City of Westminster

City for All

Air Quality Action Plan

2019 – 2024

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Foreword

Westminster has a long tradition of leading the way in tackling air pollution. We were the first local authority in the UK to officially recognise our duties to improve air quality, and we were also the first local authority to have an air quality action plan.

We must be ambitious and tenacious in our work in this area because, while it is gradually improving, air quality in Westminster remains the worst in London. The health impacts are increasingly well understood, and the message comes across loud and clear from our residents: over the last few years air quality has consistently been one of our residents' top priorities.

We have many things to be proud of in our work to date on reducing pollution in the city. Our flagship Marylebone Low Emission Neighbourhood scheme trialled innovative interventions, including London's first diesel parking surcharge. Following clear support in a public consultation in 2017, I am delighted that this parking surcharge has been rolled out across Westminster. We continue to be leaders in providing electric vehicle infrastructure, with the largest number of charging points in the country, with more added almost every day. Our nationally recognised behaviour change campaign #DontBeIdle has seen thousands of motorists pledge to cut engine idling to reduce emissions, with major national companies such as National Express and Deliveroo pledging their support.

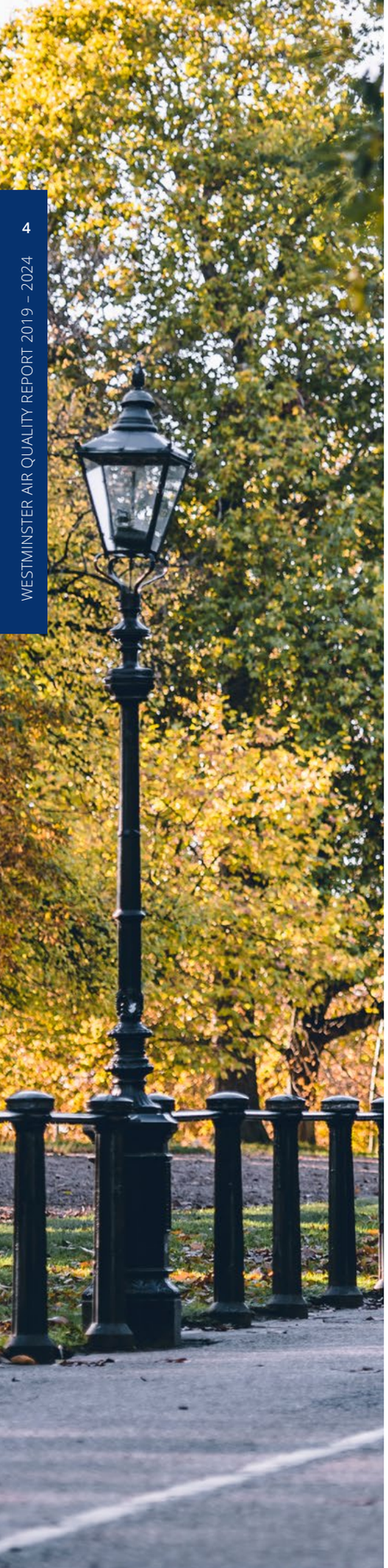
There is however, much more to be done. This plan commits Westminster to working towards World Health Organization guidelines for air pollution, which is over and above our statutory duties. It focuses on how we can show leadership as a council in all our actions, as well as recognising that everyone who is responsible for, and affected by, air pollution, must play some part in helping solve the problem.

Air pollution is something that affects everyone who lives, works in, or visits our great city. But pollution disproportionately affects some of the most vulnerable members of our society, including our children. That's why I am particularly proud that this Action Plan includes our commitment to spending over £1m over the next three years on reducing pollution levels around Westminster's schools, the most ambitious scheme of its kind in London.

Our work with schools is just one part of this Action Plan, and I am sure you'll be struck by the scale and depth of work being done on air quality improvement across the council.

This is a living document and we will listen closely to your feedback during the public consultation and beyond, to ensure that we continue to set ourselves ambitious but achievable targets to improve the air that we all breathe.

Cllr Tim Mitchell
Deputy Leader and Cabinet Member for Environment and City Management



Introduction

The City of Westminster stretches from Pimlico and Victoria in the south through the West End, Marylebone and Bayswater to Paddington and Queen's Park in the north-west. It includes London's principal areas of government, shopping, entertainment and tourism and the headquarters of innumerable commercial and professional organisations together with extensive residential areas of all types.

Approximately 247,000 people call Westminster their home, with another 1 million people setting foot in the city at some time during every day.

This Air Quality Action Plan has been produced as part of our statutory duties as an Air Quality Management Area. This Plan contains all the actions we will take to improve air quality in Westminster between 2019 and 2024.

Westminster was the first London borough to have an air quality action plan in 2000. This iteration replaces our previous 2013 – 2018 action plan. Previous action plans, our annual status reports highlighting successful actions and policies undertaken, and other statutory reporting on our work to tackle air quality can be found on our website: www.westminster.gov.uk/airquality.

Some of the key achievements and milestones from across the lifespan of our 2013 – 2018 Action Plan include:

- Providing London's largest number of Electric Vehicle charging points;
- Delivering the Marylebone Low Emission Neighbourhood (LEN), a three-year partnership programme that delivered schemes such as London's first diesel surcharge for pay to park bays;
- Launching our nationally award-winning awareness raising campaign to cut unnecessary engine idling, #DontBeIdle;
- Adopting an industry-leading Code of Construction Practice to mitigate and manage emissions from new development;
- And showing leadership on air quality issues, including partnering on cutting edge research on best practice across the world with research institutes including King's College London.

However, it is vital we do not rest on our laurels; this 2019 – 2024 Action Plan is designed to keep Westminster at the very forefront of action tackling air pollution not just in London, but across the UK.

Air pollution is also a key concern of our residents. In our annual City Survey, residents consistently rank air pollution as one of their top priorities.

Air quality is being embedded across all the work of Westminster City Council. This holds true for our overarching City for All vision for everyone living, working and visiting the city, to our 2015 – 2025 Greener City Action Plan and the new strategic planning policies of our City Plan 2019 – 2040, to new focused strategies and policies on topics ranging from electric vehicle charging infrastructure, walking and our forthcoming Carbon Reduction Strategy.

It is important to note that air quality is not something we can tackle alone. As well as not respecting borough or even national boundaries, many of the factors contributing to pollution in Westminster are beyond our control. That's why we're committed to working with all levels of government, businesses, residents and everyone with a stake in the air we breathe.

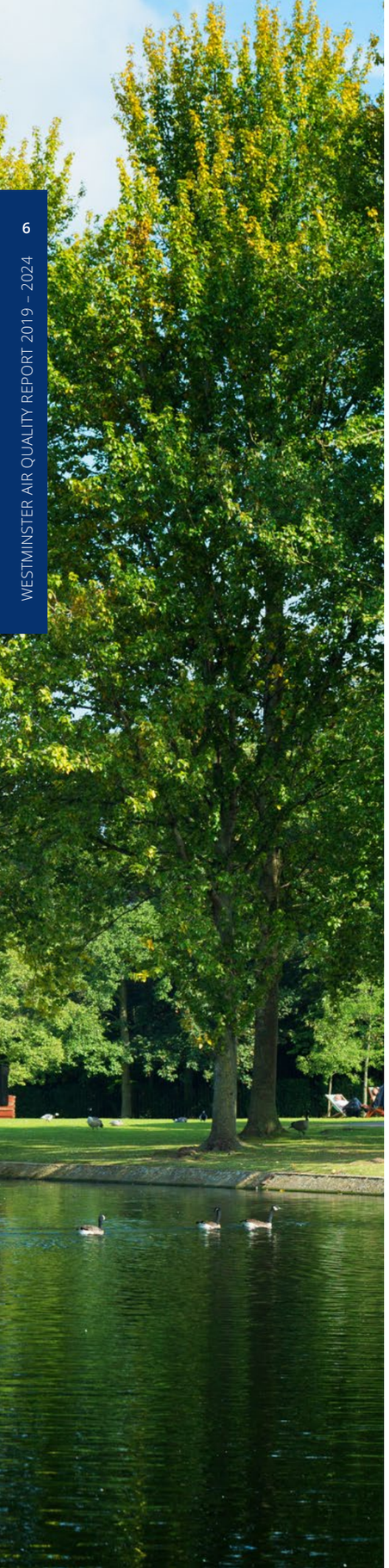
Format of this Action Plan

This Air Quality Action Plan is split into two key parts.

The first provides the context for Westminster's actions on air pollution, setting out our statutory requirements as an Air Quality Management Area, summarising the key pollutants of concern, the health impacts of pollution and the key council policies and strategies that this Action Plan links to and how our work on air quality fits within the council's wider work on creating a healthier and greener City for All. This is followed by a summary of air quality levels in London before a closer look is taken at pollution in Westminster: where pollution is, where it comes from, and the trends in pollution levels across the city over time.

The section part of this Air Quality Action Plan is the action plan itself. The action plan is split into commitments across five broad themes: monitoring, reducing emissions from transport, reducing emissions from buildings and new development, raising awareness, and lobbying and partnership working. Each of these five themes are introduced before the action plan matrix sets out all the actions we as a council are committing to taking to meet our statutory requirements and to reduce levels of all pollutants as far as we are able to.

Finally, there are a number of appendices to this Action Plan, including a glossary of useful terms, further details on our Air Quality Task Group, details on the statutory consultation undertaken for this document, and references.



Air quality in context

What is air pollution and why is it a major issue

Air pollution is the release of particles and noxious gases into the atmosphere; these emissions can be natural or manmade and are considered to have an effect on human health. Pollution from human activity is largely the result of the combustion of fossil fuels such as coal, oil, petrol or diesel.

The main pollutants of concern are carbon monoxide, nitrogen dioxide, ground level ozone, and particulate matter (small dust particles made up of a variety of different chemicals and metals). Each has different sources, health effects and chemical behaviours, making the task of understanding and controlling air pollution as a whole very complex.

While it is we who produce the pollution, it is primarily the weather that dictates what will happen once it is released into the air. During wet or windy conditions pollution concentrations remain low, either blown away, or removed from the air by rain. During still hot weather pollution is able to build up to harmful amounts, leading to what are known as pollution episodes. Concentrations also increase in winter when colder weather leads to increased emissions related to heating buildings, and low winds lead to a build-up of traffic pollution in London.

The health impacts of pollution

The health impacts of air pollution are increasingly well understood, from contributing to asthma and exacerbating other respiratory conditions to being a factor in the onset of cancer and heart disease. More research is being published all the time which increases our understanding of how air pollution can adversely influence disparate topics, including impacting on exam results[1], contributing to brain diseases such as dementia[2], and even influencing crime levels in urban areas[3].

The Department of Health's (DH) Committee on the Medical Effects of Air Pollutants (COMEAP) estimated the burden of particulate matter (PM) air pollution in the UK in 2008 to be equivalent to nearly 29,000 deaths and an associated loss of population life of 340,000 life years lost in 2008[4]. Defra has made an initial estimate that nitrogen dioxide (NO_2) contributes to shortening lives by an average of around five months – ranging from healthy individuals experiencing negligible effects to susceptible individuals whose poor health is seriously exacerbated by NO_2 pollution. This overall population burden is estimated to be equivalent to nearly 23,500 deaths in the UK per year.

Each year at least 10,000 premature deaths in London are in part attributable to key air pollutants, and the annual health costs to society of air pollution in the UK was estimated to be £15 billion in 2010, with a £3.7 billion cost to the NHS[5]. A 2018 study estimated that between 2018–2035, the the total cumulative cost to the NHS and social care due to $PM_{2.5}$ and NO_2 combined is estimated at £5.37 billion, rising to £18.57 billion when costs for diseases for which there is less robust evidence are included[6].

Children are more likely to be affected by air pollution due to relatively higher breathing and metabolic rates as well as the immaturity of their lung and immune system. The elderly are also vulnerable due to the decline in organ function with age and an increased prevalence of age-related disease.

Short term impacts of pollution

Short term health effects occur when weather conditions cause pollutant levels to build up above normal background conditions. These weather patterns tend to cause air pollution episodes, and these can last for several days. On days when air quality deteriorates more people are admitted to hospital for lung and heart problems while increased numbers of people visit their GP and need to take more medicine.

Long term impacts of pollution

It is now believed that the long term health effects of air pollution are larger than the short term effects. These effects happen at lower pollution levels than the short term effects, and are often not noticed by people at the time the damage is being done. In addition to the attribution of premature deaths in London to air pollution, the long term burden of air pollution in the UK can be represented as a loss of life expectancy from birth of approximately six months[7].

We are committed as a council to tackling all the environmental challenges we face in a holistic manner. This includes promoting actions that will help tackle both carbon emissions and air pollution emissions in order to maximise the benefits of our work on our environment.

1 https://www.pnas.org/content/115/37/9193 (retrieved 30 October 2019)

2 https://www.thelancet.com/journals/landia/article/PIIS0140-6736(16)32399-6/fulltext (retrieved 30 October 2019)

3 http://ftp.iza.org/dp11492.pdf (retrieved 30 October 2019)

4 The mortality effects of long-term exposure to particulate air pollution in the UK, Committee on the Medical Effects of Air Pollution, Dept of Health, 2010 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304641/ COMEAP_mortality_effects_of_long_term_exposure.pdf)

5 Air Pollution: Action in a Changing Climate 2010 – Defra (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69340/pb13378-air-pollution.pdf)

6 Estimating the costs of air pollution to the National Health Service and social care: An assessment and forecast up to 2035, Pimpin et al, PLOS Medicine 15(7) (https://doi.org/10.1371/journal.pmed.1002602)

7 Air Pollution in the UK 2015 – Defra (https://uk-air.defra.gov.uk/assets/documents/annualreport/air_pollution_uk_2015_issue_1.pdf)

Air quality in law: the role of local authorities

Where local authorities suspect they have levels of pollutants exceeding the National Air Quality Standards and Objectives, they are required to investigate potential exceedances with a view to implementing Air Quality Management Areas (AQMAs), which place on local authorities a statutory duty to monitor and take action to reduce levels of pollutants.

Summary of National Air Quality Standards and Objectives

Pollutant	Objective (UK)	Averaging Period	Date[1]
Nitrogen dioxide - NO_2	200 µg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
	40 µg m^{-3}	Annual mean	31 Dec 2005
Particles - PM_{10}	50 µg m^{-3} not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
	40 µg m^{-3}	Annual mean	31 Dec 2004
Particles - $PM_{2.5}$	25 µg m^{-3}	Annual mean	2020
	Target of 15% reduction in concentration at urban background locations	3 year mean	Between 2010 and 2020
Sulphur Dioxide (SO_2)	266 µg m-3 not to be exceeded more than 35 times a year	15 minute mean	31 Dec 2005
	350 µg m-3 not to be exceeded more than 24 times a year	1 hour mean	31 Dec 2004
	125 µg m-3 mot to be exceeded more than 3 times a year	24 hour mean	31 Dec 2004

Note: [1] by which to be achieved by and maintained thereafter

The Westminster context

Westminster was the first London borough to have an air quality action plan in 2000, following the declaration of the whole of the borough as an AQMA.

As part of our AQMA duties, Westminster has produced annual status reports updating Government and the public on actions taken to reduce pollution levels across the borough, alongside longer five-year action plans. Westminster's previous action plans can be found online.

As such, this Action Plan 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 to meet the requirements of the London Local Air Quality Management statutory process. This action plan sits within the council's wider work on creating a cleaner and greener city for everyone who lives in, visits or works in Westminster. A number of council plans and strategies complement and support this Air Quality Action Plan, including:

City for All

Creating a healthier and greener city is one of Westminster City Council's five priorities in our overarching City for All strategy.

Within the Healthier and Greener City priority are actions on delivering our Schools' Clean Air Fund, expanding our electric vehicle charging network, and expanding our #DontBeIdle campaign. These air quality actions sit alongside other commitments on green spaces, recycling and our ActiveWestminster programme to help our residents and visitors lead healthier and greener lives.

More information on City for All can be found on the Westminster City Council website.

Greener City Action Plan 2015 – 2025

Westminster City Council's Greener City Action Plan (GCAP) 2015 – 2025 sets out how the City of Westminster is leading the way to becoming a more sustainable city. The GCAP delivers a wide-ranging programme of environmental schemes and projects, and maps out a challenging agenda for the future. Tackling air quality is one of the nine themes of the GCAP, alongside a variety of other workstreams driving forward our work on the environment and sustainability within Westminster.

More information on the GCAP, including annual progress reports, can be found online.

Air Quality Manifesto 2018

In March 2018, we published our Air Quality Manifesto, which sets out our key priorities for work on reducing pollution across the city and beyond. The Manifesto aimed to be a point to mark where we have got to as a council, and provide some pledges for what we are going to do during the course of this AQAP.

Each of the ten priorities of the Air Quality Manifesto are represented in one or more of the actions in the action plan matrix on page 36. The ten priorities outlined by the Manifesto are:

- We will extend our successful diesel surcharge on pay and display parking across the city to help discourage diesel vehicles from polluting Westminster
- We will ask those who own more than one car to pay extra for their parking permits, unless they are driving low emission vehicles
- We will continue to invest in more ways to encourage the use of electric vehicles throughout the city
- We will go further in tackling emissions from all types of buildings, new and old, to reduce air pollution
- We will create low emission zones around our schools
- We will support residents to monitor air quality in their neighbourhoods
- We will support everyone in Westminster to increase recycling and reduce the use of limited resources
- We will continue to campaign against engine idling
- We will welcome new green technology and become a centre of leadership for green innovation
- We will invite new ideas from around the world to help inform our own work and to influence government

Some of these actions have been completed, such as the roll out of the diesel surcharge, while many others are in progress, such as delivering air quality audits to all Westminster schools as part of our £1m Schools' Clean Air Fund.

Westminster's Air Quality Task Group 2016 – 2017

In July 2016, the then Environment and Customer Services Policy and Scrutiny Committee decided to launch an investigation into air quality in Westminster. The Committee knew that air quality was an area where the council had shown significant leadership for some time, but also knew that it was one of the top concerns for Westminster residents.

In response to these concerns and to shape the policy response from the council and the Mayor of London, an Air Quality Task Group (the Task Group) was set up with the aim of developing the council's understanding of air quality, and identifying national and international best practice solutions that could be applied to central London.

As well as hearing from experts and from residents on their experiences and proposals on how the council could best tackle air pollution, the Task Group also commissioned evidence from King's College London (KCL): an independent review of initiatives to improve air quality in other cities globally, and in other London boroughs, with a view to exploring whether there are lessons that can be applied for Westminster.

The Task Group's final report, and the commissioned report from King's College London, were published in June 2017.

The Task Group made 48 recommendations across three themes: the health impacts of poor air quality; Transport; and Emissions from Buildings. Over the lifespan of this Action Plan there is also the potential for the Task Group to be reconvened to track progress of this action plan.

Air quality and climate emergency

Air quality is far from the only environmental issue facing Westminster and London as a whole. In particular, the Climate Emergency movement is another key challenge we were are facing.

In September 2019 Westminster City Council committed to becoming carbon neutral by 2030 and for the whole city to follow suit by 2040 – ten years ahead of national Government targets.

Climate change is a key issue for Westminster's residents, and our 8.9 square miles of central London attracts one million visitors each day and produce more carbon emissions than the whole of major cities such as Cardiff or Newcastle.

We are currently working to produce a Westminster Carbon Reduction Strategy, which will form an ambition set of actions to help Westminster meet its Climate Emergency commitments and goals of creating a zero carbon city. This Strategy will sit alongside this Action Plan as a key pillar of our wider work to create a cleaner and greener city.

Opportunities and synergies

It is important to note that there are some key distinctions between reducing carbon emissions and improving air quality. Carbon dioxide is not considered an air pollutant, and so the actions in this action plan are not directly aimed at reducing CO_2 levels in Westminster.

However, climate emergency efforts to reduce carbon emissions and air quality work to improve the quality of the air we all breathe can be seen as two sides of the same coin. Action to reduce emissions from buildings will often result in reduced air pollution and carbon emissions, and activities to increase green infrastructure and green space in urban areas helps reduce air pollution as well as reducing the urban heat island effect and absorbing carbon dioxide.

Air quality in London

Air quality is a major problem across all of London: all of the 33 London local authority areas have declared Air Quality Management Areas (AQMA), requiring them to take action to improve air quality in their local areas.

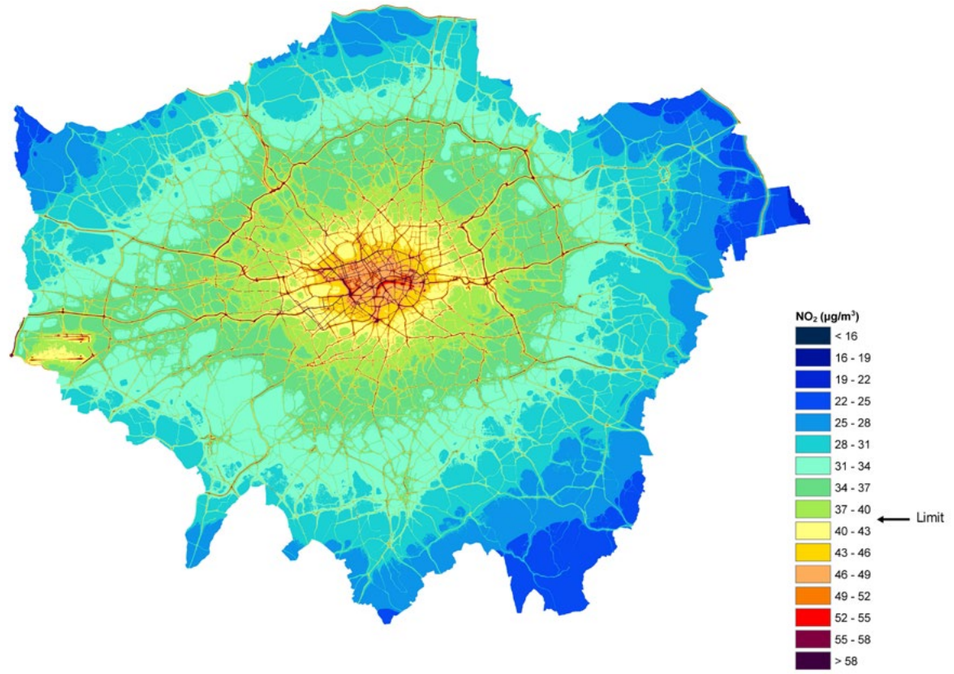
Air pollution is worse in the centre of London, where there is the heaviest concentration of traffic and buildings.

The London Atmospheric Emissions Inventory (LAEI) is published by the GLA and TfL on an approximately four yearly cycle. Using a variety of source data the latest LAEI estimates ground level concentrations of key pollutants NOx, NO_2, PM_{10} and $PM_{2.5}$ across Greater London for the year 2016, using an atmospheric dispersion model. This version of the LAEI, which was published in 2019, is the most established data source for modelling air quality across London.

Of the two main pollutant types of concern, in central London, NO_2 objectives are consistently breached, with exceedances in outer London tending to take place at the sides of busy roads. The UK national annual PM_{10} limit value is being met across London, but there are still isolated exceedances of short term PM objectives at busy roads.

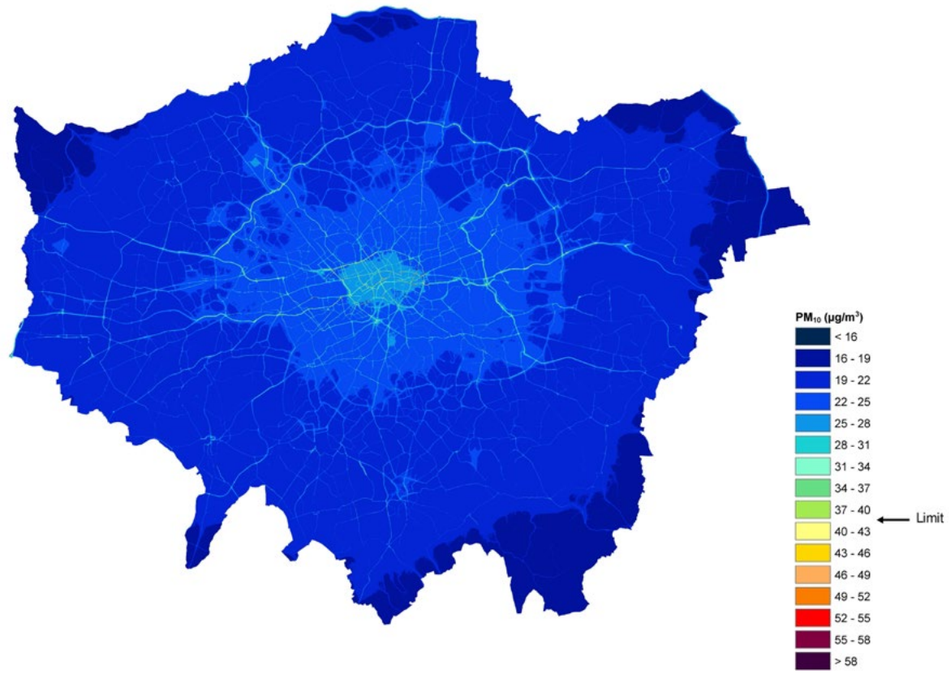
The two maps below show the overall picture in London for NO_2 and PM_{10}. Blues and greens reflect areas in compliance with standards for these pollutants; oranges, reds and darker represent exceedances of the annual limits.

Nitrogen Dioxide (NO_2)



Source: London Atmospheric Emissions Inventory (published 2019)

Particulate Matter (PM_{10})



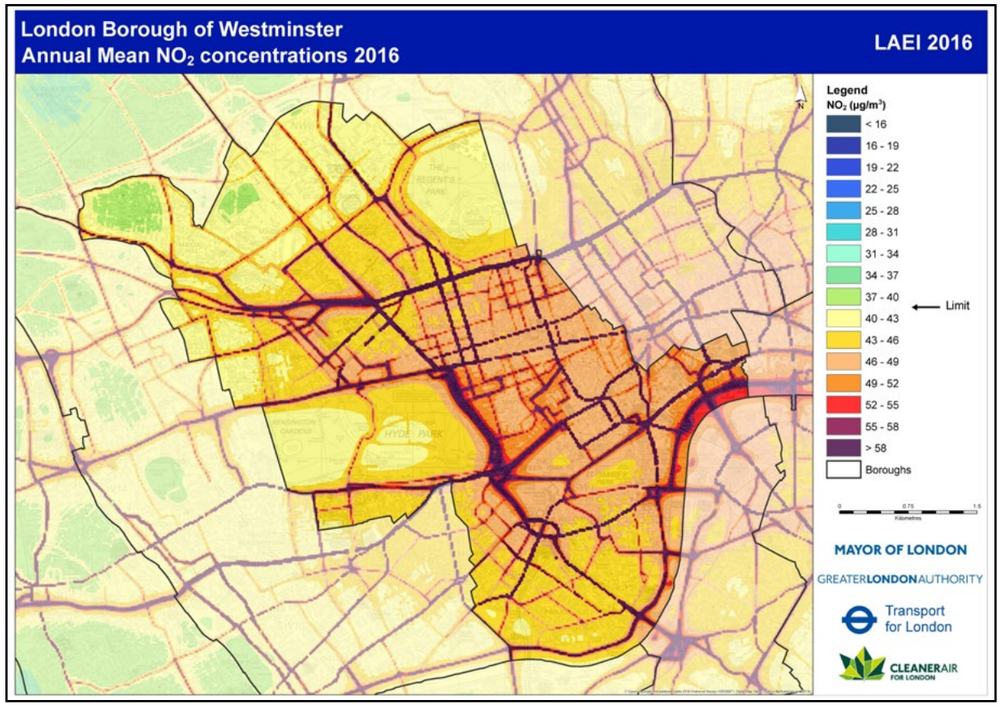
Source: London Atmospheric Emissions Inventory (published 2019)

Air quality in Westminster

Modelled air quality data

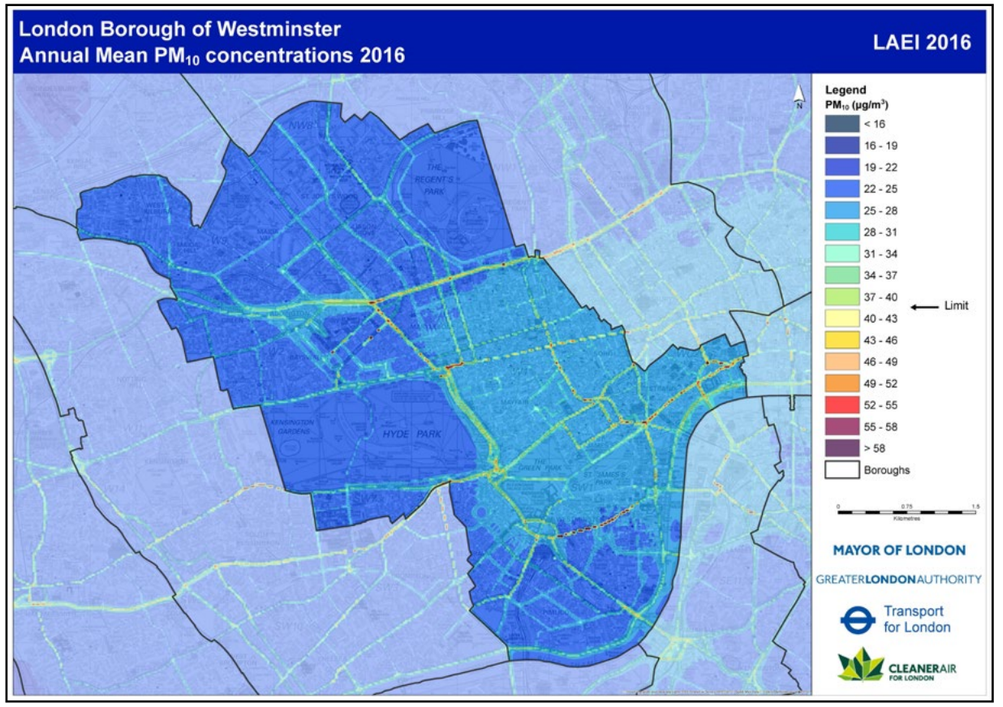
The following maps essentially reflect 'zoomed in' versions of the London-wide maps above. These allow a greater understanding of the pollution problem in Westminster. As with the rest of London, the highest pollution falls alongside busy roads and in the very centre of London where building density is highest. This reflects the influence of the two biggest sources of pollution, road transport and building emissions, which are explored further in the source apportionment section below.

Nitrogen Dioxide (NO_2)

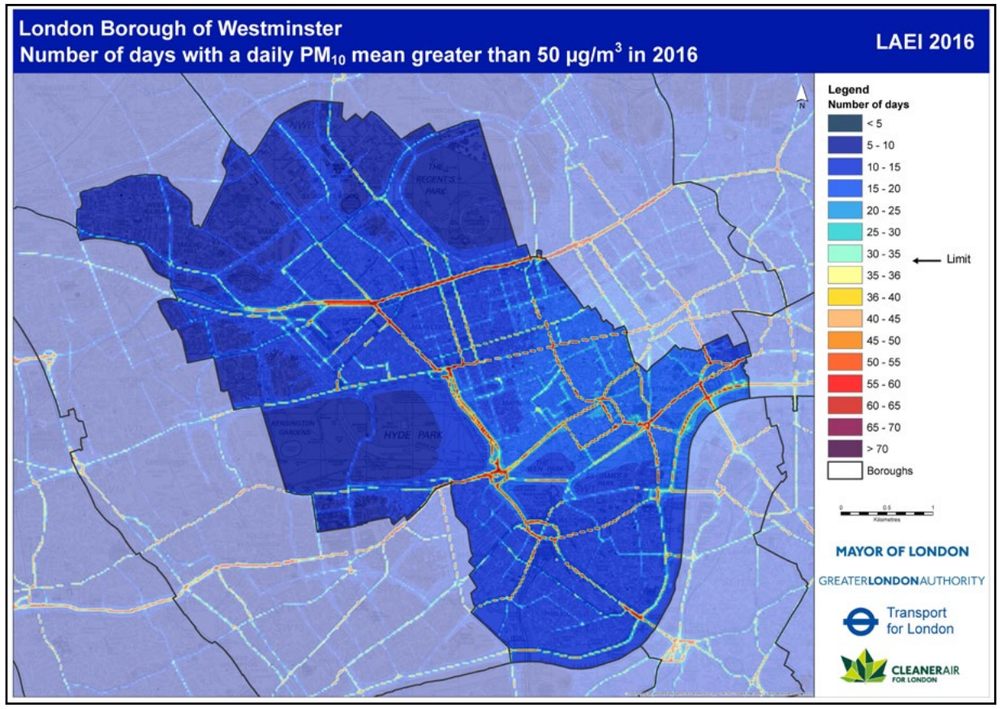


Source: London Atmospheric Emissions Inventory (published 2019)

Particulate Matter: PM_{10}

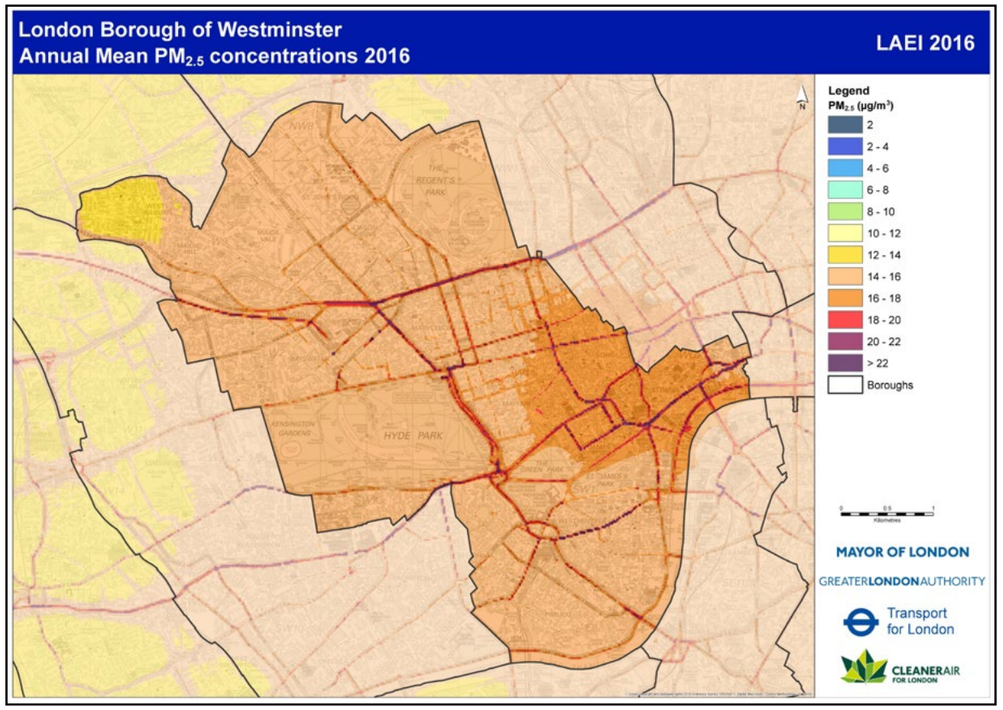


Source: London Atmospheric Emissions Inventory (published 2019)



Source: London Atmospheric Emissions Inventory (published 2019)

Particulate Matter $PM_{2.5}$



Source: London Atmospheric Emissions Inventory (published 2019)

Monitoring data and trends in Westminster's air quality

While utilising detailed air quality modelling data such as the LAEI, Westminster also has statutory duties to monitor a variety of pollutants across the city.

Air pollution monitoring can be undertaken in a variety of ways. These range from the most accurate and expensive real-time reference method monitors, which can provide accurate data every 15 minutes, to the cheapest monitoring of diffusion tubes, which can provide a single figure for NO_2 for up to a month of exposure.

Automatic monitoring in Westminster

Site Name	X (m)	Y (m)	Site Type	Pollutants monitored	Monitoring technique
Marylebone Road	528125	182016	Kerbside	NOx; PM_{10}; $PM_{2.5}$; SO_2	Chemiluminescent, TEOM, FDMS
Horseferry Road	529802	178962	Urban Background	NOx; PM_{10}; $PM_{2.5}$; Heavy Metals[1]	Chemiluminescent, FDMS, BAM, Partisol
Oxford Street (Selfridges)	528276	181065	Kerbside	NOx , PM_{10}	Chemiluminescent, BAM
Strand	530785	180911	Roadside	NOx	Chemiluminescent
Covent Garden	530444	180903	Urban Background	NOx	Chemiluminescent
Cavendish Square	528763	181397	Roadside	NOx , PM_{10}	Chemiluminescent, BAM
Oxford Street East (94 Oxford Street)	529493	181331	Roadside	NOx , PM_{10}	Chemiluminescent, BAM
Buckingham Palace Road	528709	178773	Roadside	NOx	Chemiluminescent

[1]Heavy Metals include: As, Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Se, V, Zn in PM_{10}.

Westminster's automatic monitoring network has over several years expanded to capture more pollution data across the city: 2018 was the first year of data capture for our Cavendish Square, Oxford Street East and Buckingham Palace Road monitors.

Air quality data and World Health Organisation targets

Air quality data is usually presented in one of two ways:

- As an annualised figure, reflecting the average concentrations of a particular pollutant at a particular monitoring point.
- Or as the number of hours in a year that pollution levels were above a particular level at a monitoring point.

Concentrations of pollutants are usually represented as micrograms (one-millionth of a gram) per cubic meter air, or in shortened form, µg m-3.

As the air quality in law section above explains, the National Air Quality Standards and Objectives set by the UK Government are the legal levels for pollutants that Westminster is seeking to meet. However, there is ongoing debate about at what levels these objectives should be set. This is particularly the case for Particulate Matter (PM) emissions, because adverse health impacts from PM have been documented regardless of the level of the pollutant.

The World Health Organisation (WHO) has published Guidelines for air pollutants which are more stringent than those set by the EU and UK Government for PM emissions.

Although Westminster is not legally required to meet WHO Guideline levels for air pollution, this Action Plan commits Westminster to working to meet WHO Guideline levels, going above and beyond our baseline legal requirements. This sets us more difficult standards to meet for PM emissions; but as there are no safe levels for these pollutants, it is vital that we continue to work to reduce PM emissions as far as possible.

The table below shows the main sets of Objectives and Guidelines for NO_2 and PM emissions from the UK Government and WHO.

Pollutant	Objective (UK)	Averaging Period	Set by	Legal requirement to meet
Nitrogen dioxide - NO_2	200 µg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	EU and UK Government*	Yes
	40 µg m^{-3}	Annual mean	EU and UK Government*	Yes
Particles - PM_{10}	50 µg m^{-3} not to be exceeded more than 35 times a year	24-hour mean	EU and UK Government	Yes
	40 µg m^{-3}	Annual mean	EU and UK Government	Yes
	20 µg m^{-3}	Annual mean	World Health Organisation	No
Particles - $PM_{2.5}$	25 µg m^{-3}	Annual mean	EU and UK Government	Yes
	10 µg m^{-3}	Annual mean	World Health Organisation	No
	Target of 15% reduction in concentration at urban background locations	3 year mean	EU and UK Government	Yes

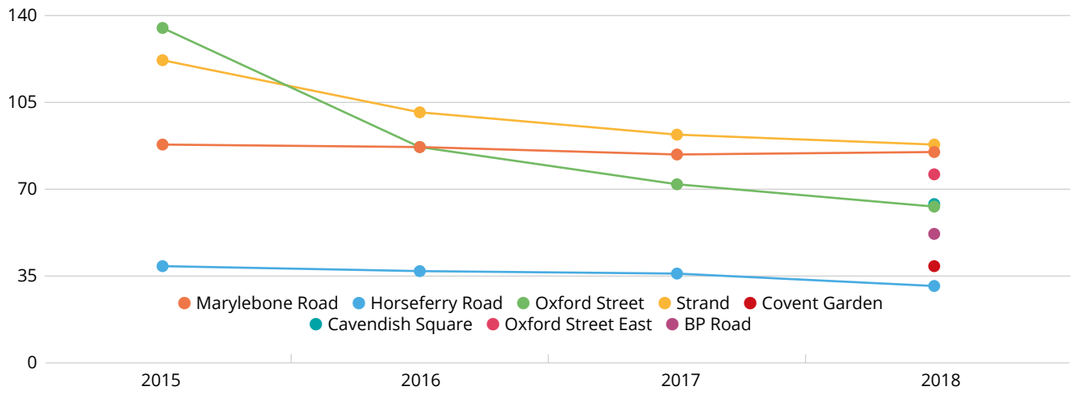
*World Health Organisation NO_2 Guideline is the same

Westminster monitoring data

Data trends in NO_2

Site ID	Annual Mean Concentration (µg m-3)							
	2011	2012	2013	2014	2015	2016	2017	2018
Marylebone Road	97	94	85	94	88	87	84	85
Horseferry Road	41	39	45	46	39	37	36	31
Oxford Street	n/a	n/a	135	143	135	87	72	63
Strand	n/a	n/a	n/a	n/a	122	101	92	88
Covent Garden	n/a	n/a	n/a	n/a	n/a	n/a	37	39
Cavendish Square	n/a	n/a	n/a	n/a	n/a	n/a	n/a	641
Oxford Street East	n/a	n/a	n/a	n/a	n/a	n/a	n/a	761
Buckingham Palace Road	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52

Line graph of Nitrogen Dioxide levels (mg m-3)



Data Trends in PM_{10}

Site ID	Annual Mean Concentration (µg m-3)							
	2011	2012	2013	2014	2015	2016	2017	2018
Marylebone Road	**41**	38	33	31	30	29	27	26
Marylebone Road FDMS	38	31	29	26	24	26	24	24
Horseferry Road	19	18	n/a	19	17	17	17	17
Oxford Street	n/a	n/a	n/a	n/a	n/a	n/a	n/a	281
Cavendish Square	n/a	n/a	n/a	n/a	n/a	n/a	n/a	281
Oxford Street East	n/a	n/a	n/a	n/a	n/a	n/a	n/a	281

Notes: Exceedance of the PM_{10} annual mean AQO of 40 µg m-3 are shown in **bold.**
1. This data has been annualised.

Data trends in $PM_{2.5}$

Site ID	Annual Mean Concentration (µg m-3)							
	2011	2012	2013	2014	2015	2016	2017	2018
Marylebone Road FDMS	25	22	20	18	16	16	15	16
Horseferry Road	13	12	12	12	10	10	9	11

Notes: Exceedance of the $PM_{2.5}$ annual mean AQO of 25 µg m-3 are shown in **bold.**

Diffusion tube monitoring

Westminster does not currently undertake diffusion tube monitoring. However, this will be changing from 2020 and adopting a new diffusion tube monitoring network is one of the actions that can be found in the action plan matrix of this Plan.

Summary

Westminster City Council meets all the national AQS objectives other than for the gas nitrogen dioxide (NO_2). We are currently meeting the current objectives for particulate matter (PM_{10} and $PM_{2.5}$) but as this pollutant is damaging to health at any level, this remains a pollutant of concern. In recognition that there is no safe exposure limit for particulate matter, this Action Plan commits Westminster to target compliance with World Health Organization Guidelines for PM_{10} and $PM_{2.5}$ by 2030.

Air quality focus areas

An air quality Focus Area is a location that has been identified as having high levels of pollution and human exposure. There are 187 in London, seven of which are in Westminster. These areas were designated by the GLA, and while they are not an exhaustive list of hotspot locations, they are where the GLA believes the problem to be most acute.

Westminster's seven air quality focus areas are:

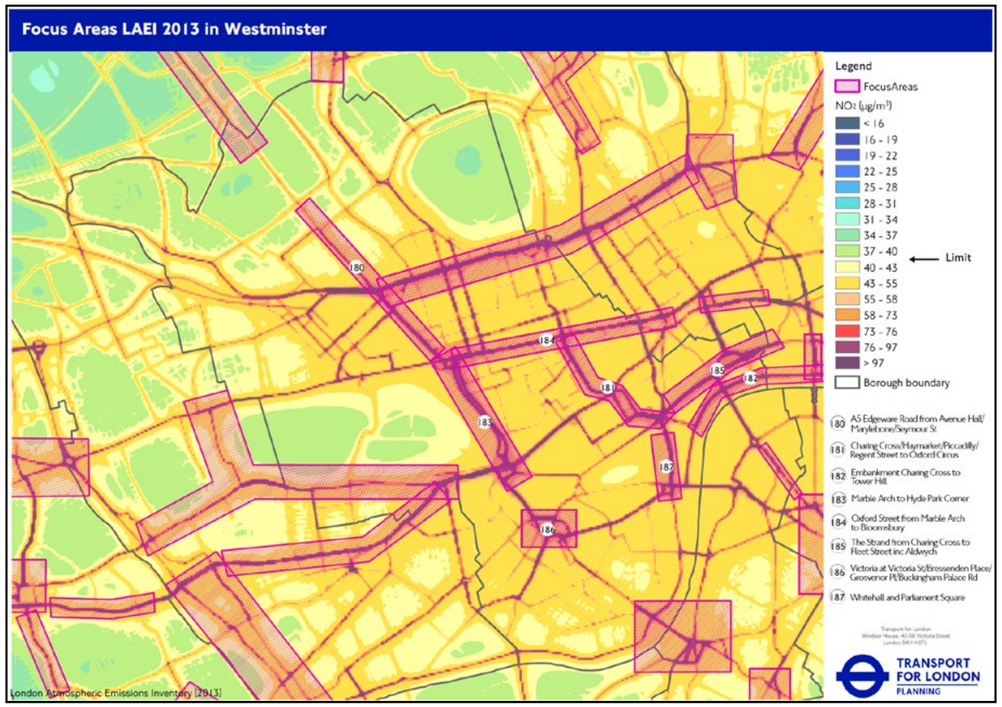
- Edgware Road / Marylebone Road (focus area 180)
- Charing Cross – Piccadilly – Haymarket – Regent's Street (181)
- Embankment (182)
- Marble Arch to Hyde Park Corner (183)
- Oxford Street (184)
- The Strand (185)
- Victoria Station and environs (186)
- Whitehall and Parliament Square (187)

These focus areas are the subject to more stringent planning regulations for new developments in Westminster's City Plan, and several of the areas have been targeted by major public realm and air quality related projects, such as the Northbank Business Low Emission Neighbourhood along The Strand and the council's forward-thinking plans for the Oxford Street District.

While the council has regard for these focus areas, our policies and interventions are not bound by them, and other monitoring and modelled data helps inform our targeted approach to improving local air quality.

In particular, other key areas of concern for the council which are not GLA designated Focus Areas include:

- Harrow Road and the Westway
- West Piccadilly
- Kingsway
- All areas immediately surrounding schools and GP surgeries

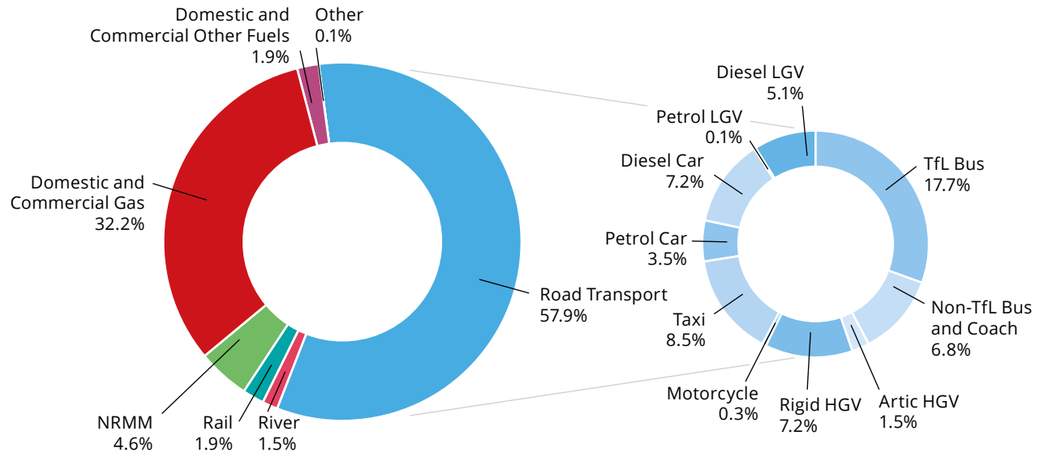


Source apportionment

Updated source apportionment graphs and accompanying narrative to be included when data is released by GLA.

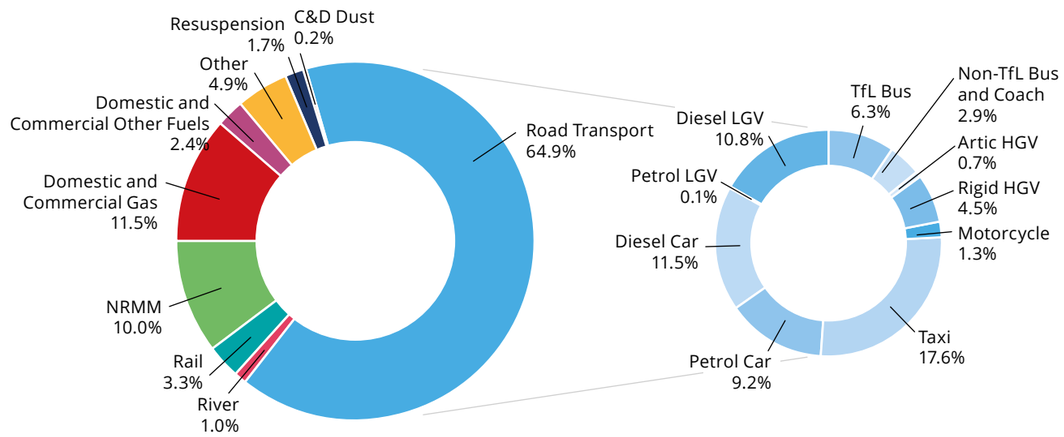
Source apportionment graphs below are placeholders from previous LAEI and have been superseded by the LAEI 2019 release.

Nitrogen Dioxide



The graph above shows that nearly 60% of NO_2 emissions come from road transport. The largest contributors to this are TfL buses (18%), Taxis (8.5%) and diesel cars (7%). Roughly one third of emissions are from Domestic and Commercial Gas sources.

Particulate matter (PM_{10})



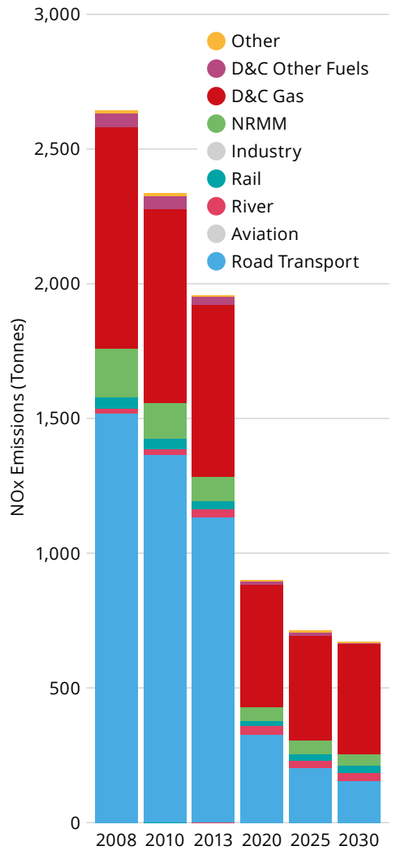
Again, Road Transport contributes nearly two-thirds of emissions, the largest polluters being Taxis (18%), diesel cars (12%) and diesel Light Goods Vehicles (including vans) at 11%, whilst Domestic and Commercial gas, i.e. boilers contribute 12% and Non Road Mobile Machinery (NRMM) contributes 10%.

Future air quality in Westminster

The LAEI provides detailed modelling figures for future air quality levels across London. The following graphs and tables show the modelled emissions forecast for Westminster for 2020, 2025, and 2030. A variety of inputs are included in the modelling to make these projections. For example, projections for road transport emissions are based on factors including expected uptake of electric vehicles, general technological advancement (and reduced emissions) of petrol and diesel vehicles, overall demand for private cars, and major policy developments such as the ULEZ. While no future modelling scenario is perfect, and there is evidence to suggest that modelled air quality figures tend to be over-optimistic in forecasting reducing emissions levels, these projections give us valuable insight into our long-term planning for tackling air quality.

PLEASE NOTE: the below projections are from the 2016 LAEI, which has been for some emissions data superseded by the 2019 LAEI release. We will include LAEI 2019 future projections when made available by the GLA.

NOx Emissions



Emissions (Tonnes) by:	2008	2010	2013	2020	2025	2030
Road Transport	1,531	1,377	1,135	335	210	165
Aviation	0	0	0	0	0	0
River	14	16	29	29	29	29
Rail	37	37	37	25	25	25
Industry	0	0	0	0	0	0
NRMM	182	135	90	44	43	43
D&C Gas	823	720	631	453	393	401
D&C Other Fuels	53	48	37	15	11	10
Other	2	2	2	2	1	2
Total	2,642	2,335	1,960	902	712	676

Notes:

(D&C = Domestic and Commercial)

The summary graph represents emissions from each source stacked on top of each other, with the total height equalling the total emissions from all sources.

The numbers in the table are those used to plot the graph and represent the tonnes of pollution emitted into the atmosphere in that year (T/y).

The emissions are combined into reasonably self explanatory 'Source Types'.

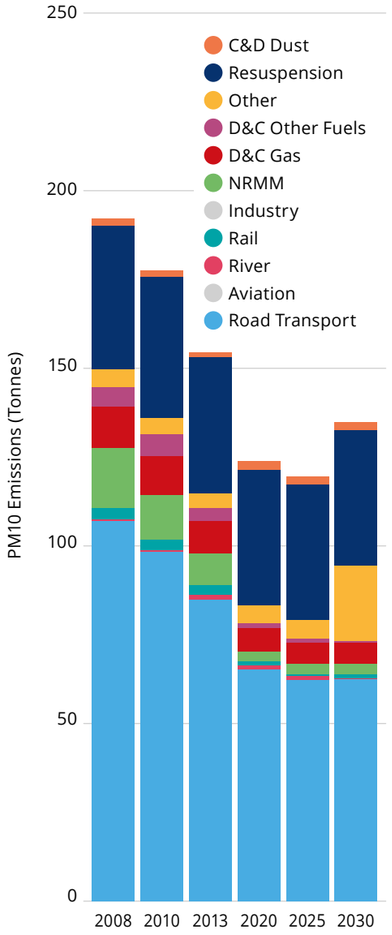
However the categories: 'Industry', 'NRMM' and 'Other' require further explanation:

- **Industry** is the total emission from Part A and Part B industrial processes, combined.
- **Non-Road Mobile Machinery (NRMM)** is the total emissions from construction and industrial off-road machines, combined.
- **Other** is the total emission from a number of small sources including agriculture, outdoor fires, garden emissions, forests, waste and waste transfer sites, combined.

NOx emissions projections for Westminster - source LAEI 2019

As Fig x shows, NOx levels are predicted to decrease rapidly between 2013 and 2020; reductions in road transport emissions (the blue bar on the graph) constitute the largest area of emissions reduction. This is due to technological advances in combustion engines for road transport vehicles, alongside an uptake of zero emission vehicles and major policy interventions such as the Mayor of London's ULEZ.

The second largest source of emissions, domestic and commercial gas (the red bar), are predicted to also decrease over the same period, but to a lesser extent. As a result, moving into the 2020s domestic and commercial gas is predicted to become the largest source of emissions in the city.



Emissions (Tonnes) by:	2008	2010	2013	2020	2025	2030
Road Transport	106.8	98.0	85.0	65.2	62.0	61.9
Aviation	0.0	0.0	0.0	0.0	0.0	0.0
River	0.4	0.5	1.0	1.0	1.0	1.0
Rail	3.0	3.0	3.0	1.0	1.0	1.0
Industry	0.0	0.0	0.0	0.0	0.0	0.0
NRMM	16.8	12.7	8.5	3.1	3.0	3.0
D&C Gas	11.7	10.7	9.2	6.5	5.6	5.7
D&C Other Fuels	6.1	6.5	3.5	1.4	1.0	0.7
Other	4.6	4.7	4.3	5.0	5.4	20.8
Resuspension	40.8	39.6	38.1	38.3	38.5	38.6
C&D Dust	1.4	1.3	1.5	1.9	1.9	1.9
Total	191.5	176.9	154.0	123.4	119.3	134.6

Notes:

(D&C = Domestic and Commercial. C&D = Construction and Demolition)

The summary graph represents emissions from each source stacked on top of each other, with the total height equalling the total emissions from all sources.

The numbers in the table are those used to plot the graph and represent the tonnes of pollution emitted into the atmosphere in that year (T/y).

The emissions are combined into reasonably self explanatory 'Source Types'.

However the categories: 'Industry', 'NRMM' and 'Other' require further explanation:

- **Industry** is the total emission from Part A and Part B industrial processes, combined.
- **Non-Road Mobile Machinery (NRMM)** is the total emissions from construction and industrial off-road machines, combined.
- **Other** is the total emission from a number of small sources including agriculture, outdoor fires, garden emissions, forests, waste and waste transfer sites, combined.

PM_{10} emissions projections for Westminster - source LAEI 2019

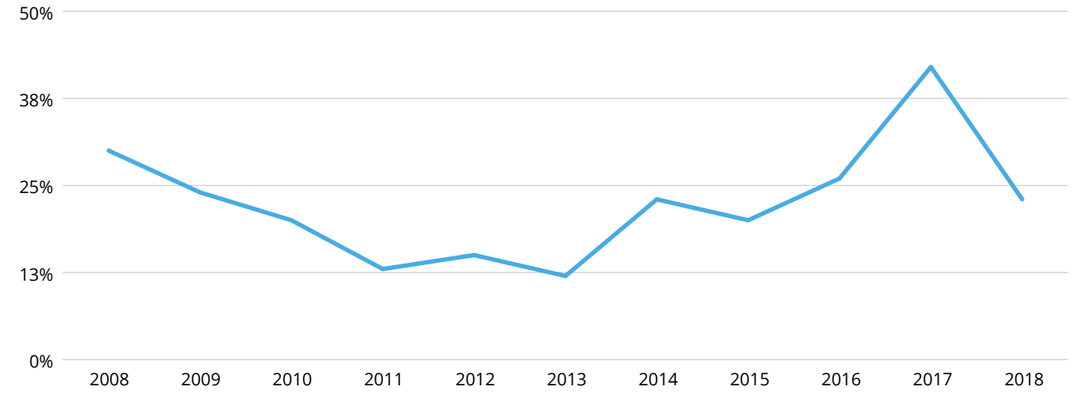
A similar picture to NOx can be seen in the projections for PM_{10} emissions, however the decrease in road transport PM emissions is predicted to much smaller than for NOx emissions. This is mainly because while a shift to zero emissions and electric vehicles will result in huge reductions in NOx emissions due to there being no tailpipe emissions, particulate emissions won't decrease as much because tyre wear and brake wear are strong components of road transport PM. This emphasises the need to not view electric vehicles as a 'silver bullet' for air quality; rather, electric vehicles need to be encouraged as part of a wider road user hierarchy that in the first instance prioritises modal shift away from private vehicle use to walking, cycling and public transport use.

Perceptions of air quality in Westminster

While the array of monitoring data and modelling outlined above shows that we have a detailed picture of the air pollution problem in Westminster, it is also worth noting that our work on this agenda is strongly supported by our residents.

In 2017, concern amongst Westminster residents about air pollution reached the highest levels we have recorded, with it being the number one concern. This dropped off in 2018, but air quality remains a top priority for our residents. Compared to national studies, Westminster residents are more likely to be interested in and concerned about air pollution; this is not a surprise given the high levels of pollution across central London.

% of residents citing air-quality as a local concern



Percentage of residents citing air-quality as a problem, 2008 to 2018. Source: Westminster City Council City Survey

A review of our past City Surveys reveals that the 2018 level of concern was not unusually low, but that the 2017 survey concerns had been exceptionally high.

Changes in the perception of "air quality as a problem" cannot be attributed to air pollution levels as there was only a small reduction in pollution levels between 2017 and 2018. Our analysis suggests that the volumes and messaging in media coverage appear to be the most likely explanators of change in concerns. National media outlets were producing more coverage that was very local, practical and explicitly linking air quality to health outcomes in 2017. While the level of media coverage has not dramatically decreased in 2018 and 2019, the spike in concern around air pollution in 2017 does seem to be linked to that year's large-scale rise in national media attention to air pollution.

Our work on the perceptions of air quality amongst Westminster residents helps inform our wider policies and projects around air pollution. National government research and the impacts of media coverage and campaigns indicate that future policies and projects around environmental issues will have most traction where the issues are grounded in local life, links with personal impacts are made explicit and where we emphasise the ability of people to make a difference. Air quality is a shared problem and we are committed to helping our residents take action to reduce their own emissions and reduce their exposure to harmful air pollution.

The air quality action plan

The council's vision for Westminster's air quality is for everyone who lives, works and visits the city to have clean and breathable air. To achieve this, we need to work holistically and collaboratively across the council and with a variety of external stakeholders including residents, businesses and other levels of government.

As with previous Action Plans, actions to improve air quality are split into five categories:

- Monitoring
- Reducing emissions from buildings and new development
- Reducing emissions from transport
- Raising awareness
- Lobbying and partnership working

As part of their statutory London Local Air Quality Management duties, the GLA has produced an air quality matrix with 38 actions for boroughs to consider delivering locally as part of their London Local Air Quality Management action planning obligations. Equally, there are 18 different sets of actions that will be used as criteria by the GLA in awarding 'Cleaner Air Borough' status, a Mayor of London accreditation scheme aimed at recognising local authorities that are working hard to improve air quality within their borough. Westminster is committed to attaining Cleaner Air Borough status through this action plan and subsequent annual progress reports. Westminster is committed to taking forward all 38 actions the GLA request boroughs consider taking.

This section is set out as follows:

- Each of the five themes is introduced, with key achievements over the lifetime of the last action plan highlighted, alongside a 'closer look' at one particular project or policy that encapsulates our work in this area. This sections also draw out some of work we will be prioritising through this new action plan.
- The action plan matrix itself sets out all the actions grouped by the five key themes. Additional information is provided for each action, including the areas of the council responsible for delivery, expected costs and benefits of the action, timeframes and key performance indicators (KPIs) for delivery, and which of the three Cleaner and Greener themes under our City for All 2020 programme each action sits under.
- The relevant Air Quality Manifesto commitments for each of the five themes are highlighted to enable us to track our progress on these priority actions.

The five themes of our Action Plan

Monitoring air quality

We will continue to monitor air quality across the City of Westminster to continually assess our compliance with Air Quality Limit Values, and against World Health Organisation targets.

We will utilise our air quality monitoring to support and evaluate our policies and projects, share our data as part of the London Air Quality Network, and raise awareness of short term and long term trends in pollution levels to our residents, businesses and visitors.

We monitor numerous air pollutants at a variety of locations across the city. More details on current pollution levels and trends can be found earlier in this Action Plan. Monitoring air quality is crucial to assessing our statutory duties as an Air Quality Management Area. Just as important is its role in evaluating the short term and long term impacts of policies and projects that we introduce or that impact on the city. Monitoring air quality also allows the public to find out and understand pollution levels across the city, and helps us provide awareness raising messaging when pollution levels are especially high.

Key actions from our Action Plan:

- Introducing a new city-wide diffusion tube monitoring network to supplement our existing automatic monitoring stations
- Continuing to trial and test new and emerging monitoring technologies, from solar powered sensors to smartphone apps
- Creating a new online interactive map of all of Westminster's monitoring locations and data
- Committing to extensive pre- and post-project monitoring of the Oxford Street District to evaluate our interventions across this area of the city
- Prioritising the provision of $PM_{2.5}$ monitoring in new automatic monitors

Relevant Air Quality Manifesto commitments

- We will support residents to monitor air quality in their neighbourhoods

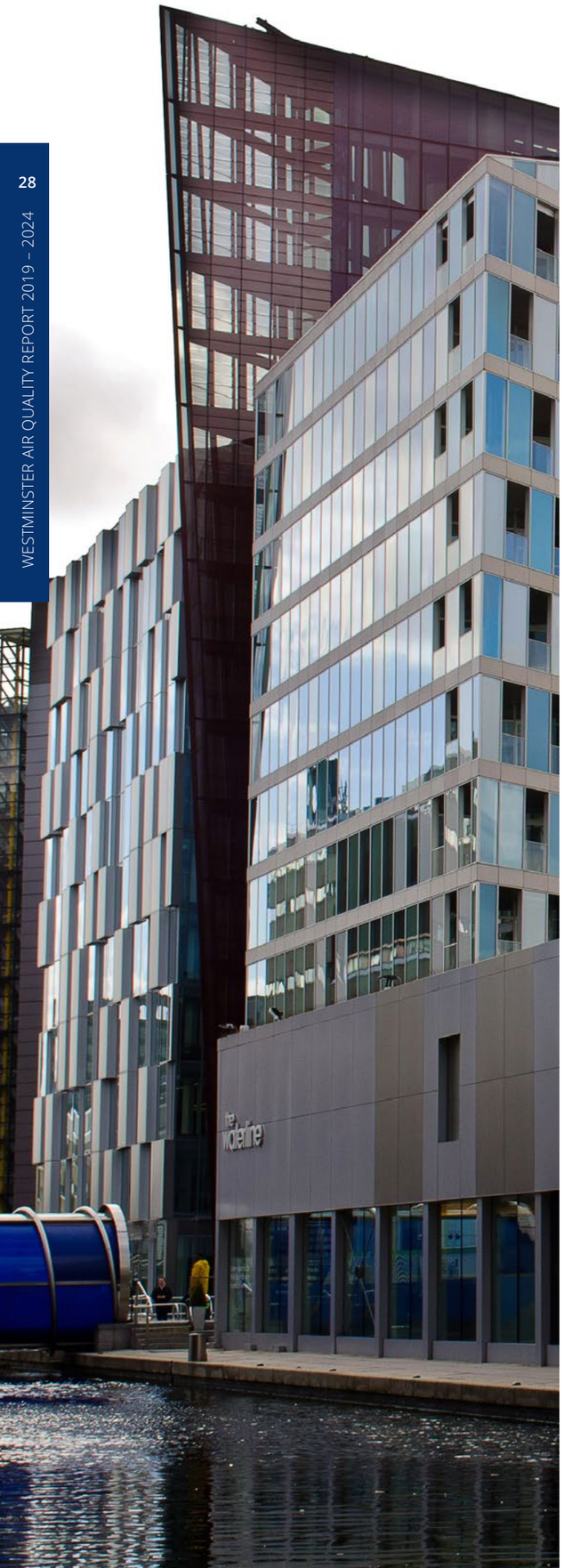
IN FOCUS:

20 years of the Marylebone Road automatic monitor

Westminster's Marylebone Road monitoring station has been at the cutting edge of pollution monitoring in London for over 20 years. Sitting opposite Madame Tussauds, the station was first installed in 1997, and was rehoused in its current self-contained air conditioned timber cabin in 2011.

The site has made an unparalleled contribution to air quality research in the UK, and has been fundamental in our understanding of emissions from traffic sources. It has provided the widest range of measurements of any station in the UK, and provides an invaluable test location for all kinds of new measurement techniques. Specific discoveries in the make-up of London's pollution that the data from the Marylebone Rd site helped unearth include the importance of non-exhaust emissions from tyre and brake wear, and the discovery of novel sources of pollution – including cooking!

As well as capturing a massive range of pollutants as part of our work to monitor air quality, it also monitors pollutants as part of the national Automatic Hydrocarbon Monitoring Network, the Heavy Metals Network and the UK Black Carbon Network, amongst others.



Reducing emissions from buildings and new development

We will mitigate and minimise emissions from both existing buildings and from new development using a combination of policy, partnership working, and specific projects and interventions.
We will work towards creating a net zero emission city by 2040.

Emissions from buildings that are in use come mainly from gas boilers. Much of the attention in terms of policy on air quality has focused in recent years on transport emissions; policies such as our own diesel parking surcharge and the Mayor of London's ULEZ mean that as transport emissions decrease, proportionally emissions from buildings will rise. As a result we are committed to reducing emissions from the built environment. Emissions from demolition and construction work are key sources of particulate matter, and can cause highly localised spikes in pollution. Our new City Plan sets the foundations for how we will approach new development across the city and seek to minimise and mitigate the air quality impacts of development.

As a result, this section of our Action Plan contains commitments to reduce emissions across the lifespan of buildings, from planning to construction to operation, and also commits us to help reduce emissions from existing, older buildings. It also includes actions on green infrastructure, highlighting the connections between the built environment and green space within the city.

Managing and mitigating emissions from new development is enshrined in a variety of our planning policies. In 2016 we introduced a Code of Construction Practice for developers, which puts stringent requirements on developers across of host of areas including air quality. Updating this document to ensure we maintain industry leading standards for developers in an action in this Plan. We also require developers to meet GLA standards for emissions from Non Road Mobile Machinery (NRMM), and are members of the industry leading London Low Emission Construction Partnership, which is pushing forward best practice across the construction industry.

Key actions from our Action Plan:

- Adopting and implementing the air quality policies in our ground-breaking City Plan 2019 – 2040
- Updating our London-leading Code of Construction Practice for developers
- Implement local scale solutions such as greening our markets and reducing emissions from major events and street works
- Deliver projects based on addressing indoor air pollution and reducing emissions from buildings with Heritage status
- Publish a holistic Carbon Reduction Strategy for the whole city
- Investigating the adoption of a city-wide definition of valuable green space, looking at biodiversity, climate resilience, air pollution, well-being and social value

Relevant Air Quality Manifesto commitments

- We will go further in tackling emissions from all types of buildings, new and old, to reduce air pollution

IN FOCUS:

Westminster's Code of Construction Practice

In 2016 we introduced a new Code of Construction Practice for developers. The purpose of the new code was to monitor, control and manage the impacts of construction on sites throughout Westminster. The Code sets out the standards and procedures to which developers and contractors must adhere to when undertaking construction of major projects. This helps both the council and developers mitigate and minimise the environmental impacts of development; for air quality this ranges from requirements around the age and emissions of construction vehicles, to on site measures to minimise dust emissions and requirements for sites to monitor dust generated as part of construction and demolition work.

Updating our Code of Construction practice to keep this document at the forefront of managing environmental impacts of development across the city is an action in this Action Plan.

Reducing emissions from transport

We will implement a range of measures to reduce emissions from transport sources throughout the city. We will continue to be leading local authority for Electric Vehicle charging provisions, and seek to continue to encourage modal shift away from private vehicle use. We will also continue to support major policy interventions aimed at reducing emissions from road transport sources, and also continue to call for more action where necessary from regional and national Government.

Road transport is the biggest single source of pollutants within Westminster. The geographically specific nature of road-related air pollution means that transport emissions also heavily contribute to air pollution hotspots across the city. It is also an area of emissions that we as a local authority have only limited control over, on issues ranging from the tax regime for diesel vehicles (the responsibility of central Government) to allowed emissions from black taxis and buses (responsibility of TfL and the Mayor of London).

In recent years we have taken strides to reduce emissions from transport where we are able to. This includes a first for the UK in retrofitting our waste vehicle fleet to substantially reduce our own emissions, to introducing London's first diesel parking surcharge as a trial in the Marylebone area, which we have now rolled out across the city. Our work in this area links into many other council policies and strategies, including our Walking Strategy, ActiveWestminster Strategy, and forthcoming Electric Vehicle Charging Strategy.

Key actions from our Action Plan:

- Continuing to be the leading London local authority for the provision of Electric Vehicle Charging Infrastructure
- Investigate changes to our resident parking permit structure to encourage modal shift away from private vehicle use and discourage the use of older more polluting vehicles
- Updating our own procurement and green fleet policies to ensure that emissions are reduced from our own fleet and our major contractors' fleets
- Investigating the potential for major changes to parking and the use of parking bays across the city following our Parking Occupancy Survey 2018
- Implement innovative projects to reduce emissions from non-road sources of transport, including those from rail, river and canal

Relevant Air Quality Manifesto commitments

- We will extend our successful diesel surcharge on pay and display parking across the city to help discourage diesel vehicles from polluting Westminster
- We will ask those who own more than one car to pay extra for their parking permits, unless they are driving low emission vehicles
- We will continue to invest in more ways to encourage the use of electric vehicles throughout the city

IN FOCUS:

Westminster's diesel parking surcharge

In 2017 Westminster launched London's first diesel parking surcharge, a 50% surcharge on pre-2015 diesel vehicles paying to park in Westminster's parking Zone F (Marylebone and Fitzrovia). The pilot was supported by local businesses and residents and was one of the innovative policies rolled out as part of the Marylebone Low Emission Neighbourhood (see the 'In Focus' section of Lobbying and Partnership working below for more details on the LEN). After a year's trial, where a reduction in surcharge eligible vehicles parking in Zone F decreased by 16% with no obvious displacement of vehicles elsewhere, we consulted on rolling this policy out across the city.

Over 1,300 responses were received from the 2018 consultation, with a clear two thirds of respondents wanting us to roll out the surcharge across the city as quickly as was feasible. As a result, a 50% diesel surcharge was implemented for the whole of Westminster in Summer 2019, a clear example of our intent to improve air pollution and tackle congestion through the powers available to us as a council.

Awareness raising

We will continue to research and implement wide-ranging behaviour change and awareness raising projects around air quality. We will seek to inform, educate, and work with residents, businesses and visitors to help enable small lifestyle changes that will both reduce peoples' exposure to poor air quality, and help reduce their contributions to the city's pollution levels.

Informing residents, businesses and visitors about local air pollution levels can help protect those who are most sensitive to its health impacts. Increasing the public's understanding of the sources and effects of air pollution can also influence changes in behaviour which can help improve air quality, for example modal shift changes away from private vehicle trips and towards other more sustainable forms of travel which will result in decreased pollution.

The impacts of awareness raising projects on actual behaviour can be difficult to measure and quantify. But many of the messages around increasing public awareness of air pollution tie in to other council behaviour change priorities: a major example is the importance of supporting healthy lifestyles through increased walking and cycling.

Partnering with Public Health is particularly important as a way to increase awareness around air pollution; health professionals are trusted and independent voices who are able to help us reach out to those members of the community that are most adversely affected by air pollution, such as the elderly, and those who are hardest to reach, such as those whose English is not their first language.

Key actions from our Action Plan:

- Continuing to support and disseminate information on high pollution episodes through alert systems such as airTEXT
- Raising awareness of indoor air pollution
- Leading on innovative behavioural insight projects on issues such as parking to understand how to maximise the impacts of our policies
- Fostering closer relationships between the council and Public Health professionals including GPs to raise awareness of air pollution among traditionally hard to reach groups

Relevant Air Quality Manifesto commitments

- We will continue to campaign against engine idling

IN FOCUS:

#DontBeIdle

Our #DontBeIdle awareness raising and behaviour change campaign is one of Westminster's most recognisable campaigns and brands. Launched in 2017, #DontBeIdle focuses on the small steps that everyone can take to improve local air quality, namely through encouraging people to cut engine idling, which is an entirely unnecessary source of pollution.

The campaign, with its distinctive black branding and celebrity endorsements, has seen over 14,000 individuals sign the #DontBeIdle pledge to reduce engine idling. 2019 saw a renewed focus on businesses signing up to the campaign, with Deliveroo and National Express among the companies pledging to work with the council to reduce idling within their fleets.

The campaign has been recognised by industry peers, from winning a London Transport Award 2017 to a national PR Moment Award 2018, and is an example of Westminster leading the way nationally on tackling air pollution through emphasising the simple steps members of the public can take to reduce their own contributions to London's air pollution.

Lobbying and partnership working

As a local authority, we cannot tackle the problem of air pollution alone. Pollutants do not respect borders: a large percentage of pollution in Westminster is created outside of the borough, at times even from as far afield as Eastern Europe or the Sahara. Equally, we do not have control over all contributors to pollution within Westminster: for example, emissions standards for the buses and black cab taxis on our roads are set by the Mayor of London and TfL.

As a result, we will continue to be a critical friend of all levels of government: working with them and promoting their work when it aligns with our own to maximise its impacts, but also lobbying for greater action when we feel they haven't got it right or gone far enough.

Working in partnership with businesses, residents and other stakeholders is another way to maximise the impact of our policies and projects. A key example of this in the new Action Plan is the delivery of our Schools' Clean Air Fund: every school in Westminster will receive an air quality audit in 2019 – 2020, which will enable schools to access our £1m Schools' Clean Air Fund. We will be working closely with schools to ensure that we can maximise the benefits from our Fund by implementing bespoke interventions for each school based on our close working relationships with staff and pupils.

Key actions from our Action Plan:

- Working with schools to deliver our £500,000 schools air quality audit programme followed by our £1m Schools' Clean Air Fund
- Working closely with businesses and business groups to tackle emissions from deliveries and vehicle fleets
- Leading innovative projects with academic institutions such as King's College London to support and then put into practice research across a range of air quality issues
- Lobbying central Government for vital policies that will help reduce emissions from road transport, including changes to vehicle excise duty and the introduction of a national diesel scrappage scheme
- Continuing to press the Mayor of London and TfL for greater action to reduce emissions from black cab taxis

Relevant Air Quality Manifesto commitments

- We will create low emission zones around our schools
- We will support everyone in Westminster to increase recycling and reduce the use of limited resources
- We will welcome new green technology and become a centre of leadership for green innovation
- We will invite new ideas from around the world to help inform our own work and to influence government

IN FOCUS:

The Marylebone Low Emission Neighbourhood (LEN)

The Marylebone LEN was a partnership between Westminster City Council, business groups and residents that sought to implement innovative projects across Marylebone to tackle the poor air pollution in that part of the city. With £1m of grant funding from TfL and over £1.5m additional funding provided by the council and LEN partners, the LEN was one of Westminster's flagship environmental programmes between 2016 and 2019.

At the heart of the LEN's work was collaboration and innovation. A number of policies and projects were trialled in the LEN area before being rolled out across the city, including much of our work with schools on anti-idling, our diesel parking surcharge, and work on indoor air quality and integrating urban realm improvements with pollution reducing planting and greenery.

By working closely with businesses, landowners, business improvement districts and residents, the LEN was able to act as a testing ground for new polices that are now becoming business as usual across the council. Although external funding for the LEN has now completed, we are committed to continuing to innovate and trial new air quality policies within the Marylebone area as part of the LEN's legacy.

The Action Plan matrix

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
	Description of action to be implemented	Anticipated cost of action implementation **£ = 0-50k ££ = 50-100k £££ = >100k**	**High = 3 Medium = 2 Low = 1**	Proposed timescale for implementation	What the Key Performance Indicators for implementation will be	Provide details on the implementation plan for the proposed action. This could be a link to a separate document, or a reference to an appendix
	Monitoring					
1	Ensure that appropriate and effective monitoring is undertaken across Westminster to meet statutory obligations as an Air Quality Management Area	**££ (per annum)**	**2**	Ongoing	The successful submission and publication of Annual Status Reports and other statutory documents to Defra / GLA Data published on Londonair website and Westminster AQ data website (cf actions 3 and 5)	This does not relate to dust monitoring undertaken at construction sites etc
2	Publish an annual report of air quality data on Westminster's website	**£**	**1**	Annual	The successful submission and publication of Annual Status Reports and other statutory documents to Defra / GLA	
3	Support the provision of live data obtained to fulfil statutory obligations for public availability on the London Air Quality Network or equivalent website	**£**	**1**	Ongoing	Data published on Londonair website and Westminster AQ data website	This does not relate to dust monitoring undertaken at construction sites etc
4	Implement and report on a new city-wide diffusion tube monitoring network	**£**	**1**	2020 and ongoing	The inclusion of diffusion tube NO_2 data in statutory reporting and on Westminster's own monitoring website (see action 5)	
5	Create and publish a new online interactive map where all Westminster's monitoring locations and data is displayed to the public	**£**	**1**	2020	The delivery and publication of an interactive public facing map Number of website visitor hits	
6	Trial and evaluate the uses and effectiveness of new low cost air quality monitors and sensors	**££**	**1**	2019 – 2024	Various dependent on project specific KPIs Number of new monitoring systems trialled	Current projects falling under this action include indoor air quality monitoring project with uHoo and the pan-London 'Breathe London' monitoring project
7	Ensure that where appropriate, area-wide project monitoring and modelling (such as for the Oxford Street District) are made available to the public	**£**	**1**	Ongoing (where appropriate)	Data published on OSD website and Westminster AQ data website	
8	Support local communities in monitoring air quality in their local areas	**££**	**1**	2019 – 2021		
9	Prioritise the provision of $PM_{2.5}$ monitoring if installing new monitors	**££**	**1**	Ongoing	Provision of $PM_{2.5}$ monitors	In line with GLA guidance to promote additional actions related to $PM_{2.5}$ and finer particles
10	Continue to support major landowners and developers in siting and installing privately owned air quality monitors	**£**	**1**	Ongoing	Advice given to third parties	Ad hoc support provided by council's technical teams related to siting and installation of monitors
11	Seek out external opportunities for grant funding related to monitoring	**£**	**1**	Ongoing		Current projects falling under this action include indoor air quality monitoring project with uHoo and the pan-London 'Breathe London' monitoring project
12	Investigate the potential for undertaking diffusion tube monitoring at all Westminster schools as part of the council's Schools' Clean Air Fund	**££**	**1**	2020	Completion of business case	This action if taken forward would complement those in Section 5 (Lobbying and Partnership working) related to the Schools' Clean Air Fund

Reducing emissions from buildings and new development

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
13	Adopt Westminster's new City Plan 2019 –2040	**£**	**3**	2019	Adoption of Plan	
14	Provide additional details and requirements for developers through the production and publication of a new Environment Supplementary Planning Document (SPD) to sit under Westminster's City Plan	**£**	**2**	2020	Publication of SPD	
15	Update Westminster's existing Code of Construction Practice (2016)	**£**	**2**	2020	Publication of updated CoCP	Current CoCP was published in 2016
16	Produce informative for developers to promote low combustion and combustion free development	**£**	**1**	2020	Publication of informative	Reduce emissions related to onsite combustion
17	Effectively manage and mitigate emissions of development taking place in designated 'Focus Areas' through City Plan policies	**£**	**2**	Ongoing	Number of applications assessed in Focus Areas Number of applications with additional requirements set out in the City Plan due to their location in designated Focus Areas	
18	Continue to secure funding from developers for interventions related to air quality where appropriate	**£**	**3**	Ongoing	Amount of funding secured Number of interventions delivered	
19	Continue to assess all relevant planning applications for their air quality impact	**££**	**3**	Ongoing	Number of applications assessed Percentage of applications assessed (target of 100%)	
20	Require all new major developments and developments with CHP to be air quality neutral as a minimum	**£**	**2**	Ongoing	Number of developments and percentage of developments where an AQ Neutral building and/or transport assessments undertaken Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	
21	Subject to publication of GLA's air quality positive requirements, developments subject to the Environmental Impact Assessment process to be Air Quality Positive (per the London Plan)	**££**	**2**			
22	Audit construction sites to ensure compliance with the GLA's NRMM requirements	**££**	**2**	Ongoing	Number of developments registered and compliant Number of audits undertaken	
23	Require developers to meet the GLA's emissions limits for Combined Heat and Power (CHP) and Biomass boilers	**£**	**1**	Ongoing		
24	Ensure emissions from construction sites are minimised through cooperation with developers and site visits, including effective dust monitoring where appropriate, and compliance with GLA NRMM requirements	**££**	**3**	Ongoing	Number of site visits Number of planning applications required to monitor for construction dust	
25	Continue to control emissions from permitted processes through inspections and enforcement	**££**	**2**	Ongoing	Number of sites with permits related to Local Air Pollution Prevention and Control guidance	
26	Effectively fulfil statutory duties as a Smoke Control Area	**££**	**2**	Ongoing		

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
27	Deliver air quality training for Westminster staff related to the Clean Air Act	**£**	**1**	2019-2020	Successful delivery of the training programme, including number of staff receiving training	Westminster received £9,000 from Defra's Air Quality Grant Programme in 2019 to deliver a bespoke training package for enforcement and planning staff related to Westminster's statutory duties including the Clean Air Act (1993)
28	Complete an indoor air quality project to identify options for building owners to reduce indoor emissions through Building Management Systems (BMS)	**£**	**1**	2019	Completion and publication of the project report Potential publication of a wider building managers' manual or toolkit for using BMS to minimise indoor emissions	This project forms part of the legacy work related to the Marylebone Low Emission Neighbourhood
29	Complete a trial of indoor air quality monitors in council owned buildings to establish their effectiveness and use elsewhere across Westminster	**£**	**1**	2019	Completion and publication of a project report	
30	Develop a diesel generator power hierarchy for developers to use when on site with the aim to reduce the amount of diesel generators	**£**	**1**	2020	Number of developments issued with informative	To be included as an informative or included in Westminster's Code of Construction Practice
31	Adopt revised planning conditions and informatives regarding the use of diesel generators	**£**	**1**	2019	Adoption of any additional information / informatives	
32	Identify and trial options for reducing emissions from existing combustion plant and backup generators across Westminster	**££**	**1**	2019-2021		
33	Where appropriate work with contractors related to major council schemes to deliver emissions abatement and mitigation above contractual requirements	**£**	**2**	Ongoing	Reporting on the Social Value elements of awarded contracts Additional agreements made between Westminster and contractors	
34	Develop and implement new policies to reduce the use of diesel generators at markets, special events, filming and street works	**£**	**1**	2020	Publication on new guidance for relevant sectors	
35	Produce and publish a Westminster Carbon Reduction Strategy	**££**	**3**	2020	Publication of Strategy	

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
36	Promoting and delivering energy efficiency retrofitting projects in workplaces and homes	**£££**	**3**	Ongoing		
37	Investigating the adoption of a city-wide definition of valuable green space	**££**	**2**	2020	Adoption of definition of valuable green space matrix Potential city-wide green infrastructure audit to understand our baseline	This action could utilise the matrix developed by Arup for Wild West End Definitions of value for green space could include looking at biodiversity, climate, air pollution, well-being and social value

Reducing emissions from transport

38	Increase the number of electric vehicle charging points within the city	**£££**	**3**	Ongoing	More details can be found in Westminster's Electric Vehicle Charging Strategy 2019	
39	Investigate with a view to undertaking trials of new electric vehicle charging technologies, such as induction charging	**££**	**2**	2021	Implementation of trials and trial results	More details can be found in Westminster's Electric Vehicle Charging Strategy 2019
40	Continue to undertake feasibility, consultation and implementation of on-street rapid charge points at taxi ranks and taxi rest ranks, in partnership with TfL	**££**	**2**	Ongoing	More details can be found in Westminster's Electric Vehicle Charging Strategy 2019	
41	Trial a new targeted approach to idling in specific parts of the borough, involving specific signage, com-munications activity and increased enforcement in idling hotspots	**££**	**1**	2021	Tbc	A more targeted approach to idling, focusing on making tangible differences in areas over short periods of time, utilising a variety of intensive comms and enforcement action
42	Introduce a new 'green fleet policy' for use across the council's owned and rented vehicle fleets	**£**	**2**	2020	Adoption of a new green fleet policy	Green fleet policy to be reviewed and updated with a view to adopting new policies in 2020
43	Update green procurement policies to maximise air quality benefits from council contracts	**£**	**2**	2020	Adoption of updated green procurement and social values policies	

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
44	Continue to support TFL and the Mayor of London with the implementation and evaluation of the ULEZ, including continuing to support future ULEZ expansions	**£**	**3**			Westminster supports the ULEZ and the proposed extension of the scheme in 2021 to the north and south circulars
45	Work with market traders to identify and implement measures to reduce emissions associated with the city's markets	**£**	**1**	2020		Associated emissions could include transport / supply chain emissions, power generation on site, and indirect benefits to air quality from reduced waste collections from markets
46	Work with railway and railway station operators to reduce emissions within mainline stations and lobby for reducing emissions from rail stock	**£**	**1**	2021		
47	Work with the Canal and River Trust to identify and implement measures to reduce emissions from canal boats in the city	**£**	**1**	2020	Completion of feasibility study	Emissions to be targeted include from wood burning stoves, an important contributor to Particulate Matter pollution in London
48	Monitor the efficacy of the pay to park diesel parking surcharge as a tool to reduce the number of most polluting journeys made in the borough	**££**	**2**	Ongoing	Number of transactions affected by surcharge (including as % of total transactions)	A continuation of the analysis of parking data relating to the pay to park diesel surcharge, first trialled in Parking Zone F (Marylebone) in 2017 and rolled out across the city in 2019
49	Monitor the potential for older petrol vehicles to be including in the pay to park diesel parking surcharge	**£**	**1**	Ongoing	Number of transactions affected by potential petrol surcharge (including as % of total transactions)	Following the 2018 public consultation on the pay to park diesel parking surcharge, Westminster committed to monitoring the potential need for a similar surcharge for older petrol vehicles
50	Complete analysis of parking occupancy surveys to ascertain the potential for utilising underused bays for other non-parking purposes. Consider undertaking trials of these alternate uses where appropriate	**£**	**1**	2019	Completion of analysis and implementation of recommendations	Decreases in occupancy of Westminster parking bays provides an opportunity for the reallocation of uses of under-utilised bays These reallocations could include: parklets, dockless bike bays, bike hangars, and 'pop up' electric vehicle charging generators
51	Explore the potential for a diesel surcharge for older vehicles to be introduced for resident parking permits	**££**	**2**	2020	Completion of analysis and implementation of recommendations	The scoping out of a similar policy to that introduced for pay to park bays across the city

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
52	Consider implementing additional charges or a cap on the maximum number of resident parking permits allowed per household	**£**	**2**	2020	Completion of analysis and implementation of recommendations	Incremental charges for additional permits would discourage households from maintaining more permits (and vehicles) than they require
53	Explore restructuring Westminster's resident parking permit bands to changing to an emission-based tariff scheme	**££**	**2**	2020	Completion of study If deemed appropriate, a move to a new resident permit band scheme	Investigate a shift to emissions based resident parking permit bands, as opposed to the current engine size bands. This would allow a more targeted approach to promoting low emission vehicle use
54	Move to an online permit system of one permit per vehicle	**£**	**1**	2020	Completion of study If deemed appropriate, a move to a system	
55	Complete behavioural insight work related to parking	**£**	**1**	2019	Completion of study	
56	Complete research project into parking behaviours	**£**	**1**	2020	Completion of report, including publication of journal article	Completion of parking behavioural insight project with University of Warwick / CUSP London analysing parking motivations between London and other European cities
57	Trial differential enforcement charges for 'sensitive streets', which could include those in AQ Focus Areas	**£**	**1**	2020	Completion of feasibility study	
58	Introduce Electric Vehicle charging infrastructure on council owned properties and housing estates	**££**	**2**	2020	Completion of feasibility study	
59	Trial dynamic or 'surge' pricing for pay to park parking across the city, such as increased prices when demand is particularly high	**£**	**2**	2022	Completion of feasibility study	
60	Continue to deliver high quality major public realm schemes that holistically include improving local air quality across the scope of works, which includes ensuring transport emissions are not permanently increased elsewhere in Westminster	**£££**	**3**	Ongoing (where appropriate)		

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
61	Consider introducing air quality guidelines for major urban realm and regeneration projects across Westminster to ensure that air pollution and other key environmental concerns are embedded across these major place-shaping projects	**££**	**2**	2021	Introduction of air quality or environmental guidelines for place-shaping and urban realm schemes	This work could include: guidelines for monitoring of air pollution in place-shaping schemes; requirements for green infrastructure; wider impact assessments looking at the potential knock on effects of major urban realm schemes on traffic. These are already being undertaken but there are no set guidelines currently in place to support placeshaping teams
62	Investigate the potential for a Zero Emission Zone in Dean Street in the Oxford Street District area	**£**	**1**	2019		Utilising TfL's draft Zero Emission Zone guidance to deliver Westminster's first non-school orientated Zero Emission Zone
63	Accelerate the uptake of zero emissions vehicles as part of investigating the potential for a wider Zero Emissions Zone in the Oxford Street area	**£££**	**3**	2020	Completion of a study that investigates the potential to limit or restrict non ultra-low emission vehicles and eventually non zero emission vehicles from part or all of Oxford Street and the surrounding district	This includes lobbying TfL and the Mayor of London for the provision of ultra low emission buses across the Oxford Street District

Awareness raising

64	Work with businesses to help them partner with local schools to maximise the impact of our Schools' Clean Air Fund	**£**	**1**	Ongoing	Number of businesses partnering with schools to support air quality measures Amount of match funding generated by business and school partnerships	
65	Continue to work with businesses and landowners to support re-timing, reducing and modal shifting of deliveries and servicing across the city	**£**	**2**	Ongoing		
66	Assist local businesses and BIDS to consolidate services such as deliveries and waste collection	**£**	**1**	Ongoing		
67	Promote the council's commitment to meet World Health Organisation limits for air pollutants by 2030	**£**	**1**	Ongoing		
68	Continue to tackle unnecessary idling through #Dontbeidle campaigns for both individuals and businesses	**£**	**1**	Ongoing	Number of sign ups to the online DontBeIdle pledge Number of businesses signing up to DontbeIdle Number of journeys affected by businesses signing up to Dontbeidle	
69	Promote and deliver air quality projects and events for national awareness raising campaigns such as National Clean Air Day and National Car Free Day	**£**	**1**	Ongoing		
70	Continue to encourage schools to join the TfL STARS accredited travel planning programme	**£**	**2**	Ongoing	Number of Gold, Silver and Bronze STARS accreditations	
71	Investigate the potential for an internal awareness raising campaign related to occupational health and pollution exposure for council employees and direct contractors	**£**	**1**	2021		
72	Support and promote direct pollution alerts services such as AirTEXT	**£**	**1**	Ongoing	Number of sign ups to the airTEXT service	
73	Promote and disseminate information of high pollution forecasts	**£**	**1**	Ongoing		Utilise a variety of council-controlled communications channels. Actions could include (but are not restricted to): council social media channels, pollution forecast widgets on council website, and supporting GLA-led pollution forecast warnings to vulnerable groups
74	Produce a feasibility study and horizon scan around indoor air pollution and potential council actions and policies	**£**	**2**	2020		This action may result in additional new actions

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
75	Provide an annual update on air quality activities to the borough Director of Public Health and require Director of Public Health sign off on statutory progress reports and subsequent Action Plans	**£**	**1**	Annual		
76	Work with Public Health to strengthen engagement with Westminster's Clinical Commissioning Group and GP surgeries	**£**	**1**	Ongoing		
77	Publish air quality information to be made freely available at healthcare facilities, GP surgeries and pharmacies	**£**	**1**	2020	Publication of materials	This includes creating materials for those in traditionally hard to reach groups, which could involve producing materials in different languages
78	Scope out with a view to implementing an awareness raising project of air quality with private healthcare facilities in the Harley Street area of the city	**£**	**1**	2020	Completion of business case for project	Project likely to be contingent on external funding availability
79	Investigate the potential for a project aimed at raising public and supplier awareness of smoke control area regulations and permitted fuels	**££**	**1**	2021	Completion of business case for project	Project likely to be contingent on external funding availability

Lobbying and partnership working

80	Lobby national government to adopt World Health Organisation targets for air pollution as new national Air Quality Standards	**£**	**3 (if taken forward by Govt.)**	2020 / Ongoing		
81	Continue to lobby national government to introduce an extensive scrappage scheme to reduce the number of older and more polluting vehicles to help generate modal shift and increase uptake of ultra low emission vehicles	**£**	**3 (if taken forward by Govt.)**	2020 / Ongoing		
82	Continue to lobby national government to make changes to Vehicle Excise Duty to discourage the uptake of more pollution diesel vehicles	**£**	**3 (if taken forward by Govt.)**	2020 / Ongoing		

	Action	Cost	Expected benefit	Timescales	Evidencing	Additional details
83	Continue to lobby national government to introduce new primary legislation on air quality	**£**	**3 (if taken forward by Govt.)**	2020 / Ongoing		
84	Continue to lobby national government to give legal enforcement powers to any new environmental enforcement agency / watchdog		**3 (if taken forward by Govt.)**	2020 / Ongoing		
85	Lobby Transport for London and the Mayor of London to prioritise Zero Emission Capable buses on routes through the city, in particular those passing through AQ Focus Areas and strategic areas such as the Oxford Street District	**£**	**1**	2020 / Ongoing		
86	Conduct air quality audits for all schools in Westminster	**£££**	**2**	2020	Audit reports for all Westminster schools	Audits will enable Westminster schools to access the council's Schools' Clean Air Fund (SCAF)
87	Launch and deliver Westminster's £1m Schools' Clean Air Fund, providing schools across the city to access council funding to implement air quality measures	**£££**	**3**	Ongoing until 2023	Amount of funding allocated Number of schools accessing Fund Number and types of measures implemented	
88	Continue to work with stakeholders in the Marylebone LEN to trial new policies and projects in the area	**£**	**1**	Ongoing	Number of projects launched in Marylebone area	This action forms part of a commitment to continuing the work of the Marylebone LEN beyond its funding lifespan (which ended in April 2019)

If you would like more information on this Action Plan or further details on our work on air quality, you can contact us in the following ways:

Visit: westminster.gov.uk/air-pollution

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