

LONDON BOROUGH OF EALING AIR QUALITY ACTION PLAN 2022-2027 - DRAFT

FOREWORD BY COUNCILLOR DEIRDRE COSTIGAN, DEPUTY LEADER OF EALING COUNCIL AND CABINET MEMBER FOR CLIMATE ACTION

Every Ealing resident deserves to breathe clean air and live a long and healthy life unaffected by air pollution.

As a council, we have declared a climate emergency in order to recognise the urgency and scale of the negative impacts of climate change on our residents.

We now know that the cost to our health of breathing dirty air is higher than we imagined. It is shocking that in Ealing, every year 160 people die prematurely as a result of air pollution.

Air pollution disproportionately affects children, older people and those with underlying health conditions. But we also see a worrying correlation between poor quality air and those places in our borough with the highest levels of economic and social deprivation. So the climate emergency is a real and pressing issue not only for the future health of our planet, but also for the wellbeing of our residents.

It will come as no surprise then that improving the quality of the air in our borough is one of our key priorities. The creation of this new Air Quality Action Plan is essential in ensuring that we can deliver on this priority and it will play an absolutely vital role in achieving our climate action goals.

Contained in this Action Plan are the steps we will take to monitor and tackle air pollution and maintain good levels of clean air for all our residents to breathe.

I appreciate that bold policy action is not always universally popular, and that change may feel too quick for some, but we are making these changes with residents and everything in this Action Plan is based on consultation with and feedback from local people. As an open, transparent and inclusive council we will continue to work with and listen to residents about the changes they want to see for their towns and neighbourhoods.

This work is just part of our wider agenda on climate action, and we will implement it alongside improvements to our streets and pavements to encourage walking, cycling and scooting, the rollout of 50 school streets, and being one of the top three boroughs for recycling in London.



Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our duty to manage local air quality, in accordance with the guidance issued by the Mayor under London Local Air Quality Management. It outlines the actions we will take to improve air quality in the London Borough of Ealing between 2022 and 2027.

This Action Plan replaces the previous action plan which was published in 2017 outlining measures to be implemented in subsequent years. Highlights of successful projects delivered during the last Action Plan period include:

- Implementation of 220 Electric Vehicle charging points across the Borough;
- Successful implementation of a Borough-wide 20 mph speed limit in December 2021;
- Completion of the 100% emissions-based parking scheme: Low emission vehicles are offered a discount in pay & display and car parking spaces. There is a scale categorising each vehicle into one of 4 carbon dioxide (CO₂) bands, with an additional surcharge added to diesel vehicles which are not Euro 6;
- Delivered 21 School Streets at March 2023, making it easier for pedestrians and cyclists to use the road space at school opening and closing times. School Streets help to achieve a safer, more pleasant environment for everyone using the streets whilst maintaining access for residents and businesses within the designated zone;
- Delivery of the Acton-Chiswick cycleway, Acton Town Centre and the Vale, Ealing Common, Hanwell Bridge and Greenford Road permanent cycle schemes under the London Streetspace Programme;
- Supporting the resident-led play streets initiative in setting up 25 streets in the borough.

Air pollution is associated with a number of adverse health impacts and it is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{1,2}.

The annual health costs to society of the impacts of air pollution in the UK is estimated to be roughly £15 billion³. Ealing Council is committed to reducing the exposure of people in Ealing to poor air quality in order to improve health.

Recent research has determined that in 2019 between 147 and 165 premature deaths in Ealing were attributable to the combined effects of NO₂ and PM₁₀⁴. According to Government's Clean Air Strategy 2019⁵,

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010.

<https://www.ncbi.nlm.nih.gov/pubmed/16234422>

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006. https://uk-air.defra.gov.uk/assets/documents/reports/cat09/0701110944_AQinequalitiesFNL_AEAT_0506.pdf

³ Defra. Air Pollution: Action in a Changing Climate, March 2010

⁴ Environmental Research Group – Imperial College London, 2020, [London health burden of current pollution and future health benefits of mayoral air quality policies](#)

⁵ Clean Air Strategy 2019, [Clean Air Strategy 2019 \(publishing.service.gov.uk\)](#)

evidence suggests that *“when all diseases are included, air pollution is expected to cause 2.4 million new cases of disease in England between now and 2035. PM_{2.5} alone could be responsible for around 350,000 cases of coronary heart disease and 44,000 cases of lung cancer in England”*.

We have developed actions that can be considered under seven broad topics:

- **Monitoring and other core statutory duties:** maintaining monitoring networks is absolutely critical for understanding where pollution is most acute, and what measures are effective to reduce pollution. There are also a number of other very important statutory duties undertaken by boroughs, which form the basis of action to improve pollution;
- **Emissions from developments and buildings:** emissions from buildings account for about 15% of emissions of nitrogen oxides (NO_x) across London⁶ so are important in affecting NO₂ concentrations;
- **Public health and awareness raising:** increasing awareness can drive behavioural change to lower emissions as well as to reduce exposure to air pollution;
- **Delivery servicing and freight:** vehicles delivering goods and services are usually light and heavy duty diesel-fuelled vehicles with high primary NO₂ emissions;
- **Borough fleet actions:** our fleet includes light and heavy duty diesel-fuelled vehicles such as mini buses and refuse collection vehicles with high primary NO₂ emissions. Tackling our own fleet means we will be leading by example;
- **Localised solutions:** these seek to improve the environment of neighbourhoods through a combination of measures; and
- **Cleaner transport:** road transport is the main source of air pollution in London, accounting for 62% of the emissions of NO_x across London⁶. We need to incentivise a change to walking, cycling, public transport and ultra-low emission vehicles including electric vehicles as far as possible.

Our priorities are:

- Reduce road traffic emissions
- Improve indoor air quality and reduce emissions from wood burning
- Reduce emissions from construction of new developments
- Invest in green infrastructure
- Raise awareness of air quality
- We will also work with external partners such as the Greater London Authority (GLA) and the Environment Agency in order to implement measures at a wider scale and to continue implementing measures in relation to fugitive PM₁₀ emissions, in particular at Acton Goods Yard, Horn Lane.

You will see in this report that we have worked hard to engage with stakeholders and communities who can make a difference to air quality in the borough. We would like to thank all those who have worked with us in the past and we look forward to working with you again, as well with new partners, as we deliver this new action plan over the coming years.

In this AQAP we outline how we plan to effectively use local levers to tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence

⁶ GLA and TfL air quality, [London Atmospheric Emissions Inventory 2019](#)

(such as Euro standards, national vehicle taxation policy, taxis and buses), and so we will continue to work with and lobby regional and central government on policies and issues beyond the London Borough of Ealing's influence.

Responsibilities and Commitment

This AQAP was prepared by Ealing Council's Environmental Protection team, in association with Ricardo Energy and Environment, with the support and agreement of the following officers and departments;

Joe Blanchard – Head of Environmental Health & Trading Standards

Gina Cole - Head of Parking Services

Chris Cole - Head of Transport Planning Service

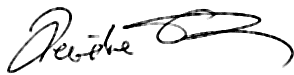
Russell Roberts – Principal Transport Planner,

Alex Jackson - Head of Planning

Joanne Mortensen - Climate Action Programme Manager

This Air Quality Action Plan has been approved by: e-signatures to be provided in final issue

Cllr. Deirdre Costigan - Deputy Leader of Ealing Council and Cabinet Member for Climate Change



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Nicky Fiedler – Strategic Director of Housing & Environment



Anna Bryden - Director of Public Health,

This AQAP will be subject to an annual review and appraisal of progress and reporting to the General Purposes Committee. Progress each year will be reported in the Annual Status Reports produced by the London Borough of Ealing as part of our statutory London Local Air Quality Management duties.

If you have any comments on this AQAP please send them to the Council's Environmental Protection Team, Ealing Council, Perceval House, 14/16 Uxbridge Rd, London W5 2HL or Email: Pollution-Technical@ealing.gov.uk

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Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
ASR	Annual Status Report
CAB	Cleaner Air Borough
CHP	Combined Heat and Power
DPH	Director of Public Health
EV	Electric Vehicle
FORS	Fleet Operator Recognition Scheme
GLA	Greater London Authority
JSNA	Joint Strategic Needs Assessment
LAEI	London Atmospheric Emissions Inventory
LAQN	London Air Quality Network
LAQM	Local Air Quality Management
LB	London Borough
LIP	Local Implementation Plan
LLAQM	London Local Air Quality Management
MAQS	Mayor's Air Quality Strategy
MTS	Mayor's Transport Strategy
NRMM	Non-Road Mobile Machinery
OLEV	Office for Low Emission Vehicles
PM ₁₀	Particulate matter less than 10 micron in diameter
PM _{2.5}	Particulate matter less than 2.5 micron in diameter
SPG	Supplementary Planning Guidance
STARS	Sustainable Travel: Active, Responsible, Safe
TfL	Transport for London
ULEZ	Ultra-Low Emission Zone
WLSRTP	West London Sub-Regional Transport Plan

1 INTRODUCTION

- 1.1.1 This report outlines the actions that the London Borough of Ealing and others will deliver between 2022 and 2027 in order to reduce concentrations of pollution, and exposure to pollution; thereby positively impacting on the health and quality of life of residents and those employed in or visiting the borough.
- 1.1.2 It has been developed in recognition of the legal requirement on the local authority to work towards air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under that Act and to meet the requirements of the London Local Air Quality Management statutory process.
- 1.1.3 This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Ealing's air quality Annual Status Report (ASR).

2 CURRENT AIR QUALITY IN EALING

- 2.1.1 The UK Clean Air Strategy 2019 provides the overarching strategic framework for air quality management in the UK and contains national air quality standards and objectives established by the Government to protect human health. The national Air Quality Objectives take into account EU Directives that set limit values which member states are legally required to achieve by their target dates.
- 2.1.2 The London Borough of Ealing is meeting all of the national Air Quality Objectives other than those for nitrogen dioxide (NO₂).
- 2.1.3 The London Borough of Ealing is meeting the current national AQS objectives for Particulate Matter (PM₁₀ and PM_{2.5}).
- 2.1.4 However, for PM_{2.5} the legal objective is significantly higher than the World Health Organisation (WHO) recommended guideline limit. As a result, the Mayor of London has committed to meeting the WHO health-based guideline limit of 10 µg / m³ by 2030. PM_{2.5} concentrations in the Borough currently exceed this WHO guideline limit.
- 2.1.5 There have also been concerns, and historical breaches of the air quality objectives, over a number of years regarding PM₁₀, particularly at Acton Goods Yard, Horn Lane. Work has been undertaken putting in place a Low Emission Strategy for the site, as well as joint enforcement action by the Council and the Environment Agency.

2.1 AIR QUALITY MANAGEMENT AREAS AND FOCUS AREAS

- 2.1.6 In accordance with the LAQM process, Ealing Borough Council declared an Air Quality Management Area (AQMA) has been declared covering the whole borough in 2000.
- 2.1.7 The AQMA has been declared for nitrogen dioxide (NO₂; annual mean objective) and Particulate Matter (PM₁₀; 24-Hour mean objective), as both pollutants failed to meet the relevant air quality objectives. For PM₁₀, air quality objectives are now being achieved, but there are still widespread exceedances of NO₂, particularly along busy and congested roads. The London Borough of Ealing also has a formal responsibility to work towards reductions of PM_{2.5}, which is a fraction of PM₁₀, although the objective for this pollutant is a national rather than local requirement.

2.1.8 An Air Quality Focus Area is a location that has been identified by the GLA as having high levels of pollution and human exposure. There are currently 8 focus areas in the borough. These are:

- a. **Acton Central:** Acton A40 North Acton Station/Gypsy Corner/Savoy Circus;
- b. **Hanger Hill:** Hanger Lane/Twyford Abbey Road;
- c. **Perivale:** A40 Western Avenue Teignmouth Gardens to Alperton Lane;
- d. **Hanwell:** Hanwell Broadway, Ealing Broadway and Walpole;
- e. **South Acton:** Acton High Street/Gunnersbury Lane junction to rail in Acton High Street;
- f. **Southall:** King Street/The Green/Western Road/South Road;
- g. **East Acton:** Victoria Road/Portal Way/ Wales Farm Road; and
- h. **Central Greenford:** Greenford Road (junction with Rockware Avenue) to Greenford Road (junction with Whitton Avenue West)

2.1.9 The Air Quality Focus Areas are included on the maps of pollutant concentrations across Ealing borough (Figure 2-1 to Figure 2-3). The maps provide a context for concentrations of annual mean NO₂, PM₁₀ and PM_{2.5}. They are based on modelled concentrations from the London Atmospheric Emissions Inventory (LAEI) for 2019, the most recent available year.

2.2 MAPS OF POLLUTANT CONCENTRATIONS IN EALING

2.2.1 Figure 2-1 shows annual mean NO₂ concentrations across the London Borough of Ealing in 2019. It shows that the highest concentrations occur along main roads, reflecting that roads are the largest source of pollution within Ealing. There are large areas of the borough away from major roads where the annual mean NO₂ objective is being achieved.

2.2.2 Figure 2-1 shows the annual mean PM₁₀ concentrations, which again shows higher concentrations in the east of the borough (towards central London) and along major roads. A similar distribution is shown for PM_{2.5} in Figure 2-3.

2.2.3 It should be noted that the objectives apply at locations where members of the public are likely to be regularly present and are likely to be exposed over the averaging period of the objective. The annual mean objectives for nitrogen dioxide and PM₁₀ are considered to apply at the façades of residential properties, schools, hospitals etc. The 24-hour objective for PM₁₀ is considered to apply at the same locations as the annual mean objective, as well as in gardens of residential properties and at hotels.

2.2.4 All maps also show the Air Quality Focus Areas within the borough.

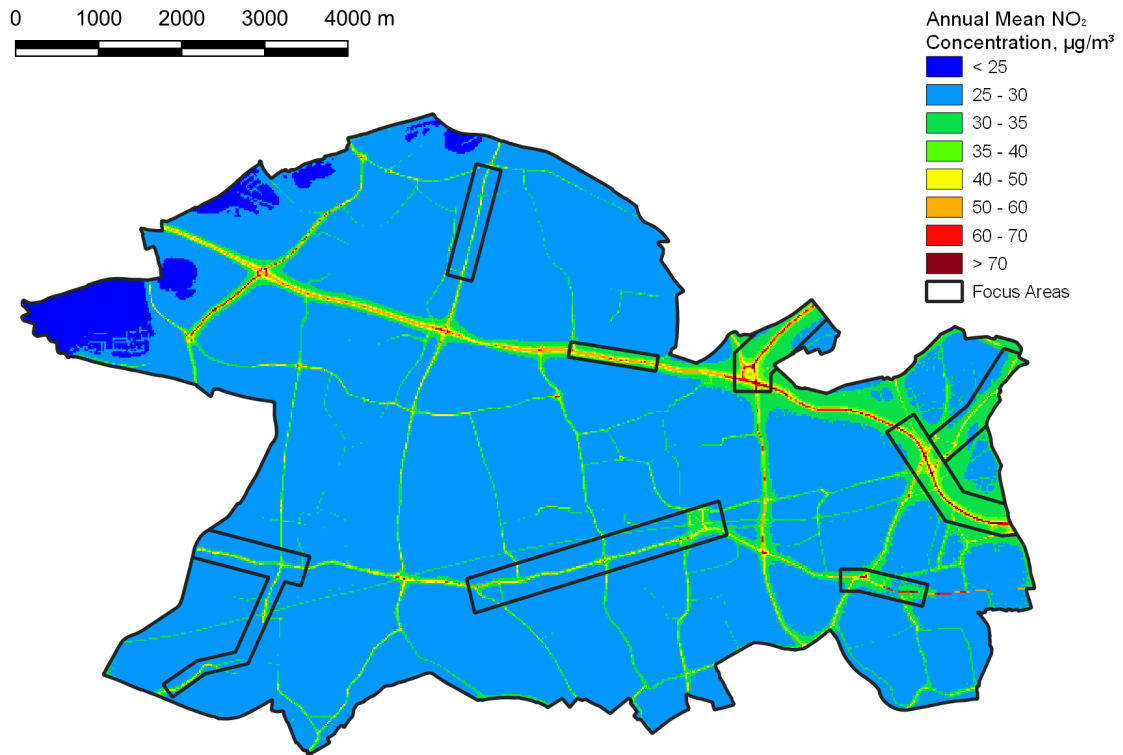


Figure 2-1: Modelled map of annual mean NO₂ concentrations including Air Quality Focus Areas (from the LAEI 2019)

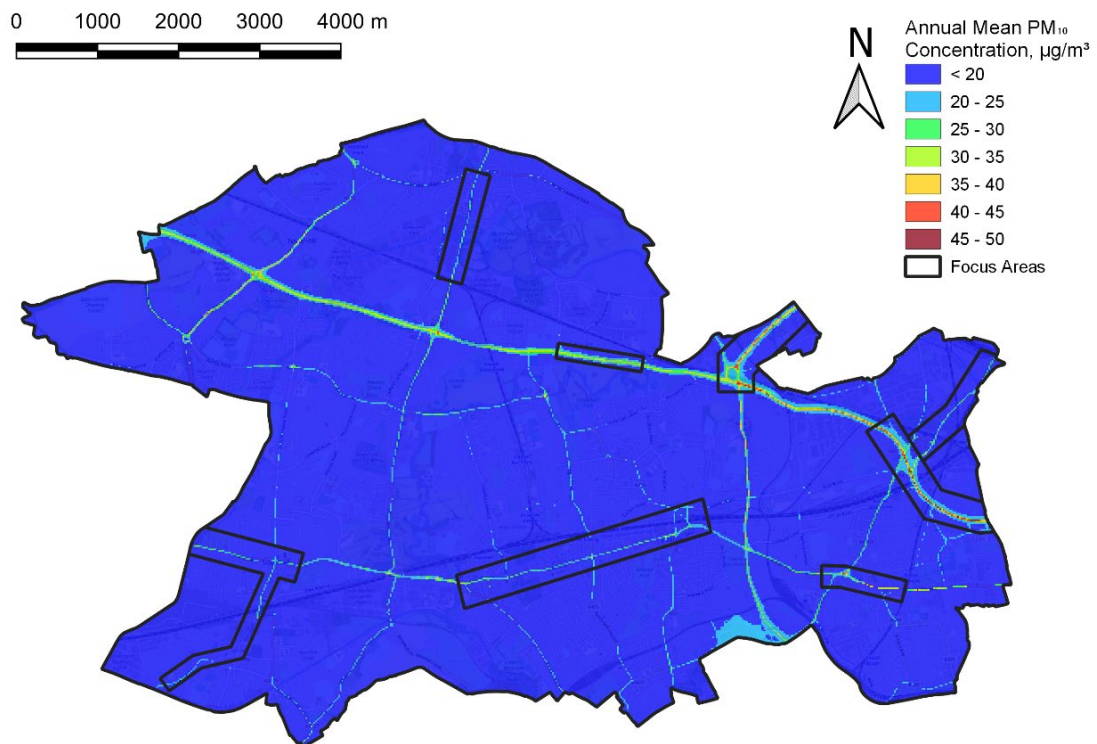


Figure 2-2: Modelled map of annual mean PM₁₀ concentrations including Air Quality Focus Areas (from the LAEI 2019)

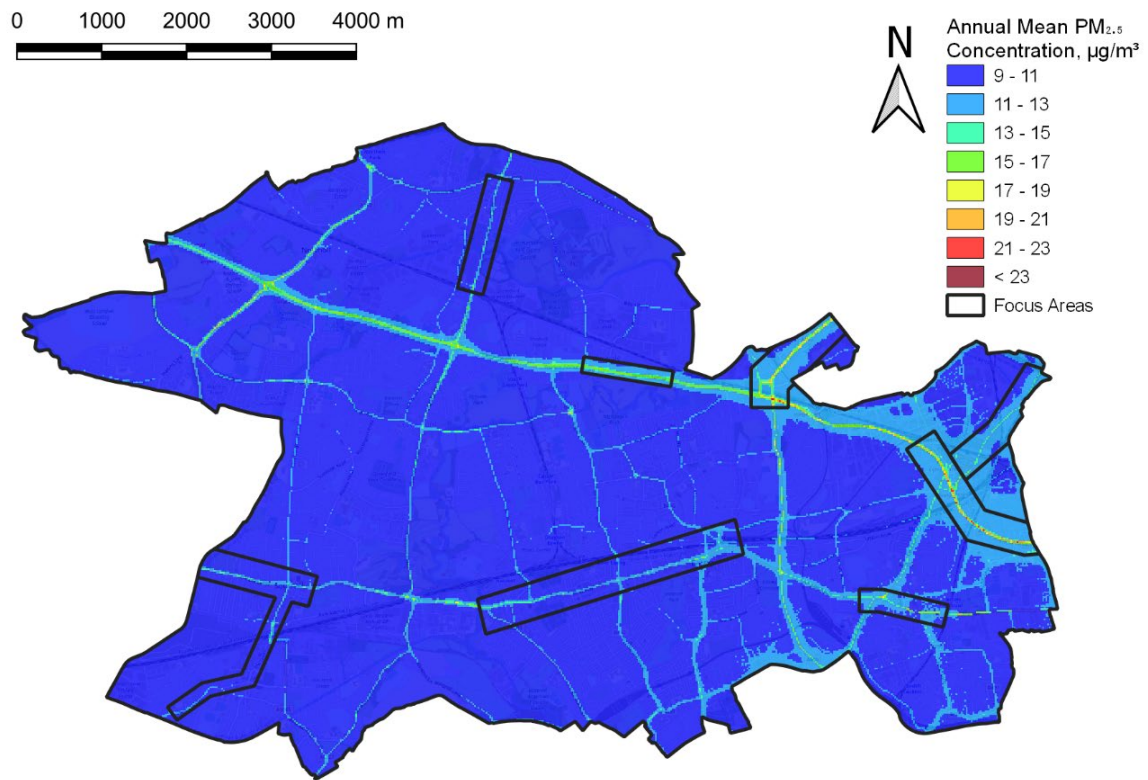
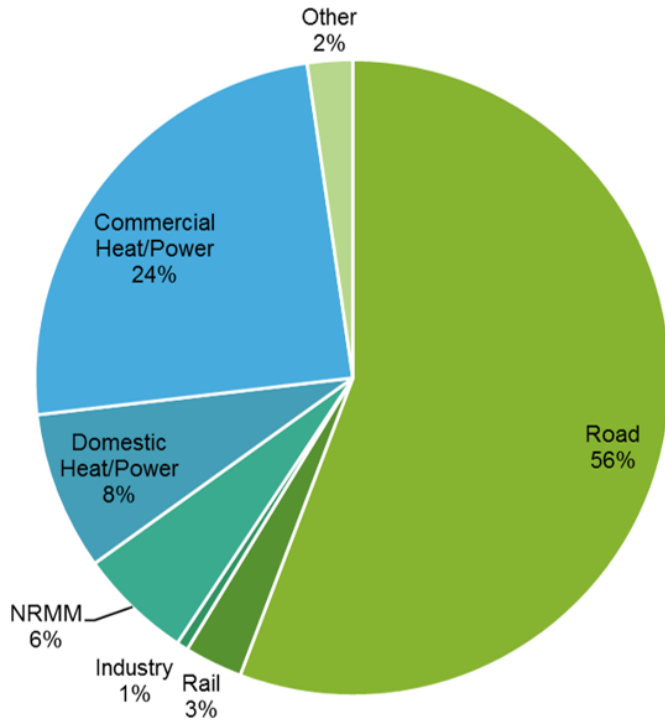


Figure 2-3: Modelled map of annual mean PM_{2.5} concentrations (from the LAEI 2019)

2.3 SOURCES OF POLLUTION IN EALING

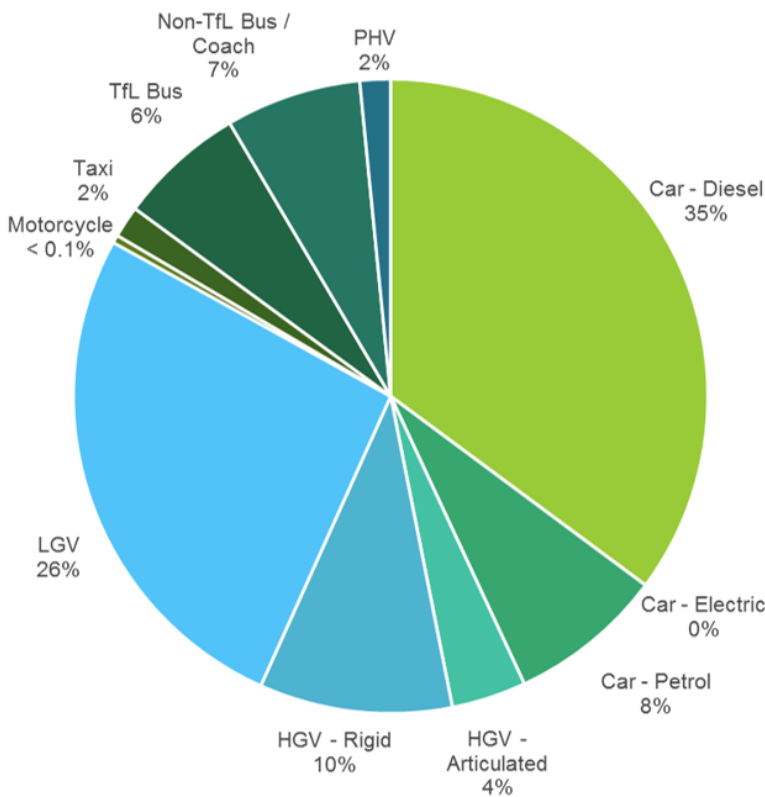
- 2.3.1 Pollution in Ealing comes from a variety of sources. This includes pollution from sources outside the borough, and, in the case of particulate matter, a significant proportion of this comes from outside of London and even the UK.
- 2.3.2 Figure 2-4 and Figure 2-5 present the total emissions of NO_x originating in Ealing by emissions sector. The main sources of NO_x emissions that originate in Ealing are road transport and domestic and commercial heating (i.e. boilers). Diesel vehicles dominate the road transport contribution to total NO_x emissions, with the most important contributor being diesel cars (35%), followed by LGVs (26%).
- 2.3.3 Since the publication of the previous Air Quality Action Plan for 2017 –2021, where emissions for 2013 were presented, there have been significant reductions in emissions from a number of sectors, including road transport, rail, and industry. As a result, total NO_x emissions in Ealing have reduced compared to 2013.
- 2.3.4 Figure 2-6 and Figure 2-7 present the total emissions of coarse particulate matter (PM₁₀) in the borough divided by emissions sector and vehicle category, respectively. The most important emissions sectors are road transport, resuspension, and construction. Emissions from the road transport sector are dominated by the contributions from diesel cars (27%) and petrol cars (31%).
- 2.3.5 The main sources of fine particulate matter (PM_{2.5}) in Ealing are road transport, domestic and commercial combustion, and wood burning, as shown in Figure 2-8. Emissions from construction are significantly reduced compared to PM₁₀ emissions. As for PM₁₀, the majority of PM_{2.5} emissions from road transport are caused by petrol and diesel cars.
- 2.3.6 Unlike other pollutants, such as NO₂, a large proportion of PM_{2.5} in London comes from outside London and even the UK⁷. In 2016 the estimated background concentration for PM_{2.5} was 10.2 µg/m³, meaning that the external contribution to London's PM_{2.5} levels alone were above the WHO guideline of 10 µg/m³.

⁷ PM_{2.5} in London, 2019. https://www.london.gov.uk/sites/default/files/pm2.5_in_london_october19.pdf



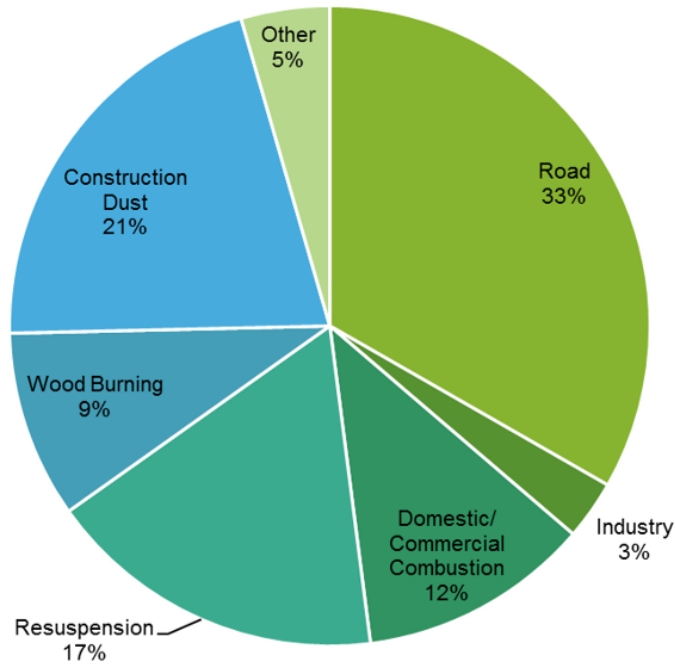
Sector	NOx Emissions in 2019 (tonnes)
Road	669
Rail	36
Industry	7
NRMM	69
Domestic Heat/Power	97
Commercial Heat/Power	295
Other	28

Figure 2-4: NOx emissions by source in Ealing in 2019 (from the LAEI 2019)



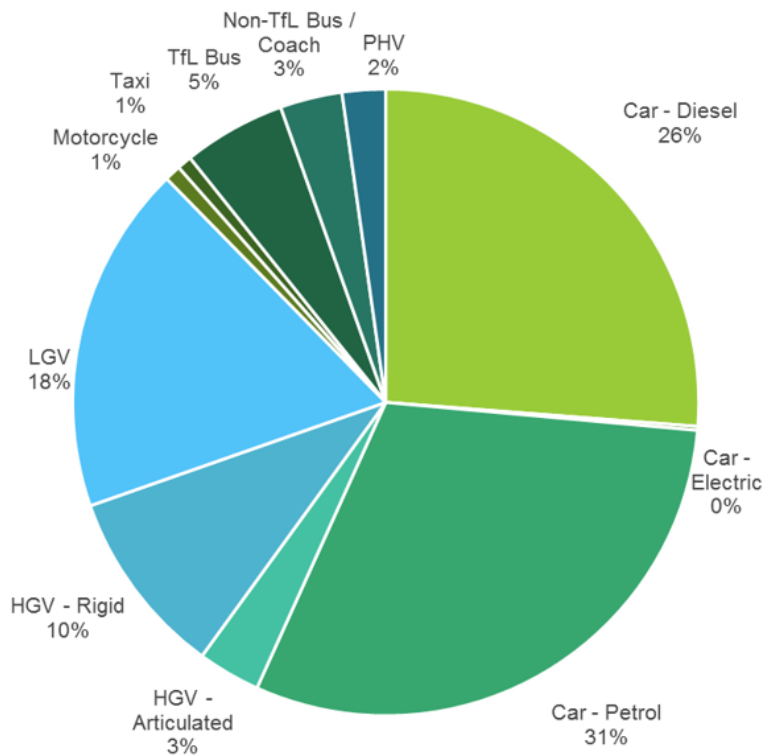
Sector	NOx Emissions in 2019 (tonnes)
Car - Diesel	235
Car - Electric	0
Car - Petrol	53
HGV - Articulated	25
HGV - Rigid	66
LGV	176
Motorcycle	3
Taxi	11
TfL Bus	43
Other Bus/Coach	46
PHV	10

Figure 2-5: NOx emissions by vehicle type in Ealing in 2019 (from the LAEI 2019)



Sector	PM ₁₀ Emissions in 2019 (tonnes)
Road	90.4
Industry	8.1
Domestic/Commercial Combustion	31.8
Resuspension	46.8
Wood Burning	25.7
Construction Dust	56.8
Other	12.2

Figure 2-6: PM₁₀ Emissions by source (from the LAEI 2019). “Other” includes Non-Road Mobile Machinery.



Sector	PM ₁₀ Emissions in 2019 (tonnes)
Car - Diesel	23.7
Car - Electric	0.2
Car - Petrol	27.4
HGV - Articulated	2.9
HGV - Rigid	8.7
LGV	16.3
Motorcycle	0.8
Taxi	0.7
TfL Bus	4.8
Other Bus/Coach	2.9
PHV	2.0

Figure 2-7: PM₁₀ Emissions by vehicle type (from the LAEI 2019)

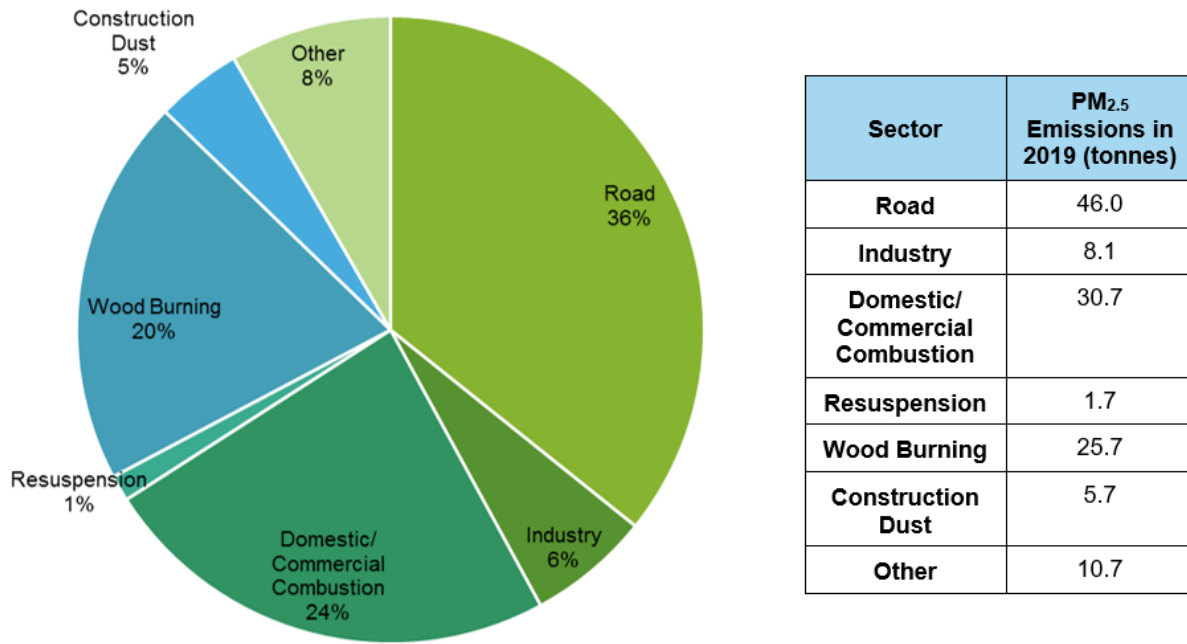


Figure 2-8: PM_{2.5} Emissions by source (from the LAEI 2019). "Other" includes Non-Road Mobile Machinery

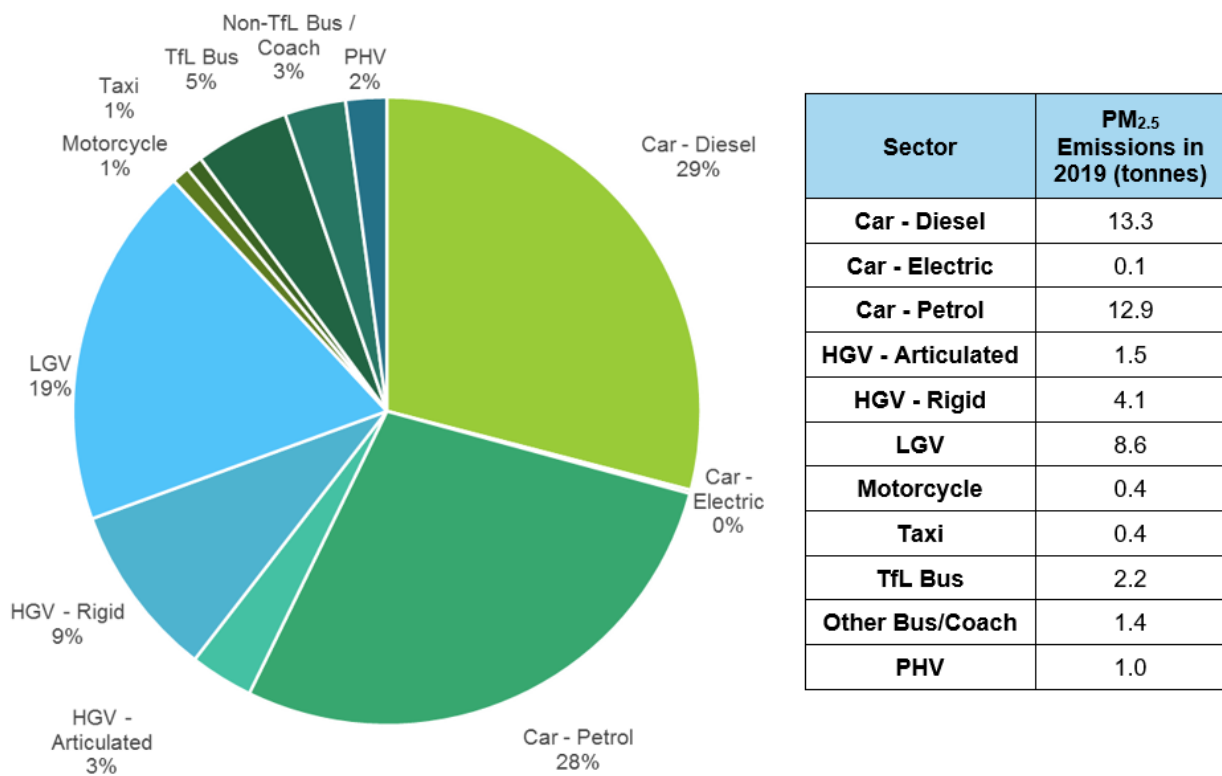


Figure 2-9: PM_{2.5} Emissions by vehicle type (from the LAEI 2019)

2.4 SOURCE APPORTIONMENT

2.4.1 Source apportionment of NO_x (NO₂ and NO) concentrations has been carried out for the 19 monitoring sites in Ealing which exceeded the UK National Air Quality Objective of 40µg/m³ for annual mean NO₂ concentrations in 2019. This source apportionment analysis allows the main source of pollution at each site to be identified. The source apportionment analysis uses a combination of local modelling outputs and background concentration maps for the UK published by Defra. Figure 2-10 shows the locations where the detailed source apportionment was carried out.

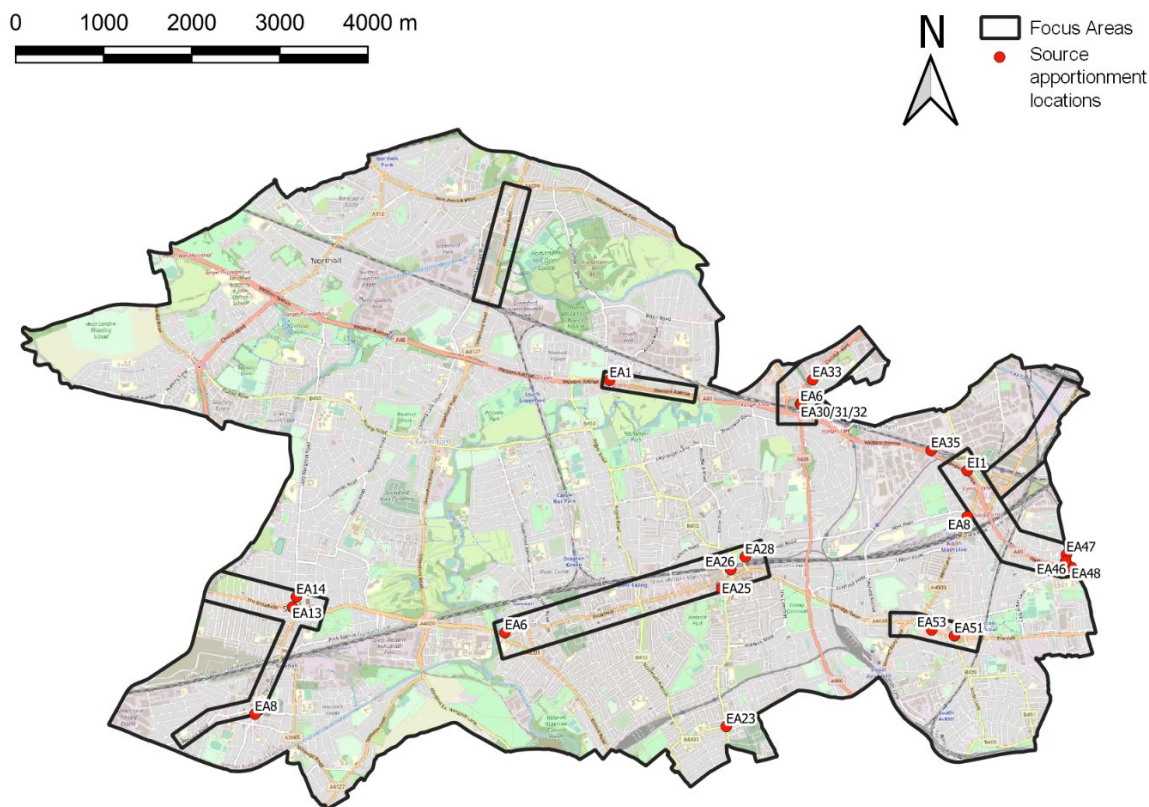


Figure 2-10: Monitoring locations across MDDC, including the CREDITON and CULLOMPTON AQMAs

- 2.4.2 Figure 2-11 shows the contribution to NO_x concentrations at these sites from local roads apportioned by vehicle category. The background contribution, which includes non-road sources and more distant roads, is also included.
- 2.4.3 Across all sites there is a significant contribution to NO_x concentrations from non-road sources including domestic combustion, industry, and non-local roads. These sources contribute 44% of the total NO_x concentration on average at monitoring locations which exceeded the objective in 2019.
- 2.4.4 On average, the most important contributor to total NO_x concentrations from local roads is diesel cars, which contribute 19% of total NO_x concentrations. LGVs contribute a further 14% of the total.
- 2.4.5 The contribution of buses and coaches varies strongly by location, reflecting that traffic for these vehicles is restricted to specific bus routes; on major bus routes, buses contribute a large proportion of the total emissions from road vehicles. On average, buses and coaches contribute 10% of total NO_x concentrations.

2.4.6 These results demonstrate that reducing emissions from vehicles is required in order to achieve compliance. However, reducing emissions from other sources is also necessary to reduce concentrations and safeguard the health of everybody who lives and works in Ealing.

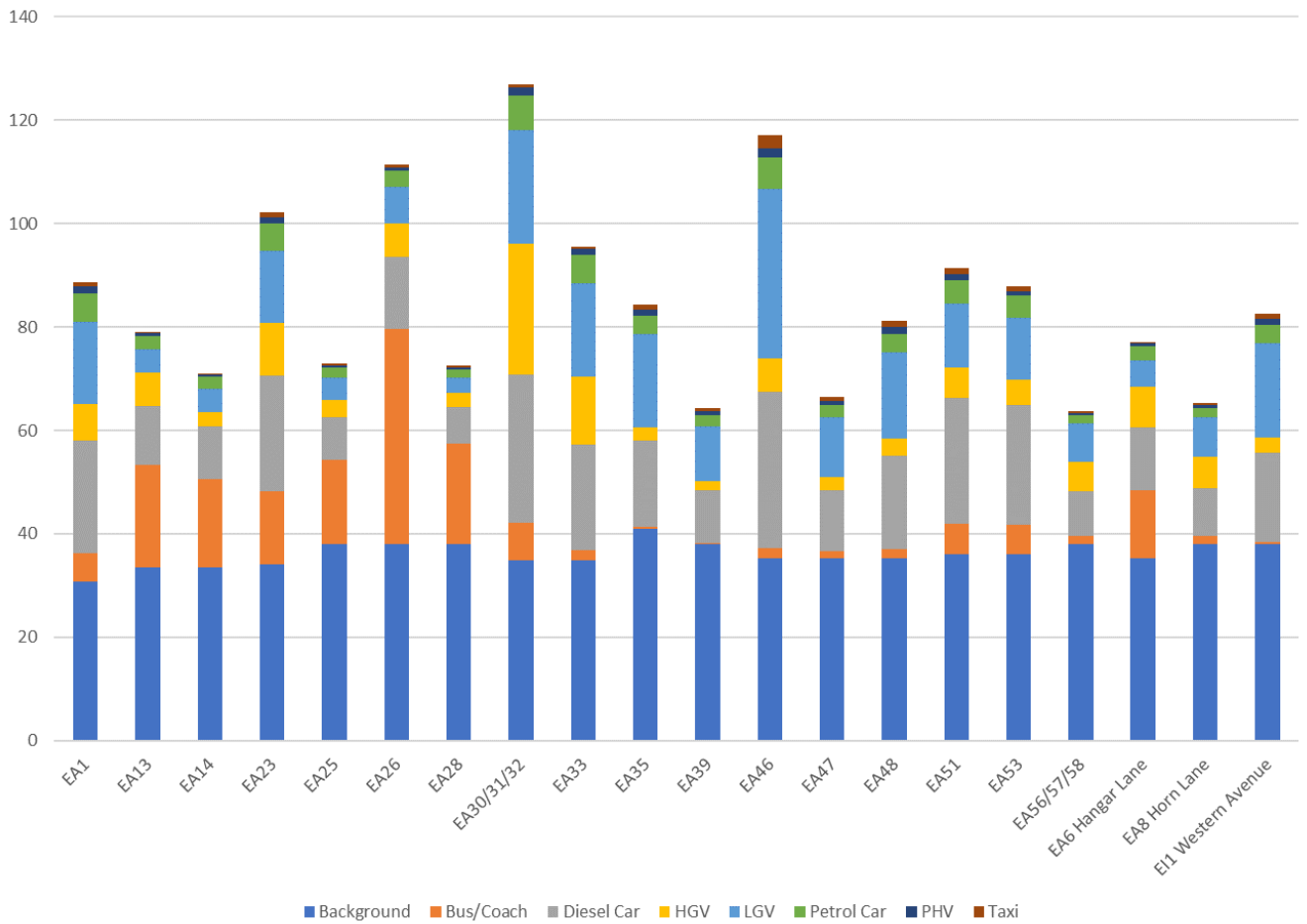


Figure 2-11: NOx source apportionment for local road transport and background for monitoring locations in Ealing, 2019, µg/m³

3 EALING COUNCIL'S AIR QUALITY PRIORITIES

- 3.1.1 The council's corporate plan for 2022-2026 sets out Ealing's priorities and specific, ambitious targets, all of which are designed to have a major positive impact on the quality of people's lives. In order to deliver on these targets, Ealing must work closely with other organisations and also encourage and support residents to act.
- 3.1.2 The Council Plan for 2022-2026 sets out three key priorities for the borough:
- **Creating good jobs** - returning good well-paid jobs to our borough and delivering the next generation of genuinely affordable homes.
 - **Tackling the climate crisis** - cleaning our air and ensuring the borough we build is sustainable.
 - **Fighting inequality** - that blights too many lives and disproportionately holds back all too many people from achieving their dreams and aspirations.
- 3.1.3 These priorities are supported by nine aims focussed on outcomes, including tackling inequality, climate action, and healthy lives. This Action Plan supports Ealing's priorities, in particular through improving public health, delivering a sustainable and effective transport infrastructure and by improving the parking service.
- 3.1.4 The priorities for the London Borough of Ealing are to reduce NO₂ concentrations to below the National Air Quality Objectives, to ensure that levels remain below the National Air Quality Objectives for PM₁₀, and to reduce PM_{2.5} levels in line with the Mayor's aim to meet World Health Organisation (WHO) guidelines by 2030.
- 3.1.5 The council's Air Quality Strategy 2022-2023 sets out Ealing Council's vision for improving air quality and safeguarding the health of those who live and work in Ealing. The AQS sets out the actions that Ealing Council will take to improve air quality, offers advice on how the local community can reduce their air pollution footprint, and details where reliable air quality information can be sourced from. To this end, the Air Quality Strategy highlights the Council's goals in five priority action areas:
- Reducing road traffic emissions
 - Improving indoor air quality
 - Reducing the impact of new and existing developments
 - Green infrastructure
 - Raising awareness of air quality
- 3.1.6 These action areas were developed through the source apportionment analysis described in Section 2.4, and through a public engagement exercise including an online survey and community engagement events carried out in March and April 2022 to identify key issues for Ealing residents.

4 POLICY CONTEXT

4.1 INTERNATIONAL AND NATIONAL

EU Directive 2008/50/EC

4.1.1 The key international air quality policy that influences UK air quality policy is the EU Directive 2008/50/EC⁸ for ambient air quality and cleaner air for Europe. This sets legally binding limits for sulphur dioxide, nitrogen dioxide, particulate matter, lead, benzene, and carbon monoxide emissions. The 2008/50/EC was made in law in England through the Air Quality Standards Regulations 2010⁹, which were amended in 2016¹⁰. This legislation was implemented on ambient air quality limit values, assessment, and management. The Regulations aim to designate zones in which ambient air will be managed by limiting pollutant concentrations within them at a local level.

Air Quality Strategy

4.1.2 The Air Quality Strategy¹¹ published by the Department for Environment, Food, and Rural Affairs (Defra) and Devolved Administrations, provides the policy framework for air quality management and assessment in the UK. It provides air quality standards and objectives for key air pollutants, which are designed to protect human health and the environment. It also sets out how the different sectors: industry, transport and local government, can contribute to achieving the air quality objectives. The strategy describes the Local Air Quality Management (LAQM) regime that has been established, whereby each authority must carry out regular reviews and assessments of air quality in its area to identify whether the objectives have been, or will be, achieved at relevant locations. If this is not the case, the authority must declare an Air Quality Management Area (AQMA) and prepare an action plan which identifies appropriate measures that will be introduced in pursuit of the objectives.

Clean Air Strategy

4.1.3 The UK government's plans for dealing with air pollution was developed further in the Clean Air Strategy 2019¹². The strategy identifies the actions on how government and society will protect public health and the environment, secure clean growth and innovation, reduce emissions from transport, homes, farming and industry, and monitor progress.

Air Quality Plan for Nitrogen Dioxide

4.1.4 The Air Quality Plan for Nitrogen Dioxide in UK (2017)¹³ provides a separate long-term strategy to reduce roadside NO₂ concentrations. This includes a ban on the sale of new diesel and petrol vehicles by 2040. In 2020, this ban was moved forward to the end of 2030¹⁴.

⁸ EU Directive 2008/50/EC <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32008L0050>

⁹ The Air Quality Standards Regulations 2010 <https://www.legislation.gov.uk/ukxi/2010/1001/contents/made>

¹⁰ The Air Quality Standards (Amendment) Regulations 2016 <https://www.legislation.gov.uk/ukxi/2016/1184/contents/made>

¹¹ [The Air Quality Strategy 2007](#)

¹² Clean Air Strategy 2019. <https://www.gov.uk/government/publications/clean-air-strategy-2019>

¹³ Air Quality Plan for NO₂ in UK, 2017 <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017#history>

¹⁴ Government takes historic step towards net-zero with end of sale of new petrol and diesel cars by 2030. <https://www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030>

4.2 REGIONAL (LONDON-WIDE)

London Local Air Quality Management

4.2.1 London Local Air Quality Management (LLAQM)¹⁵ is set out in Policy Guidance and Technical Guidance issued by the Mayor in 2016. Supervision of the LAQM system in Greater London has been devolved to the Mayor of London, to whom powers to intervene and direct boroughs have been given under Part IV of the Environment Act 1995. These guidance documents outline changes to the LAQM system which include the introduction of an air quality Annual Status Report (ASR) to amalgamate all other reporting requirements.

The London Plan

4.2.2 The London Plan 2021¹⁶ sets out the Mayor's spatial development strategy for London. It brings together all relevant strategies, including those relating to transport, environment, economic development, housing, culture, health and health inequalities, and air quality. The latest version of London Plan sets out policies SI 1 and SI 2 for improving air quality and minimising greenhouse gas emissions respectively.

4.2.3 Policy SI1 'Improving Air Quality' states that "London's air quality should be significantly improved and exposure to poor air quality, especially for vulnerable people, should be reduced". It goes on to detail that development proposals should not:

- *lead to further deterioration of existing poor air quality;*
- *create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits;*
- *reduce air quality benefits that result from the Mayor's or boroughs' activities to improve air quality;*
- *create unacceptable risk of high levels of exposure to poor air quality.*

4.2.4 It also states that "The development of large-scale redevelopment areas, such as Opportunity Areas and those subject to an Environmental Impact Assessment should propose methods of achieving an Air Quality Positive approach through the new development. All other developments should be at least Air Quality Neutral".

4.2.5 The policy describes Air Quality Focus Areas; these are locations which exceed EU annual mean limit values for nitrogen dioxide where there is high human exposure.

The Mayor's Transport Strategy

4.2.6 The Mayor's Transport Strategy (MTS) sets out the transport vision for London. Published in March 2018¹⁷, it details how Transport for London and partners will deliver the plan over the next two decades. The goals of the Strategy include achieving the highest environmental standards.

4.2.7 The focus of the Strategy is to encourage more people to walk, cycle and use public transport. By using the Healthy Streets Approach to prioritise human health and experience in planning the city, the Mayor wants to change London's transport mix so the city works better for everyone. One of the ten healthy streets indicators is clean air. This, coupled with Government's 'The Road to Zero 18 by 2050

¹⁵ London Local Air Quality Management Technical Guidance 2016

https://www.london.gov.uk/sites/default/files/llaqm_technical_guidance_llaqm_tg_16.pdf

¹⁶ The London Plan 2021 <https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/london-plan-2021>

¹⁷ Mayor's Transport Strategy 2018 <https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf>

¹⁸ The Road to Zero, 2018

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739460/road-to-zero.pdf

that seeks at least 50%, and as many as 70%, of new car sales and up to 40% of new van sales being ULEVs by 2030, is likely to deliver significant reductions in concentration of roadside pollutants.

London Environment Strategy

4.2.8 In May 2018, the Mayor published the London Environment Strategy¹⁹ (LES). The Strategy brings together in one document the approaches set out to tackle the most urgent environmental challenges in London, including air quality, green infrastructure, climate change mitigation, waste, adapting to climate change, ambient noise and low carbon circular economy. The LES provides background information on the air quality issues in London, and then sets out three principal Objectives, with associated Policies and Proposals. The three principal Objectives are:

- **Objective 4.1:** Support London and its communities, particularly the most vulnerable and those in priority locations, to help empower people to reduce their exposure to poor air quality.
- **Objective 4.2:** Achieve legal compliance with UK and EU limits as soon as possible, including by mobilising action from London Boroughs, Government and other partners.
- **Objective 4.3:** Establish and achieve new, tighter air quality targets for a cleaner London by transitioning to a zero emission London by 2050, meeting World Health Organisation health-based guidelines for air quality.

4.2.9 The LES recognises that two pollutants are of specific concern, nitrogen dioxide and particulate matter (PM₁₀ and PM_{2.5}). The LES notes that London is failing to meet the legal limit for nitrogen dioxide, but that “exposure to particulate matter is damaging at any level and must be reduced”. In this regard, the LES recognises the need to go beyond legal limits, which should be treated as “starting rather than an end point”. The WHO guidelines are set much tighter for PM₁₀ and PM_{2.5}, and the LES sets out “the timescale, and the changes needed, to achieve these tighter targets”.

4.2.10 The LES also makes specific reference to non-road transport sources: “to achieve legal compliance as quickly as possible, all sources of pollution must be addressed. This means significantly increasing efforts in relation to non-transport sources. This is vital as the proportion of total emissions from non-transport sources is expected to increase over the lifetime of this strategy as our efforts on transport start to have an effect”.

Low Emission Zone (LEZ)

4.2.11 A key measure to improve air quality in Greater London is the Low Emission Zone (LEZ). This entails charges for vehicles entering Greater London not meeting certain emissions criteria and affects older, diesel-powered lorries, buses, coaches, large vans, minibuses and other specialist vehicles derived from lorries and vans. The LEZ was introduced on 4th February 2008 and was phased in through to January 2012. From January 2012 a standard of Euro IV was implemented for lorries and other specialist diesel vehicles over 3.5 tonnes, and buses and coaches over 5 tonnes. Cars and lighter Light Goods Vehicles (LGVs) are excluded. The third phase of the LEZ, which applies to larger vans, minibuses and other specialist diesel vehicles, was also implemented in January 2012. As set out in the 2010 MAQS, a NO_x emissions standard (Euro IV) is included in the LEZ for HGVs, buses and coaches, from 2015.

Ultra-Low Emission Zone (ULEZ)

¹⁹ London Environment Strategy, 2018, https://www.london.gov.uk/sites/default/files/london_environment_strategy_0.pdf

4.2.12 The current Mayor, Sadiq Khan, introduced the Ultra-Low Emission Zone (ULEZ) in the Capital on 8 April 2019. The ULEZ operates 24 hours a day, 7 days a week in the Congestion Charging zone in central London. All cars, motorcycles, vans, minibuses and Heavy Goods Vehicles need to meet exhaust emission standards (ULEZ standards) or pay an additional daily charge to travel within the zone. The ULEZ standards are Euro 3 for motorcycles; Euro 4 for petrol cars, vans and minibuses; Euro 6 for diesel cars, vans and minibuses; and Euro VI for HGVs, buses and coaches.

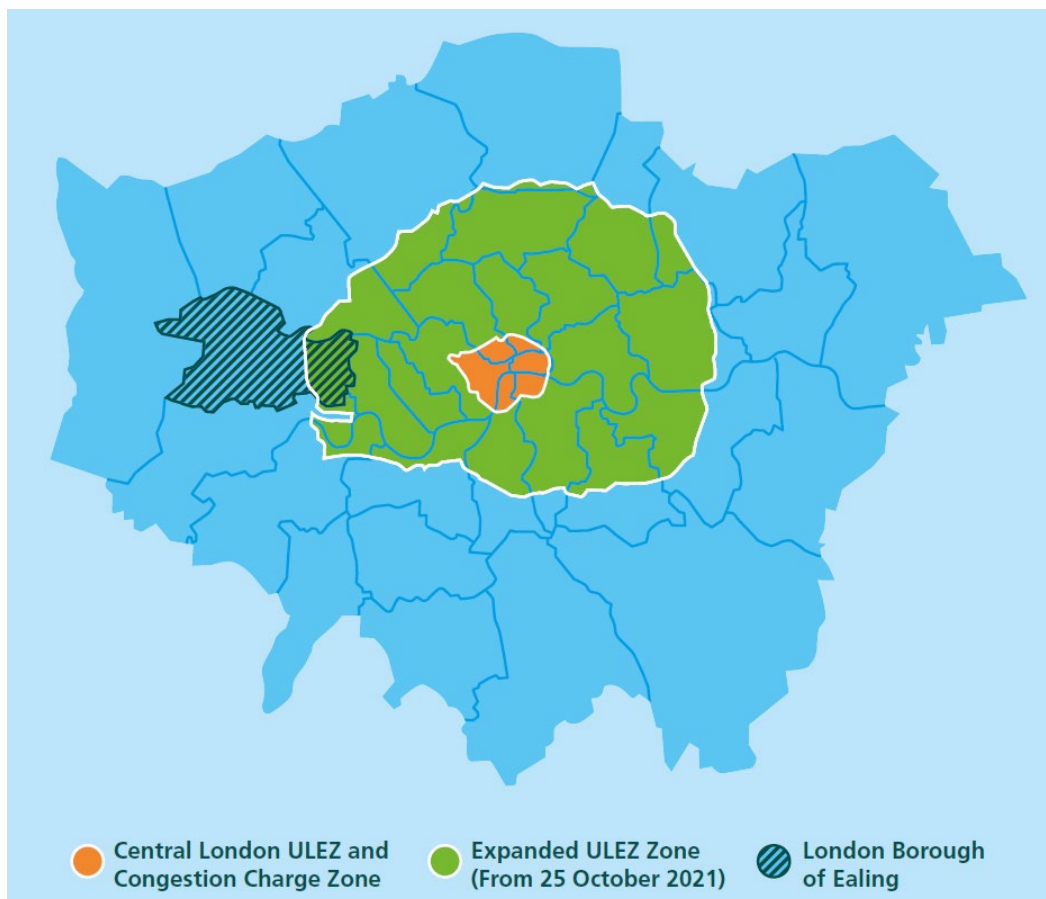


Figure 12: Expanded ULEZ area (light blue)

4.2.13 The zone was expanded beyond central London to the North and South Circular roads on 25 October 2021. As a result, a portion of the Borough of Ealing now lies within the ULEZ. This will impact traffic and emissions both inside and outside the zone.

4.2.14 The zone will be expanded across all 29 London Boroughs (the light blue region in Figure 12) on 29 August 2023, and as a result the entirety of the Borough of Ealing will lie within the ULEZ.

GLA Supplementary Planning Guidance: Sustainable Design and Construction

4.2.15 The GLA’s SPG on Sustainable Design and Construction (GLA, 2014a) provides details on delivering some of the priorities in the London Plan. Section 4.3 covers Air Pollution. It defines when developers will be required to submit an air quality assessment, explains how location and transport measures can minimise emissions to air, and provides emission standards for gas-fired boilers, Combined Heat and Power (CHP) and biomass plant. It also sets out, for the first time, guidance on how Policy 7.14B(c) of the London Plan relating to ‘air quality neutral’ should be implemented. The Air Quality

Neutral²⁰ and Air Quality Positive²¹ London Plan Guidance were updated in February 2023. Further information on application of more stringent Transport Emissions Benchmarks may be found in Action 7a (see Table 7-1).

GLA Supplementary Planning Guidance: The Control of Dust and Emissions during Construction and Demolition

4.2.16 The GLA's SPG on The Control of Dust and Emissions During Construction and Demolition (GLA, 2014b) outlines a risk assessment based approach to considering the potential for dust generation from a construction site, and sets out what mitigation measures should be implemented to minimise the risk of construction dust impacts, dependent on the outcomes of the risk assessment. This guidance is largely based on the Institute of Air Quality Management's (IAQM) 2014 guidance on the Assessment of dust from demolition and construction (Institute of Air Quality Management, 2016), and it states that "the latest version of the IAQM Guidance should be used".

West London Sub-Regional Transport Plan

4.2.17 Ealing is the lead borough for the West Trans sub-regional partnership which also includes Brent, Hammersmith and Fulham, Harrow, Hillingdon and Hounslow. The West London Sub-Regional Transport Plan (WLSRTP) sets out the transport strategy to address the particular challenge faced by the sub region. The plan also provides the context for individual borough Local Implementation Plans (LIPs) and helps form a bridge between the Mayor's Transport Strategy and individual local authority transport objectives. The WLSRTP identified the following challenges for the west sub-region:

- Improve north-south connectivity;
- Improve access to, from and within Key locations;
- Enhance east-west capacity and manage congestion;
- Enhance the efficiency of freight movements in the sub-region; and
- Improve land-based air quality.

4.3 EALING

Ealing Air Quality Strategy 2022-2030

4.3.1 The Ealing Air Quality Strategy (AQS) will be published in tandem with the Air Quality Action Plan (AQAP) in 2023. The AQS sets out Ealing Council's vision for improving air quality and safeguarding the health of those who live and work in Ealing. The AQS sets out the actions that Ealing Council will take to improve air quality, offers advice on how the local community can reduce their air pollution footprint, and details where reliable air quality information can be sourced from.

Ealing Corporate Plan (2021-2022)

4.3.2 The Ealing Corporate Plan is summarised in Chapter 3 of this report.

Local Plan

²⁰ Air Quality Neutral London Plan Guidance <https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/air-quality-neutral-aqn-guidance>

²¹ Air Quality Positive London Plan Guidance <https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/air-quality-positive-aqp-guidance>

4.3.3 The adopted Development (Core) Strategy 2026 provides the spatial vision and policies to support the future development of the borough. The Strategy also has to conform to both the context and the policies of the London Plan. The vision is to harness opportunities for growth and development and promote improvement in appropriate locations. These locations are primarily along the Uxbridge Road/Crossrail and the A40/Park Royal corridors. These two east-west corridors include Ealing's town centres, Park Royal Industrial Estate and the five Crossrail stations. In addition to the Development (or Core) Strategy, there are development plan documents that specifically cover development sites and the implementation of development policies. A new Local Plan²² has also been drafted and underwent consultation from 30 November 2022 to 8 February 2023. This new document touches almost every aspect of everyday life in Ealing from climate and transport to homes and open spaces and more.

Ealing Climate and Ecological Emergency Strategy 2021-2030

4.3.4 The Ealing Climate and Ecological Emergency Strategy 2021 – 2030²³ sets out a plan to reduce the council's produced emissions. The intended outcome of these actions is to mitigate climate change. The strategy focusses on four themes which are energy, food, nature, travel and waste. The objectives in the energy and travel themes offer substantial co-benefits for air pollutant emissions, particular around reducing the number of vehicles travelling in and through Ealing.

Ealing Council Transport Strategy 2019 and Local Implementation Plan

4.3.5 The Ealing Council Transport Strategy²⁴ sets out the transport priorities for the Council in accordance with the Mayor's Transport Strategy, with a focus on 2019-2022. It is supported by the Local Implementation Plan (LIP). As the Council's existing Transport Strategy (2019) focused on the initial 2019-22 period, it is now an opportune time to commence a wide-ranging strategic review to develop a new Transport and Active Travel strategy, work on which has been agreed by the Cabinet.

4.3.6 The LIP²⁵ is a statutory document prepared by each London borough to implement the Mayor of London's Transport Strategy. It sets out overarching borough transport objectives with an associated delivery and monitoring strategy, with reference to the Mayor's priority areas.

4.3.7 The current LIP sets out the council's current transport priorities, projects and targets for the period 2019-2022. The LIP has eight policy objectives which focus on road safety, sustainable travel, smoothing traffic flow, quality of life, healthy travel, accessibility, principal road condition and reduced contribution to climate change. The focus of the LIP includes the encouragement of sustainable travel, especially cycling. The LIP also includes 14 targets in its performance monitoring framework covering areas such as walking and cycling mode shares and PM₁₀ concentrations.

4.3.8 The Council's Transport Strategy is further supported by the Ealing Council Cycle Plan 2019-2022²⁶ which sets a policy framework for Ealing Borough to be committed to active travel through encouraging cycling. The aim of the Strategy is for the Borough to be an exemplar for cycling.

4.3.9 The Council's Transport Strategy is also supported by the Ealing Council Parking Plan²⁷ which aims to improve road safety and encourage cycling by effectively managing street parking. The Parking

²² New Local Plan (Regulation 18) https://www.ealing.gov.uk/info/201164/local_plan/3125/new_local_plan

²³ Climate and Ecological Emergency Strategy 2021-2030

https://www.ealing.gov.uk/downloads/file/15879/climate_and_ecological_emergency_strategy_2021-2030

²⁴ Ealing's Transport Strategy 2019-2022 https://www.ealing.gov.uk/downloads/download/5418/ealings_transport_strategy_2019-2022

²⁵ Local Implementation Plan https://www.ealing.gov.uk/info/201173/transport_and_parking/620/transport_strategies_and_plans/2

²⁶ Ealing Council Cycle Plan 2019-2022 https://www.ealing.gov.uk/downloads/download/5404/cycling_plan

²⁷ Ealing Council Parking Plan https://www.ealing.gov.uk/downloads/download/5405/parking_plan

Plan includes emissions-based parking charges, increasing the number of Electric Vehicle Charging Points, and introducing car clubs. This reduces congestion and encourages the uptake of cleaner or electric vehicles and a shift towards public transport.

- 4.3.10 The Transport Strategy is also supported by the Travel to School Plan²⁸ which intends to increase walking and cycling to and from schools to improve pupil health through reduced congestion. The Travel to School Plan also encourages more schools to receive and maintain school travel plan accreditation (STARS), the London-wide programme.

Old Oak and Park Royal Development Corporation

- 4.3.11 The Old Oak and Park Royal Development Corporation (OPDC) is developing a new centre and community for west London. Using the investment in rail infrastructure projects HS2 and Crossrail, new opportunities for development are being created in the area. The Corporation was officially launched on 1 April 2015 and is the Local Planning Authority, master developer and regeneration agency for the 650-hectare site. As a Local Planning Authority, OPDC has a duty to prepare a Local Plan. This sets out OPDC's strategy for development within its area and contains the policies that will be used to direct development and determine applications across the entire OPDC area.

Joint Strategic Needs Assessment (JSNA)

- 4.3.12 Ealing Council was given responsibility for public health in April 2013. The Council produced the JSNA²⁹ to provide clear intelligence on the current and future health and wellbeing needs of the population to inform commissioning plans and strategies. Air quality has been featured in the 2019 JSNA report that provides context for air pollution and associated impact on health and well-being of residents in the borough.

Health and Wellbeing Strategy

- 4.3.13 The Ealing Health and Wellbeing Strategy³⁰ is a long-term way of meeting the needs of the local population. The 2022-27 strategy is being developed with a focus on addressing inequalities, to be launched in early 2023. It promotes wellness, in its broadest sense, throughout Ealing's population, helping to prevent ill health. Although air quality is not specified, one of the priority areas of the Strategy is to address the broader social, economic, and environmental factors that can support people's ability to be healthy and make changes to improve their health.

²⁸ School travel plans 2021/2022 <https://www.egfl.org.uk/services-to-schools/school-travel-plans-202122>

²⁹ Ealing Joint Strategic Needs Assessment <https://data.ealing.gov.uk/jsna/>

³⁰ Health and Wellbeing Strategy https://www.ealing.gov.uk/downloads/download/3755/health_and_wellbeing_strategy

5 PROJECTS UNDERTAKEN TO INFORM THE ACTION PLAN

5.1 REAL TIME AIR QUALITY DATA AND ALERTS

- 5.1.1 A Defra funded five-year (2022-2027) project is being launched, which will help strengthen communications and public messages, through evidence, using near real-time air quality data. This data is anticipated to provide greater confidence, therefore encouraging local communities to adopt more sustainable modes of travel (walking/cycling). This would help reduce peak time congestion, a particularly big problem in the West of Ealing Borough, improve local air quality, reduce exposure to poor air quality and improve public health. Key features of this project will include:
- a. a new regional website resource which will focus on local issues, engaging the public and providing key information in terms of improving knowledge and steering the public towards improvement areas;
 - b. bespoke reporting and analysis on the monitoring datasets to feed into public messaging across 5-years;
 - c. air quality alerts and forecast; and
 - d. social media Twitter feed – to be populated by the Council and its communications team.

5.2 REMOTE SENSING OF EXHAUST EMISSIONS IN EALING

- 5.2.1 Defra grant-funded roadside remote sensing surveys of vehicle exhaust emissions were undertaken in Ealing borough and the City of London in 2012. A key development in this work was the direct measurement of NO₂, which had not been possible previously using other remote sensing equipment available in the UK. This provided a very useful dataset on the relationships between pollutants and vehicle technology, Euro class, fuel type, and vehicle dynamics, which has been applied across the UK. The results have had many implications for air quality policy. For diesel cars it was shown that total NO_x emissions, whilst peaking for vehicles manufactured around year 2000, have changed little overall over the past 20 years and in that time new after-treatment technologies have increased the proportion of NO_x that is NO₂ (known as primary NO₂). A comprehensive survey of taxis was also undertaken with results indicating a halving (or more) of NO emissions from London taxis in the transition from Euro 2 to Euro 3 and a significant peak in the emissions of particulate matter at Euro 3.

5.3 SOUTHALL LOW EMISSION STRATEGY

- 5.3.1 The Southall Gasworks site, known as The Green Quarter, is a major regeneration scheme to convert the site into a large mixed development for affordable housing, commerce, schools, public parkland, and a central park. Due to its historical use as a gasworks and chemical works site from the 19th century until the late 1960s, there was contamination of the soil which has since been treated in a soil hospital to make the land safe and suitable for its new uses, including housing.
- 5.3.2 In recognition of the scale of the development and the potential impact of the scheme on future emissions of air pollutants and greenhouse gases, the Council commissioned the preparation of a Low Emissions Strategy (LES) for The Green Quarter in 2019. The LES aims to set a course for the development to minimise pollutant emissions and achieve net zero-carbon emissions by 2050.
- 5.3.3 In response to concerns raised by local residents, the Council have commissioned an independent air quality monitoring survey around the site and appointed a dedicated Environmental Health Officer to respond to issues raised by the local community. Near real-time data is available at

airqualityengland.co.uk. Further air quality monitoring within the borough will be undertaken between 2022 and 2027 as part of Defra funded air quality project. We have also commissioned independent soil monitoring on the site.

5.4 SCENARIO DEVELOPMENT IN EALING

5.4.1 In 2014 a Defra grant-funded piece of work was undertaken looking at scenario development to inform the evidence base for air quality action planning in Ealing, and add to the national evidence base³¹. A number of scenarios were investigated:

Voluntary scrappage scheme

5.4.2 The scheme assumes that scrapped Euro 5 and older diesel cars will be replaced by a mix of Euro 6 petrol and diesel cars and that scrapped Euro 5 and older vans will be replaced by Euro 6 diesel vans. With a 10% take up of the scheme, total NOx emissions from cars and vans in 2017 were estimated to reduce by about 5% (relative to the 2017 business as usual scenario) and with a 20% take up, total NOx emissions are estimated to reduce by about 11%.

Reducing the number of diesel cars purchased

5.4.3 This scenario assumes that some form of policy intervention is introduced to reduce the attractiveness of new diesel cars relative to other fuel types. It assumes that the sales of new Euro 6 diesel cars will be reduced by 25% relative to the base scenario in 2017, and that sales of alternative fuel Euro 6 compliant cars (petrol, hybrid) will increase pro rata. With this scenario, it is estimated that total NOx emissions from passenger cars in 2017 reduce by about 1% (relative to the 2017 business as usual scenario).

Policies to reduce idling

5.4.4 Surveys carried out in the Ealing area in 2013 have revealed that between 8% and 40% of journey time was spent stationary, for example waiting at traffic signals. This scenario assumes that if a stop within a journey is more than 10 seconds, the vehicle engine is switched off for the duration of the stationary episode that is longer than 10 seconds. This scenario therefore quantifies the difference between all light duty drivers not switching off their engines and all light duty drivers systematically switching of their engines during stops of over 10 seconds. It is estimated that total NOx emissions from passenger cars and vans in 2017 reduce by up to 8%. This scenario by its nature, explicitly targets hotspot locations.

Introducing an ULEZ in Ealing

5.4.5 A Low Emission Zone already operates in London. Larger vans, minibuses and other diesel vehicles need to meet Euro 3 emissions standards. Lorries, buses, coaches and other specialist heavy vehicles need to meet Euro 4 emissions standards. TfL LEZ regulations currently do not apply to passenger cars. This scenario sets the compliance criteria for an ULEZ as Euro 6 for diesel light vehicles, and Euro 5/6 for petrol light vehicles. This is applied to all passenger cars, vans and taxis. It is assumed that vehicles are replaced on a like-for-like basis, adopting the compliant Euro standard for the ULEZ. This scenario was estimated to reduce total NOx emissions from light vehicles by approximately 52% relative to the business-as-usual scenario.

³¹ Glyn Rhys-Tyler Ltd. <https://www.glynrhys-tyler.com/publications.html>

5.4.6 These broad-brush percentage reductions have been aggregated (along with some assumptions about buses and HGV emissions reductions) and applied to monitoring locations in the hotspot locations. It is recognised that this will hide significant local spatial variation. The results show that even with a significant intervention such as the ULEZ there will still be annual mean concentrations over the annual mean objective. The analysis assumes that Euro 6/VI emissions technology delivers improvements.

Low Emissions Strategy for Acton Goods Yard, Horn Lane, Acton

5.4.7 The Low Emissions Strategy (LES) for Acton Goods Yard, Horn Lane provides a framework for voluntary agreement between the site operators, Ealing Council and the Environment Agency to reduce emissions and improve local air quality. It aims to secure a commitment from each of the occupiers to take all reasonable steps by providing good practice measures to reduce emissions. These include measures relating to site management, staff training, visitor and HGV driver training, monitoring, inspection and maintenance, water dust suppression, HGVs and mobile machinery, materials handling and storage and conveyors. It goes on to provide a checklist for occupiers of Acton Goods Yard. The LES is very much complementary to this Air Quality Action Plan.

6 DEVELOPMENT AND IMPLEMENTATION OF THE LONDON BOROUGH OF EALING’S AQAP

6.1 CONSULTATION AND STAKEHOLDER ENGAGEMENT

6.2.1 In developing/updating the action plan we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 3.1. In addition, we have undertaken the following stakeholder engagement:

- *A public consultation which ran from the 5th December 2022 to the 30th January 2023.*
- *This public consultation included:*
 - *Two in-person events on the 9th and 12th December 2022;*
 - *Two webinars outlining the Air Quality Action Plan and the supporting Air Quality Strategy 2022-2030 on the 9th and 12th January 2023.*

6.1 The response to our consultation stakeholder engagement is given in Appendix A.

Yes/No	Consultee
Yes	the Environment Agency
No	Transport for London and the Mayor of London do not routinely respond to consultations.
Yes	all neighbouring local authorities
Yes	other public authorities as appropriate
Yes	bodies representing local business interests and other organisations as appropriate

6.2 STEERING GROUP

6.2.1 The Steering group was set up at the outset of the process and a meeting was held on the 21st February 2022 to provide background to the process and discuss measures for inclusion within the Action Plan.

6.2.2 Follow-up meetings were held with Steering Group members to finalise the Action Plan measures and develop targets and KPIs where appropriate.

6.2.3 The draft Air Quality Action Plan was then provided to the Steering Group for comment prior to the wider consultation described in Section 6.1.

7 AIR QUALITY ACTION PLAN

7.1.1 Table 7-2 shows the Ealing Air Quality Action Plan. It contains:

- a list of the actions that form part of the plan;
- the responsible individual and departments/organisations who will deliver this action;
- estimated cost to the council;
- expected benefit in terms of emissions and concentration reduction;
- the timescale for implementation; and
- how progress will be monitored.

7.1 EVALUATION APPROACH

7.1.2 The actions are evaluated in relation to their expected impact on:

- air quality (i.e. reduction in emissions or concentrations);
- cost; and
- timescale for implementation.

7.2 AIR QUALITY IMPACT

7.2.1 Air quality impacts have been classified to represent 'low' to 'high' impact. The higher the impact, the greater the improvement in air quality, i.e. the greater the reduction in NO₂ concentrations. For each Action, the expected reduction in annual mean NO₂ concentrations has been determined based on professional judgement, drawing, wherever possible, on experience gained from other studies, as well as the LLAQM Borough Air Quality Action Matrix as published by the GLA. The following classification scheme has been used:

Low: *imperceptible*. Improvements, while a step in the right direction, are unlikely to be detected within the uncertainties of monitoring and modelling;

Medium: *perceptible* (a demonstrable improvement in air quality). An improvement of up to 2 µg/m³ NO₂. Improvement is not likely to be shown by monitoring due to confounding factors of the weather;

High: *significant*. Improvement of more than 2 µg/m³ NO₂. Can be clearly demonstrated by modelling or monitoring (a significant improvement is likely to be delivered by a package of options rather than by a single intervention).

7.3 COST

7.3.1 The implementation of the measures set out in this Action Plan are dependent on securing a sufficient and consistent level of funding both to support any additional staff that may be required, and to deliver the programme. In line with current London technical guidance, it is not necessary to carry out a detailed cost-benefit analysis. Rather the aim is to provide a broad indication of costs so that the proposed measures can be ranked according to the cost and the expected improvement to air quality. Costs are represented as follows:

- **'Very Low'** cost is taken to be £10K and under;
- **'Low'** cost is taken to be £10 - £50K;
- **'Medium'** cost is £50 - 500K;
- **'High'** cost is £500K - £2 million; and
- **'Very High'** cost is over £2 million.

7.4 ACTION PLAN

7.4.1 Following guidance for all London boroughs, the actions have been grouped into seven categories: monitoring and core statutory duties; emissions from developments and buildings; public health and awareness raising; delivery servicing and freight; borough fleet actions; cleaner transport; and localised solutions. These are aligned to the Council’s Air Quality Strategy priorities as shown in Table 7-1.

Table 7-1: Alignment between the council’s Air Quality Strategy priorities and Air Quality Action Plan measures

Air Quality Action Plan category	Air Quality Strategy priorities
Monitoring and core statutory duties	Monitor the performance of the Air Quality Strategy and Air Quality Action Plan
Emissions from Developments and Buildings	Reducing the impact of new and existing developments Green infrastructure Wood burning and indoor air quality
Public health and awareness raising	Raising awareness of air quality
Delivery servicing and freight	Reducing road traffic emissions
Borough fleet actions	Reducing road traffic emissions
Cleaner transport	Reducing road traffic emissions
Localised solutions	Reducing road traffic emissions Reducing the impact of new and existing developments Green infrastructure

Table 7-2: Air Quality Action Plan

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Monitoring and core statutory duties	1	Ealing to maintain the borough's 3 continuous monitoring stations and 60 diffusion tubes.	Air quality team	Low	No emissions/concentrations benefit but critical in terms of understanding emissions, concentrations, and the monitoring and evaluation of the Action Plan.	Ongoing	KPI: All monitors fully calibrated & serviced every year. Target: Over 90% date capture at all sites. KPI: Submission of statutory annual status report on time each year.	Details of our monitoring can be found here: Latest Annual Status Report Additional monitoring to be an integrated part of planning process, to enable assessment, mitigation and protection against adverse impacts from construction.
Monitoring and core statutory duties	2	Seek funding for a PM2.5 monitor from S106	Air quality team	Low	No direct emissions/concentrations benefit but critical in terms of understanding emissions and concentrations in the Borough. This will also enable better monitoring and evaluation of the effectiveness of this Air Quality Action Plan in terms of PM _{2.5} concentrations.	2022 - 2023	Output: Decision regarding location of monitor. KPI: Installation of new PM _{2.5} monitor	Ealing Council is investigating the possibility of augmenting the existing monitoring network with low-cost sensors.
Monitoring and core statutory duties	3	Commission and maintain monitoring of air pollution around the Southall Gasworks site	Air quality team	Medium	No direct emissions/concentrations benefit but crucial to understanding air quality in the air and developing future measures if required.	Monitoring commissioned 2021; to continue through period covered by this plan	Output: Detailed monitoring data including all relevant pollutants for the Southall Gasworks site.	
Emissions from developments and buildings	4	Ensuring emissions from construction are minimised	Development Management in association with Environment Protection	Low	High. Emissions from construction and demolition dust account for 20.9% of PM ₁₀ emissions in Ealing, and 4.4% of total PM _{2.5} emissions in Ealing.	Ongoing	Target: 100% of relevant applications to include appropriate conditions on construction dust mitigation.	During construction, developers and contractors should follow the guidance set out in The Control of Dust and Emissions during Construction and Demolition SPG: carry out an Air Quality and Dust Risk Assessment, submit an Air Quality and Dust Management Plan for the construction, implement mitigation measures and carry out site monitoring. Enhanced planning conditions with greater emphasis on Construction and Environment Management Plans are being developed. Opportunities for spot

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
								<p>checks for planning conditions will also be investigated.</p> <p>The Council will investigate engagement opportunities with the London Low Emission Construction Partnership to review work in other boroughs.</p> <p>Medium to high risk sites will be required to install AQ monitors.</p>
Emissions from developments and buildings	5a	Ensuring enforcement of Non-Road Mobile Machinery (NRMM) air quality policies	Development Management in association with Environment Protection	Low	<p>n/a. Benefits potentially significant but not quantifiable.</p> <p>Emissions from NRMM have increased since 2013, and now account for 7.8% of total NO_x emissions, 1.5% of PM₁₀ emissions, and 3.2% of PM_{2.5} emissions in Ealing.</p>	Ongoing	<p>Target: 100% of relevant applications to include a condition on use of only NRMM Low Emission Zone-approved machinery.</p> <p>KPI: This information reported annually.</p>	<p>The NRMM Low Emission Zone requires that all engines with a power rating between 37 kW and 560 kW meet an emission standard based on the engine emission “stage”.</p> <p>LBE has signed-up for the pan London GLA NRMM scheme delivered by Merton Council, responsible for enforcing NRMM standards at major construction sites in the borough. <i>There are now 15 such sites being identified with agreement of Development Management.</i></p> <p>Ealing is 75% compliant as of 2022, based on 26 audits completed that calendar year.</p>
Emissions from developments and buildings	5b	Reduce emissions from onsite diesel- or petrol-powered generators at construction sites	Air quality Team	Low	<p>n/a. Benefits potentially significant but not quantifiable.</p> <p>Emissions from NRMM have increased since 2013, and now account for 7.8% of total NO_x emissions, 1.5% of PM₁₀ emissions, and 3.2% of PM_{2.5} emissions in Ealing.</p>	Ongoing	<p>Target: 100% of major developments to commit to no diesel or petrol generators.</p>	<p>LBE advise construction sites to avoid the use of diesel-or-petrol powered generators and use mains electricity or battery powered equipment.</p> <p>All major developments will be requested to commit to no diesel or petrol powered generators in their Dust/Air Quality Management Plans.</p>
Emissions from developments and buildings	6	Reduce emissions from CHP	Development Management in association with Environment Protection	Low	<p>n/a. Benefits potentially significant but not quantifiable.</p>	Ongoing	<p>Target: Conditions attached to ensure that 100% of new energy installations are compliant with the latest London Plan.</p> <p>KPI: To be reported on annually.</p>	<p>LBE now discourages the use of small scale and unabated gas CHPs that exacerbate air pollution.</p> <p>We seek compliance with London Plan policies that require developers to quantify the impact of CHPs on air quality to support their ‘air quality neutral (AQN)/air quality positive (AQP)</p>

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
								proposal, as opposed to accepting qualitative treatment.
Emissions from developments and buildings	7a	Enforce Air Quality Neutral policies	Development Management in association with Environment Protection	Low to Medium	n/a. Benefits potentially significant but not quantifiable. Reduces the contribution to pollution from new developments, and minimises exposure of residents of new developments.	Ongoing	Target: 100% of eligible developments meeting the air quality neutral standards per year. KPI: To be reported on annually.	LBE encourages developers to harness and maximise energy from renewables and using technology (air/ground source heat pumps and PV). All eligible developments must provide appropriate AQN/AQP documentation/mitigations. LBE may apply more stringent Transport Emissions Benchmarks (TEB) than those designated for the area (Outer/Inner London) for developments in areas of poor air quality and AQFAs, when calculating emissions (NOx, PM _{2.5}) using approach that set out in the latest AQN & AQP guidance and Defra policies and comparing it to total predicted emissions, before applying costs against damage to environment.
Emissions from developments and buildings	7b	Reduce emissions from emergency diesel- or petrol-powered generators	Development Management in association with Environment Protection	Low	Medium.	Ongoing	Target: Conditions attached to any developments that propose any emergency generators onsite. KPI: To be reported annually.	LBE now request developers to consider alternative technology to diesel generators. If viable alternatives can't be found, then developers will be requested to submit post installation emission testing by an accredited laboratory to ensure NOx emissions at the flue meet emission standard of 150mg/Nm-3 (at 5% O2). Substituting diesel generators for alternative cleaner power (mains electricity) can be undertaken at construction sites, emergency power back-ups, roadside servicing and repairs, fast-food kiosks/outlets on high streets, leisure events, summer festivals, wherever there is relevant exposure and risk to public health. Construction plans including diesel generators at construction sites must be NRMM compliant.
Emissions from developments and buildings	8	Ensuring adequate, appropriate, and well-located green space and infrastructure is included in new developments	Development Management in association with Environment Protection	Low	Green infrastructure schemes can transform urban areas and help to provide improved public spaces. Whilst it can be hard to quantify air quality	Ongoing	Target: 100% of major development applications to integrate green space/communal gardens. KPI: To be reported annually	Developers of larger developments are required to create on-site green space (external amenity) and infrastructure. There is a chapter in the Core Strategy on Green Space. This is to maximise

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
					exposure improvements from such schemes it may therefore be useful to consider such schemes as part of the Healthy Streets approach or to look at the measures of success built into Green Infrastructure proposals.			benefit sensitive demographics with large exposure (schools, care homes etc).
Emissions from developments and buildings	9	Declaring Smoke Control Zones and ensuring they are fully promoted and enforced.	Environment Protection	Low	Medium Solid Fuel burning including biomass contributes to up to 31% of urban derived PM _{2.5} , and 20% of PM _{2.5} emissions in Ealing (2019).	Ongoing	<p>Target: 100% targeted action against retailers/wholesale businesses selling non-authorised solid fuels.</p> <p>Target: Raise awareness of the impact of solid fuel burning</p> <p>Target: 100% smoke complaints investigated within 48 hours</p> <p>Target: Publish Ealing Air Quality Strategy, including information on the impacts of solid fuel burning and advice for households.</p>	The Ealing Air Quality Strategy, to be published in 2023, which will include a chapter on indoor air quality and wood burning, which will highlight the importance of reducing solid fuel burning impacts.
Emissions from developments and buildings	10	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:FIT, RE:NEW and through borough carbon offset funds	Development Management in association with Sustainability officers	Low	High Domestic and commercial heating accounts for 33% of total NOx emissions, 7% of total PM ₁₀ emissions, and 15% of PM _{2.5} emissions in Ealing. This scheme will deliver NOx reductions for all gas energy efficiency measures and any boilers either replaced with ultra-low NOx plant or by a connection to a local district heating network. In addition, there are energy savings related with updating boiler efficiency.	Ongoing	<p>Target: 100% of housing specifications will contribute to zero carbon outcomes;</p> <p>Target: 100% council owned homes will have an average EPC rating B (SAP points) by 2030;</p> <p>Target: 100% new council owned housing will be built to zero carbon standards by 2022;</p> <p>Target: % of Council-led programs to carry out 1000 large-scale energy efficiency measures and 4000 small-scale energy efficiency measures on private homes by 2030 (private residential).</p>	<p>The council will seek additional funding to extend its successful retrofit programmes.</p> <p>Ealing had extended GHG Scheme until 31st March 2022. Details can be found here: Green homes save money – Around Ealing;</p> <p>The Healthy Homes Ealing telephone helpline offers energy efficiency advice to Ealing residents.</p>
Emissions from developments and buildings	11	Master planning and redevelopment areas aligned with Air	Development Management, Transport and	Very Low	Medium impact on emissions from new developments.	December 2022	Target: 100% of housing developments/regeneration projects to use energy from	See further information in the Climate and Ecological Emergency Strategy

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
		Quality Positive and Healthy Streets approaches	Environment Protection				renewables and non-combustible technologies, e.g. air source heat pump (ASHP) and ground source heat pumps (GSHP), with aim to improve AQ and reduce exposure.	
Public health and awareness raising	12	Public Health department taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plans	Public Health	Medium	n/a Benefits potentially significant but not quantifiable.	Ongoing	Target: Ensure that the Director of Public Health signs off statutory Annual Status Reports and new Air Quality Action Plans.	DPH already briefed by way of a briefing note and works closely with Environment Protection via Public Health consultant.
Public health and awareness raising	13	Engagement with businesses to encourage active changes to improve air quality, particularly anchor institutions – such as NHS, schools, and Ealing Council – and their local supply chains.	Public Health	High	n/a Benefits potentially significant but not quantifiable.	Ongoing	Output: Ealing Council will create an internal working group to focus on engaging with businesses on air quality. KPI: Monitor the progress of local businesses, anchor institutions, and local supply chains targeted,	Working with the voluntary sector is very active and is likely to link into hospitals and pharmacies. Provision of support to others re: work on engagement. Further stakeholder engagement work potentially includes liaison with primary care networks (GP surgeries etc) that might target vulnerable groups and members of society. Awareness raising is also being enabled through work with Integrated Care Partnership (ICP) partners and through development activity for the Health and Wellbeing Strategy 2022-27.
Public health and awareness raising	14	Supporting direct alert service such as airTEXT, and promotion and sharing of high pollution alert services through community engagement and school events	Environment Protection /Public Health	Very Low	Low	Ongoing	High pollution alert service information to be incorporated into Health Protection Forum and relevant extreme weather response/planning forums e.g. Winter planning. Awareness raising of airTEXT/high pollution alert services to be undertaken with primary care during 2022-23.	Ealing has signed-up to both the GLA's air pollution alerts and the airTEXT service; these are shared with schools, GP surgeries and care Homes. We are exploring new ways to boost airTEXT membership via SMS. Ealing will continue engagement with GPs surgeries, via Public Health, to target and protect vulnerable groups from impacts of air pollution, by increasing free subscription of airTEXT. Access to airTEXT will be promoted in the Air Quality Strategy, to be published in 2022. airTEXT is also promoted on social media channels.

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Public health and awareness raising	15	Raise public awareness about air quality and provide accurate resources for the public to use to find out about air pollution in Ealing.	Environment Protection/Public Health	Low	Low	Ongoing	Provide detailed, transparent information and resources in the Ealing Air Quality Strategy for the public to use to understand the health impacts of poor air quality, what Ealing Council are doing, and what they can do to help.	The draft Ealing Air Quality Strategy 2022-2030 was published in 2022. This document aims to provide accurate resources for the public to use to find out about air pollution in Ealing.
Public health and awareness raising	16	Encourage schools to join the TfL STARS accredited travel planning programme <i>Further engagement with GPs surgeries, via Public Health, to target and protect vulnerable groups from impacts of air pollution, by increasing free subscription of airTEXT.</i>	Transport/Public Health	Low	Medium	2022 - 2025	STARS accreditation KPIs: Gold: 20; Silver: 6; Bronze: 13; and Schools engaged & registered on STARS: 3; 42 schools achieved or working towards TfL STARS accreditation	Health protection role already embedded in Public Health. Input from Public Health team on active travel (linked to healthy child weight interventions) in collaboration with awareness raising engagement with schools undertaken by Transport as regards to influencing pupils' behaviour, leading to active travel and improved local air quality along school routes .
Public health and awareness raising	17	Improvement of air quality in and around schools. Extend schools audits to all polluted schools (and potentially to other vulnerable groups, such as nurseries).	Environment Protection / Public Health	Low	Low	As and when ASRs and AQAPs are completed, reviewed or updated (every 5-year interval).	21 school streets implemented as at March 2023; further twice yearly roll out (likely to be 4-5 each time) until 50 are delivered. 872 School children cycle trained; Cycle improvements; 24/7 bus lanes; Air quality monitoring extended to a further 5 schools in 2022	Discussions underway for applying to pilot a healthy school 'Superzone' in 2023. Also see further information in Action 26. This may also link to opportunities in the Mayor's London Health Inequalities Strategy 2018-28 (Implementation Plan 2021-24) , for example development of up to 50 School Superzones, where school becomes the focus of a local neighbourhood area
Delivery Servicing and Freight	18	Update of Procurement policies to reduce pollution from logistics and servicing	Transport/ Development Management	None	Low	Complete	100% contractors are FORS accredited; 75% sites are NRMM compliant/self-compliant	Whilst vast majority of servicing contractors are FORS accredited and NRMM polices are actively enforced through scheme led by Merton, however engagement with Procurement needs to be had in near future to further reduce pollution from logistics and servicing https://www.london.gov.uk/sites/default/files/gla_group_rpp_v7.12_final_template_for_web.pdf

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Delivery Servicing and Freight	19	Reducing emissions from deliveries to local businesses and residents: <i>Council to take action to raise awareness of Air Quality amongst the business community, by preparing briefing to Ealing's largest businesses. Briefing will seek to promote use of Evs, using London Mayor's Cleaner Vehicle Checker</i>	Transport and Development Management	Low to Medium	Medium	Short term	KPI: % of business CPZs to be implemented	Highways Programme developed and Industrial CPZ programme commenced. Preliminary design complete Park Royal Industrial Estate To follow LAEI trajectory on base year figure: 990 tonnes in 2013 Source TfL LIP3 Outcomes data To follow LAEI trajectory on base year figure: 98 tonnes PM ₁₀ and 55 tonnes PM _{2.5} in 2013 Source TfL LIP3 Outcomes data pack. London Mayor's Cleaner Vehicle Checker
Borough Fleet Actions	20	Reducing emissions from council fleets: Migrate existing small vehicle fleet to electric vehicles	Facilities Management	Low	Medium	Ongoing	Target: To acquire 40 EV vans Target: 100% vehicle fleet to be EVs by 2025	WestTrans has secured FORS Champion status for LBE in recognition of the procurement practices – including FORS accreditation requirements for any procured freight/fleet function. The Council is holding discussions with all teams to move vehicle fleet to EVs as much as possible. However, currently there are no full EVs able to tow over 2 tonnes on the market. Instead, these medium and large vehicles will be replaced with Euro VI standard vehicles on contract hire for 3-4 years, by which time there should be suitable replacement EVs available. Facilities Management to investigate promoting EV with local businesses, by taking advantage of government grants.
Borough Fleet Actions	21	Reducing emissions from council fleets: Smarter Driver Training for drivers of vehicles in Borough Own Fleet i.e. through training of fuel-efficient driving and providing regular re-training of staff	Facilities Management	Low	Low	Ongoing	KPI: Number of training sessions carried out	FM/ICT use vehicle telematics to monitor driver behaviour. This highlights speeding, harsh driving, idling etc. This information is then fed back to drivers to improve driver behaviour.
Localised solutions	22	Green Infrastructure (GI)	Development Management, Transport,	Low	Low	Ongoing	Borough to develop GI targets in conjunction with its LIP and Core strategy	Green Infrastructure is being developed following Policy 6.3 of the Ealing Development Strategy 2026.

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
			Highways, Environment Protection, Regeneration					Defra Air Quality Grant provided improvements for Horn Lane which includes green landscaping and SUDS.
Localised solutions	23	Liveable Neighbourhoods	Transport in partnership with Environment Protection and Regeneration	High	Low to Medium	Ongoing.	Borough to seek funding for implementation of area-based air quality schemes when available.	West Ealing Liveable Neighbourhood (WELN) scheme. This is aimed at eliminating air quality hotspots by reducing car journeys through encouraging mode shift and provision of Green Landscaping and SUDS. The Ultra Low Emissions Zone (ULEZ) was extended to cover Acton Oct 2021; further extension which will cover the entirety of Ealing is planned to take place by the 29 August 2023.
Localised solutions	24	Support communities wishing to enact temporary road closures, support and encourage resident-led Play Streets, and identify opportunities to increase the size and number of School Streets	Transport/ Highways/ Street Services	Low	High in targeted areas	Ongoing	Target: Increase number of school streets to 50 by 2027.	The resident-led play streets initiative has resulted in 25 registered play streets in the borough. Ongoing work will encourage them to return as traffic increases. Ongoing work will identify opportunities to increase the number and size of the successful School Streets.
Cleaner transport	25	Ensuring that Transport and Air Quality policies and projects are integrated	Shared responsibility between Transport, Street Enforcement and Environment Protection	Medium	Low	Ongoing	Target: 100% of AQ and Transport policies and projects to be integrated. Target: 100% of major road schemes to include integrated air quality monitoring	Examples of current integrated policies include policies on school travel plans, LENs, school streets, modal shift to walking and cycling, emissions-based parking charges that promoting cleaner vehicles and electric vehicles.
Cleaner transport	26	Discouraging unnecessary idling by taxis and other vehicles	Environment Protection/ Transport/ Street Enforcement	Low	Medium at pollution hotspots; low on overall emissions.	2022 and ongoing	Target: Identify pollution hotspots for additional anti-idling measures. Target: 100% AQ hot spots to have anti-idling signage. Target: 100% AQ hot spots with anti-idling signage to have civil enforcement.	LBE's approach combines public awareness and education, anti-idling signage and enforcement to target idling hotspots such as schools and bus and taxi ranks. Ealing participates in the Mayor of London's Idling Action London campaign, which delivers idling action events, school workshops, and business engagement. Anti-idling signage already exists at some major roads, e.g., Madeley Road, but further anti-idling signage is planned

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
								<p>for 2023 and beyond. Future signage may include health messages.</p> <p>The key implication, is for enforcement via a borough-wide traffic management order (TMO) under section 6 of the Road Traffic Regulation Act 1984, based on the exemplar TMO provided by Idling Action London, which has also been implemented in other London boroughs. A borough-wide TMO would provide consistency and parity across the borough and enable any enforcement to equitably take place across the whole borough.</p>
Cleaner transport	27	Using parking policy to reduce pollution emissions	Street Services/ Highways	Low	Low to Medium	2022	<p>Output: Existing 100% emissions-based parking scheme for long-term parking to be extended to 'short stay' visitor parking.</p> <p>Seek opportunities to reclaim carriageway as part of public realm improvements including SUDs</p>	<p>The implementation of 100% emissions-based permit parking for long-term parking is complete.</p> <p>Low emission vehicles are offered a discount in pay & display and car parking spaces. There is a scale categorising each vehicle into one of 4 carbon dioxide (CO₂) bands, with an additional surcharge added to diesel vehicles which are not Euro 6.</p>
Cleaner transport	28	Installation of Ultra-low Emission Vehicle (ULEV) infrastructure	Transport/ Highways	Low to High depending on uptake	Medium. Emissions from private cars account for 24% of total NOx emissions in Ealing. Electric vehicles do not emit NOx, so any shift from convention vehicles to EVs will reduce NOx emissions.	Ongoing	<p>Target: Reduce walking time to an electric vehicle charging point to 10 minutes by 2023.</p> <p>Target: Reduce walking time to an electric vehicle charging point to 5 minutes by 2025.</p> <p>Target: Increase number of electric vehicle charging points to 2000 by 2026.</p>	<p>Ealing Council has successfully implemented 220 EV charging points in Ealing during the previous Air Quality Action Plan. Building on this success by increasing the availability of charging points is a priority for the Council going forward. Additional provision will focus on streets further than 10 minutes from an EV charging point, and areas with street parking.</p> <p>Ealing Council will require all new parking spaces to be passively equipped for EV charging going forwards.</p>
Cleaner transport	29	Provision of infrastructure to support cycling	Transport	High	High. Emissions from private cars account for 24% of total NOx emissions in Ealing, 19% of total PM ₁₀ emissions, and 20% of total PM _{2.5}	Ongoing	<p>Target: Deliver Uxbridge Road walking & cycling corridor project which will separate cyclists from other road traffic. Uxbridge Road is a key nexus for cyclists in the Borough.</p>	<p>Improve interconnectivity through identifying key cycle routes. Targets follow MTS trajectory on base period figures.</p>

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
					emissions. Modal shift away from car use will decrease these emissions.		<p>Target: Increase the number of cycle hangars in the Borough to 150 by 2026.</p> <p>Target: % of Londoners to do at least 20 minutes active travel daily: 38% for 2021 and 70% for 2041; 46% by 2026 % of Londoners living within 400m of the London-wide strategic cycle network: 16% and 69% in 2021 and 2041 respectively; 29% by 2026.</p>	<p>91% of Ealing Residents are within five minutes' walk of a bus service and 99% are within seven minutes (both at average walking speed).</p> <p>Improved PTAL is desirable in Park Royal, Norwood Green and parts of Greenford, Northolt, Perivale and Southall.</p> <p>Northolt and Southall active travel schemes that will see reclamation of carriageway.</p>
Cleaner transport	30	Increase cycle training with schools and adults	Transport		Low. Training will increase uptake of cycling, which will reduce emissions from transport. However, the effectiveness is difficult to quantify.	2022 – 2027 (annually)	Target: Support at least 450 adults in cycle training annually	<p>Further training events postponed due to Covid-19</p> <p>Cycle training individuals trained (917) exceeded target (447) from previous Air Quality Action Plan;</p> <p>School children cycle trained (872);</p> <p>Dr Bike Events (77)</p>
Cleaner transport	31	Provision of infrastructure to support pedestrians	Transport	High	High. Emissions from private cars account for 24% of total NOx emissions in Ealing, 19% of total PM ₁₀ emissions, and 20% of total PM _{2.5} emissions. Modal shift away from car use will decrease these emissions.	Ongoing	<p>Target: Completion of Uxbridge Road walking & cycling corridor project which will improve pedestrian safety and accessibility to bus services along this route.</p> <p>Target: Improve pedestrian experience in town centres to make walking to amenities more attractive.</p> <p>Target: Ensure sustainable/active travel is included in new developments.</p> <p>Target: Seek to create new routes across roads, railways and canals where severance is an issue.</p> <p>Target: Investigate potential for modal filters or temporary road closures on key pedestrian routes.</p>	<p>A 20mph speed limit was successfully introduced across Ealing to improve road safety.</p> <p>The provision of additional pedestrian infrastructure in town centres and areas of severance is aligned with the Transport Strategy goal to make the Borough accessible to those with a mobility impairment.</p>

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Cleaner transport	32	Increasing the proportion of electric and hydrogen vehicles and low emission vehicles in Car Clubs	Transport	Low	Low. The car club fleet in London is almost 100% Euro 5 or Euro 6 compliant. In the general fleet, EVs have the potential to reduce NO2 concentrations by up to 1% at receptors on main roads with the highest exposure to road traffic emissions.	Ongoing	Target: 100% of car clubs to be EV (proportional to demand)	WestTrans has been working on increasing the EV and hybrid fleet within car clubs in Ealing. Future targets are based on expanding on this work to switch all vehicles to EVs. A Zipcar Flex floating car club with Electric Vehicles was introduced in Acton/Ealing in July 2021.

Appendix A: Summary of consultation

A.1 INTRODUCTION

This appendix sets out details of the consultation covering the Ealing Air Quality Action Plan and the supporting Air Quality Strategy. It summarises the feedback received and the response from the Council.

The key groups involved in this consultation included:

- **Statutory consultees** including the Greater London Authority, the Environment Agency and all neighbouring boroughs.
- **Interest groups** including local and national campaign groups and environmental charities.
- **Members of the public.** In total, 204 responses were received from the public. The public consultation process also included the Ealing Air Quality Strategy 2022 – 2030.

A.1.1 Summary of consultation process

The consultation period ran for eight weeks, from 5 December 2022 to 30 January 2023. The majority of responses were received through an online questionnaire, accessed through the Council’s consultation website. Responses could also be provided by email to the dedicated consultation inbox.

In addition, the following activities were undertaken to support the public consultation:

- A series of social media posts by the Council throughout the consultation period.
- Distribution of leaflets promoting the consultation to Ealing residents.
- Two in-person events on the 9th and 12th December 2022, which aimed to raise public awareness of the consultation, explain its scope, and offer the opportunity for questions.
- Two webinars outlining the Air Quality Action Plan and the supporting Air Quality Strategy 2022-2030 on the 9th and 12th January 2023.

Following analysis of the feedback received, a revised final version of the AQAP was produced in spring 2023.

Responses from statutory consultees, interest groups and members of the public are summarised in sections A.2, A.3 and A.4 respectively.

A.2 RESPONSES FROM STATUTORY CONSULTEES

A.3.1 GLA

Consultee	Category	Response
GLA	Statutory consultee	<ul style="list-style-type: none"> • Response pending

A.3.2 Environment Agency

Table A.1 – Summary of Responses of consultation – Environment Agency

Consultee	Category	Response
Environment Agency	Statutory consultee	<ul style="list-style-type: none"> • Is pleased to note that Ealing regularly participates in the Heathrow Air Quality Cluster Group • Suggests that the new AQAP makes reference to the forthcoming ‘air quality positive’ guidance. • Suggests that the plan should include reference to the 2023 ULEZ expansion to include the whole borough. • Notes an ambiguity in the contribution of Non-Road Mobile Machinery to PM₁₀ and PM_{2.5} emissions. • Suggests that Section 5.12 include a commitment to working with professional partners such as the Environment Agency on Acton Goods Yard.

		<ul style="list-style-type: none"> • Suggests that the London Plan SI 8E position on enclosure should be referenced in 'The London Plan' section of the Air Quality Action Plan, page 13 and adopted by Ealing Borough. • Notes that the plans to help residents switch to lower emissions vehicles and encourage walking and cycling will help to tackle both the climate crisis and improve air quality.
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A.3 RESPONSES FROM INTEREST GROUPS

Table A.2 – Summary of Responses of consultation – interest groups

Consultee	Category	Response to consultation
Friends of the Earth	Interest group	<ul style="list-style-type: none"> • Suggests that the AQAP and associated AQS are too long and detailed and could be more accessible. • Suggests a need for more real-time air pollution monitoring stations, potentially including portable monitoring stations. • Raises question of the contribution of sources inside vs outside Ealing to concentrations. • Suggests moving material on policy context to appendices. • Suggests a range of potential further actions with potential benefits for the environment and public exposure to air pollution, including: <ul style="list-style-type: none"> ○ Promoting vegetated front gardens ○ Discouraging purchase and use of SUVs ○ Retrofit of existing buildings to reduce emissions from housing stock (Action 10). ○ Exploring more effective ways to publicise problem of solid fuel burning and enforcing reducing in log burners. ○ Monitoring compliance with anti-idling signage, and stronger publicity. ○ Considering changes to pelican crossings to support pedestrians. • Suggests need for more detail on benefits of proposed measures and quantification of objectives in order to evaluate the effectiveness of the proposed measures
Mums for Lungs	Interest group	<ul style="list-style-type: none"> • Welcomes the AQAP and associated measures, including 20mph speed limit across the borough and prioritisation of schools and school-related traffic. • Suggests a range of further actions with potential benefits for the environment and public health and safety, including: <ul style="list-style-type: none"> ○ Aim to reduce vehicle traffic ○ More action on enforcement of 20mph speed limit ○ Phasing out use of diesel cars ○ Increased parking charges and reduced on-street parking ○ Repurposing of parking spaces to create public realm improvements ○ Review of funding strategy for School Streets ○ Use of School Superzones to support sustainable and safe active travel for all school runs (covered in Action 17) ○ Efforts to raise public awareness of risks of wood burning • Urges Council to add more detail on rationale for and prioritisation of actions, as well as how delivery will be assessed to ensure public accountability and effective use of funds.

A.4 CONSULTATION RESPONSES FROM THE PUBLIC

A.4.1 Demographic profile of respondents

The respondent profile for the online consultation is provided in Table A-3. Overall, 198 respondents (of 204 total respondents) provided demographic information with their response. Compared to the population of Ealing residents, groups including those who are White British, those who are over the age of 35 and men were more likely to respond to the consultation.

Table A-3: Respondent profile

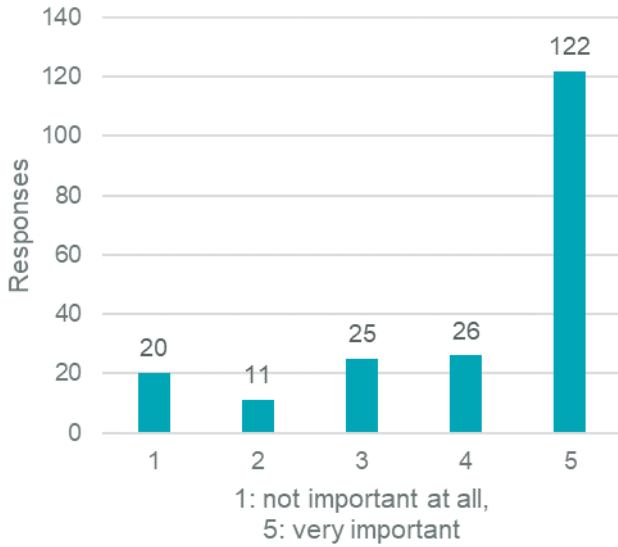
	Sub-category	Number of responses
Age	Under 18	1
	18-24	1
	25-34	17
	35-44	27
	45-54	51
	55-66	42
	65+	41
	Prefer not to say	21
Gender	Female	70
	Male	95
	Prefer not to say	33
Limiting illness/disability	Limiting illness/disability	22
	None	154
	Prefer not to say	22
Ethnicity	White - English, Welsh, Scottish, Northern Irish or British	106
	White - Irish	12
	White - Roma	2
	White - Other	30
	Any other White background	3
	Mixed or multiple ethnic groups - White and Black Caribbean	1
	Mixed or multiple ethnic groups - White and Black African	1
	Mixed or multiple ethnic groups - White and Asian	4
	Asian or Asian British - Indian	12
	Asian or Asian British - Pakistani	1
	Asian or Asian British - Bangladeshi	1
	Asian or Asian British - Chinese	1
	Any other Asian background	1
	Black, Black British, Caribbean or African - Caribbean	1
	Arab	1
	Any other ethnic group	16

A.4.2 Findings

A majority of respondents to the consultation (73%) felt that air quality is important to them. However, this is likely to reflect the fact that individuals who feel strongly about the issue are more likely to respond to the consultation.

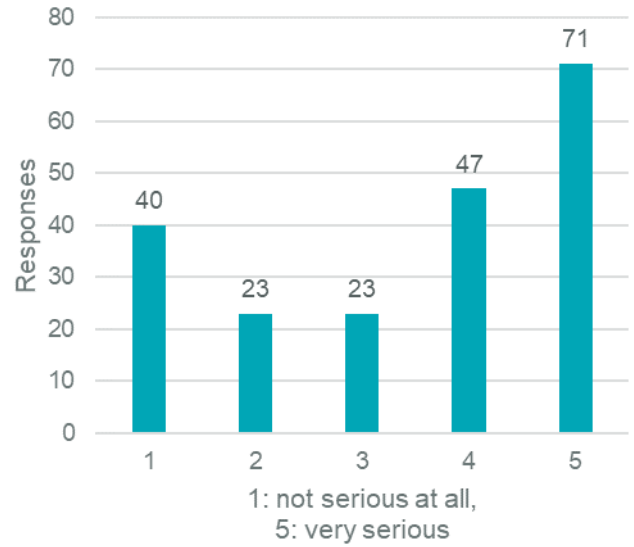
While the majority of respondents also feel that air quality is a problem in Ealing, there is less agreement on this point. While 35% believe that air quality is a very serious problem in this area, 20% of respondents believe that air quality is not at all a serious issue in Ealing.

How important is air quality to you?



Base: All respondents (204)

How much of a problem do you think air quality is in Ealing?

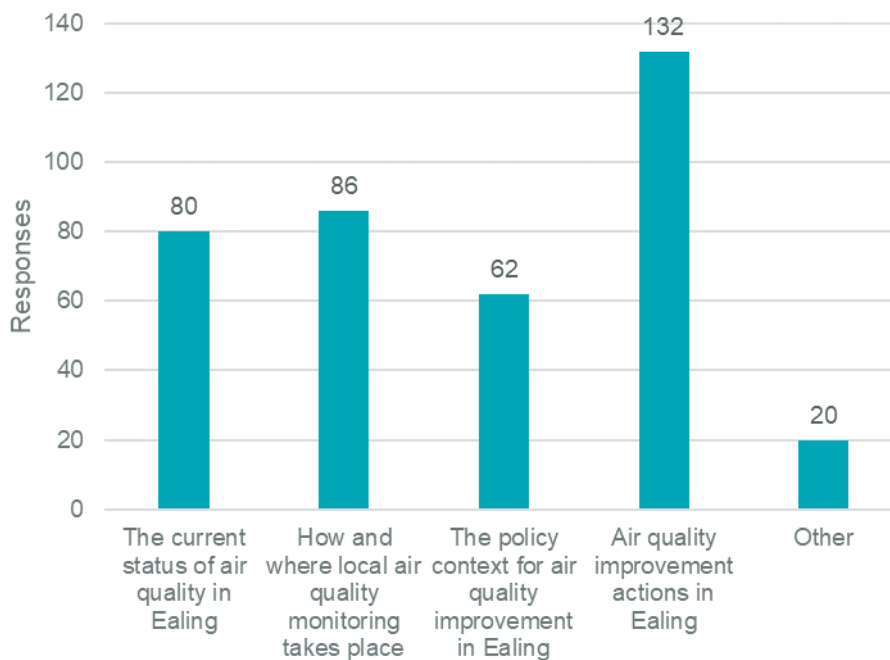


Base: All respondents (204)

Respondents were asked to select the areas of the Air Quality Action Plan that they were most interested in. A majority of respondents (65% of the total) selected air quality improvement actions in Ealing as one of the most important areas, while the policy context for air quality improvement in Ealing was seen as least important by respondents.

Detailed comments were received suggesting that the policy section, while providing useful information, could be placed in an appendix rather than in the main text of the AQAP.

Please select the areas of the Air Quality Action Plan that you are most interested in

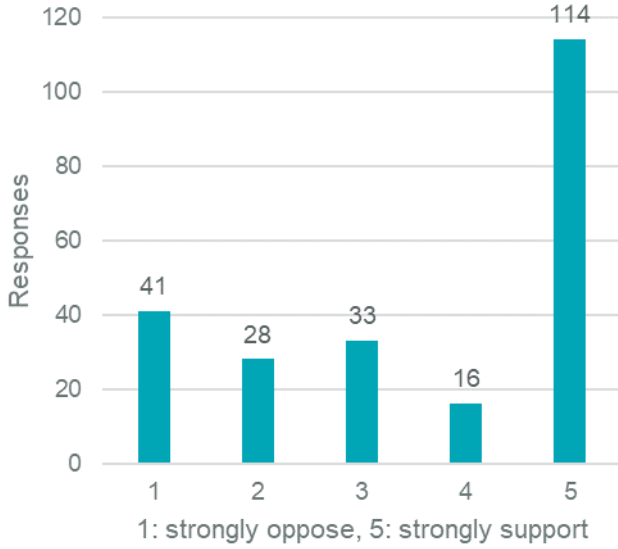


Base: All respondents (204)

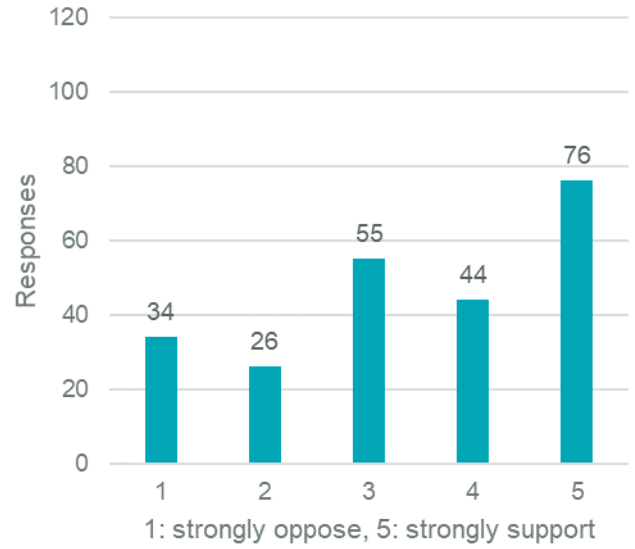
How strongly do you support or oppose the measures highlighted in these priority action areas?

Respondents were asked whether they support or oppose measures highlighted in each of the Council’s priority action areas. A breakdown of responses to each priority is provided below.

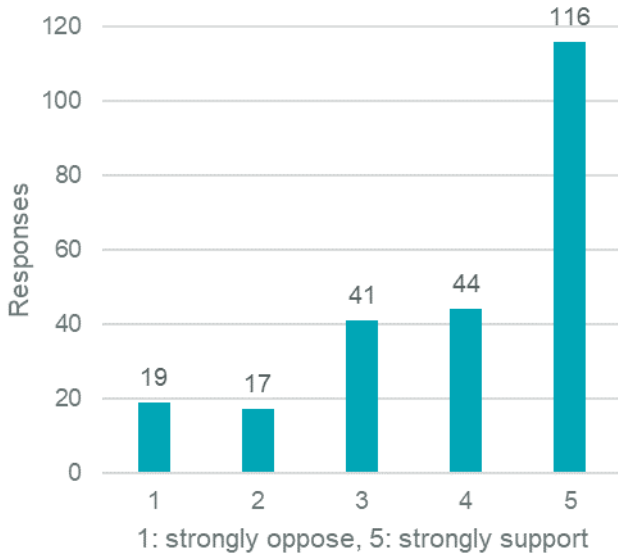
Reducing road traffic emissions



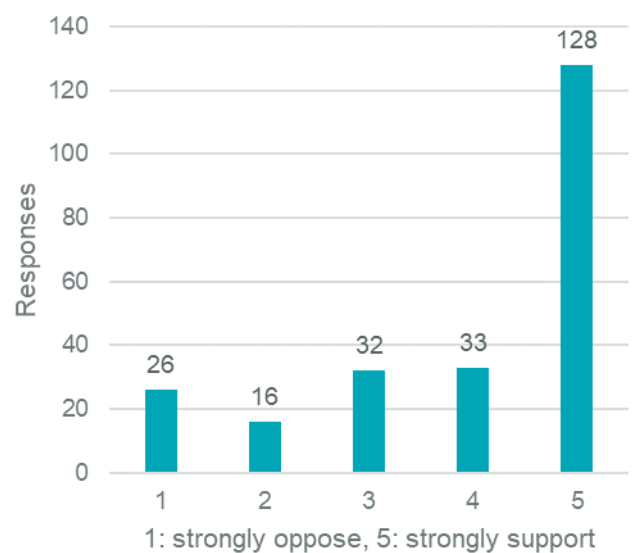
Improving indoor air quality



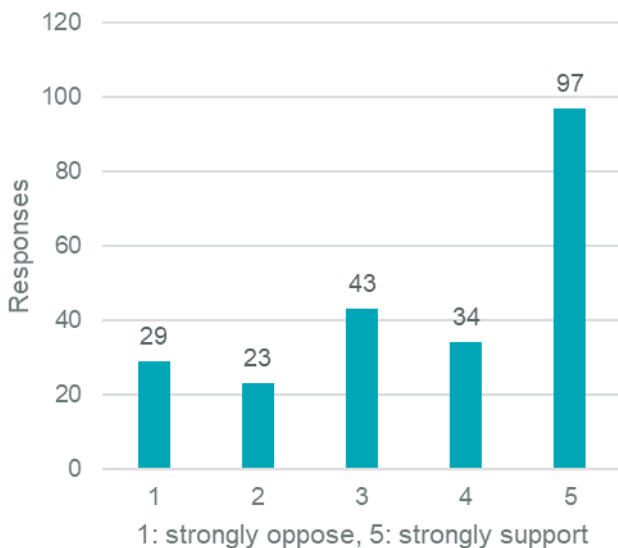
Reducing the impact of new and existing developments



Green infrastructure



Public health and awareness raising



Base: All respondents (204)

Respondents were broadly supportive of the measures relating to all priority action areas. Measures aimed at reducing the impact of new developments and green infrastructure were particularly strongly supported. Measures relating to improving indoor air quality received the lowest overall level of support, with many responses highlighting a need for further action on wood burning.

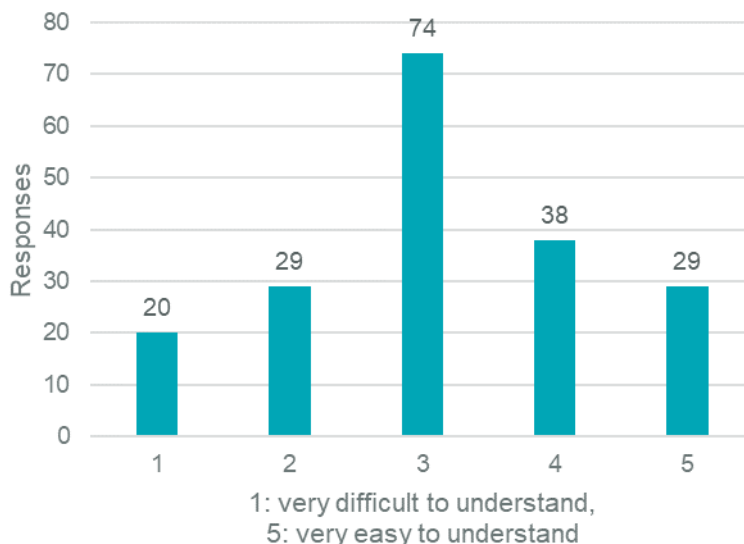
Many respondents felt that there were specific actions that were inadequate or not sufficiently ambitious. The following areas were most likely to be mentioned as needing more action:

- Greater focus / more actions on wood burning
- Greater focus / more actions on tackling vehicle emissions
- Greater focus / more actions on trees and protecting green space
- Tackling air pollution around schools
- Enforcement of existing policies, particularly around anti-idling.

Some respondents felt that the expected benefits from individual measures were unclear, particularly relating to the impact of the measures on pollutant concentrations. Concerns were also raised around how the measures address inequality in Ealing.

A significant minority of respondents commented that the document is relatively long and therefore difficult to understand. This is further demonstrated in the responses to question included below.

How clear and easy to understand did you find the Air Quality Action Plan?



Base: All respondents (204)

Responses also highlighted the need for consistency between the AQAP and the Air Quality Strategy 2022-2030, and suggested that clarity would be improved by ensuring that the two documents follow similar formats.

Concern was expressed about potential adverse health impacts of air pollution, particularly for those groups who are more vulnerable to the effects of poor air quality. The vulnerable population in Southall is highlighted as an example.

The importance of using and publishing air pollution data and secondary data to understand the effectiveness of measures included in the Council’s AQS and AQAP.

A4.4. Proposed changes to the Draft Air Quality Action Plan

The Council carefully considered all of the consultation responses that were received. Through the consultation process, several changes were incorporated into the final AQAP. A summary of these changes is set out below for ease of reference.

Accessibility

In recognition of the technical nature of this Air Quality Action Plan, the Council has developed an Air Quality Strategy to provide a less technical summary of air quality in the Borough and provide a broader roadmap for the Council's ambitions for air pollution over the next decade. Following consultation feedback, the Air Quality Strategy has been amended to ensure that it fulfils this role, including the provision of an executive summary. Changes were made to the Air Quality Action Plan to ensure consistency between the two documents where necessary.

ULEZ expansion

Following the consultation response from the Environment Agency, references to the ULEZ have been updated to note the forthcoming expansion of the ULEZ to include the whole Borough in 2023.

Amendment of action 6 to include reference to air quality positive

Following the consultation response from the Environment Agency, Action 6 has been updated to include reference to forthcoming Air Quality Positive guidance.

Amendment of Sections 3 and 7 to highlight links between AQAP and AQS

Following relevant comments and suggestions from members of the public and local groups, paragraph 3.5 of the Air Quality Action Plan has been updated to include information on the AQS and include the Council's air quality priority action areas.

A table demonstrating the links between the AQAP measures and the AQS air quality priorities has been added to Section 7 as Table 7-1.

Amendment of Sections 2.4 and 3 to better highlight rationale for measures

Following relevant comments and suggestions from members of the public and local groups (Mums for Lungs, Friends of the Earth Ealing and Clean Air for Southall and Hayes), the following changes have been made to provide more information on the rationale underpinning the actions in the Air Quality Action Plan:

- 1 Section 2.4 has been expanded to include more details on the source apportionment analysis and demonstrate how the results have led to the development of the action plan measures.
- 2 Section 3 has been updated with additional information on how the council's priority action areas have been derived.
- 3 Additional information on targets and KPIs have been included for measures.

Amendment of action 2 on PM_{2.5} monitoring

Additional information has been provided on the Council's ambition to increase PM_{2.5} monitoring in the borough and investigate the possibility of using portable monitors in order to facilitate monitoring and evaluation of the Air Quality Action Plan measures.

Amendment of action 9 on Smoke Control Zones

Reference to the Air Quality Strategy's section on wood burning and indoor air quality has been added to action 9.

Amendment of references to Non-Road Mobile Machine in Section 2

Following the consultation response from the Environment Agency, Figures 2-6 and 2-8 of the AQAP have been amended to note that Non-Road Mobile Machinery is included in the "Other" category in these plots.

Appendix B: Reasons for not pursuing Action Plan Measures

Table B-1: Action Plan Measures Not Pursued and the Reasons for that Decision

Action category	Action description	Reason action is not being pursued
None	None	None

