks Service, Hackney Homes, Hackney Energy, Planning, Communications and Sustainable Procurement. To assist in developing the plan there have been stakeholder engagement sessions held, where all members of the Steering Group were invited to a workshop to discuss and contribute ideas on how to progress with the plan.

Thereafter, there have been numerous individual meetings with the Steering Group members to refine and develop specific actions on how each department can contribute to controlling and reducing air pollution within the Borough. This collaborative work has been essential to the development of the plan and forms the basis of how as a Council we will tackle this issue collectively. Once the plan had been drafted each member of the Steering Group was then given the opportunity to assess the work and ensure the output for their area was realistic and achievable.

## 5.0 Action Plan Table

The following pages detail Hackney's Air Quality Action Plan, with actions grouped into our nine themes:

1. Monitoring and other core statutory duties
2. Emissions from development and buildings
3. Public health and awareness raising
4. Delivery servicing and freight
5. Borough fleet
6. Localised solutions

7. Cleaner transport
8. Schools and communities
9. Lobbying

## 5.1 Air Quality Action Plan

For each policy objective an indication of cost is given.

	Description
Indication of cost	No additional cost – may be undertaken with existing staff/financial resources
	Low cost (Officer time) – less than £10,000 to deliver
	Medium cost – between £10,000 and £50,000 to deliver
	High cost – above £50,000

Table 4: Indication of cost key

<b>[Separate Document]</b>
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Table 5: Air quality action plan

## Responsibilities & Commitment

This AQAP was prepared by the Land Water Air team of Hackney Council with the support of the teams on the Steering Group. These include: Public Health, Environmental Services, Street Scene, Parking, Fleet Management, Parks Service, Hackney Homes, Planning, Communications and Sustainable Procurement.

Details of high-level Council members who have approved the AQAP [to be inserted when the AQAP goes for formal adoption].

This AQAP will be subject to an annual review, with appraisal of progress and reporting to the Sustainability Board. Progress each year will also be reported in the Annual Status Reports produced by Hackney Council, as part of our statutory London Local Air Quality Management duties.

If you have any comments relating to this AQAP please send them to:

Address: Land Water Air Team, Hackney Service Centre, 1 Hillman Street, London, E8 1DY  
 Telephone: 0208 356 3000  
 Email: [landwaterair@hackney.gov.uk](mailto:landwaterair@hackney.gov.uk)

## Appendix A: Response to Consultation [To be completed following consultation exercise]

## Appendix B: Air Quality in London

The first legislation in the UK covering air quality was The Clean Air Act 1956, created as a response to 'The Great Smog' that was engulfing London at the time. Local government was not given responsibility for managing local air quality until the 1990s when the 1995 Environment Act was passed. A requirement of the Act was for the Government to create a UK Air Quality Strategy, which was published in 1997. We are now on the third iteration of this strategy with the latest Clean Air Strategy published in 2019. This updated strategy shows the scale of the issue and that there are many factors in tackling air quality that are only possible at national and even international level.

Despite improvements in air quality that have taken place in past decades, there are two key pollutants that remain a particular concern: NO<sub>2</sub>, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). The GLA commissioned a report that estimated over 9,000 Londoners died prematurely from long-term exposure to air pollution in 2010.<sup>30</sup> Air pollution limits, as set out in the 2008 Ambient Air Quality Directive are not being met in many areas, and are worse in inner London, in particular where there are concentrations of traffic and areas of high building densities.

### London NO<sub>2</sub>

Across London's inner boroughs, the NO<sub>2</sub> annual mean NAQO is consistently breached. The highest concentrations are found at the kerbsides of busy roads which experience regular high volumes of traffic such as the A10. In outer London borough areas, kerbside locations also show consistent breaching of the annual mean NO<sub>2</sub> NAQO. However, away from major roads, at urban background locations such as some residential areas and parks, concentrations tend to be within the NO<sub>2</sub> annual mean NAQO. Figure 7 below shows the change in the NO<sub>2</sub> annual mean concentrations across London using modelled data based upon 2016 air quality monitoring data.

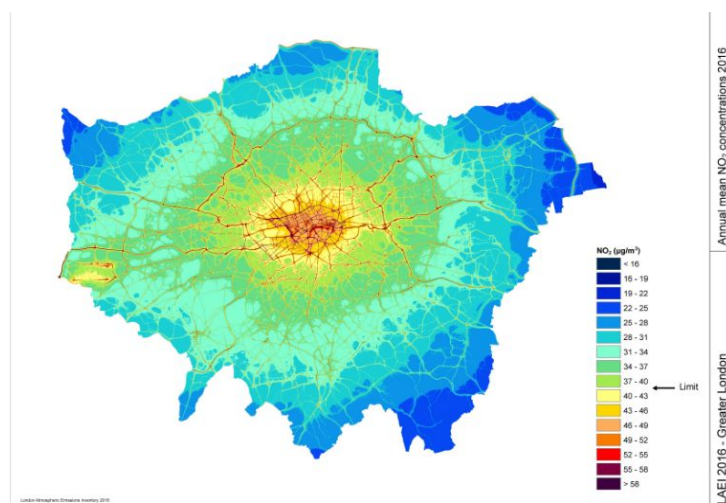


Figure 7: NO<sub>2</sub> annual mean modelled concentrations (LAEI, 2016)

### London PM<sub>10</sub>

Figure 8 shows the PM<sub>10</sub> annual mean concentrations throughout London using modelled data based upon 2016 air quality monitoring data. Across both central and outer London kerbside locations along certain busy roads, such as the A12, there is a breach of the PM<sub>10</sub>

<sup>30</sup><https://www.kcl.ac.uk/lsm/research/divisions/aes/research/ERG/research-projects/HIAinLondonKingsReport14072015final.pdf>

annual mean NAQO. Urban background locations across London meet the  $PM_{10}$  annual mean NAQO.

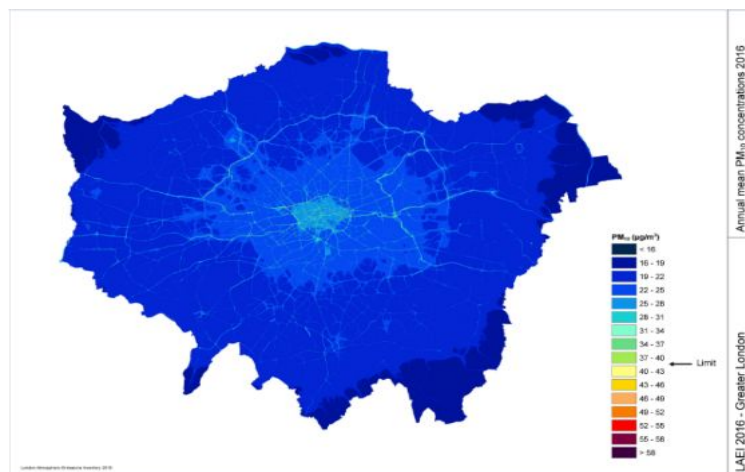


Figure 8: Annual mean concentrations  $PM_{10}$  (LAEI, 2016)

### London $PM_{2.5}$

The  $PM_{2.5}$  annual mean NAQO is consistently met across London as presented in Figure 9 which shows modelled  $PM_{2.5}$  annual mean concentrations.

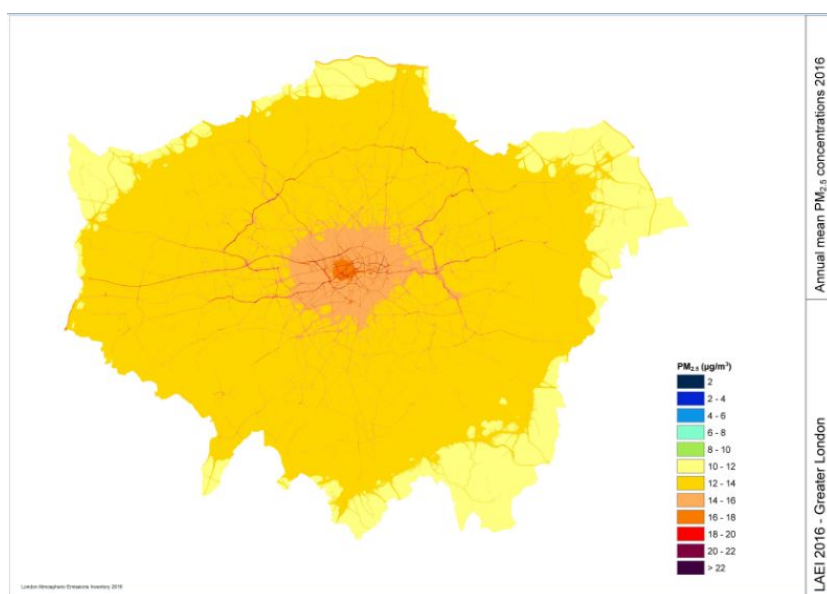


Figure 9: Annual mean  $PM_{2.5}$  concentrations (LAEI, 2016)