



***Bromley Council***  
***Air Quality***  
***Action Plan***  
***2020-2025***



THE LONDON BOROUGH  
[www.bromley.gov.uk](http://www.bromley.gov.uk)

# Acronyms & Abbreviations



<b>airTEXT</b>	Air pollution forecasts for Greater London
<b>AQA</b>	Air Quality Assessment
<b>AQAP</b>	Air Quality Action Plan
<b>AQFA</b>	Air Quality Focus Area
<b>AQLV</b>	Air Quality Limit Values
<b>AQMA</b>	Air Quality Management Area
<b>AQMS</b>	Air quality Monitoring station
<b>AQN</b>	Air Quality Network
<b>AQO</b>	Air Quality Objective
<b>ASR</b>	Annual Status Report
<b>BEB</b>	Buildings Emission Benchmark
<b>CAB</b>	Cleaner Air Borough
<b>CAZ</b>	Central Activity Zone
<b>CEMP</b>	Construction Environmental Management Plan
<b>CEO</b>	Civil enforcement officer
<b>CHP</b>	Combined Heat and Power
<b>CIL</b>	Community Infrastructure Levy
<b>CLP</b>	Continuous Logistics Plan

# Acronyms & Abbreviations



<b>DEFRA</b>	Department for Environment, Food and Rural Affairs
<b>DES</b>	Driving Efficiently and Safely
<b>EV</b>	Electric Vehicle
<b>ECO</b>	Energy Company Obligation
<b>EFL</b>	Energy Facts Label
<b>Euro VI</b>	European Emission standard number 6
<b>FORS</b>	Fleet Operator Recognition Scheme
<b>FPN</b>	Fixed Penalty Notices
<b>GLA</b>	Greater London Authority
<b>GULCS</b>	Go Ultra Low City Scheme
<b>HEYL</b>	Healthy Early Years London
<b>HGV</b>	Heavy Goods Vehicle
<b>JSNA</b>	Joint Strategic Needs Assessment
<b>LAEI</b>	London Atmospheric Emissions Inventory
<b>LAQM</b>	Local Air Quality Management
<b>LAQN</b>	London Air Quality Network
<b>LB</b>	London Borough
<b>LEN</b>	Low Emission Neighbourhoods

# Acronyms & Abbreviations



<b>LEZ</b>	Low Emission Zones
<b>LIP</b>	Local Implementation Plan
<b>LLAQM</b>	London Local Air Quality Management
<b>NRMM</b>	Non-Road Mobile Machinery
<b>NO2</b>	Nitrogen Dioxide
<b>NOx</b>	Nitrogen Oxides
<b>PCN</b>	Penalty Charge Notice
<b>PM10</b>	Particulate matter less than 10 micron in diameter
<b>PM2.5</b>	Particulate matter less than 2.5 micron in diameter
<b>RE:FIT</b>	Is a procurement initiative for public bodies wishing to implement energy efficiency measures and local energy generation projects on their assets
<b>RE:NEW</b>	Is the Mayor's award-winning programme to help make London's homes more energy efficient.
<b>SEELS</b>	Salix Energy Efficient Loans
<b>SCA</b>	Smoke Control Area
<b>SDP</b>	Strategic Development plan
<b>SPG</b>	Supplementary Planning Guide
<b>TEB</b>	Transport Emissions Benchmark
<b>TfL</b>	Transport for London
<b>ULEZ</b>	Ultra Low Emission Zone

# *Links to data*

DATA GLA: <https://data.london.gov.uk/dataset/llaqm-bespoke-borough-by-borough-2013-update-air-quality-modelling-and-data>

DATA GLA: <https://data.london.gov.uk/dataset/laei-2013-london-focus-areas>

DATA GLA: <https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2016>

DATA GLA: <https://data.london.gov.uk/dataset/laei-2016---borough-air-quality-data-for-llaqm>

DATA DEFRA: [https://uk-air.defra.gov.uk/data/pcm-data#population\\_weighted\\_annual\\_mean\\_pm25\\_data](https://uk-air.defra.gov.uk/data/pcm-data#population_weighted_annual_mean_pm25_data)

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# Foreword

I am pleased to endorse Bromley's revised draft Air Quality Action Plan 2020-2025.

Bromley is the largest borough geographically and the 6th largest by population in London, with 327,500 residents who call Bromley their home.



With that in mind, this action plan highlights existing measures as well as new initiatives; both of which demonstrate the Borough's commitment to tackling poor Air Quality. The measures presented further contribute to the 'clean and safe borough' ambition within our borough plan 2020-25, and is one of the priorities within Bromley's Transformation Agenda, that of a quality environment and healthy Bromley.

This plan demonstrates the intended actions against the 25 measures stipulated in the latest GLA 2019 matrix, which are proportionate within the local context.

It gives clear actions and anticipated targets for delivery, and demonstrates the joined up and holistic approach we will take. However, the arena surrounding air quality is moving at a fast pace, as such, the actions we take as a borough will not necessarily be restricted to those listed in the matrix. We will scan the horizon for the opportunities that present themselves resultant of new technology, advancements in research or new funding streams, and we will consider how these can be applied for the benefit of Bromley residents as they arise.

Within this plan, Bromley recognises the need to work with external partners and stakeholders collaboratively, to reduce pollution in the areas of the borough where levels exceed the national air quality objectives. This is important as the main contributing factors that affect us locally, such pollution from our strategic and major road networks, are not directly within our control. Finally, whilst we meet the national objectives for PM 2.5, we intend on using the measures within this plan to reduce the levels from this pollutant further, with the aim of meeting the enhanced WHO target in the future.

***Cllr Huntington-Thresher Portfolio Holder for Environment & Community Services***

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**Bromley is the  
greenest and least  
polluted of all London  
Boroughs**

# Responsibilities and Commitment

This draft Air Quality Action Plan (AQAP) has been produced as part of our statutory duties as an Air Quality Management Area, as required by the Greater London Authority (GLA) under the London Local Air Quality Management (LLAQM) statutory process.

This draft Plan contains all the actions we will take to improve air quality in Bromley between 2020 and 2025.



In accordance with the LLAQM, progress against the plan will be detailed in Annual Status Reports and available to download from Bromley Council's website.

This document has been formulated by the Environmental Protection team at the London Borough of Bromley with the support and agreement of the following officers and departments.

- **Ade Adetoseye OBE** Chief Executive
- **Dr Nada Lemic** Director Public Health
- **Colin Brand** Director Environment & Public Protection
- **Joanne Stowell** Assistant Director Public Protection
- **Peter McCready** Assistant Director Environment
- **Angus Culverwell** Assistant Director Traffic and Parking
- **Gillian Fiumicelli** Head of Vascular Disease Prevention Programme
- **Sarah Foster** Head of Performance Environment and Public Protection
- **Jake Hamilton** Head of Development and Planning
- **Charlotte Hennessy** Environmental Protection, and PRS Housing Manager
- **Paul Chilton** Transport Operations Manager
- **Hugh Chapman** Arboriculture Manager
- **Amy Harris** Waste Strategy Manager
- **Lee Gullick** Carbon Programme Manager
- **George Brown** Environmental Programme Officer
- **Rachel Sadler** Environmental Protection Officer
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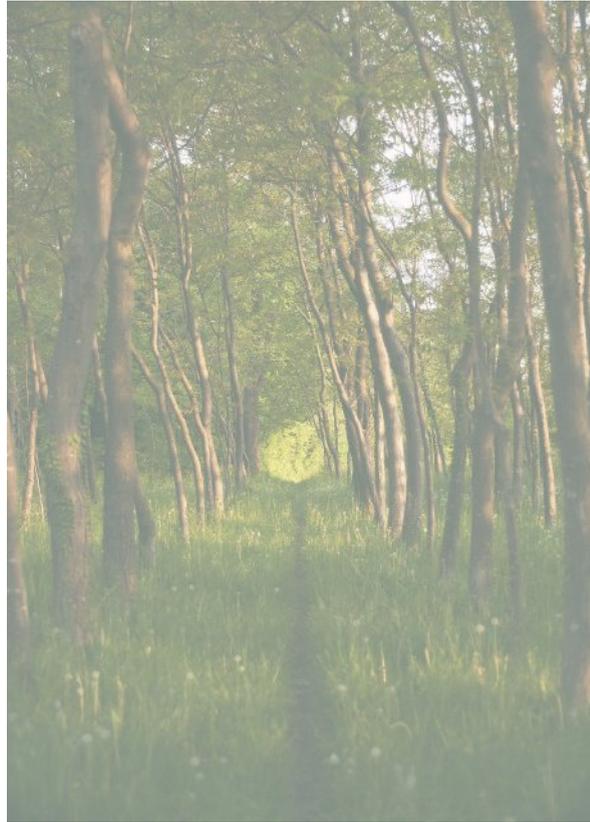
According to the latest LAEI, Bromley has the lowest percentage of population exposed to NO<sub>2</sub> levels above the legal limit



# Summary

This draft Air Quality Action Plan (AQAP) has been produced as part of the Council’s duty to London Local Air Quality Management. It outlines the action we will take to improve air quality in the London Borough of Bromley from 2020-2025, and replaces the previous action plan which ran from 2010 to 2020.

Whilst certain modelled data shows that Bromley may be the greenest and least polluted of all London Boroughs, we know that poor air quality is associated with a number of adverse health impacts; 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.



The annual health costs to society of the impacts of air pollution in the UK are estimated to be roughly £15 billion, and the London Borough of Bromley is committed to reducing the exposure of people in Bromley to poor air quality in order to improve health.

The AQAP has been split into 2 sections. The first section provides the background for Bromley’s actions on air pollution, including general explanations of what air pollution is and the associated health effects.

This section also summarises the AQMA and the AQFAs, as well as the key pollutants of concern for Bromley. It provides the overall picture for London, and takes a closer look at pollution in Bromley: where pollution is, where it comes from, and the trends in pollution levels across the borough over time.

The second section of this draft AQAP is the action plan itself; it presents the required themes as required by the GLA. However, whilst the GLA has 7 themes, we have condensed these down to 5, as the 3 categories that relate to transport have been grouped together. The 5 themes are: **monitoring, reducing emissions from buildings and new development, reducing emissions from transport (including freight/servicing and fleet), public health & raising awareness and local solutions.**

The GLA within their matrix presented 25 action points under the above theme headings, and we aim to deliver proportionate actions against all points to meet our statutory requirements. Working in partnership, we have presented additional actions beyond the initial 25 points, and are committed to reduce levels of all pollutants as far as is practicable within the local context. This is an important point to make, as Air Quality is something we cannot tackle alone. Pollution travels across borough, national and international boundaries, and many of the factors contributing to pollution in Bromley may be beyond our control (e.g transboundary pollution). Moreover, the main areas in our borough that experience exceedances are along our busy 'A' roads, the majority of which are the responsibility of TfL. This being the case, we will continue to work with and lobby regional and central government on policies and issues beyond Bromley’s control, whilst tackling action in those areas within our sphere of influence.

# What is Air Pollution?

Air pollution is a combination of solid particles and noxious gases that are emitted into the atmosphere. Some of these emissions occur naturally, and some as a result of human activity, but both can have a negative effect on human health. Human derived pollution is mostly associated with the combustion of fossil fuels such as coal, oil, petrol or diesel. Examples of natural pollution include the smoke resultant of forest fires and the production of methane from animals.

## 01 The main pollutants

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).

## 02 What is the most harmful pollutant?

According to the World Health Organisation (WHO), PM 2.5 is considered to be the air pollutant which has the greatest impact on human health, as they are able to pass into the blood, and cause harm at very low levels.

## 03 Where does it originate from?

Pollution in Bromley comes from a variety of sources. This includes pollution from sources outside of the borough, and in the case of particulate matter, a significant proportion of this comes from outside of London and even the UK.

## 04 How does the weather or season impact?

Even though humans produce the pollution, the weather will determine what happens once it is released into the air. For example, when it's windy or wet pollution concentrations remain low, either removed from the air by rain or blown away. When it's hot, dry and still, pollution levels climb, and pollution episodes can occur. Concentration levels are also higher in winter, as more people rely on their heating systems.

# What are the Health Effects of Poor Air Quality?

**Institute for Health Metrics & Evaluation estimates that air pollution is ranked as the 10th largest risk factor for mortality and ill-health in England.**

## 01 Health and Other Impacts

It is now well understood that poor air quality contributes to asthma and exacerbates other pre-existing respiratory conditions. It is also a factor in the onset of cancer and heart disease. As research develops, our understanding of how poor air quality can adversely influence disparate topics increases. For example, research shows it can even influence crime levels in urban areas, due to windows and doors being left open in extended periods of hot weather.

## 02 Short-term Exposure

Short term exposure to high levels of air pollution usually occur as a result of pollution episodes caused by the weather (see previous page point 4). These episodes can result in a range of adverse health effects, including exacerbation of respiratory conditions such as asthma and chronic respiratory disease, through to an increase in emergency admissions to hospital.

## 03 Long-term Exposure

The relative risk associated with long-term exposure is greater than for short-term. It occurs at a lower level than for short-term and contributes to the initiation, progression and exacerbation of disease. These effects are often not noticed by people at the time the damage is being done. Additionally, it is estimated that the average reduction in UK life expectancy associated with air pollution is 6 months.

## 04 Who's most at risk?

Poor air quality disproportionately affects the health outcomes of the very young, the elderly, the ill and the poor.

# The Air Quality Objectives

## Bromley meets all national air quality objectives for particulate matter



The table on the right presents the Air Quality Objectives to be achieved. Benzene, 1,3-Butadiene, Carbon Monoxide, Lead and Sulphur Dioxide remain in the regulations, however the limits for these pollutants have been met for several years and are well below the national air quality objectives, as such, it is not necessary to report upon these pollutants. Therefore, the pollutants of concern for Bromley are NO<sub>2</sub> and Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>).

Air quality data is usually presented in one of two ways: as an annualised figure, reflecting the average concentrations of a particular pollutant, or as the number of hours in a year that pollution levels were above a particular level. This data either pertains to particular monitoring points, or modelled data.

Pollutant	Objective	Averaging Period
Nitrogen dioxide (NO <sub>2</sub> )	200µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean
	40µg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>10</sub> )	50µg/m <sup>3</sup> not to be exceeded more than 35 times a year	24-hour mean
	40µg/m <sup>3</sup>	Annual mean
Particulate Matter (PM <sub>2.5</sub> )	Work towards reducing emissions/concentrations of fine particulate matter (PM <sub>2.5</sub> )	Annual mean
Sulphur dioxide (SO <sub>2</sub> )	266µg/m <sup>3</sup> not to be exceeded more than 35 times a year	15-minute mean
	350µg/m <sup>3</sup> not to be exceeded more than 24 times a year	1-hour mean
	125µg/m <sup>3</sup> not to be exceeded more than 3 times a year	24-hour mean
Benzene (C <sub>6</sub> H <sub>6</sub> )	16.25µg/m <sup>3</sup>	Running annual mean
	5µg/m <sup>3</sup>	Annual mean
1,3-Butadiene (C <sub>4</sub> H <sub>6</sub> )	2.25µg/m <sup>3</sup>	Running annual mean
Carbon Monoxide (CO)	10mg/m <sup>3</sup>	Maximum daily running 8-hour mean
Lead (Pb)	0.5µg/m <sup>3</sup>	Annual mean
	0.25µg/m <sup>3</sup>	Annual mean

# Key Pollutants of Relevance to Bromley

The main atmospheric pollutants of concern in **Bromley** are Nitrogen Dioxide (NO<sub>2</sub>) and Particulate Matter (PM) with fractions PM<sub>10</sub> (breathable) & PM<sub>2.5</sub> (able to pass into blood stream).

The main source of both pollutants is traffic emissions, large scale combustion plant, construction sites and domestic heating also contribute.

Bromley Council meets all the national AQOs other than for the annual mean limit for nitrogen dioxide (NO<sub>2</sub>). We are currently meeting the national objectives for particulate matter PM<sub>10</sub> and modelled data shows we should meet the objective for PM<sub>2.5</sub> in 2020. However, as PM<sub>2.5</sub> 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 to target compliance with WHO guidelines for these pollutants in the future.

## ✔ Nitrogen Dioxide: NO<sub>2</sub>

All combustion processes produce oxides of nitrogen (NO<sub>x</sub>). In London, road transport and heating systems are the main sources of these emissions. NO<sub>x</sub> is primarily made up of two pollutants - Nitric Oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO<sub>2</sub> is of most concern due to its impact on health. However NO<sub>x</sub> easily converts to NO<sub>2</sub> in the air - so to reduce concentrations of NO<sub>2</sub> it is essential to control emissions of NO<sub>x</sub>.

## ✔ Particulate Matter: PM<sub>10</sub> and PM<sub>2.5</sub>

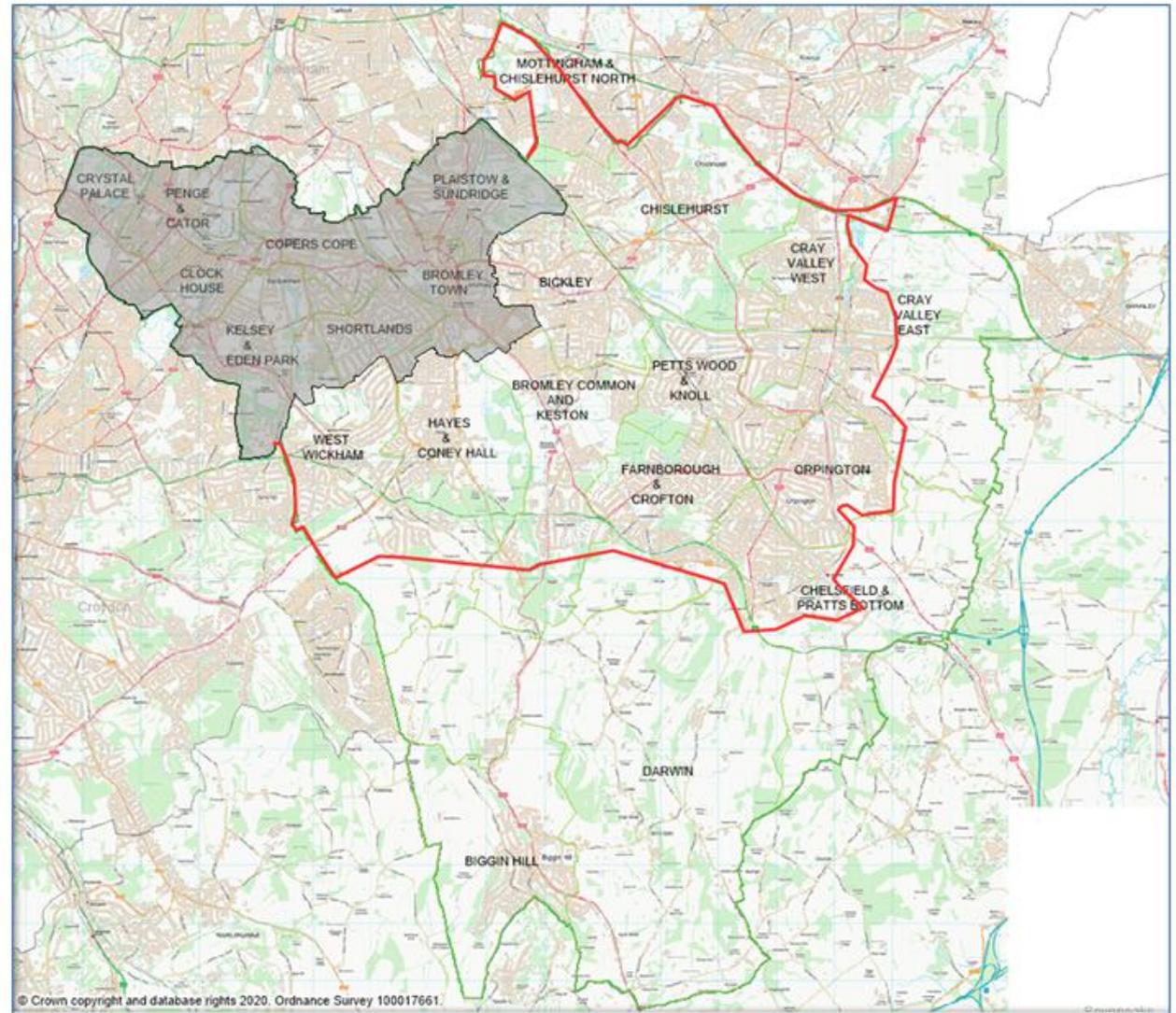
Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>) is a complex mixture of non-gaseous particles of varied physical and chemical composition. It is categorised by the size of the particle (for example PM<sub>10</sub> are particles with a diameter of less than 10 microns (µgm)). This size of particulate is breathable. Most PM emissions in London are caused by road traffic, in Central London this is as much as 80%, with exhaust emission, tyre and brake wear and dust from road surfaces being the main sources. Construction sites, with high volumes of dust and emissions from machinery are also major sources of local PM pollution, along with accidental fires and burning of waste. However, a large proportion of PM originates outside of London, and includes particulates from natural sources, such as sea salt, forest fires and Saharan dust.

# The Air Quality Management Area

According to GLA modelled data, no primary or secondary schools in Bromley are exposed NO2 concentrations that exceed to annual limits.

Where local authorities suspect they have levels of pollutants exceeding the National Air Quality Standards and Objectives (page 6), they are required to investigate potential exceedances with a view to implementing Air Quality Management Areas (AQMAs). The declaration of an AQMA, places a statutory duty to monitor and take action to reduce levels of pollutants. Bromley declared an AQMA in 2007 (grey shaded area on the map) for the North West of the Borough. However, as required by the LLAQM, from 2020 onwards, local monitoring and mapping provided by the GLA must be utilised to assess whether an AQMA should be revised.

This exercise was undertaken, and the 2020 modelled data, despite showing a decline in exposure levels over time, still supports an extension of the AQMA; the map to the right shows shows the extended boundary highlighted in red.



Legend

- Current AQMA
- Proposed new boundary
- Borough boundary



# The Air Quality Focus Areas

Bromley meets **all** air quality objectives for hourly and 24 hour concentrations.

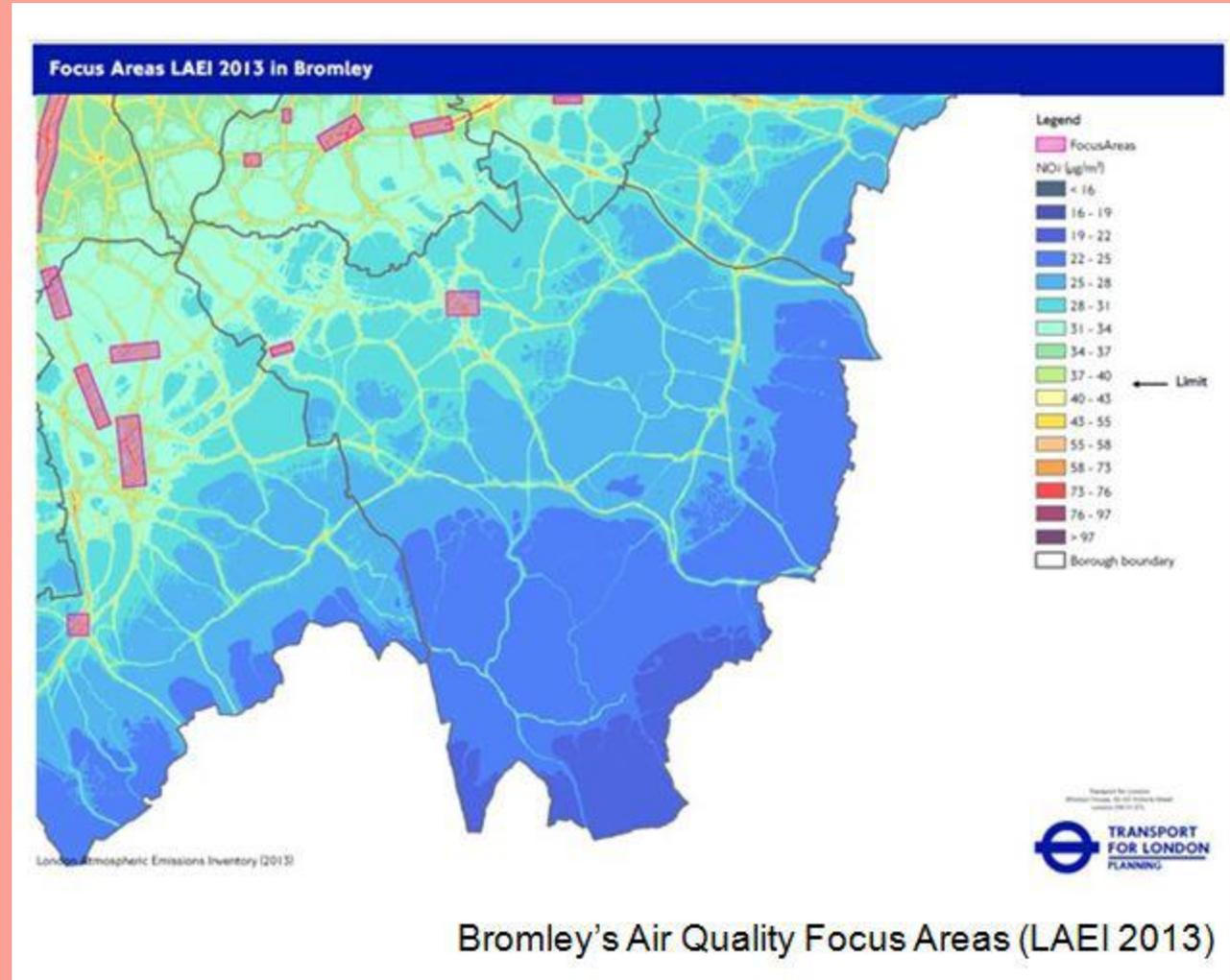
In 2016 the LLAQM introduced the concept of Air Quality Focus Areas (AQFAs) across London. The AQFAs are described as areas where the risk of exceeding pollution limits is high and there is relevant public exposure, and Local Authorities must keep these areas under review and take positive action where possible to improve them.

The Map on the right highlights the 2 AQFAs within Bromley, these are:

- Tweedy Rd A21/High St/Widmore Rd A222
- Croydon Road between Elmers End Green and Croydon Rd.

Research into available funding is being undertaken with a view to removing the gyratory system at Elmers End Green to create a new public space and improvement of the cycling and walking routes to the station/tram stop.

The Council has less control over the Bromley Town Centre AQFA as it is vehicles on the A21 that pollute, and the road is the responsibility of TfL. However, the Council will work on proposals to reduce the need to drive to the town centre, and continue to lobby TfL to use less polluting buses.



Bromley's Air Quality Focus Areas (LAEI 2013)

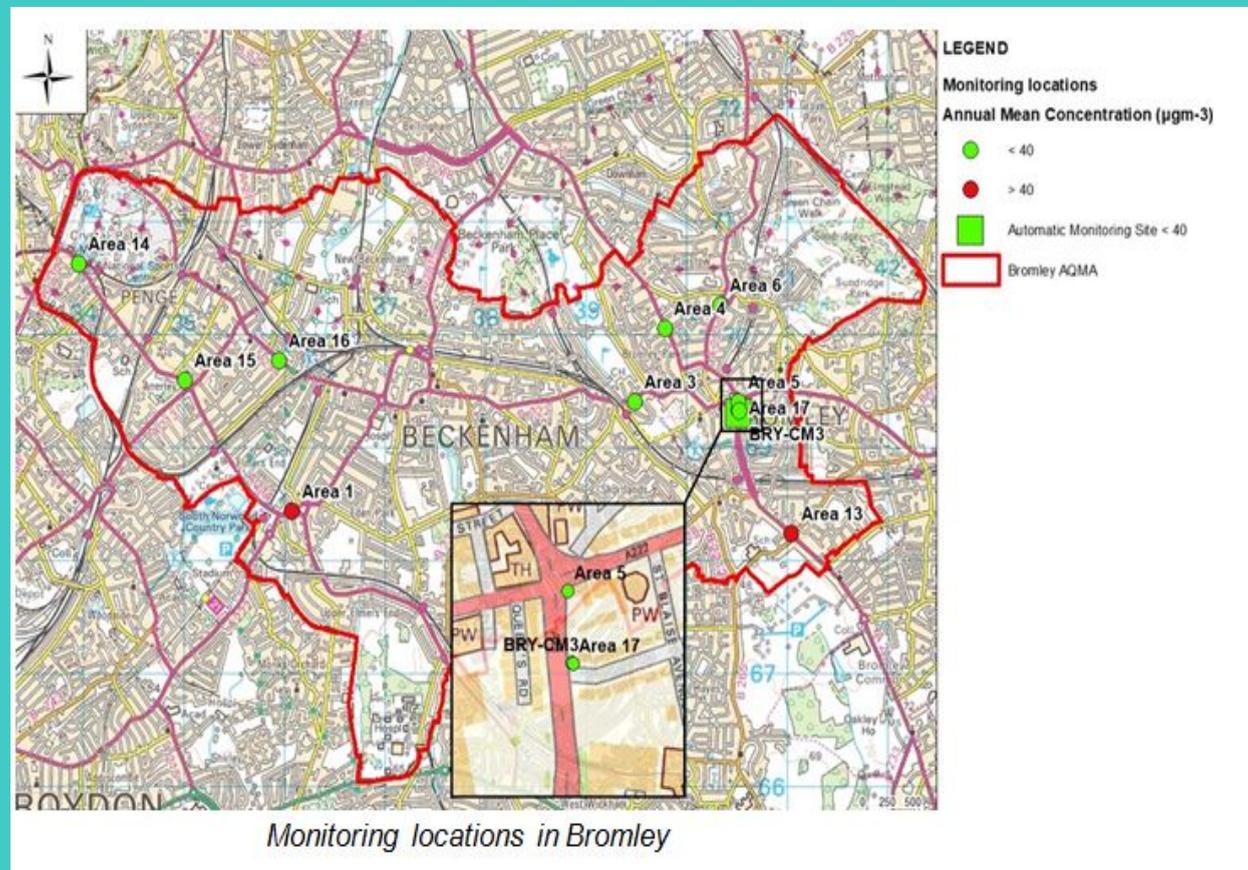
# Monitoring Data

Bromley currently has ten passive monitoring sites in the borough with all sites located in the AQMA, and one co-located at the air quality monitoring station in Harwood Avenue.

As well as our own data, Bromley utilises modelled data from the London Atmospheric Emissions Inventory (LAEI), and both data sources show annual mean exceedances of the air quality objectives for NO<sub>2</sub> across the borough.

The NO<sub>2</sub> diffusion tube locations are shown on the map; the annual mean NO<sub>2</sub> objective of 40µg/m<sup>3</sup> was exceeded at two of the ten NO<sub>2</sub> monitoring locations in 2018. It is important to note that this is the lowest number of annual mean NO<sub>2</sub> exceedances in all years since 2010.

The highest annual mean NO<sub>2</sub> concentration in 2018 was monitored at Elmers End Road with a value of 51.3µg/m<sup>3</sup> however, the level measured at this location was the lowest since since 2011



# Air Quality in London

Air quality is a major problem across all of London: all of the 33 London Local Authority areas have declared AQMAs (some borough wide), 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.

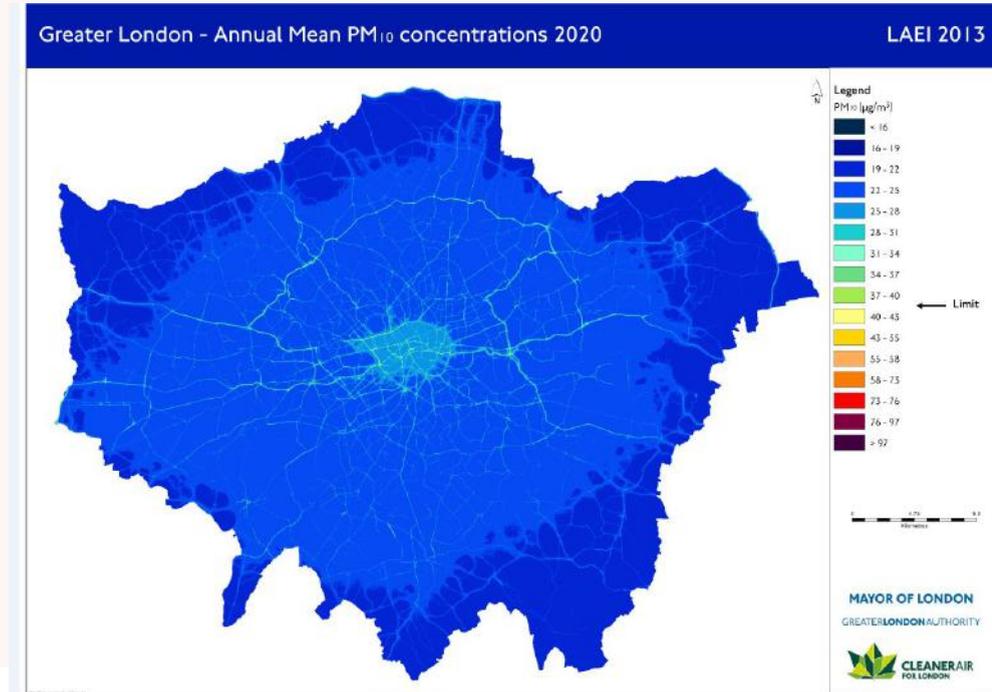
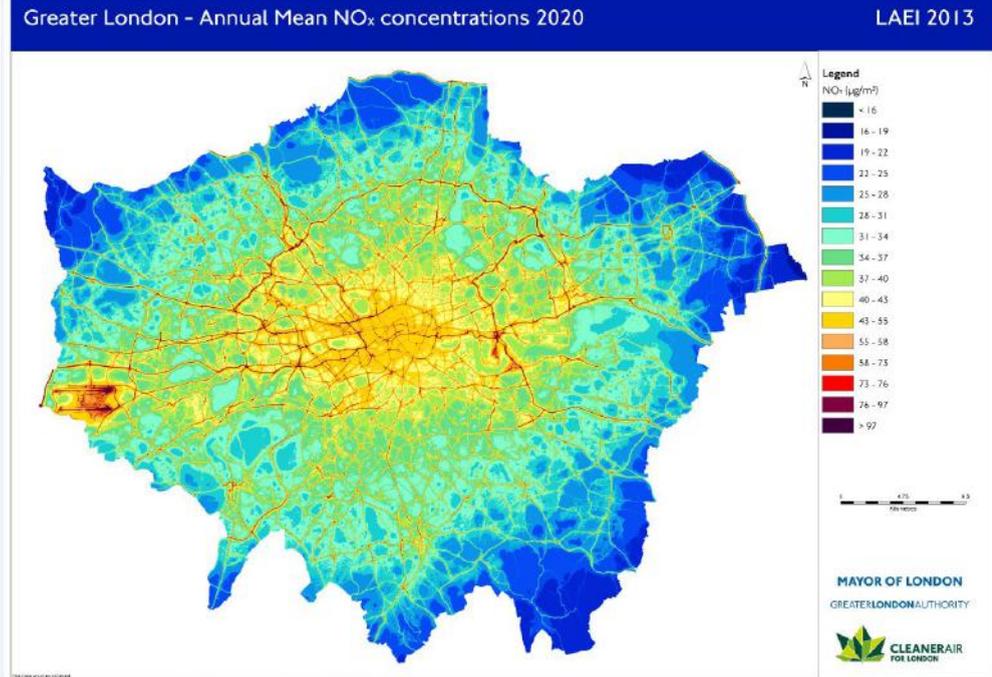
The London Atmospheric Emissions Inventory (LAEI), is published by the GLA and TfL on an approximately four yearly cycle. Using a variety of source data; the LAEI modelling data that predicts levels for 2020 has been used here. Using an atmospheric dispersion model, this data (collated in 2013), provides predicted estimates of ground level concentrations of the key pollutants NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> across Greater London for the year 2020. As of yet, the 2016 data does not have the predictions for 2020.

This LAEI modelled 2020 data is the most established source for future predictive modelling air quality across London.

Of the two main pollutant types of concern, in central London, NO<sub>2</sub> objectives are consistently breached, with exceedances in outer London tending to take place at the sides of busy roads.

The UK national annual PM<sub>10</sub> limit value is being met across London, but there are still isolated exceedances of short term PM<sub>10</sub> objectives at busy roads.

The two maps to the right show the overall picture in London for NO<sub>x</sub> and PM<sub>10</sub>. Blues and greens reflect areas in compliance with standards for these pollutants; oranges, reds and darker represent exceedances of the annual limits.



# Air Quality in Bromley NO<sub>2</sub> and PM<sub>10</sub>

The maps to the right essentially reflect 'zoomed in' versions of the London-wide maps on the previous page. These allow a greater understanding of the pollution that is predicted to exist in Bromley in 2020.

This data shows that in 2020 Bromley is predicted to meet all the national objectives at our monitoring points other than for the annual mean of Nitrogen Dioxide (NO<sub>2</sub>), however, the data for Bromley shows that there has been some decline in NO<sub>2</sub> concentrations since 2010.

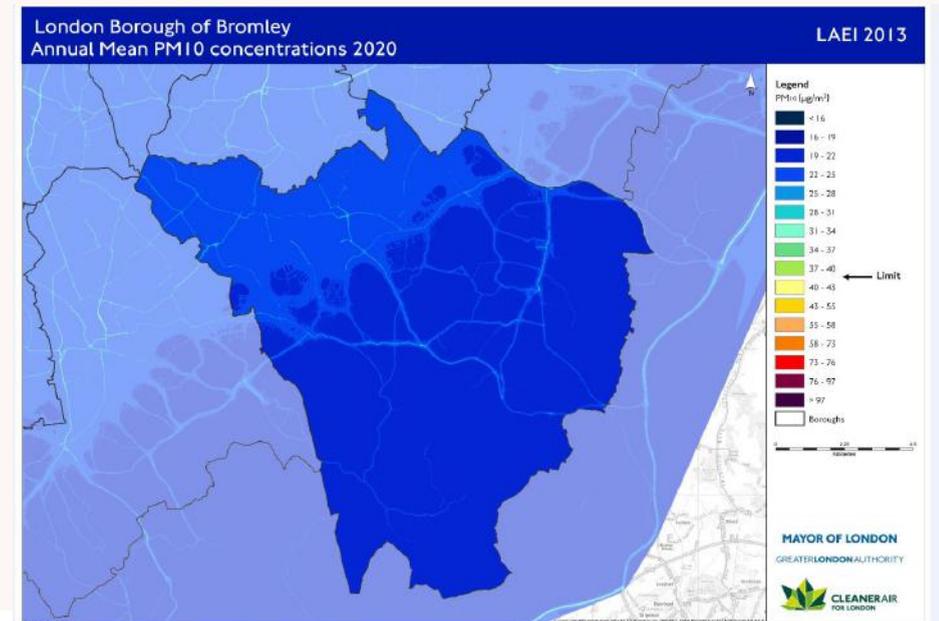
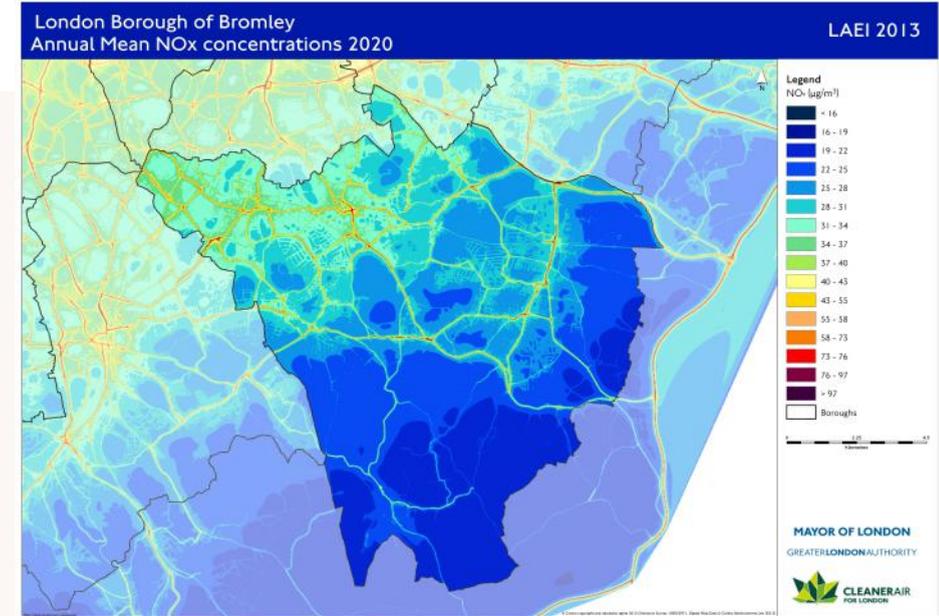
As with the rest of London, the highest pollution falls alongside busy main roads such as the A21, A20 and A232.

These roads are clearly distinguishable on the maps and show as light green due to their associated pollution levels.

As most of the polluting roads in Bromley are operated and managed by Transport for London, our ability to limit air pollution from these roads is limited

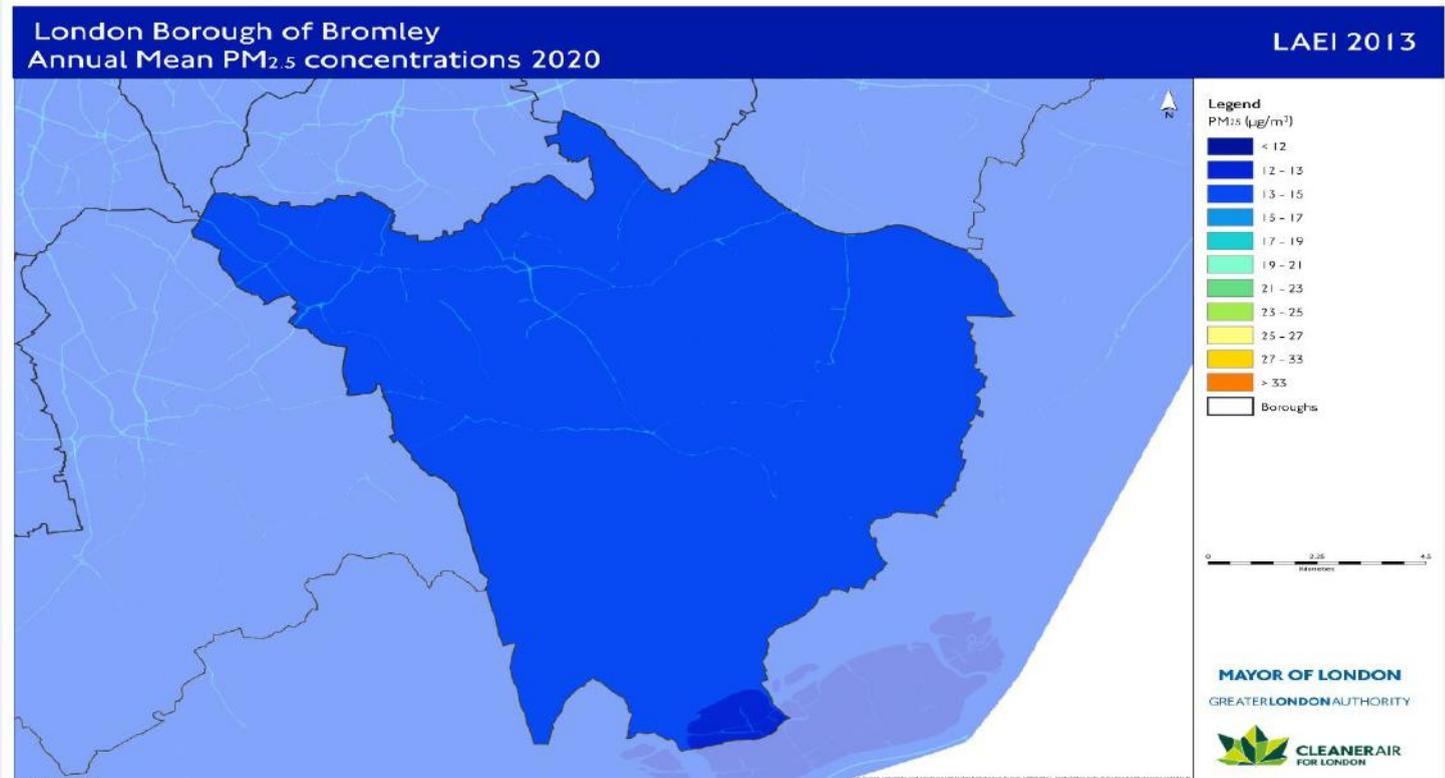
The colour changes show how the pollution gradient changes with distance, away from heavy traffic, and further demonstrates that the majority of the borough has pollution levels well below the target limit.

The modelled data for 2016 showed that Bromley met the current objective for PM<sub>10</sub>, and that almost half the borough met the current objective for PM<sub>2.5</sub>. The predicted data for 2020 shows that Council will meet the current objectives for Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>), however as the pollutant PM<sub>2.5</sub> is considered to be damaging to health at any level this remains a pollutant of concern.



# Air Quality in Bromley PM2.5

Modelled data for 2018 and 2020 shows that Bromley has the lowest concentration levels of PM2.5 per weighted population



As previously mentioned, 2016 data shows Bromley is meeting the current objective for PM10 and is predicted to meet the objective for PM2.5 in 2020, however as the pollutant PM2.5 is considered to be damaging to health at any level this remains a pollutant of concern.

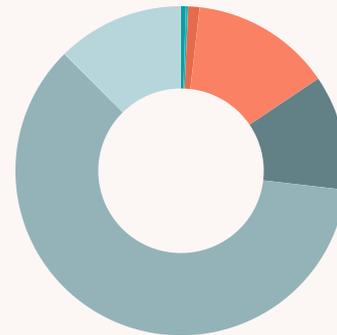
The WHO annual mean guideline limit for protection of human health is considered to be 10 micrograms per cubic metre of air. The 2016 LAEI modelled data showed that approximately half of the borough was within limits, and the other half had modelled data that showed levels between 12 and 14 micrograms per cubic meter of air. Later modelled DEFRA data in 2018, shows the average concentration per weighted population in Bromley is 10.4 micrograms per cubic meter of air. This level is the lowest of the London Boroughs, and is below the maximum limits set in the Air Quality Objectives. However it is marginally above the WHO guideline, and therefore further efforts to reduce this are warranted if we are to meet this target, as is our ambition.

# Source Apportionment

## What are the Sources of NOx and NO2?

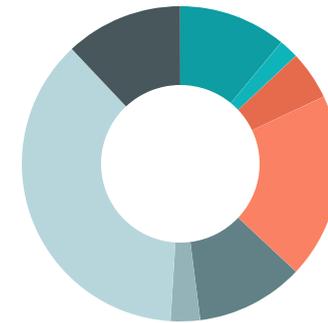
All combustion processes produce Nitrogen Oxides (NOx). In London, road transport and heating systems are the main sources of these emissions. NOx is primarily made up of two pollutants - nitric oxide (NO) and Nitrogen Dioxide (NO2).

### NOx Emissions Tonnes



- Rail (0.47%)
- Aviation (0.23%)
- Other (1.1%)
- Industrial and Commercial (13.74%)
- Domestic (11.32%)
- Road Traffic (60.69%)
- Construction (12.44%)

### NOx Road Transport Emissions



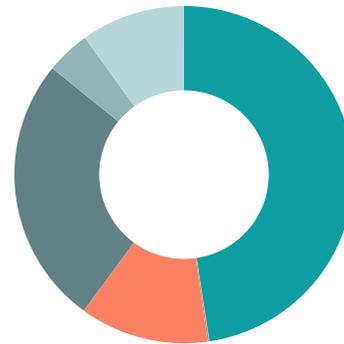
- TFL Bus (11%)
- Taxi (2%)
- Non-TFL Bus (5%)
- LGV Diesel (19%)
- HGV Rigid (11%)
- HGV Artic (3%)
- Car Diesel (37%)
- Car Petrol (12%)

Of the NO2 that originates in the borough, the graph above shows that 60% of NO2 emissions come from road transport, and the second largest source being industrial and commercial. Sources within that category being industrial and commercial heating and industrial emissions. With regards to transport, it's clear that the largest contributors are diesel vehicles (diesel cars, LGV diesel and TFL buses) (67%).

# Source Apportionment

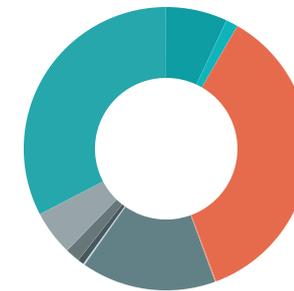
## What are the Sources of PM10?

Sources of PM10 Emissions



- Industrial and Commercial (47.6%)   ■ Rail (0.05%)
- Aviation (0.13%)   ■ Domestic (12.29%)
- Road Transport (25.8%)   ■ Other (4.21%)
- Resuspension (9.92%)

PM10 Road Transport Emissions



- HGV Rigid (6.96%)   ■ HGV Artic (1.37%)
- Car Petrol (36%)   ■ Car Electric (0.1%)
- LGV Diesel (15.29%)   ■ LGV Electric (0.02%)
- LGV Petrol (0.16%)   ■ Motorcycle (0.69%)
- Non-TFL Buses (1.66%)   ■ TFL Buses (5.1%)
- Car Diesel (32.64%)

With PM10, industrial and commercial (including construction) sources contribute almost half of all emissions in this category, the single next largest polluters being diesel and petrol cars.

# The Future of Air Quality in Bromley

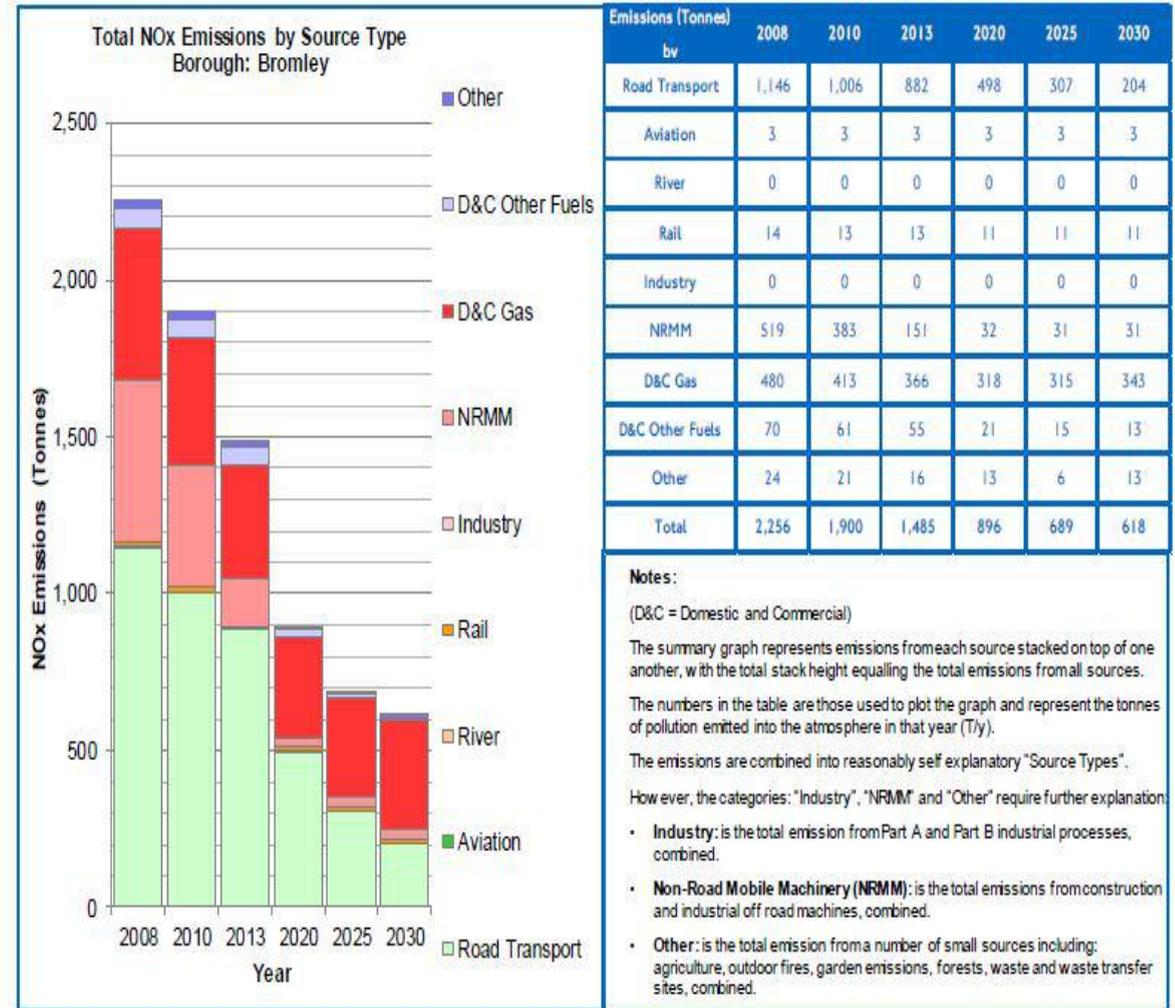
Data shows that Bromley's air quality has improved year on year since 2010

The LAEI provides detailed modelling figures for future air quality levels across London. The following graphs show the modelled emissions forecast for Bromley 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.

The graph to the right shows that NOx levels are predicted to decrease rapidly between 2020 and 2025; reductions in road transport emissions (the green bar on the graph) constitute the largest area of emissions reduction. This is due to technological advances in transportation, 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 borough.

## London Atmospheric Emissions Inventory

### NOx Emissions - Bromley



# The 5 Themes of the Action Plan

Bromley's vision is to both maintain and improve the overall air quality in the borough, and to work towards achieving the PM2.5 limits set by the WHO in the future. We know we can't achieve this alone, therefore a holistic and collaborative approach will be taken with partners and stakeholders, to drive our ambitions forward.

Our Action plan has been split into 5 categories:

- Monitoring
- Reducing emissions from buildings and new development
- Public Health and Raising awareness
- Reducing emissions from transport (including, servicing, freight and fleet)
- Local Solutions

As part of their statutory LLAQM duties, the GLA produced a matrix with 25 actions for boroughs to consider delivering locally as part of their LLAQM action planning obligations, and Bromley is committed to taking forward all of these actions. Working in partnership, we have also presented additional actions beyond the initial 25 points, and are committed to reduce levels of all pollutants as far as we are able to.

This section is set out as follows:

- Each of the five themes is introduced, with key achievements over the lifetime of the Action Plan;
- The Action Plan matrix itself sets out all the actions grouped by the five key themes.

## ✓ Monitoring Air Quality: Theme 1

We will continue to monitor air quality to assess our compliance with Air Quality Limit Values, and against World Health Organisation targets.

**Key actions from our Action Plan-**

- We will expand our network of diffusion tube monitoring to cover the expanded AQMA;
- We will test emerging monitoring technologies including smartphone apps as they are developed;
- We will seek funding for automatic monitoring of PM10 and PM 2.5.

## ✓ Reducing Emissions from Buildings and New Developments: Theme 2

Emissions from demolition and construction work are key sources of particulate matter, specifically Non-Road Mobile Machinery is the major culprit, and non-compliant construction plant can cause highly localised spikes in pollution. We will ensure that all planning applications for major developments are conditioned to require compliance with the NRMM, meaning that plant will be complaint with relevant emissions standards, and our new Development Plan (incorporating the London Plan) will set a more demanding requirement for certain developments.

**Key actions from our Action Plan-**

- 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 emissions by 2029 for Council buildings.



## **Reducing Emissions from Buildings and New Developments cont: Theme 2**

Within this plan the bar will be raised from achieving “air quality neutral” to “air quality positive” for the largest developments, and all major development proposals “must be at least air quality neutral” and be submitted with an air quality assessment.

### **Key actions from our Action Plan-**

- Revise our Code of Construction Practice for developers;
- Publish a holistic Carbon Reduction Strategy for Council buildings;
- Ensure NRMM compliant planning conditions are applied to all major developments.



## **Public Health and Raising Awareness: Theme 3**

We will continue to inform residents, businesses and visitors about local air pollution levels, and by doing this we can help protect those who are most sensitive to its health impacts. We understand that by increasing the public’s understanding of the sources and effects of air pollution can also influence changes in behaviour which in turn improve air quality, for example modal shift changes away from using a car to drive children to school towards other more sustainable forms of travel, and through promoting health lifestyles such as cycling and walking, all of which will result in decreased pollution.

Partnering with Public Health is another way we will work 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-**

- we will continue to support and disseminate information on high pollution episodes through alert systems such as airTEXT;
- we will build closer relationships between the council and Public Health professionals including GPs to raise awareness of air pollution among traditionally hard to reach groups;
- we will undertake and promoting anti-idling campaigns around schools;
- we will promote campaigns on cleaner smoke-free fuels for heating;

## **Reducing Emissions from Transport: Theme 4**

Road traffic is the single largest source of NO<sub>2</sub> emissions within Bromley. The geographically specific nature of road-related air pollution means that transport emissions also heavily contribute to air pollution hotspots across the borough. 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).

We will implement a range of measures to reduce emissions from transport sources throughout the borough. These will include actions for: Delivery Servicing and Freight, greening our Council fleet and promoting cleaner transport.

### **Key actions from our Action Plan-**

- We will improve the walking and cycling infrastructure and promote the use of greener routes such as the National Cycle Network;
- We will reduce emissions from the Council's fleet including the phased replacement of gritters in 2020 whereby Euro VI rated vehicles are introduced;
- We will minimise emissions from contractors by smart procurement measures;
- We will progress the installation of Ultra Low Emission Vehicle (ULEV) infrastructure, and ensure that with new homes 1 in 5 car parking spaces have an electric charge point;
- We will provide education on fuel efficiency as part of the driver induction process of all new staff;
- We will be promoting the use of alternative transport for those staff (including the provision of electric bikes) who undertake visits where possible.

## **Local Solutions: Theme 5**

These measures seek to improve the environment of neighbourhoods through a combination of measures;

### **Key actions from our Action Plan-**

- We will identify opportunities for greening infrastructure through the planning process;
- We will undertake a feasibility study for enhancing the public realm potentially through gyratory removal at Elmers End;
- We will deliver the Shortlands Friendly Village Scheme;



## *Consultees*



- The Secretary of State;
- The Environment Agency;
- Transport for London (who will provide a joint response with the Mayor);
- All neighbouring boroughs and/or neighbouring district and county councils;
- Other public authorities as the borough considers appropriate;
- Bodies representing local business interests and other persons/ organisations as considered appropriate;
- Residents

## *Results of Consultation*



See Appendix A Summary of Consultation Responses

# The Air Quality Matrix

Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
<b>Monitoring: Theme 1</b>					
<b>1 Ensure that appropriate and effective monitoring is undertaken across Bromley to meet statutory obligations.</b>	Ongoing maintenance of the Harwood Ave air quality monitoring station (AQMS)	Target: data capture over 90%	Environmental Protection	3	Ongoing
	Publish an annual report of air quality data on Bromley's website	The successful submission and publication of Annual Status Reports and other statutory documents to the GLA	Environmental Protection	1	Annually
	Seek funding where appropriate (via s106 agreements) for reference monitoring in Bromley	Submissions	Environmental Protection	2	Ongoing
	Review of diffusion tube network following the extension of the AQMA and add additional diffusion monitoring points	Appropriately site 20 additional diffusion tube monitoring points within the extended zone of the proposed new AQMA. Roll out to commence by January 2021	Environmental Protection	2	January 2021
	Seek funding for AQMS to measure PM10 and PM 2.5 NO2 and O3 at Biggin Hill by local agreement	Submissions and implementation if successful	Environmental Protection	2	Ongoing
	Prioritise the provision of a PM2.5 monitor if installing new monitors	Business Case completed, efforts to source funding for new monitors ongoing"	Environmental Protection	2	Ongoing
	Seek to test appropriate new smart monitoring technologies as they develop	Report based on horizon scanning and reviewing of current and emerging technology.	Environmental Protection	3	March 2022
	Continue to support major developers in siting and installing construction site dust monitors	Advice given through planning consultation system. Outputs – number of planning conditions /reports provided. Reported annually in the ASR	Environmental Protection	1	Annually
	Membership of the LAQN	Membership status renewed.	Environmental Protection	3	Annually
	Borough review of Part B (Environmental Permitting) processes to ensure all relevant process are captured	Borough wide review to be completed by the end of 2021.  Target: 100% of relevant sites permitted  Output – number of additional new permits issued	Environmental Protection	3	December 2021

Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit: High (3) Medium (2) Low (1)	Date	
<b>Reducing Emissions from Developments and Buildings: Theme 2</b>						
2	Ensuring emissions from demolition and construction are minimised	Require Construction Environmental Management Plans for 100% of major developments where works are likely to produce levels of dust	CEMPs submitted with mitigation for dust or as required by planning condition.  Target: 100% of relevant sites have CEMPs in place.	Planning	3	Ongoing
		Require real-time PM10 monitoring at high risk sites in accordance with the Mayor of London SPG.	Monitors installed on relevant sites.  Target: 100% of new High Risk sites have monitoring in place.	Planning and Environmental Protection	2	Ongoing
		Enforcement visits when complaints received.	Visits undertaken and enforcement actions as and when they are received.  Target: 100% of complaints investigated	Environmental Protection	2	Ongoing
		Update Bromley's existing Code of Construction Practice	Code to be revised by end of 2021	Environmental Protection	3	December 2021
		Produce information for developers to promote low combustion and combustion free development.	Informative produced	Environmental Protection	2	December 2021
		Adopt revised planning conditions and informatives regarding the use of diesel generators	Adoption of any additional information /informatives. To commence immediately, to be formally implemented by the end of 2021	Environmental Protection	3	December 2021
		Effectively manage and mitigate emissions of development taking place in the designated AQFAs through New Bromley Plan	Number of relevant applications assessed in Focus Areas with additional requirements.	Planning	2	Ongoing
		Where appropriate, use planning obligations to secure funding from developers for monitoring compliance checks on major and/or sensitive sites.	Amount of funding secured	Planning and Environmental Protection	1	Ongoing
		Continue to assess all relevant planning applications for their air quality impact and condition as appropriate.	Number of applications assessed, against no received within 28 days.  Target: 100% of relevant applications assessed	Environmental Protection	2	Ongoing
3	Ensuring enforcement of Non Road Mobile Machinery (NRMM) air quality policies	Apply conditions for construction sites to ensure compliance with the GLA's NRMM requirements *Planning conditions to include where appropriate: Air Quality Assessment AQN assessment CEMP to include PM10 monitoring NRMM compliance with London LEZ Seek funding for air quality measures through S.106, CIL where feasible	Number of developments registered and compliant.  Target: NRMM planning condition applied to 100% of relevant sites	Environmental Protection and Planning Enforcement	2	Ongoing
		Ensure emissions from construction sites are minimized through cooperation with developers and site visits, including effective dust monitoring where appropriate, and compliance with GLA NRMM requirements	Compliance visits undertaken and number of reactive visits to complaints and appropriate enforcement outcomes.  Targets: A minimum of 10 site audits annually (subject to sufficient sites meeting the criteria).	Environmental Protection and Planning Enforcement	1	Annually
4	Reducing emissions from CHP and ensure smaller developments use ultra-low NOx boilers	Require developments with CHP to be air quality neutral as a minimum.	Number of developments where AQ neutral is applied.  Target: 100% of relevant sites.	Planning	3	Ongoing
		Require developers to meet the GLA's emissions limits for Combined Heat and Power (CHP) and Biomass boilers	As Above	Planning	3	Ongoing
		Set requirement for evidence of maintenance of CHP and associated plant	As Above	Carbon Management	2	Ongoing

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
<b>Reducing Emissions from Developments and Buildings: Theme 2</b>						
5	Enforcing Air Quality Neutral Policies	Apply Air Quality Positive for regeneration areas in line with the new London Plan	Agree standard planning conditions to require compliance with AQN standards and London Plan policy.  Output – number of conditions applied	Planning	3	Ongoing from 2020
		Set requirement for evidence of maintenance of CHP and associated plant.	Number of relevant developments applied.  Target: 100%	Planning	2	Ongoing
6	Ensuring adequate, appropriate, and well located green space and infrastructure is included in new and existing developments, where appropriate.	Planning application / conditions - Set targets to improve levels of green infrastructure provided in new developments.*To be considered on a case-by-case basis through application of relevant London Plan Policies	To be considered on a case-by-case basis through application of relevant London Plan Policies. Output target: number of sites including GI	Planning Development And Control	2	Ongoing
		Ensure that exposure to poor air quality in amenity spaces is considered at design stage and as part of the AQA.*To be considered on a case-by-case basis through application of relevant London Plan Policies	To be considered on a case-by-case basis through application of relevant London Plan Policies. Output target: number of sites including GI	Public Health and Environmental Protection	2	Ongoing
7	Ensuring that Smoke Control Areas (SCA) are appropriately identified and fully promoted	Carry out awareness campaigns in relation to bonfires and wood burning stoves and provide advice on appropriate fuel by issuing guidance	Guidance to be produced by the end of 2021 and to be promoted through newsletters including 'Environment Matters'. Estimated engagement can be demonstrated through circulation outputs, website page hits. We will circulate to providers of fuels and relevant businesses, demonstrated through number of correspondence.	Public Health and Environmental Protection	2	December 2021
		Effectively fulfil statutory duties as a Smoke Control Area	Promotion and education campaign and respond to complaints  Target: Minimum 1 campaign a year and 100% response to complaints.	Environmental Protection	2	Annually
		Continue to control emissions from permitted processes through inspections and enforcement. (see also action 1)	Number of sites with permits related to Local Air Pollution Prevention and Control guidance. Inspection audits undertaken as set by risk assessments per premises.  Target: 100% of all relevant sites to have appropriate permit	Environmental Protection	2	Ongoing
8	Deliver energy efficiency retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:NEW, RE:FIT and through borough carbon offset funds to replace old boilers/top-up lost insulation in combination with other energy conservation Measures.	Promoting and delivering energy efficiency retrofitting projects in workplaces and homes	ECO Flex declarations commenced in 2017. The projected figure for Bromley in 2019/20 is 12 declarations covering 53 households with an escalation year on year.  Target: 5% minimum increase annually.	Housing	2	Annually

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
<b>Reducing Emissions from Developments and Buildings: Theme 2</b>						
8		Follow up proposals for inclusion in a revised policy for the retrofitting of air pollutant reduction equipment for clients living in areas identified as most likely to trigger detrimental health effects	Revised policy published	Housing	2	December 2021
		Continue with the advice service for households at risk of fuel poverty in south east London. Target- to carry out 800 home visits and 800 one-to-one advice sessions at events across South East London including Bromley	Provide advice to a minimum of 37 Bromley households	In Partnership with Neighbouring boroughs (South East)	1	Ongoing
		As part of a current review of the use of discretionary grant funding linked to Disabled Facilities Grants and the Better Care Fund	Review funding- Target March 2022	Housing	1	March 2022
	Promoting and delivering energy efficiency projects in council buildings- leading by example	All projects have a demonstrable carbon reduction and will be appraised independently. Overall organisational emissions reductions will be evidenced in the Council's Carbon Management Programme. Carbon Management Programmes and other energy emissions reports can be viewed at: <a href="http://bromley.gov.uk/info/2001105/sustainability">bromley.gov.uk/info/2001105/sustainability</a> * Individual timescales depend on project scope; the financial investment and works required vary. All projects feed into on-going carbon management programme, each lasting 5 years. Costs are project specific to include SEELS and SALIX loans	100% appraisals undertaken of relevant projects and annual report provided	Carbon Management	2	Annually
8A	Update local authority procurement policies to reduce pollution from logistics and servicing, and to maximise air pollution benefits	Production of a sustainability toolkit for service leads to consider sustainability issues including carbon and air quality when initiating the procurement process.	Toolkit developed and workshops provided to relevant services.	Procurement and Carbon Management	2	January 2022
8B		LB Bromley Sustainability Policy to be further developed	Policy to be developed and published	Procurement and Carbon Management	2	January 2022
		Seek to influence supplier behaviour through Circular Economy principles: reduced journeys, shared services, product life extension, waste minimisation, energy recovery from waste	100% Contracts analysed and report provided annually	Procurement and Carbon Management	1	Annually
9	Ensure master planning and redevelopment areas are aligned with Air Quality Positive and Healthy Street approaches.	Update ASR and planning portal	Portal updated	Development Control	1	December 2021

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
	<b>Public Health And Awareness Raising: Theme 3</b>					
10	Public Health department taking shared responsibility for borough air quality issues and supporting implementation of Air Quality Action Plans	The Health and Well-Being Board will include a new section within the Joint Strategic Needs Assessment (JSNA) with up to date information on air quality impacts on the population *Public Health Team to support engagement with local stakeholders (businesses, schools, community groups and healthcare providers)	Production of JSNA	Public Health	2	December 2021
11	Engagement with businesses. This could be linked to the engagement with town centre BIDS proposed in the final LIP to promote active and public transport options to their members, reducing pollution in town centres through mode shift	Promote active travel and public transport to businesses. The Council will host events such as free cycle training and Dr Bike sessions for BIDs who are proactively engaged	Record number of businesses actively engaged with emissions reductions initiatives, and provide annual report.  Produce baseline for 2020 and target increase 10% per annum.	Traffic and Road Safety	2	Annually
12	Promotion of availability of airTEXT	Public Health team to support promotion through GP practices and pharmacies Membership of airTEXT consortium	No. of signups to the AirTEXT Alerts - Promoted through dissemination through 40 GP Practices and 20 Pharmacies with an estimated distribution of 50,000 residents.  Produce baseline for 2020 and target increase 10% per annum.	Public Health and Enviro Protection also self-promotion by AirTEXT	3	Ongoing
13	Encourage schools to join the TFLs STARS accredited travel planning programme by providing information on the benefits to schools and supporting the implementation of such a programme.	Use of the STARS programme in schools as a tool to promoting active travel to school. The Council will consider infrastructure enhancements proposed in the travel plan of Gold accredited schools as part of its annual LIP programme. Bronze or Silver STARS accredited schools will be encouraged to gain Gold accreditation. *The vast majority of schools in Bromley promote travelling to school by methods other than car. Initiatives such as 'Walk on Wednesday' the 'Walking Bus' and 'Bikeability' all contribute to an environment where being active is a normalised part of day to day life for families in Bromley	Number of Bronze, Silver Gold accreditations.  Currently 76% of schools have active travel plans. Target - The Council will seek to maintain a level where more than 75% of schools have an active travel plan with a target score for quality of >180.	Traffic and Road Safety	2	Ongoing

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
<b>Public Health And Awareness Raising: Theme 3</b>						
<b>14</b>	<b>Air quality in and around schools.</b>	Ongoing co-ordination of the Healthy Schools London in Bromley project, to improve children and young people's health and well-being. Target is to add 5% more schools each year. *over ninety schools currently participating. London Healthy Early Years (HEYL) supports and recognises achievements in child health, wellbeing and education in early years settings. Well over one hundred Bromley Early Years settings have already registered with a target of an additional 5% year on year.	5% target annual increase achieved annually	Public Health	2	Annually
		The borough is currently undertaking a trial of a green screen around Valley Primary School as part of the Shortlands Friendly Village (Liveable Neighbourhood) project. If successful, consideration will be given to how the green screens can be delivered to more schools in the AQMA. *This delivers on the LIP3 commitment to look to undertake a trial of new green infrastructure, such as trees and green walls around schools in the AQMA and alongside corridors with the highest concentrations as a means of natural emissions capture	Results of trial published  Seek funding for at least one additional green screen per year for duration of the plan	Traffic and Road Safety	1	March 2021  End of plan 2025
		Promote campaign on anti-idling, involving specific signage, communications activity and increased enforcement in idling hotspots around 8 schools (see also 21). *A more targeted approach to idling, focusing on schools will be taken, which should make a difference in areas over short periods of time, utilising a variety of comms and enforcement action	No. of FPNs or verbal warnings given, campaigns undertaken and locations targeted (see also 21)  Report annually	Traffic and Road Safety	1	Ongoing

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
	<b>Reducing Emissions From Transport: Theme 4</b>					
15	Update local authority procurement policies to reduce pollution from logistics and servicing.	Seek to influence supplier behaviour through circular economy principles: reduced journeys, shared services, product life extension, waste minimisation, energy recovery from waste.	Contracts analysed – dependent timeframes relate to contract end/renewal.  Target 100% of contracts analysed	Commissioning and Procurement	2	August 2021
15 cont.		Require suppliers with large fleets to have attained Bronze / Silver / Gold Fleet Operator Recognition Scheme (FORS) accreditation. *Bromley's LIP3 sets out a road map to reducing emissions from the LBB fleet to 2041 and working with procurement, the Council will be asked to consider how they could ask contractors to innovate towards a greener fleet and to reduce emissions from the Council's fleet	No. of suppliers accredited – report provided.  Produce baseline for 2021 and target increase 5% per annum	Strategic Transport	2	April 2021 and annual report
16	Reducing emissions from deliveries to local businesses and residents	Sustainability toolkit for service leads to consider sustainability issues including carbon and air quality when initiating the procurement process. Will require measurements that are proportional and appropriate to contract size	Toolkit produced and implemented.	Commissioning and Procurement	2	April 2021
		LB Bromley Sustainability Policy to be further developed	Policy updated and published	Strategic Transport	2	July 2021
		The Council will continue to seek to work with collection locker providers to provide such facilities in some borough car parks to reduce delivery miles	Provision of facilities installed.  Target: 100% of carparks to have lockers by 2025 where feasible. Progress reported annually.	Third Party Agencies	2	End of Plan 2025
		Any development likely to create a significant number of trips will, where necessary, is required to enter into an agreement to submit and implement acceptable Construction Logistics Plans, and Delivery/Service Plans. Consideration will be given to re-organisation of freight to support consolidation (or micro-consolidation) of deliveries, by setting up or participating in new logistics facilities, and/or requiring that council suppliers participate in these.	Target 100% CLP and SDP submitted for all relevant developments	Planning	2	Ongoing
17	Reducing emissions from council fleets	Council fleet and hired fleet to meet Quality Standard. Operating data and feedback will be collected to help inform future replacements and procurement projects	Target 100% compliance with standard. Progress reported annually.	Transport operations	2	End of plan 2025
		Increase the number of plug-in hybrid and electric council vehicles through planned replacement programme	No. increased. The Council is committed to Carbon Free Emissions by 2029 – Annual report on increase.	Neighbourhood Management and Transport	3	Ongoing

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
17 Cont.		Increase the uptake of new Euro VI vehicles in the heavier fleet, phase out older vehicles operated by our contractors by April 2020	No. Increased, and older fleet phased out in target time	Commissioning and Procurement	2	April 2020
		Promote fuel-efficient driving through the driver induction and competence checks	Target 100% of all new drivers to receive an induction. – report annually	Transport	2	Annually
		Work in partnership with our Waste contractor to ensure our infrastructure allows for a fully electric waste collection fleet in 2026	Improvement in infrastructure.  Target: fully electric fleet by 2026 (beyond the plan) Progress reported annually.	Neighbourhood Management	3	2026
		Monitor progress with vehicle manufacturers, other similar operators and technical developments to further support the intake of alternatively fueled vehicles.	Monitoring undertaken.  Target: 6 monthly review	Neighbourhood Management	1	Annually
		Increase the use of pool vehicles	Uptake monitored and reported annually.  Produce baseline for 2020 and target increase 10% minimum per annum.	Neighbourhood Management	1	Annually
		Maintain the FORS accreditation held by the Council's Waste, Streets and Parks contractors.	Accreditation in place. Contractors will be encouraged to attain gold accreditation	Neighbourhood Management	1	Ongoing
		Equip waste vehicles with the 'Driving Efficiently and Safely' (DES) tracking and monitoring system to monitor and minimise idling, braking, over-revving, and contravention of speed limits	No. of vehicles equipped- report annually.  Produce baseline for 2020 and target increase 5% minimum per annum	Neighbourhood Management	2	Ongoing
		Supervisors of the waste and street cleansing service to use electric vehicles	Target – minimum of 12 electric vehicles fully operational by March 2020	Neighbourhood Management	1	March 2020
		Installation of electric charging point for HGV's	Installation of points – Target minimum of 5 points by 2021	Transport	1	December 2021
		Increase the % of mobile equipment used (e.g. electric chainsaws) by the Arboriculture contractor	Produce baseline for 2020 and target increase over the current 30% level over the term of the AQAP	Neighbourhood Management	1	End of plan 2025
17A	Staff Lease Car Scheme	Promote the uptake of alternative fuel cars via the staff lease scheme. The option to further incentivise drivers will be a discussion point when approaching the next procurement exercise	14% of the fleet is now hybrid/plug in or pure electric - Target minimum 5% increase over this level reported annually	Transport operations	1	Ongoing

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
<b>Reducing Emissions From Transport: Theme 4</b>						
20	Ensure that Transport and Air Quality policies and projects are integrated.	Through this AQAP and Bromley's LIP3 officers will continue dialogue regarding project and policy implementation. *Transport and Environmental Health staff form part of core AQAP Steering Group	Ongoing monitoring Target: quarterly reviews undertaken	Highways and Public Protection	3	Annually
21	Discouraging unnecessary idling by taxis, coaches and other vehicles	The Council is participating in the London-wide anti-idling campaign funded from the Mayor's Air Quality Fund with eight schools in the borough to hold anti-idling campaigns per annum. PCN enforcement will allow for a significantly higher penalty for idling to be applied	Target: Minimum of 8 campaigns annually – report annually	Traffic and Road Safety		Annually
		The borough has adopted powers to enforce against idling vehicles but will look to create a Borough-wide TMO to allow for PCN enforcement which will be easier to enforce with existing and widely allocated CEO resources	TMO created and in effect from April 2020. Target- launch campaign and be ready to enforce by 2020- Report annually	Traffic and Road Safety	3	Ongoing Launch September 2020
22	Temporary car free days.	Work with BIDs to support a suitable programme of weekend road closures to allow town centres and high streets to be used in new and innovative ways, supporting vibrant town centres and communities	Programme to be produced by April 2021 - Output - Closures applied	Traffic and Road Safety	2	April 2021
		Continue with Play Street events and engage with residents in discussions about possible changes in the locality that would enhance walking and cycling	No of events held over period of plan Produce baseline for 2021 and target increase 5% per annum	Public Health and Traffic and Road Safety	1	Ongoing
23	Using parking policy to reduce pollution emissions.	The use of electric vehicles will be promoted by providing the appropriate infrastructure. There are national policies in place to influence road users' choice of vehicle but parking policy is not considered to have an impact on the use of those vehicles. * As even EVs will emit pollutants in the form of Particulate Matter via brake and tyre debris and road wear and tear. The borough's priority will be to encourage active travel where this can be a genuine option for the user	Events and promotion Target: Produce plan for pocket parks to utilise road space by end of 2021 for introduction in 2022	Parking	2	Plan December 2021 Implementation December 2022
24	Installation of Ultra-low Emission Vehicle (ULEV) infrastructure such as electric vehicle charging points, rapid electric vehicle charging points and hydrogen refueling stations	Work with Bluepoint London to continue to roll out electric vehicle charging infrastructure. *There are national policies in place to influence road users' choice of vehicle but parking policy is not considered to have an impact on the use of those vehicles	Maintain membership of the Source London network and expansion of the infrastructure	Traffic and Road Safety	2	Ongoing
		Install 4 Rapid Charge Points as part of the TFL scheme by March 2020 along with the 4 installed on the A232 TLRN in Coney Hall and West Wickham	Target - Installation of 4 rapid charging points. The Council will continue to work closely with TFL and private sector partners to improve the provision of charging equipment in key locations where our own funding is compromised.	Traffic and Road Safety	3	March 2020
		Policy 30 of the Local Plan requires 1 in 5 car parking spaces to be provided with electric vehicle charge points	Application of the plan. Output – developments subject to the requirement. Target: 1 in 5 car parking spaces in Bromley to be provided with chargers	Planning	2	To be applied to all developments- Ongoing throughout the plan
		Implementation of a pilot for lamp post charging points, including £30K LIP investment match funded by GULCS	Outcome of pilot Target: Report published	Traffic and Road Safety	1	December 2021

	Action name	Description of Actions	Evidence and KPIs	Responsibility	Magnitude of Benefit High (3) Medium (2) Low (1)	Date
<b>Reducing Emissions From Transport: Theme 4</b>						
25	Provision of infrastructure to support walking and cycling and encourage mode shift away from private vehicle usage	Development of new cycle routes, both as part of TfL's strategic cycle network and local routes	Outcome 1 of Bromley's LIP3	Traffic and Road Safety	3	Ongoing throughout the plan
		Delivery of the 'Shortlands Friendly Village Scheme' to include schemes to reduce traffic volumes on residential streets to facilitate a safer and more inviting environment for walking and cycling.	Scheme delivered.	Traffic and Road Safety	2	To commence in November 2020
		Delivery of area-based schemes that promote walking and reduce road danger, including a new footpath to Valley Primary School, a parallel zebra crossing outside Bishop Challoner School and a segregated cycle route in Albermarle Road and Beckenham Road to connect Shortlands with Beckenham, plus a cycle route in Valley Road to Harris Primary.	Schemes delivered by 2025. Reported annually.	Traffic and Road Safety	1	By end of plan 2025
		Improve pedestrian safety-installation of new pedestrian crossings	Number of crossings installed.  Produce baseline for 2020 and to establish an appropriate target for annual improvement.	Traffic and Road Safety	2	Ongoing
		Improve pedestrian infrastructure to encourage walking to school	Infrastructure improved.  Target: As a minimum improvements to footways and crossings to benefit 5 Primary schools and 1 Secondary School by April 2023	Traffic and Road Safety	2	April 2023
		Provide high quality cycle hubs at stations and continue to deliver on-street cycle parking and Bike hangers	Hubs installed.  Target: Minimum of three installation by end of 2021	Traffic and Road Safety	2	December 2021