

LONDON BOROUGH OF BRENT



AIR QUALITY ACTION PLAN

2023-2027



The air we breathe affects our health. This is why reducing air pollution in the borough is a priority. This Air Quality Action Plan (AQAP) outlines the actions we will take to improve air quality in the London Borough of Brent (LBB) over the next five years, between 2023 and 2027 (inclusive).

Our vision for cleaner air

- Air pollution is **harmful to everyone** and it can affect all **organs of the body**
- There is **no “safe” amount of air pollution** – long-term exposure to even low levels of air pollution can impact our health in the future
- The health impacts of air pollution are **unequal**, leading to unacceptable **health inequalities**

Therefore, improving air quality remains a priority for LBB.

Our vision is to ensure 'Clean air for everyone living in, working in, or visiting Brent.'

The core aims we have set to help us achieve this vision are to:

- **Reduce pollution concentrations**, striving for World Health Organisation (WHO) guidelines;
- **Raise awareness** of the health impacts;
- **Influence change** and lead by example.



WHAT ACTION HAS BEEN TAKEN OVER THE LAST FIVE YEARS?

This action plan replaces the previous plan which ran from 2017 to 2022. Highlights of the projects delivered through the past action plan include:

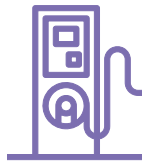
- Tackling unnecessary idling by taxis, coaches and other vehicles;



- 15 no-idling events at schools across the borough

- 482 drivers engaged as part of idling events and ongoing no-idling enforcement

- Supporting the installation of on-street electric vehicle charge points throughout Brent;



- 350 electric vehicle charge points installed between 2017 and 2022

- 34% of on-street households in Brent are within a 5-minute walk from a public charger

- Engaging with business to reduce air pollution and promoting options for less polluting deliveries;

- 103 businesses signed up to the Brent Environmental Network

- 2 cargo-bike pilots, with 7 businesses trialling cargo bikes



- Promoting air quality action days;
 - annual engagement events held for Clean Air Day and Car Free Day



- Targeted upgrades of green infrastructure;
 - 1,294 trees planted in Brent between 2017 and 2021
 - two green screens installed at two schools where playgrounds are bound by busy roads



- Promoting air pollution forecasting and route planner tools;
 - 206 subscribers to airTEXT



- Limiting impact of new development using planning policies;
 - Air Quality Neutral applicable to all developments
 - Air Quality Positive introduced for major developments within Growth Areas Areas and Air Quality Focus Areas



- Enforcing Combined Heat and Power (CHP) and biomass air quality policies;
 - London Plan limits the potential of major developments to use gas boilers



- Promoting energy efficiency retrofitting projects in workplaces and homes;
 - 400 residents have consulted the Warmer Home Advice Service since 2018
 - 89 households identified for the Green Homes Grant



- Improving energy efficiency in council buildings;
 - 68% reduction in CO2 emissions in 2021/22 compared to 2010/11 baseline



- Updating procurement policies
 - Sustainable Procurement Policy published March 2021



- Working with schools to raise awareness and reduce air pollution
 - rolled out 28 permanent school streets
 - delivered air quality engagement at 80 Brent schools through the Breathe Clean project



IN THE SPOTLIGHT: BRENT SCHOOL STREETS

Delivered in partnership with TfL and the borough's schools, the School Streets programme aims to make the roads safer for pupils and to cut local air pollution.

In 2020, the council rolled-out emergency School Streets at 30 schools across the borough. This reduced the number of cars around school gates and helped families to social distance during the Covid-19 pandemic. By discouraging car use, more people are encouraged to walk and cycle as part of their daily routine. Schools in Church End, Cricklewood, Harlesden, Neasden and Stonebridge are among the schools where School Streets have been introduced. Locations were selected on the basis of a number of criteria, including road safety issues; exposure to poor air quality; and where support was needed to enable social distancing.

Schemes were introduced as temporary measures using an experimental traffic order with a view to either making schemes permanent or removing them after an independent review. In September 2022, the vast majority of these were made permanent.

There are now 31 school streets in the borough, 28 of these are permanent. To allow for better monitoring and enforcement, cameras are being installed at all permanent school streets.

For more information, visit www.brent.gov.uk/schoolstreets

'I think it is best that cars are not on the road when kids are out because of the pollution. It can damage lungs and affect breathing, especially because of my asthma.'

Christine, who is in year 6 at John Keble school (which has a school street)



IN THE SPOTLIGHT: CARGO BIKE TRIALS WITH BRENT BUSINESSES

Businesses and organisations in Harlesden and Willesden Green town centres had the opportunity to trial cargo bikes for free through two pilot projects, in 2021 and 2022 respectively. Subsidies were made available to help businesses switch from using petrol and diesel vehicles to transport goods in a more environmentally friendly way.

In Harlesden, the trial ran for a month and 3 organisations switched to use cargo-bikes during the trial. During this pilot, Harlesden Mutual Aid, who deliver food parcels to the local community, used cargo bikes to make 60 deliveries, distributing 1,920 meals.

In Willesden Green, the project (funded by Defra through the Cross River Partnerships Clean Air Village 4 programme) also ran for a month with 4 businesses trying out cargo bikes. For the Willesden Green pilot, 72 deliveries were made for a total of 4 businesses, equating to 56 miles of cargo bike travel.

We are expanding these pilots to offer other businesses and organisations across the borough the opportunity to pilot cargo bikes as an environmentally friendly way to transport goods around Brent.

For more information, visit www.brent.gov.uk/bikesforbusiness



THE WIDER CONTEXT

Air pollution causes a number of adverse health impacts; it can cause asthma, heart disease, cancer, and is also linked to dementia. Even if you have no underlying health issues, air pollution can still impact your future health.

It is therefore important that we do all in our power to reduce air pollution in the borough and help people to reduce their exposure to poor air quality.

This is particularly critical for those who are most susceptible to air pollution, as they are even more likely to be affected by high-pollution episodes as well as long-term exposure to lower levels of pollution. This includes:

- People with existing health conditions, such as asthma and heart disease
- Children

- Elderly
- Pregnant women
- Communities in areas of higher pollution, such as close to busy roads

Did you know?

Living near busy roads in London may stunt lung growth in children by up to 12.5% (1)



It is also known that areas with poor air quality, and therefore worse health outcomes, are often the less affluent areas (2, 3). **Air pollution therefore exacerbates health and social inequalities.**

Not only does air pollution harm our health, it also harms our economy. It is estimated that the health problems resulting from air pollution cost the UK up to £20 billion per year (4).

It is therefore critical that we all play a role in tackling air pollution in the borough, for our own health and for the health of others.



(1) KCL. (2019). Personalising the Health Impacts of Air Pollution: Summary for Decision Makers.

(2) Barnes, J. et al.,. Emissions vs exposure: Increasing injustice from road traffic-related air pollution in the United Kingdom. Transportation research part D: transport and environment 73 (2019): 56-66.

(3) Greater London Authority air quality exposure and inequalities study (2023)

(4) Royal College of Physicians, Every Breath We Take: The Lifelong Impact of Air Pollution, (2016)

ACTION WE WILL TAKE OVER THE NEXT FIVE YEARS

In developing this AQAP, we have spoken with over 400 Brent residents to understand where they would like to see action taken first (6). From this, and in line with guidance from the Greater London Authority (GLA), we have developed 37 actions under five broad themes, including the following 16 priority actions. The full list of 37 actions can be seen in Section 5.



Theme 1 - Cleaner transport

Road transport is the main source of air pollution in London. We will incentivise walking and cycling, providing infrastructure to make our streets safer and more inclusive, aiming for a reduction in traffic. We will deliver electric vehicle charging infrastructure and work with TfL to provide clean public transport. We will work to reduce emissions from vehicles delivering goods and services. This includes LBB's fleet such as mini-buses and refuse collection vehicles. Tackling our own fleet means we will be leading by example.

Priority actions:

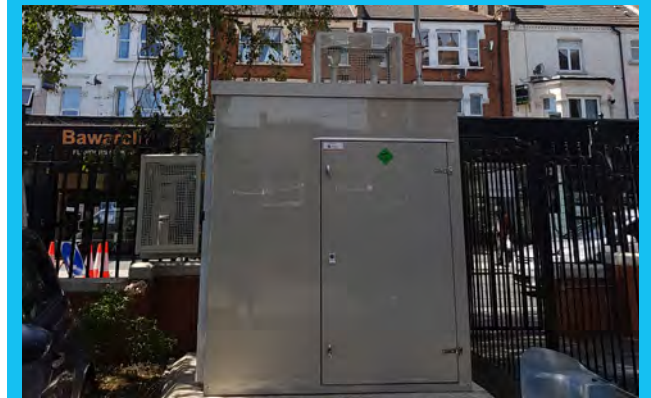
1. Provide walking and cycling infrastructure
2. Encourage walking and cycling in the borough by providing support
3. Discourage unnecessary idling
4. Reduce emissions from deliveries
5. Reduce emissions from council fleets
6. Install electric vehicle charging infrastructure

Theme 2 - Monitoring air pollution and other core statutory duties

Critical for understanding where pollution is worst, and what reduction measures are effective. There are also a number of other statutory duties undertaken by boroughs, which form the basis of action to improve pollution.

Priority actions:

7. Share air quality monitoring data in an easy-to access format, reporting against both UK Air Quality Objectives and WHO targets
8. Maintain and expand monitoring networks and fulfil other statutory duties



(5) Kaizen Partnership, Brent Air Quality Action Plan Engagement Insight Research Report, (January 2022)

(6) Kaizen Partnership, Report on LB Brent Consultation on the Draft Air Quality Action Plan (June 2023)

Theme 3 - Public health and awareness raising

Drives behavioural change to lower emissions, reducing exposure to air pollution and leading to direct health benefits.

Priority actions:

9. Work with schools and nurseries to improve air quality and to raise awareness about pollution in the local area
10. Brent's Public Health team will drive awareness and behavioural change, collaborating with health partners to reduce exposure of those most vulnerable to poor air quality, both indoor and outdoor
11. Promote air pollution alerts and route planner tools



Theme 4 - Emissions from homes, buildings, and developments

This includes emissions from construction, industry, and our own homes such as wood burning stoves and boilers. Collectively, these are responsible for a significant amount of NO2 and PM emissions in the borough.

Priority actions:

12. Promote and deliver energy efficiency and retrofitting projects in workplaces and homes throughout Brent
13. Enforce non-road mobile machinery (NRMM) air quality policies and reduce emissions from developments
14. Ensure the Smoke Control Zone is promoted and enforced



Theme 5 - Localised solutions

These seek to improve the environment of neighbourhoods through a combination of measures with a local focus.

Priority actions:

15. Introduce Green Neighbourhoods across the borough, focussing sustainable solutions in priority areas
16. Develop location specific action plans for Air Quality Focus Areas as part of the Local Implementation Plan (LIP) programme



Improving air quality in the borough requires joined up thinking and collaborative action. We have worked hard to engage with stakeholders and communities and would like to thank all those who have worked with us. We look forward to working with you again, as well as with new partners, as we deliver this new action plan over the coming years.

In this AQAP we outline how we plan to effectively use local levers to tackle air quality issues within our control and work with partners to contribute to this. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as Euro standards, national vehicle taxation policy, taxis and buses). We will therefore continue to work with the lobby regional and central government on policies and issues beyond LBB's influence.

Responsibilities and Commitments

The AQAP was prepared by the Healthy Streets and Parking Department of LBB in partnership with WSP UK Ltd. This AQAP has been produced in line with GLA guidance and has been influenced by internal discussions through Brent's Air Quality Steering Group as well as through community outreach. The AQAP has been approved by:



Dr Melanie Smith,
Director of Public Health



Chris Whyte
Director of Environment and Leisure

This AQAP will be subject to an annual review, appraisal of progress and reporting to the Director of Public Health and the Cabinet Member for Environment, Infrastructure and Climate Action. Progress each year will be reported in the Annual Status Reports produced by LBB, as part of our statutory London Local Air Quality Management duties.

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

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ABBREVIATIONS

AQAP	Air Quality Action Plan
AQFA	Air Quality Focus Area
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BEB	Building Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LBB	London Borough of Brent
LLAQM	London Local Air Quality Management
NRMM	Non-Road Mobile Machinery
NO2	Nitrogen Dioxide
PM10	Particulate matter less than 10 micron in diameter
PM2.5	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emission Benchmark
TfL	Transport for London
ULEV	Ultra Low Emission Vehicle
ULEZ	Ultra Low Emission Zone
WHO	World Health Organisation



FOREWORD



In 2020 a coroner made history by ruling that the death of a child in South London, Ella Kissi-Debrah, was due to air pollution.

Just this death alone should be enough for us all to stop and reflect on air pollution in Brent and in London. Poor air quality can affect anyone and we know that over 4,000 premature deaths are attributed to poor air quality in London and Brent has 149 of them. There is increasing evidence about the detrimental effects to our health, increasing the chances of developing dementia, being at risk of having a stroke and respiratory conditions, such as asthma.

Only 50% of Brent has access to a motor car, but we know that residents from poorer backgrounds are disproportionately affected by poor air quality. Highlighting this health inequality is important so that we can make sure Brent's air is safe for everyone to breathe.

There are ways that we can improve air quality though and this is our action plan in making sure that the air we breathe is not harmful to residents.

Councillor Neil Nerva, Cabinet Member for Public Health and Adult Social Care



Our air quality action plan works in tandem with our aim to become carbon neutral by 2030 and we know that achieving that is about empowering you.

So that you can take actions to tackle climate change and improve air quality.

Our core aims focus on reducing Nitrogen Dioxide in the atmosphere by encouraging cleaner travel. We will do this by installing more electric charging points, making our roads safer for cyclists and our streets more desirable to use sustainable forms of transport. We also aim to reduce emissions from homes by retrofitting some council properties, making them more energy efficient and having less of a need to use fuels to heat homes.

We are proud to back many projects, including rewilding, our popular Schools Streets and supporting local community groups that develop green spaces, but we want to support more of you. I encourage all residents that want to create a borough with safer air quality, to take action today – from cycling clubs to volunteering.

Councillor Krupa Sheth, Cabinet Member for Environment, Infrastructure and Climate Action

1 INTRODUCTION AND CONTEXT

This report outlines the actions that LBB will deliver between 2023 and 2027 (inclusive) to improve air quality across the borough and reduce exposure to pollution; thereby improving the health and quality of life of residents and visitors to the borough and reducing inequalities.

This AQAP is a statutory document and has been produced as part of our duty to London Local Air Quality Management (LLAQM). It has been developed in recognition of the legal requirement on the local authority to work towards air quality objectives Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the London Local Air Quality Management statutory process (7).

What is Air Pollution?

Air pollution is contamination of the environment (indoor or outdoor) by any chemical, biological or physical agent that changes the natural characteristics of the atmosphere.



The top pollutants of concern are nitrogen dioxide (NO₂) and particulate matter (PM).

NO₂ is a gas which is produced during combustion (burning) processes. Exposure to NO₂ can aggravate respiratory diseases and irritate airways.

PM are microscopic particles of solid or liquid matter in the air. PM of less than 10 micrometres (µm) in diameter are referred to as PM₁₀, while PM of less than 2.5 µm in diameter are referred to as PM_{2.5}. PM is capable of penetrating deep into the lungs and enter the bloodstream causing cardiovascular and respiratory impacts, as well as potentially contributing to the development of other diseases such as dementia. There is also evidence that PM_{2.5} can cross the blood-brain barrier and there is emerging evidence of a direct link between PM_{2.5} and lung cancer.

1.1 WHY IS THIS AIR QUALITY ACTION PLAN (AQAP) NEEDED?

Despite improvements in air quality over the last five years, air pollution continues to harm our health and economy, and worsen inequalities.

1.1.1. Air pollution and health

Air pollution is the largest environmental threat to public health in the UK. Exposure to air pollution is estimated to cause 36,000 premature deaths each year. In 2019, 4,100 deaths in London were caused by air pollution and 149 of these were in Brent. PM_{2.5} and NO₂ collectively are responsible for over 8% of all deaths in the borough (8).

Air pollution causes a number of adverse health impacts; it can cause asthma, heart disease, cancer, and is also linked to dementia. Even if you have no underlying health issues, air pollution can still impact your future health.

It is therefore important that we do all in our power to reduce air pollution in the borough and help people to reduce their exposure to poor air quality.

(7) LLAQM Policy and Technical Guidance (2019) (8) GLA Air Quality in LB Brent: A Guide for Public Health Professionals (2022)

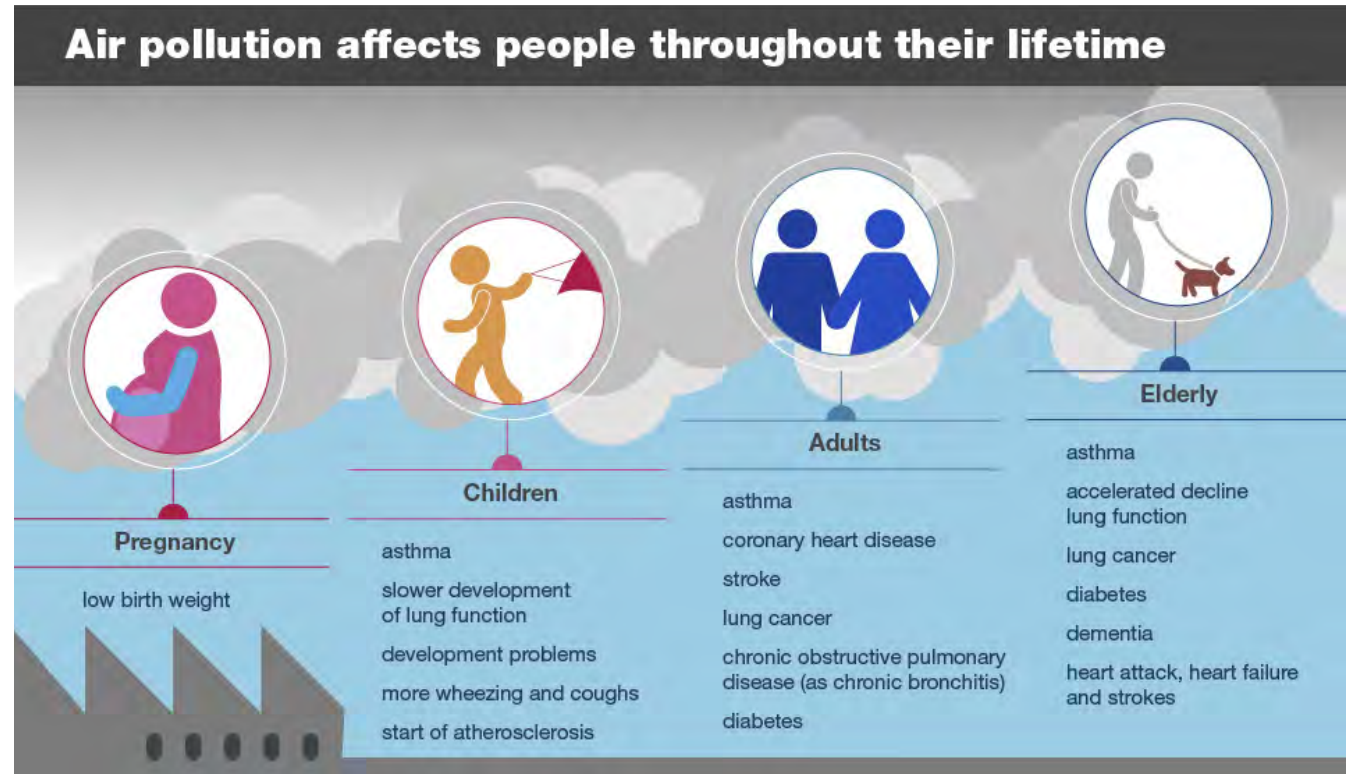
This is particularly critical for those who are most susceptible to air pollution, as they are even more likely to be affected by high-pollution episodes as well as long-term exposure to lower levels of pollution This includes:

- People with existing health conditions, such as asthma and heart disease
- Children
- Elderly
- Pregnant women
- Communities in areas of higher pollution, such as close to busy roads

Did you know?

Living near busy roads in London may stunt lung growth in children by up to 12.5% (9).

A recent report (10) found that outer London boroughs (such as Brent) experienced more deaths caused by air pollution than inner London boroughs. This, in part, is due to a higher proportion of elderly people in these areas. Additionally, there are over 500,000



people in outer London boroughs that suffer from asthma and are therefore more susceptible to the impacts of toxic air (11).

Within Brent, there are over 18,000 people who suffer with asthma, almost 2,500 of whom are children.

It is therefore critical that we all play a role in tackling air pollution in the borough, for our own health and for the health of others.

(9) KCL. (2019). Personalising the Health Impacts of Air Pollution: Summary for Decision Makers. (10) Environmental Research Group. London health burden of current air pollution and future health benefits of mayoral air quality policies (2021) (11) Greater London Authority and Transport for London., London Atmospheric Emissions Inventory Road Transport Emissions Analysis (January 2022)

1.1.2. Air Pollution and inequality

The most vulnerable in our society are often those who contribute to pollution the least and whose health is most at risk.

It is clear that air pollution has a severe impact on Brent residents. However, we are not all affected equally – there are well established links between air quality exposure and both deprivation and ethnicity (12, 13). Air pollution therefore exacerbates health and social inequalities.

A key finding from a 2023 report by the GLA (13) was that:

‘The most deprived communities of London still more commonly live in the most polluted areas... [and] the areas in London with the lowest NO2 and PM2.5 concentrations have a disproportionately white population. The inequalities in exposure to air pollution experienced between ethnic groups are much more pronounced in Outer London than Inner London.’

Socio-economically deprived communities, Black, Asian, and minority ethnic populations,

our children, and elderly relatives all experience worse health outcomes as a result of air pollution. Often it is the case that these communities are contributing to the pollution the least. This is an environmental and health injustice and has led us to develop the vision

and aims for this AQAP, set out in Section 1.2.

Addressing socio-economic inequality is a priority for the council and is a strategic theme in the Borough Plan. This AQAP can play a role in addressing the inequalities arising from air pollution in the borough.



(12) Barnes, J. et al., Emissions vs exposure: Increasing injustice from road traffic-related air pollution in the United Kingdom. Transportation research part D: transport and environment 73 (2019): 56-66. (13) Greater London Authority air quality exposure and inequalities study (2023)

1.1.3. Air pollution and the economy

Not only does air pollution harm our health, it also harms our economy. It is estimated that the health problems resulting from air pollution cost the UK up to £20 billion per year (14).

The health impacts of air pollution affects the NHS. In 2017 it was estimated that in England the cost to the NHS and social care systems from air pollution was £157 million.

There are also direct costs to our local businesses; the health impacts of air pollution contribute to increased sick days and reduced productivity in employees.



(14) Royal College of Physicians, Every Breath We Take: The Lifelong Impact of Air Pollution (2016)

1.1.4. Air pollution and the Climate and Ecological Emergency

Air quality and the climate and ecological emergency are closely linked and have similar solutions. Therefore, action we take in the borough to tackle air pollution, and vice-versa, will be win-win – it helps to improve air quality and helps to reduce carbon dioxide emissions.

What is the difference between air quality and the climate crisis?

The pollutants we talk about in relation to “air pollution” or “air quality” are NO₂, PM₁₀, and PM_{2.5}. These are the pollutants which are of greatest concern in relation to air quality as, at present, they cause the greatest harm **directly** to human health in the UK. It is the pollutants themselves which cause us harm, for example through causing inflammation of the respiratory system.

When talking about the climate and ecological emergency, the main gases are carbon dioxide (CO₂) and methane (CH₄). These are known as greenhouse gases and anthropogenic emissions of these gases damage the Earth’s climate and ecosystems through being the main contributor to global heating. They therefore have a significant **indirect** impact on our health and

well-being. It is the changing climate, resulting from excess greenhouse gases, that causes us significant harm.

What are the links between air quality and the climate crisis?

Many of the sources of outdoor air pollution are also sources of CO₂ emissions. For example, using fossil fuels for power generation, industry, and transport are all major sources of both PM, NO₂, and CO₂. Therefore, tackling these sources for improvements in air quality will also help to reduce CO₂.

It is also the case that some pollutants associated with “air quality” contribute to global heating, and that pollutants associated with global heating worsen air quality. For example, black carbon, or soot (for example, from wood burning), is one type of PM_{2.5} which is associated with respiratory and cardiovascular disease. It is also one of the largest contributors to global warming after CO₂. Also, with warmer temperatures, longer growing seasons, and damper conditions, we are more likely to have increased concentrations of ozone (which is a pollutant that irritates eyes and lungs and is also a greenhouse gas) and increased concentrations of allergens such as pollen and mould.

For more information about the climate and ecological emergency, and what Brent are doing to reduce carbon dioxide emissions, visit: <https://www.brent.gov.uk/neighbourhoods-and-communities/community-priorities/climate-emergency>



1.2 OUR VISION FOR CLEANER AIR

Progress has been made in reducing pollution levels over the past five years. However, there is still more work to do.

We know that:

- Air pollution is harmful to everyone and it can affect all organs of the body
- There is no “safe” limit of air pollution – long-term exposure to even low levels of air pollution can impact our health in the future
- The health impacts of air pollution are unequal, leading to unacceptable health inequalities

Therefore, improving air quality remains a priority for LBB. Our vision is to ensure:

Clean air for everyone living in, working in, or visiting Brent.



The core aims we have set to help us achieve this vision are to:

- Reduce pollution concentrations, striving for World Health Organisation (WHO) guidelines;
- Raise awareness of the health impacts;
- Influence change and lead by example.

Tackling air pollution is a real challenge and takes joined up action. Achieving our vision will depend on international, national, and regional (London) environmental policy, as well as the actions we take as a borough and as individuals.



Core Aim 1

Reduce pollution concentrations

Reduce nitrogen dioxide and particulate matter concentrations as quickly as possible, striving for compliance with WHO guidelines

Focus will be on areas where air quality is worst, where vulnerable members of the community are most at risk, and where planned developments risk introducing further exposure to poor air quality.

Core Aim 2

Raise awareness

Raise awareness of the health impacts of air pollution and address health inequalities

Empower those who are most vulnerable to pollution by providing information on health impacts and ways to reduce personal exposure, while maintaining a focus on reducing emissions across the borough.

Core Aim 3

Influence change

Influence change by leading by example and working with strategic partners

Where air pollution is not within our direct control, we will work with partners to take further action to improve air quality

Key Driver 1:

Reduce pollution concentrations

There is no 'safe' limit of air pollution - outdoor air pollution is associated with mortality and morbidity even at low levels

Key Driver 2:

Raise awareness

Air pollution can harm all organs of the body and affects everyone

Key Driver 3:

Reduce inequalities

However, the health impacts of air pollution are unequal, leading to unacceptable health inequalities

1.3 POLICY CONTEXT

This AQAP sits within a framework of international, national, regional, and local policies and guidelines. This section outlines the context that the AQAP was developed within.

1.3.1. International context

In July 2022, the United Nations (UN) General Assembly declared access to a clean and healthy environment a human right – **this includes clean air**. Although this is not legally binding, it formalises the right to breathe clean air and is an important step towards protecting human health as well as the health of the planet.

The WHO are a UN agency that aims to connect nations to promote health and give everyone an equal chance to live a healthy life. In relation to air pollution, it estimates that air pollution (indoor and outdoor combined) is associated with 7 million premature deaths annually. The WHO assesses the health effects of air pollution and provides guidelines for pollution levels in the atmosphere based on risk to human health. The most recent update to the WHO guidelines was September 2021. These thresholds are not legally binding but they provide information on the levels of pollution in the air which are

considered to be harmful to human health, according to a wide body of scientific research.

1.3.2. National context

The UK has a long history of air pollution policy, with the Clean Air Act 1956 being introduced in response to the 1952 smog in London, extended in 1968 and then consolidated in 1993.

The Environment Act 1995 as amended by the Environment Act 2021 requires the Government to produce an Air Quality Strategy. The Clean Air Strategy 2019 sets out actions required across government and society to tackle air pollution in England. The clean air chapter of the Environmental Improvement Plan 2023 builds on and updates the 2019 Clean Air Strategy. Additionally, the 2023 Air Quality Strategy: FRAMEWORK FOR LOCAL AUTHORITY DELIVERY sets out the actions that Defra expects local authorities to take in support of the air quality targets.

Pollution levels are regulated by the Air Quality Standards Regulations 2010, meaning that there are legally binding limits for concentrations in outdoor air for major air pollutants that impact human health, including NO₂, PM₁₀, and PM_{2.5}. (Table 1, page 23.) These limits are higher than the WHO 2021 guideline thresholds.

Most recently, the Environment Act 2021

included amendments to the Clean Air Act 1993 as well as extending the Environment Act 1995, requiring the Government to set two new air quality targets. The air quality targets set in the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 are:

- Annual Mean Concentration Target ('concentration target') - a maximum concentration of 10µg/m³ to be met across England by 2040
- Population Exposure Reduction Target ('exposure target') - a 35% reduction in population exposure by 2040 (compared to a base year of 2018).

Additionally, interim targets have been set stating that by January 2028:

- An annual average of 12 µg/m³ for PM_{2.5} is not exceeded at any monitoring station.
- Population exposure to PM_{2.5} is at least 22% less than in 2018.

At the time of writing, the Clean Air (Human Rights) Bill had its first reading in the House of Commons. It aims to enshrine the human right to healthy air in UK law. The proposed legislation, Ella's law, has been named after nine-year-old Ella Adoo-Kissi-Debrah who is the first person to have air pollution listed as a cause of death after suffering a fatal asthma attack.

1.3.3. Regional context

The Environment Act 1995 (Part IV) requires local authorities in the UK to review air quality in their area and designate air quality management areas if improvements are necessary. Where an air quality management area is designated, local authorities are also required to produce an air quality action plan describing what they will do to contribute to achieving air quality limit values in the local area.

Air Quality (England) (Amendment) Regulations 2002 and the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023, provide the statutory basis for the national air quality objectives. These have been taken forward at the London level by the Mayor in the London Local Air Quality Management (LLAQM). The LLAQM system is a statutory process by which London local authorities monitor, assess and take action to improve local air quality.

The London Environment Strategy 2018 sets out how the Mayor of London is tackling air pollution across London, including its aim to meet WHO health-based guidelines for PM2.5 by 2030 and implement the Ultra Low Emission Zone.

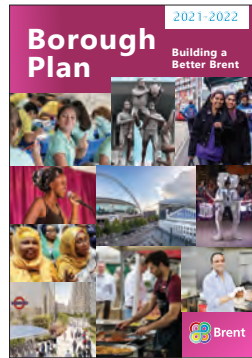


1.3.4. Local context

There are several council policies which link to air quality and that this AQAP aligns with. These include:

Brent Borough Plan

2023-2027: Sets out the Council's vision for the next four years. Its primary aim is 'Moving Forward Together', Improving Brent's air quality is included as a priority for the council under the strategic theme "A cleaner, greener future".



Climate & Ecological Emergency Strategy

2021-2030: In July 2019, Brent Council declared a climate and ecological emergency and committed to do all in its gift to strive for carbon neutrality by 2030. This target is borough-wide, not just direct council emissions, because of the scale and urgency of this issue.



Inclusive Growth Strategy (IGS) 2019-2040:

The aim of this strategy is to reduce poverty and inequality, increase the borough's resilience, and enhance the economic and social wellbeing of the community. "Health" and "Environment" are two key themes in Brent's IGS under which improving air quality is prioritised. The stated objective is to "Reduce the negative health impacts of pollution" with a further aim of reducing health inequalities related to pollution.



Brent's Long Term Transport Strategy:

Provides the strategic direction for investment in transport in Brent, with the aim of improving transport options for all and to reduce the negative impacts of travel on the borough, including air pollution. Our aim is to reduce traffic in Brent by 25% by 2041.



Draft Joint Health and Wellbeing Strategy:

This strategy includes a theme of "Healthy Places" which incorporates the requirement to create a borough where residents have access to clean air.



Brent's Local Plan:

The Local Plan is a collection of planning documents that, alongside national planning policy and the Mayor's London Plan, sets out our strategy for future development in Brent. It includes policies around housing, town centres, open space employment, community facilities, the built and natural environment and transport. This includes a specific policy on air pollution.



2 AIR QUALITY IN BRENT

Air quality monitoring is undertaken across the borough to understand how pollution levels are changing over time and to compare these with the thresholds set for protecting human health. As part of this AQAP, we are committing to strive for both the UK Air Quality Objectives and the WHO guidelines.

The UK's Environmental Improvement Plan 2023 and the 2023 Air Quality Strategy: Framework for Local Authority Delivery provide the overarching strategic framework for air quality management in the UK and contains national air quality standards and objectives established by the Government to protect human health. The objectives take into account EU Directives that set limit values which member states are legally required to achieve by their target dates. These objectives are shown in Table 1.

The WHO has also published guidelines for pollution limits and these are also shown in Table 1. These are much lower than the legal limits that the borough is obliged to achieve, in recognition of the fact that there are health impacts for us all, even at lower concentrations.

This is why LBB will not stop prioritising air quality once all of the legal limits are met.

We are committed to strive towards the WHO guidelines and will report against them on an annual basis to show progress made.

Table 1: Air Quality Objectives and WHO Air Quality Guidelines

Pollutant	Averaging time	Air Quality Objective (µg/m ³)	Interim WHO targets (µg/m ³)				WHO Air Quality Guideline (µg/m ³)
			1	2	3	4	
NO ₂	Hourly mean	200a	-	-	-	-	-
	Daily mean	-	120	50	-	-	25
	Annual mean	40	40	30	20	-	10
PM ₁₀	Daily mean	50b	150c	100c	75c	50c	45c
	Annual mean	40	70	50	30	20	15
PM _{2.5}	Daily mean	-	75c	50c	37.5c	25c	15c
	Annual mean	12 by 2028; 10 by 2030 (lowered from 20)	35	25	15	10	5

a Not to be exceeded more than 18 times per year

b Not to be exceeded more than 35 times per year

c 99th percentile (i.e. 3-4 exceedance days per year)

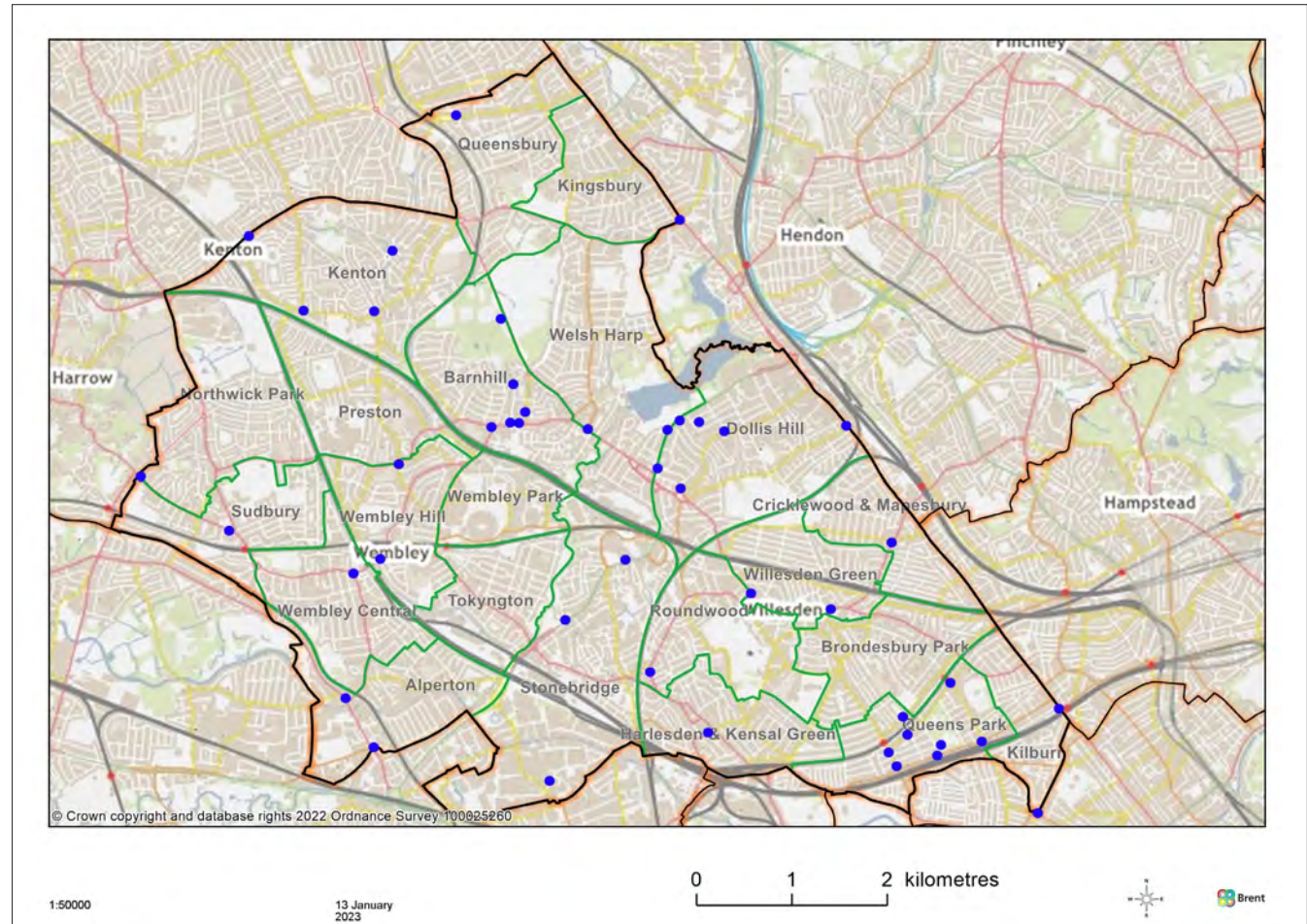
2.1 MONITORING AIR POLLUTION IN THE BOROUGH

A review of the monitoring data collected between 2016 and 2021 shows a general decreasing trend in NO₂, PM₁₀ and PM_{2.5} concentrations across the majority of Brent. However, some areas in the borough are still exceeding the legal limits. Moreover, pollution levels across the whole borough are higher than the WHO guidelines.

2.1.1 How does Brent monitor air pollution?

LBB currently operates four automatic monitoring stations and a diffusion tube network comprising 45 monitoring locations. All four automatic stations monitor NO₂ and PM₁₀, while two also measure PM_{2.5}. Figure 1 shows the locations of air quality monitoring across the borough. The 45 diffusion tube locations monitor NO₂ only. The data collected each year is published in Annual Status Reports and are made available on the council's website (15).

Figure 1: Locations of air quality monitoring across Brent



2 AIR QUALITY IN BRENT (continued)

2.1.2 Trends in pollution levels across Brent

The monitoring data indicates that pollutant concentrations are generally decreasing over time and therefore air quality in Brent is improving.

This improving trend was also observed at all diffusion tube locations, with the exception of Fryent Country Park (location 33a), a site which measures background concentrations, where no change has been recorded since 2016, and Harlesden High Street (location BRT55), where a slight decrease was observed in 2019 but an increase in 2021 was reported which exceeds 2016 levels for annual mean NO₂ concentrations.

It should be noted that monitoring data from 2020 should be treated with caution, as pollutant concentrations were affected by COVID-19 restrictions. The annual mean NO₂ concentrations recorded from the four automatic sites can be seen in Figure 2. Annual mean PM₁₀ concentrations for the same locations are shown in Figure 3. PM_{2.5} annual mean concentrations recorded at BT4 and BT8 are shown in Figure 4.

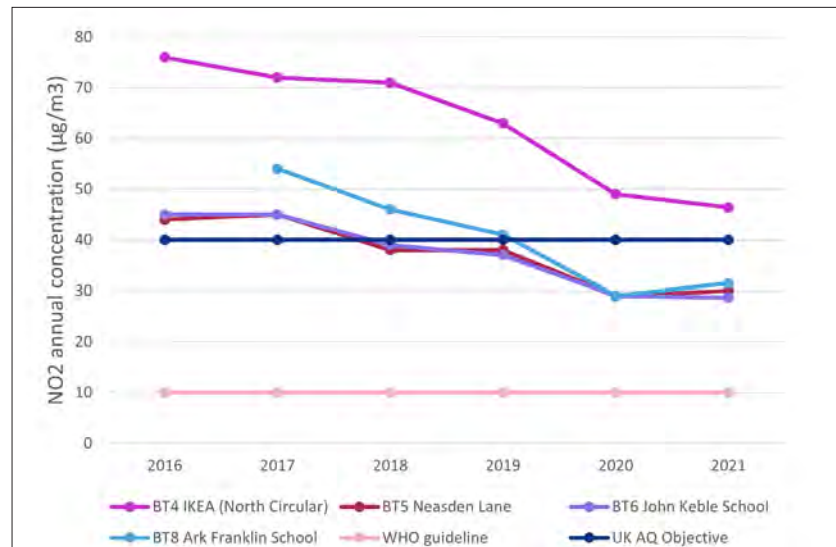


Figure 2: Annual Mean NO₂ Concentrations at BT4 (Ikea), BT5 (Neasden Lane), BT6 (John Keble Primary School), and BT8 (Ark Franklin Primary School)

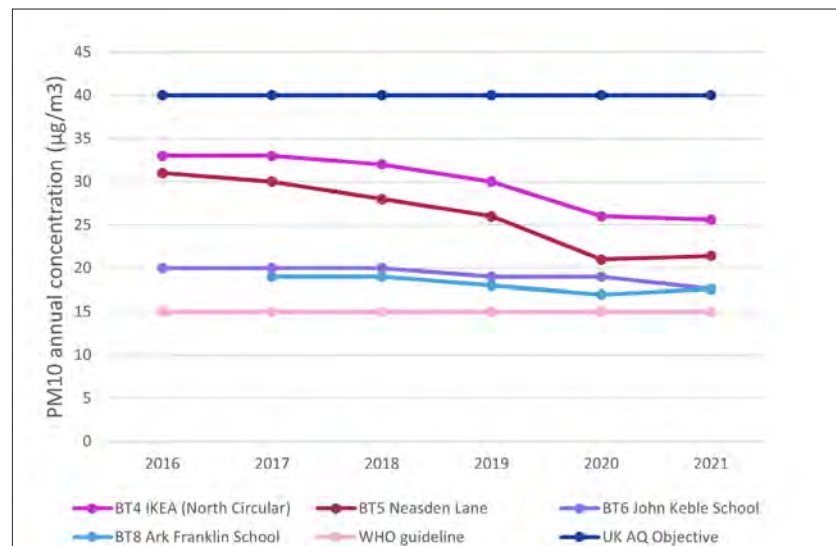


Figure 3: Annual Mean PM₁₀ Concentrations at BT4 (Ikea), BT5 (Neasden Lane), BT6 (John Keble Primary School), and BT8 (Ark Franklin Primary School)

2 AIR QUALITY IN BRENT (continued)

Air quality in the borough has generally improved in recent years, as demonstrated by the monitoring data. Data from the London Atmospheric Emissions Inventory (LAEI) demonstrates that average concentrations of NO₂ were approximately 22% lower in 2019 than in 2016. Analysis of NO₂ monitoring in Brent also demonstrated this same reduction over the same time period. LAEI data also demonstrates that in 2016, air quality at 10 schools in the borough did not meet the annual mean NO₂ AQO. Data from the modelling undertaken for this AQAP (detailed in Section 2.2) demonstrates that this has reduced to 4 schools (including school playgrounds). Therefore, improvements are being observed.

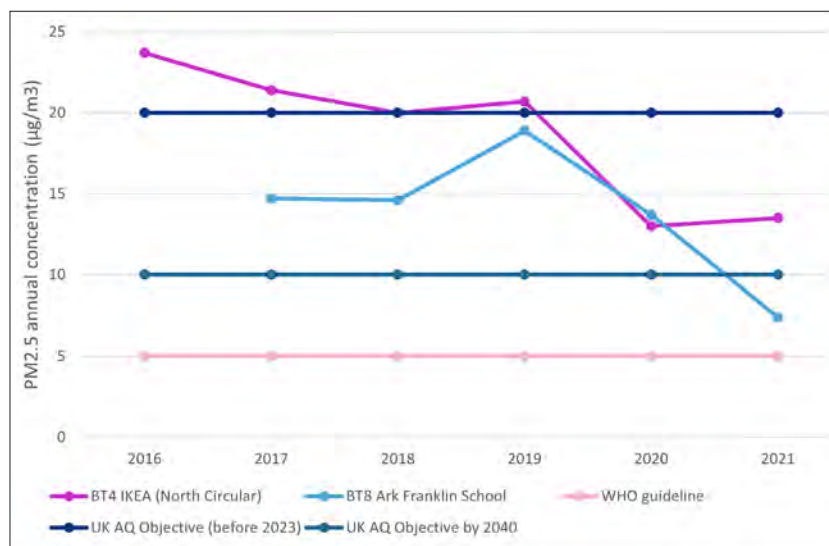


Figure 4: Annual Mean PM_{2.5} Concentrations at BT4 (Ikea), and BT8 (Ark Franklin Primary School)

However, there is still much work to do. LBB is currently meeting the objectives for PM₁₀. However, the objectives for NO₂ and PM_{2.5} are not yet being met at some locations within the borough. Also, the PM_{2.5} and NO₂ legal objectives are far higher than the WHO recommended guideline limit. For this reason, in the London Environment Strategy the Mayor has committed to meeting the WHO healthbased guideline limit (interim 4) for PM_{2.5} across London by 2030. A key area of focus for the council will be to strive towards meeting the most recent WHO guideline limits (as published in 2022) and help the Mayor meet the 2030 target.



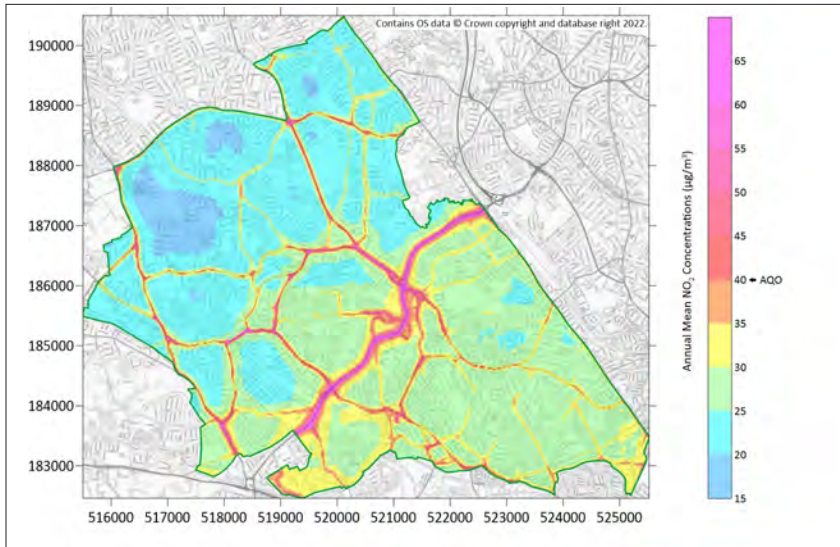


Figure 5: Modelled map of annual mean NO₂ concentrations

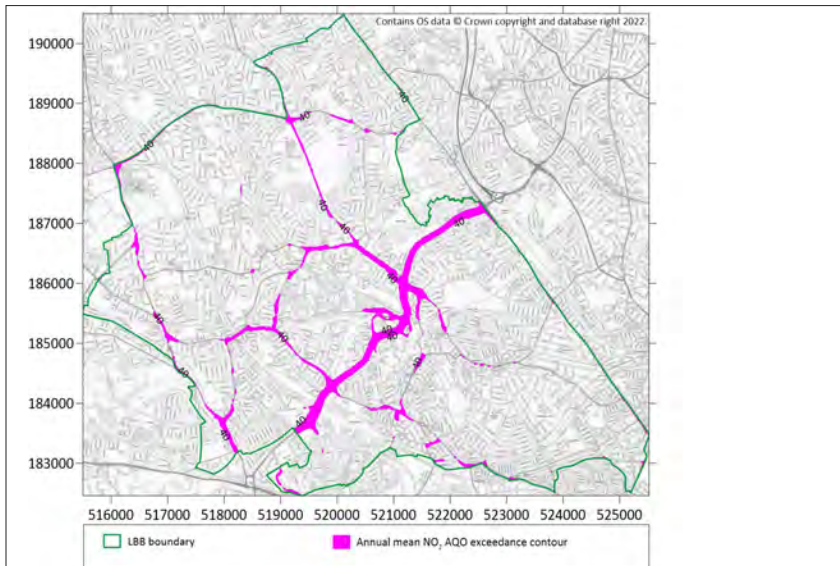


Figure 6: Modelled map of annual mean NO₂ AQO exceedances

2.2 AIR QUALITY MODELLING

LBB has undertaken borough specific modelling as part of the AQAP update. The model covered the entire borough of Brent, including a 200m buffer zone beyond the LBB's boundary to avoid underpredicting pollution concentrations close to the LBB boundary. The modelling was based on 2019 traffic data from the LAEI. Full details of this modelling can be found in the report **London Borough of Brent Air Quality Action Plan 2023-2027: Air Dispersion Modelling.**

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2.2.1 Results of modelling air quality for 2019

Figure 5, Figure 7, and Figure 8 present the predicted annual mean NO₂, PM₁₀ and PM_{2.5} concentrations across LBB, based on LBB specific dispersion modelling using LAEI 2019 traffic data. As displayed in Figure 5, the annual mean NO₂ concentrations are predicted to exceed the annual mean NO₂ air quality objective (AQO) (40µg/m³, as per Table 1) along major roads. Figure 6 further illustrates this and displays the areas that do not meet the annual mean NO₂ AQO. Figure 7 shows that the annual mean PM₁₀ AQO (40µg/m³) is predicted to be met except along major road links. The annual mean PM_{2.5}

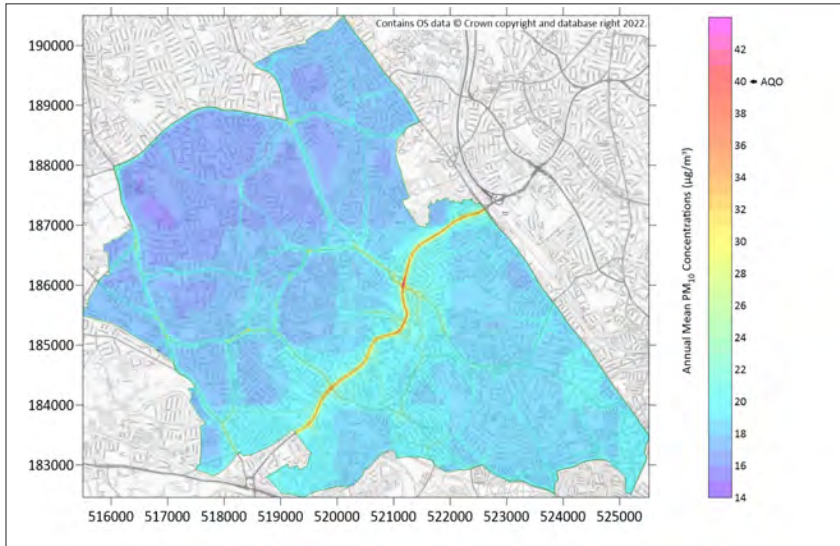


Figure 7: Modelled map of annual mean PM10 concentrations

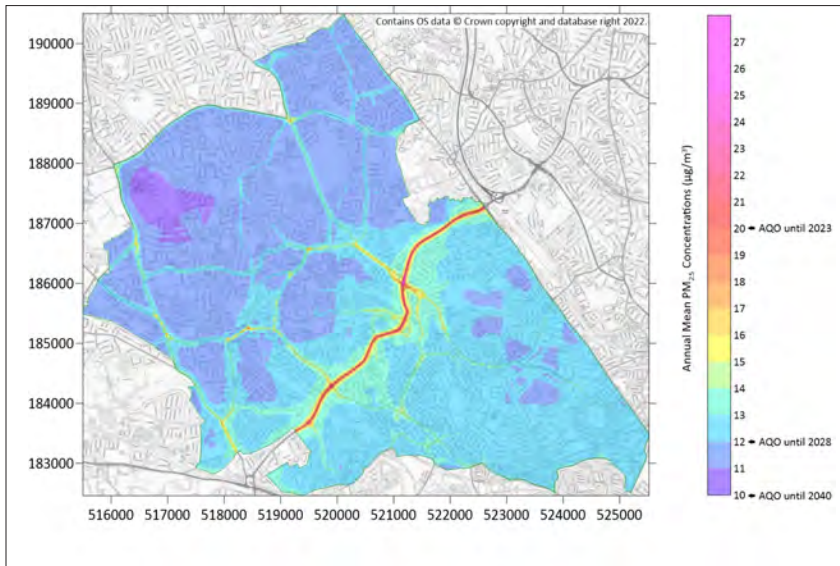


Figure 8: Modelled map of annual mean PM2.5 Concentrations

AQO (prior to 2023) ($20\mu\text{g}/\text{m}^3$) is also predicted to be exceeded along major roads and junctions, in particular the North Circular Road, as shown in Figure 8. The updated AQO of $10\mu\text{g}/\text{m}^3$ was predicted to be exceeded across the whole borough.

Further analysis of the air pollutant dispersion modelling work has found that the annual mean NO₂ AQO is predicted to be exceeded at 4,400 sensitive receptor locations within the 2019 baseline scenario. Of these, exceedances are predicted at 4,385 residential receptor locations, 2 schools (1.6% of schools), 2 nurseries and 2 playgrounds. The annual mean PM₁₀ AQO is predicted to be met at all receptor locations in the 2019 baseline scenario. However, exceedances of the annual mean PM_{2.5} AQO ($20\mu\text{g}/\text{m}^3$) are predicted at a total of 33 receptor locations, of which all are residential receptors. The updated PM_{2.5} AQO of $10\mu\text{g}/\text{m}^3$ is predicted to be exceeded at all sensitive receptor locations

What are 'Sensitive Receptors'?

Sensitive receptors are people and places that may be at risk from exposure to air pollutants. Sensitive receptors include, but are not limited to, residential properties, hospitals, GPs, schools, nurseries, playing fields and nursing homes.



In addition to the 2019 baseline, modelling was carried out for another scenario: Scenario 1 (SC1). SC1 modelled the expansion of the Ultra Low Emission Zone (ULEZ) to the North Circular for the year 2022.

Fewer exceedances were predicted in the SC1 model than in the 2019 baseline model. However, the modelling found that the annual mean NO₂ AQO is predicted to be exceeded, and therefore not met, at a total of 868 sensitive receptor locations in SC1. Of these, 867 receptor locations are residential receptors, with the other 1 receptor location at another education (colleges, further education) receptor. The annual mean PM₁₀ AQO is predicted to be met at all receptor locations for the SC1 scenario. A total of 3 exceedances of the annual mean PM_{2.5} AQO (20µg/m³) are predicted for the SC1 scenario, of which all are residential receptors. The updated PM_{2.5} AQO of 10µg/m³ is predicted to be exceeded at 100% of sensitive receptors in 2022. These results demonstrate the work needed to reduce NO₂ and PM_{2.5} levels further but also highlight the air quality improvements brought about by the policies such as the expansion of the ULEZ to the North (and South) Circular roads, which resulted in a pollution emissions reduction of 26% within the expanded ULEZ area.

The WHO guidelines and modelling output

Both the 2019 baseline and SC1 2022 models found that the annual mean concentrations of NO₂, PM₁₀ and PM_{2.5} are predicted to **exceed the revised 2022 WHO annual mean air quality guidelines throughout the borough**. Further details of the population exposure analysis can be found in Appendix A.

LBB's aim is to strive towards meeting the revised WHO guidelines, although it is noted that these are likely not achievable through borough scale actions alone. This is due to factors outside of the borough's direct control, such as transboundary pollution, and therefore would take strong international, national, and regional collaboration.

What is 'transboundary pollution'?

Air pollution does not respect boundaries – once produced, it moves around depending on wind and global air circulation patterns. Transboundary air pollution is pollution that originates in one area or country but has travelled to cross into another border through movement in the air. Therefore, the effects of that pollution are felt in a location which might be far away from where the pollution was produced. Over half of London's concentrations of PM_{2.5} come from regional, and often transboundary (non-UK) sources outside of London (16).



2.3 BRENT'S AIR QUALITY MANAGEMENT AREA

Based on the review of air quality data undertaken as part of the AQAP update, and the fact that WHO guidelines are not being met across the borough, the current Air Quality Management Area (AQMA) is being extended to encompass the entire borough.

In 2006, LBB declared an AQMA within the borough. The AQMA covered the area south of the North Circular Road and all housing, schools and hospitals along the North Circular Road, Harrow Road Bridgewater Road, Ealing Road Watford Road, Kenton Road, Kingsbury Road, Edgware Road, Blackbird Hill, Forty Lane and East Lane. Figure 9 shows the extent of the 2006 AQMA.

What is an 'Air Quality Management Area'?

An Air Quality Management Area (AQMA) is an area where the air quality objectives are not likely to be achieved and there is relevant public exposure. Areas that have been declared as an AQMA must have an action plan to detail measures to address the air pollution problem.



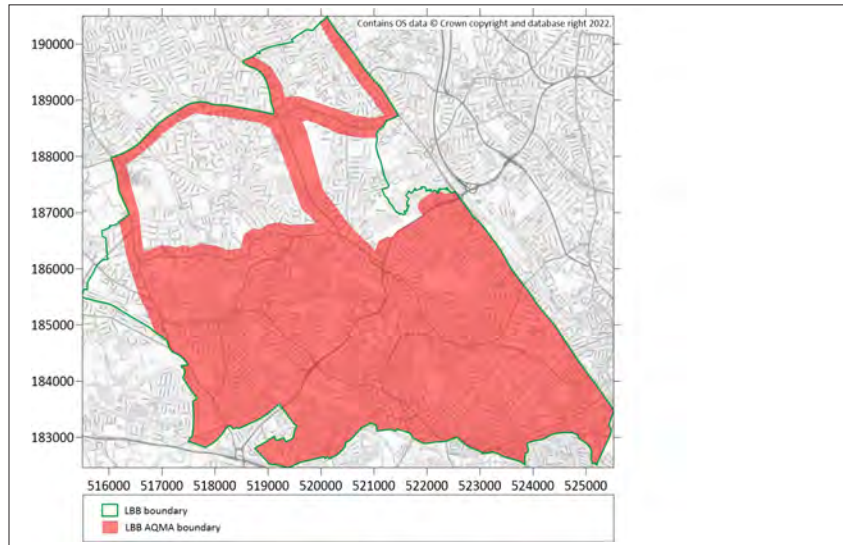


Figure 9: 2006 LBB AQMA boundary

The AQMA was declared in 2006 for the following pollutants:

- NO₂ annual mean: Brent was failing to meet the EU annual mean limit for NO₂ at some of the monitoring locations throughout the borough. Additionally, modelling indicated exceedances of the AQO in several locations across the borough;
- PM₁₀ 24-hour mean: Monitoring of PM₁₀ across Brent showed exceedances of the PM₁₀ 24-hour mean AQO, however this AQO has been met in recent years.

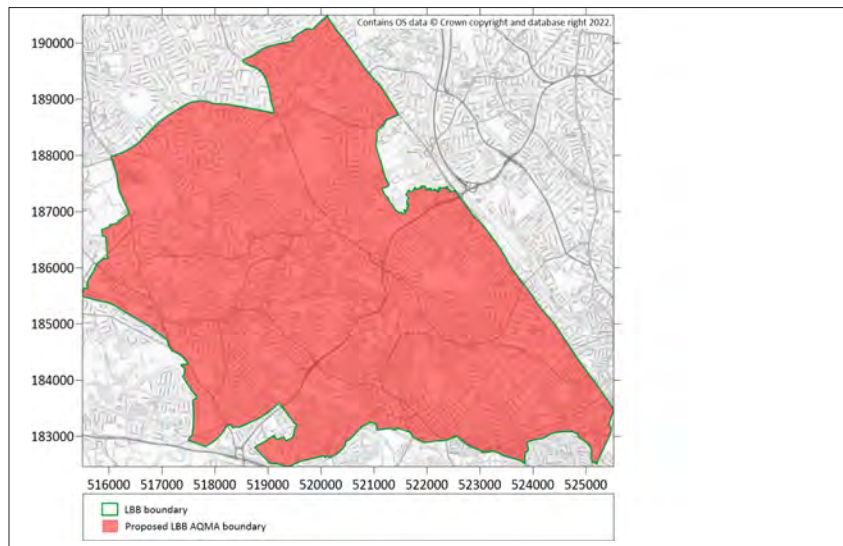


Figure 10: New borough-wide AQMA boundary

Based on the outcome of the air quality dispersion modelling undertaken as part of the AQAP update, and the fact that WHO guidelines are not being met across the borough, the current AQMA will be extended to encompass the entire Borough of Brent as shown in Figure 10. The AQMA is already declared for annual mean NO₂ and daily mean PM₁₀. As discussed, the air quality dispersion modelling carried out using 2019 LAEI data shows that, in 2022, PM_{2.5} concentrations are predicted to exceed 10µg/m³ and therefore not meet the Mayor of London's target for 2030, or the 2040 UK AQO, over the entire borough. Therefore, the AQMA will be extended to cover the borough.

2.4 BRENT'S AIR QUALITY FOCUS AREAS

Our core aims commit to focussing on tackling air pollution where communities are most exposed to poor air quality in order to eliminate health inequalities. Identifying Air Quality Focus Areas (AQFAs) allows us to prioritise where to focus our attention to deliver these aims.

Analysis conducted on pollution levels, deprivation, and population exposure have led to a total of 21 AQFAs being identified, as shown in Figure 11. This increases the total number from 15 (there were eleven AQFAs identified by the GLA LAEI within the borough and also four LBB Air Quality Action Areas (AQAA), as identified within the previous AQAP).

What is an 'Air Quality Focus Area'?

An Air Quality Focus Area (AQFA) is a location that has been identified as having high levels of pollution as well as high levels of human exposure.



As part of the air dispersion modelling undertaken for the AQAP update, an analysis of modelled pollution exposure was undertaken together with a map of the Indices of Multiple Deprivation (IMD) (to identify the level of deprivation across the borough ranked 1-10, with 1 being high deprivation and 10 being low deprivation), existing LAEI AQFAs and LBB AQFAs, as well as town centres and designated growth areas (to further identify locations of existing and future population exposure).

It was identified that a further 10 AQFAs are to be proposed within LBB. The 11 LAEI AQFAs have also been extended where relevant. Therefore, a total of 21 AQFAs have been identified as outlined in further detail in Table 2 and shown in Figure 11, along with an overlay of the IMD deciles within Brent. It should be noted that some areas were identified within the area under the jurisdiction of the Old Oak and Park Royal Development Corporation (OPDC). As such, these were not incorporated into the AQFAs presented within this document, however we will work with the OPDC to identify collaborative actions to tackle air pollution in the Park Royal area.

Further details of each of the AQFAs and the sources of pollution within each area are discussed further in section 2.5.

Figure 11: LBB Air Quality Focus Areas and IMD

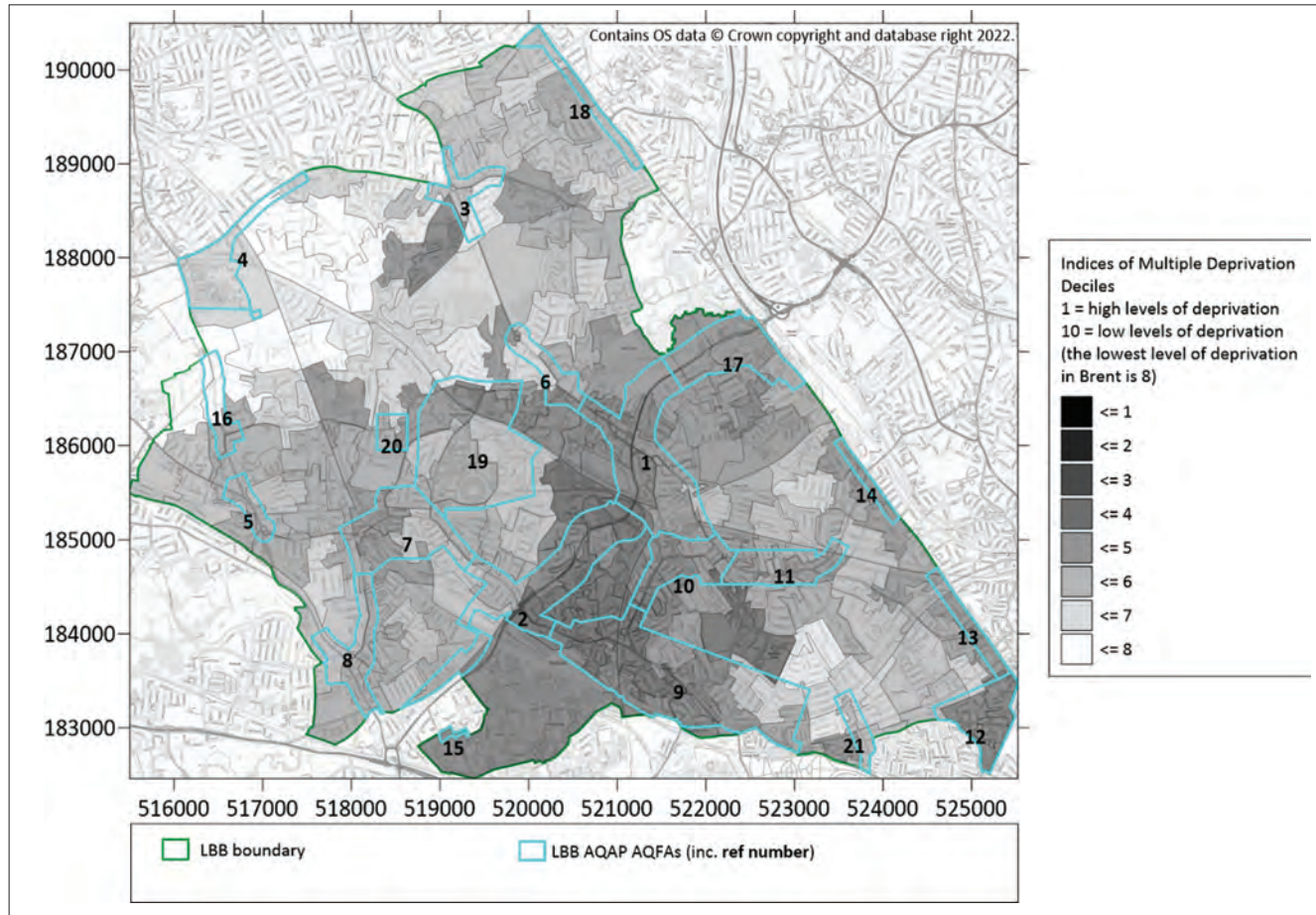


Table 2: Air Quality Focus Area in London Borough of Brent

ID	Name	Justification	Area (m2)	Modified or new designation?
1	A406/ Neasden/ Neasden Stations	<ul style="list-style-type: none"> • A406 corridor and Neasden Lane junction. • Large number receptors (1,042) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Covers all of Neasden Stations Growth Area. • Covers all of Neasden Town Centre. 	1,269,653	Modified from previous LBB AQAA
2	A406/ Harrow Road	<ul style="list-style-type: none"> • A406 corridor. • Large number receptors (520) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Covers part of Alperton Growth Area. • Does not cover any Town Centres. 	1,248,170	Modified from previous Brent AQAA
3	Kingsbury	<ul style="list-style-type: none"> • Moderate number of receptors (80) not meeting annual mean NO2 AQO. • Moderate to low deprivation. • Does not cover any Growth Areas. • Covers all of Kingsbury Town Centre. 	299,868	New AQFA
4	Kenton Road/ Northwick Park	<ul style="list-style-type: none"> • Moderate number of receptors (78) not meeting annual mean NO2 AQO. • Moderate to low deprivation. • Covers all of Northwick Park Growth Area. • Covers most of Kenton Town Centre 	543,946	New AQFA
5	Sudbury Town Centre	<ul style="list-style-type: none"> • Moderate number of receptors (61) not meeting annual mean NO2 AQO. • Moderate deprivation. • Does not cover any Growth Areas. • Covers all of Sudbury Town Centre. 	176,925	New AQFA

Table 2: Air Quality Focus Area in London Borough of Brent (continued)

ID	Name	Justification	Area (m2)	Modified or new designation?
6	Blackbird Hill/ Salmon Street	<ul style="list-style-type: none"> • Moderate number of receptors (139) not meeting annual mean NO2 AQO. • High to moderate deprivation • Does not cover any Growth Areas or Town Centres. 	289,329	Extension of LAEI AQFA
7	Wembley Town	<ul style="list-style-type: none"> • Large number of receptors (500) not meeting annual mean NO2 AQO. • Moderate deprivation. • Covers southern part of Wembley Growth Area. • Covers southern part of Wembley Town Centre.. 	816,820	Modified from previous Brent AQAA
8	Alperton/Ealing Road	<ul style="list-style-type: none"> • Large number of receptors (369) not meeting annual mean NO2 AQO. • Moderate deprivation. • Covers part of Alperton Growth Area. • Covers all of Ealing Road Town Centre. 	476,909	New AQFA
9	Harlesden	<ul style="list-style-type: none"> • Large number of receptors (527) not meeting annual mean NO2 AQO. • High to low deprivation. • Does not cover any Growth Areas. • Covers Harlesden Town Centre. 	2,057,828	Modified from previous Brent AQAA
10	Church End	<ul style="list-style-type: none"> • Small number of receptors (24) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Covers all of Church End Growth Area. • Covers all of Church End Town Centre. 	489,837	Modified from previous Brent AQAA
11	Willesden Green	<ul style="list-style-type: none"> • Moderate number of receptors (56) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Does not cover any Growth Areas. • Covers all of Willesden Green Town Centre 	442,782	Extension of LAEI AQFA

Table 2: Air Quality Focus Area in London Borough of Brent (continued)

ID	Name	Justification	Area (m2)	Modified or new designation?
12	South Kilburn	<ul style="list-style-type: none"> • Moderate number of receptors (78) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Covers all of South Kilburn Growth Area. • Covers southernmost parts of Kilburn and Queen's Park Town Centres. 	473,632	Modified from previous Brent AQAA
13	Kilburn	<ul style="list-style-type: none"> • Moderate number of receptors (62) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Does not cover any Growth Areas. • Covers most of Kilburn Town Centre 	210,128	Modified from previous Brent AQAA
14	Cricklewood	<ul style="list-style-type: none"> • Moderate number of receptors (66) not meeting annual mean NO2 AQO. • High deprivation. • Does not cover any Growth Areas. • Covers all of Cricklewood Town Centre. 	110,328	Extension of LAEI AQFA
15	Park Royal	<ul style="list-style-type: none"> • Small number of receptors (37) not meeting annual mean NO2 AQO • High deprivation. • Does not cover any Growth Areas or Town Centres. 	23,732	Extension of LAEI AQFA
16	Watford Road	<ul style="list-style-type: none"> • Moderate number of receptors (73) not meeting annual mean NO2 AQO. • Moderate to low deprivation. • Does not cover any Growth Areas or Town Centres. . 	246,322	New AQFA
17	A406/ Staples Corner	<ul style="list-style-type: none"> • Moderate number of receptors (129) not meeting annual mean NO2 AQO. • High to moderate deprivation. • Covers all of Staples Corner Growth Area. • Does not cover any Town Centres. 	669,141	Extension of LAEI AQFA

Table 2: Air Quality Focus Area in London Borough of Brent (continued)

ID	Name	Justification	Area (m2)	Modified or new designation?
18	Burnt Oak/ Colindale/ The Hyde	<ul style="list-style-type: none"> • Small number of receptors (6) not meeting annual mean NO2 AQO. • Moderate to low deprivation. • Covers large part of Burnt Oak/ Colindale Growth Area. • Covers all of Colindale/ The Hyde and Burnt Oak Town Centres. 	210,128	Extension of a 2016 LAEI AQFA (which was removed in the 2019 LAEI).
19	Wembley Park/Ark Academy	<ul style="list-style-type: none"> • Small number of receptors (6) not meeting annual mean NO2 AQO. • Moderate to low deprivation. • Covers large part of Burnt Oak/ Colindale Growth Area. • Covers all of Colindale/ The Hyde and Burnt Oak Town Centres. • Large number receptors (373) not meeting annual mean NO2 AQO (including several schools). • Moderate deprivation. • Covers most of northern section of Wembley Growth Area. • Covers northern part of Wembley and all of Wembley Park Town Centres. 	1,574,094	Modified from previous Brent AQAA
20	Wembley Hill Road/ West Lane/Preston Road	<ul style="list-style-type: none"> • Small number receptors (3) not meeting annual mean NO2 AQO. • Moderate deprivation. • Does not cover any Growth Areas or Town Centres. 	130,202	Modified from previous Brent AQAA. Extension of LAEI AQFA.
21	Kensal Rise	<ul style="list-style-type: none"> • Small number receptors (27) not meeting annual mean NO2 AQO. • Moderate to low deprivation. • Does not cover any Growth Areas. • Covers most of Kensal Rise Town Centre. 	157,089	New AQFA

2.5 WHERE DOES POLLUTION COME FROM IN BRENT?

Pollution in Brent comes from a variety of sources. This includes pollution from sources outside of the borough. In the case of particulate matter, a significant proportion of this comes from outside of London and even the UK. Of the pollution that originates within the borough, the main sources of NOx and PM2.5 emissions are road transport, and the main source of PM10 is construction.

2.5.1. Sources of Nitrogen Dioxide in Brent

Of the pollution that originates within the borough, the main sources of NOx emissions are **road transport**, followed by **industrial/commercial heat/power**.

NOx emissions in Brent by source are outlined in Figure 12 and the breakdown of NOx emissions by transport type is shown in Figure 13. As shown, the top three road traffic sources are diesel cars (36%), diesel LGVs (26%) and HGVs (10%).

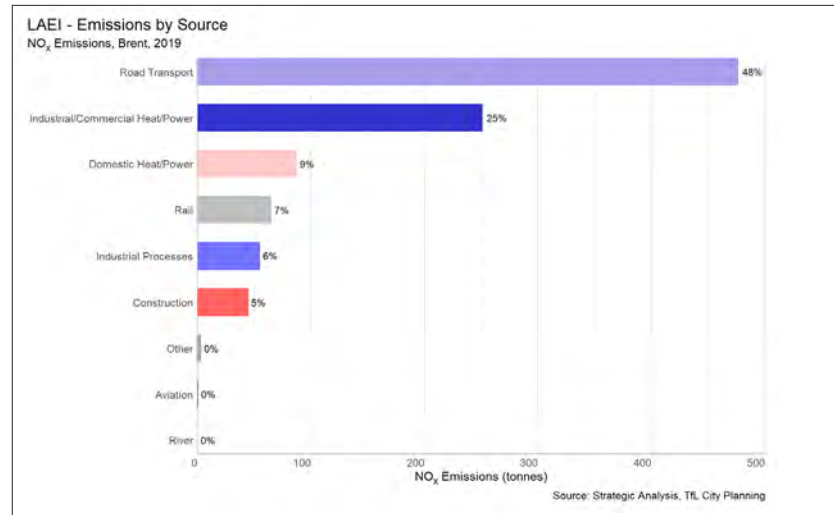


Figure 12: NOx Emissions by Source (LAEI 2019)

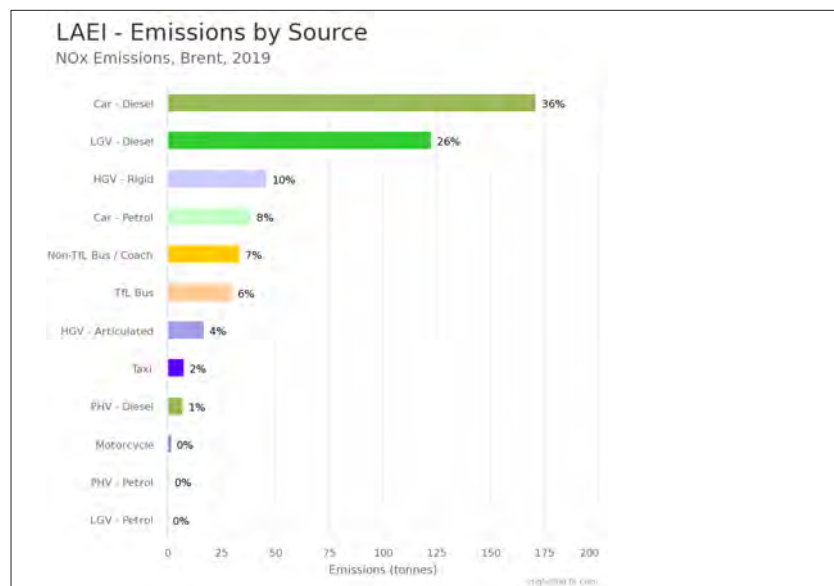


Figure 13: NOx Emissions by Transport Type (LAEI 2019)

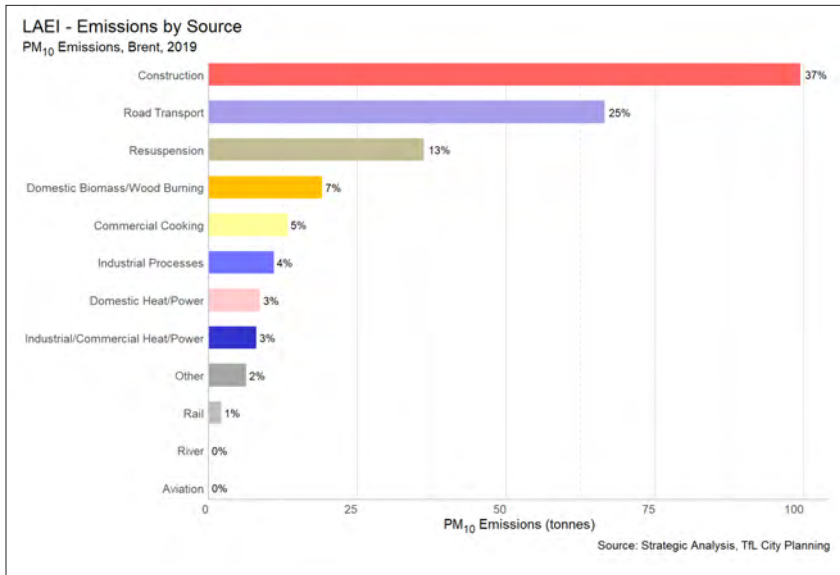


Figure 14: PM10 Emissions by Source (LAEI 2019)

2.5.2. Sources of PM10 in Brent

Figure 14 shows that the main sources of PM10 are **construction** (37%) and **road transport** (25%). Of the road transport sources, Figure 15 shows that petrol cars (30%) and diesel cars (26%) are the top two emissions sources.

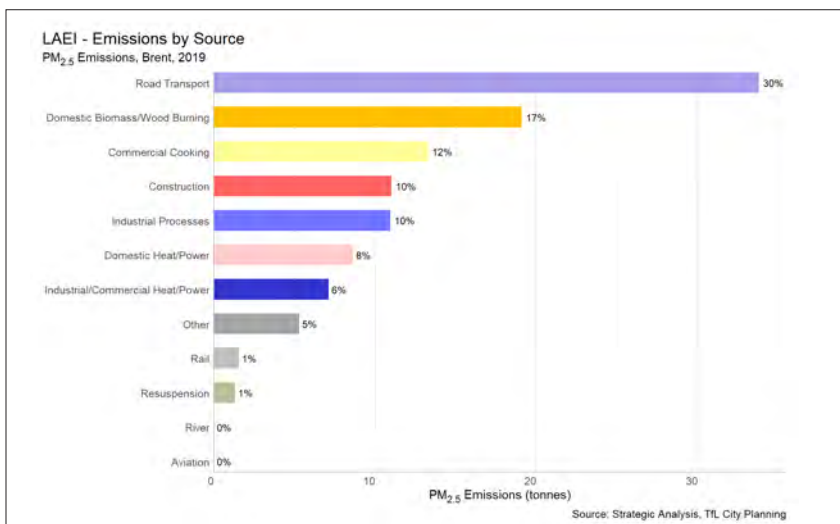


Figure 15: PM10 Emissions by Transport Type (LAEI 2019)

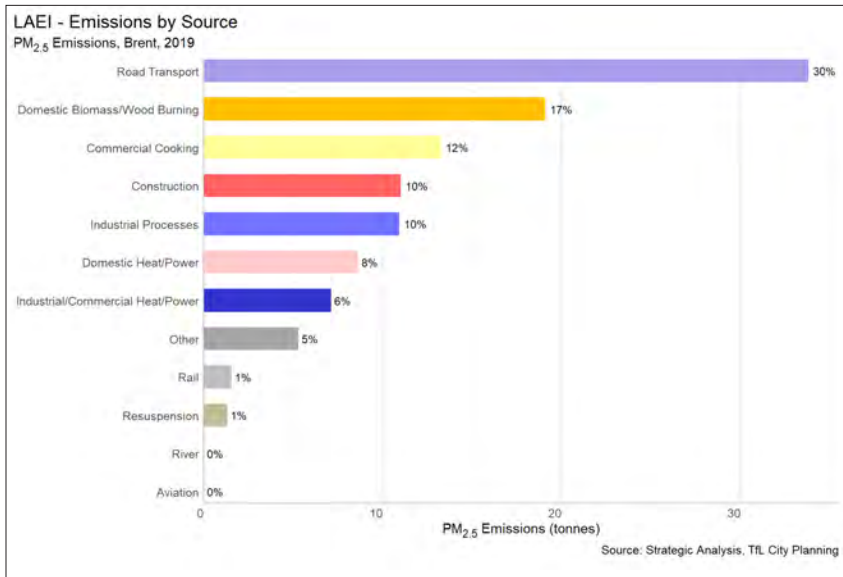


Figure 16: PM_{2.5} Emissions by source and vehicle type (LAEI 2019)

2.5.3. Sources of PM_{2.5} in Brent

Figure 16 shows that, of the pollution originating from within Brent, the main sources of PM_{2.5} are **road transport** (30%) and **domestic biomass/wood burning** (17%). Of the road transport sources, Figure 17 shows that diesel cars (29%) and petrol cars (27%) are the top two emissions sources.

2.5.4. Source Apportionment within AQFAs

As outlined within Section 2.4, a total of 21 AQFAs have been identified within LBB. Source Apportionment has been carried out for each AQFA. This enables us to understand, for road transport (the main source of pollution in the borough), which type of vehicles are causing the pollution in each local area.

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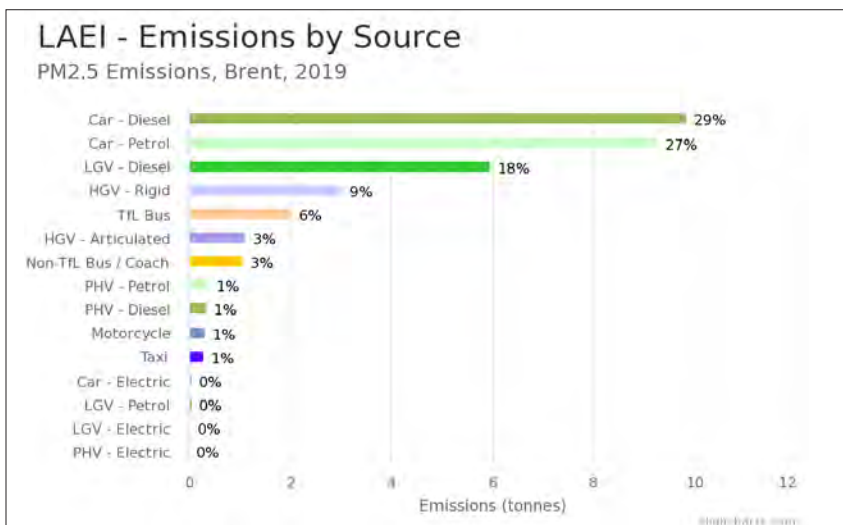


Figure 17: PM_{2.5} Emission by Transport Type (LAEI 2019)

The source apportionment for each of these AQFAs have been outlined in detail in the report London Borough of Brent Air Quality Action Plan 2023-2027: Air Dispersion Modelling, and a brief summary has been provided in Table 3.

2 AIR QUALITY IN BRENT (continued)

AQFA number	AQFA name	Top 3 road NOx emission sources	Top 3 road PM10 emission sources	Top 3 road PM2.5 emission sources
1	A406/ Neasden/ Neasden Stations	Diesel Cars (34.2%)	Petrol Cars (28.8%)	Diesel Cars (27.9%)
		Diesel LGVs (25.5%)	Diesel Cars (25.6%)	Petrol Cars (26.8%)
		Rigid HGVs (12.9%)	Diesel LGVs (17.8%)	Diesel LGVs (18.2%)
2	A406/ Harrow Road	Diesel Cars (33.9%)	Petrol Cars (29%)	Diesel Cars (28.1%)
		Diesel LGVs (26.5%)	Diesel Cars (25.7%)	Petrol Cars (27%)
		Rigid HGVs (12.8%)	Diesel LGVs (18.4%)	Diesel LGVs (18.8%)
3	Kingsbury	Diesel Cars (36.9%)	Petrol Cars (34%)	Diesel Cars (33.7%)
		Buses/Coaches (25.2%)	Diesel Cars (30.9%)	Petrol Cars (31.2%)
		Diesel LGVs (15.5%)	Diesel LGVs (12.8%)	Diesel LGVs (13.1%)
4	Kenton Road/ Northwick Park	Diesel Cars (40.4%)	Petrol Cars (33.3%)	Diesel Cars (33.3%)
		Buses/Coaches (17.8%)	Diesel Cars (30.4%)	Petrol Cars (30.6%)
		Diesel LGVs (16.8%)	Diesel LGVs (12.5%)	Diesel LGVs (12.8%)
5	Sudbury Town Centre	Diesel Cars (33%)	Petrol Cars (29.2%)	Diesel Cars (29.7%)
		Buses/Coaches (23.7%)	Diesel Cars (27%)	Petrol Cars (26.8%)
		Diesel LGVs (15.1%)	Buses/Coaches (13.2%)	Buses/Coaches (13.1%)
6	Blackbird Hill/ Salmon Street	Diesel Cars (31.3%)	Petrol Cars (31.4%)	Diesel Cars (30.9%)
		Buses/Coaches (27.8%)	Diesel Cars (28.3%)	Petrol Cars (29%)
		Diesel LGVs (16.9%)	Diesel LGVs (14.7%)	Diesel LGVs (15%)
7	Wembley Town	Buses/Coaches (42.4%)	Petrol Cars (26.7%)	Diesel Cars (27.2%)
		Diesel Cars (25.9%)	Diesel Cars (24.8%)	Petrol Cars (24.4%)
			Buses/Coaches (22.5%)	Buses/Coaches (22.7%)

Table 3: Source Apportionment of Road Source Emissions in each AQFA



2 AIR QUALITY IN BRENT (continued)

AQFA number	AQFA name	Top 3 road NOx emission sources	Top 3 road PM10 emission sources	Top 3 road PM2.5 emission sources
8	Alperton/ Ealing Road	Diesel Cars (29.8%)	Petrol Cars (27.9%)	Diesel Cars (28.2%)
		Buses/Coaches (22.6%)	Diesel Cars (25.7%)	Petrol Cars (25.6%)
		Diesel LGVs (15.8%)	Diesel LGVs (13.6%)	Diesel LGVs (14%)
9	Harlesden	Diesel Cars (28.7%)	Petrol Cars (26.1%)	Diesel Cars (26.3%)
		Buses/Coaches (24.8%)	Diesel Cars (24.2%)	Petrol Cars (24.1%)
		Diesel LGVs (19%)	Diesel LGVs (16.4%)	Diesel LGVs (17.1%)
10	Church End	Diesel Cars (28.8%)	Petrol Cars (26.5%)	Diesel Cars (26.5%)
		Buses/Coaches (26.8%)	Diesel Cars (24.4%)	Petrol Cars (24.6%)
		Diesel LGVs (17.1%)	Diesel LGVs (14.6%)	Diesel LGVs (15.2%)
11	Willesden Green	Diesel Cars (28.9%)	Petrol Cars (25.2%)	Diesel Cars (25.4%)
		Buses/Coaches (27.7%)	Diesel Cars (23.4%)	Petrol Cars (23.2%)
		Diesel LGVs (18.5%)	Diesel LGVs (15.4%)	Diesel LGVs (16%)
12	South Kilburn	Buses/Coaches (36.2%)	Petrol Cars (25.7%)	Diesel Cars (25.5%)
		Diesel Cars (24.9%)	Diesel Cars (23.6%)	Petrol Cars (23.7%)
		Diesel LGVs (15.4%)	Buses/Coaches (15%)	Buses/Coaches (15.5%)
13	Kilburn	Buses/Coaches (36.9%)	Petrol Cars (20.5%)	Diesel Cars (20.7%)
		Diesel Cars (20.9%)	Diesel Cars (19.1%)	Petrol Cars (18.8%)
		Diesel LGVs (16.3%)	Buses/Coaches (17.5%)	Buses/Coaches (18.1%)
14	Cricklewood	Diesel Cars (26.3%)	Petrol Cars (24.1%)	Diesel Cars (24.4%)
		Buses/Coaches (26.2%)	Diesel Cars (22.4%)	Petrol Cars (22.3%)
		Diesel LGVs (20.9%)	Diesel LGVs (18%)	Diesel LGVs (18.7%)

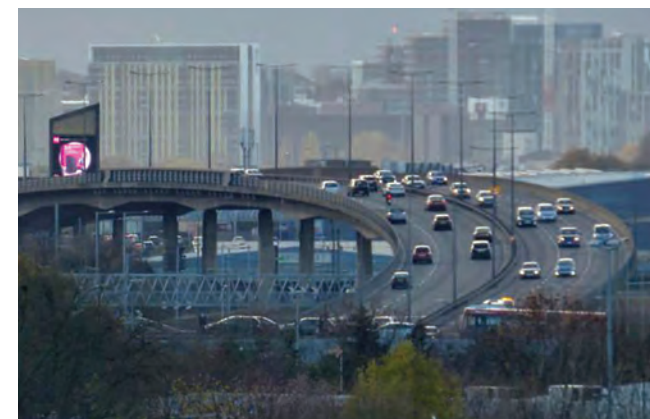
Table 3: Source Apportionment of Road Source Emissions in each AQFA (continued)



2 AIR QUALITY IN BRENT (continued)

AQFA number	AQFA name	Top 3 road NOx emission sources	Top 3 road PM10 emission sources	Top 3 road PM2.5 emission sources
15	Park Royal	Diesel Cars (34.1%)	Petrol Cars (27%)	Diesel Cars (26.9%)
		Diesel LGVs (30%)	Diesel Cars (24.7%)	Petrol Cars (25.1%)
		Rigid HGVs (18.3%)	Diesel LGVs (22.4%)	Diesel LGVs (23.1%)
16	Watford Road	Diesel Cars (35.9%)	Petrol Cars (30.9%)	Diesel Cars (30.4%)
		Diesel LGVs (18.5%)	Diesel Cars (27.8%)	Petrol Cars (28.6%)
		Buses/Coaches (16.5%)	Diesel LGVs (13.7%)	Diesel LGVs (14%)
17	A406/ Staples Corner	Diesel Cars (31.6%)	Petrol Cars (28.1%)	Diesel Cars (27%)
		Diesel LGVs (27.2%)	Diesel Cars (24.8%)	Petrol Cars (26.1%)
		Rigid HGVs (13.1%)	Diesel LGVs (19.2%)	Diesel LGVs (19.7%)
18	Burnt Oak/ Colindale/ The Hyde	Diesel Cars (37%)	Petrol Cars (32.4%)	Diesel Cars (32.9%)
		Buses/Coaches (28.8%)	Diesel Cars (30.1%)	Petrol Cars (29.5%)
		Diesel LGVs (15.8%)	Buses/Coaches (14.5%)	Buses/Coaches (14.5%)
19	Wembley Park/ Ark Academy	Buses/Coaches (31.9%)	Petrol Cars (27.4%)	Diesel Cars (27.6%)
		Diesel Cars (28.3%)	Diesel Cars (25.2%)	Petrol Cars (25.2%)
		Diesel LGVs (15.8%)	Buses/Coaches (15.4%)	Buses/Coaches (15.5%)
20	Wembley Hill Road/ West Lane/ Preston Road	Diesel Cars (34.7%)	Petrol Cars (31.2%)	Diesel Cars (32.3%)
		Buses/Coaches (33.9%)	Diesel Cars (29.5%)	Petrol Cars (28.4%)
		Diesel LGVs (14.2%)	Buses/Coaches (17.5%)	Buses/Coaches (17.4%)
21	Kensal Rise	Diesel Cars (29.9%)	Petrol Cars (25.7%)	Diesel Cars (26.1%)
		Buses/Coaches (25.3%)	Diesel Cars (24%)	Petrol Cars (23.5%)
		Diesel LGVs (23.9%)	Diesel LGVs (20.2%)	Diesel LGVs (21%)

Table 3: Source Apportionment of Road Source Emissions in each AQFA (continued)



3 LONDON BOROUGH OF BRENT'S AIR QUALITY PRIORITIES

In developing this AQAP, we have spoken with over 400 Brent residents to understand where they would like to see action taken first (17). From this, and in line with guidance from the GLA, we have developed 37 actions under five broad themes.

The AQAP consists of 37 actions that we will implement to deliver air quality improvements. These are split into the following key themes:

Theme 1 - Cleaner transport: road transport is the main source of air pollution in London. We will incentivise walking and cycling, providing infrastructure to make our streets safer and more inclusive, aiming for a reduction in traffic. Of car trips made by Londoners, over half could be cycled in around 10 minutes, and more than a third could be walked in under 25 minutes (18). We will deliver electric vehicle charging infrastructure and work with TfL to provide clean public transport. We will work to reduce emissions from vehicles delivering goods and services. This includes LBB's fleet such as mini-buses and refuse collection vehicles. Tackling our own fleet means we will be leading by example;

Theme 2 - Monitoring air pollution and other core statutory duties: critical for

understanding where pollution is most acute, and what reduction measures are effective. There are also a number of other statutory duties undertaken by boroughs, which form the basis of action to improve pollution;

Theme 3 - Public health and awareness raising: drives behavioural change to lower emissions, reducing exposure to air pollution, leading to direct health benefits;

Theme 4 - Emissions from homes, buildings, and developments: this includes emissions from construction, industry, and our own homes such as wood burning stoves and boilers. Collectively, these are responsible for a significant amount of NO₂ and PM emissions in the borough;

Theme 5 - Localised solutions: these seek to improve the environment of neighbourhoods through a combination of measures with a local focus.

Of the 37 actions detailed in Section 5, 16 actions have been identified as key priorities, through community outreach with over 400 residents, and through analysis of key sources of pollution. These 16 actions are as follows:



(17) Kaizen Partnership, Brent Air Quality Action Plan Engagement Insight Research Report, (January 2022)

(18) TfL, Travel in London (Report 11), (2018) <https://content.tfl.gov.uk/travel-in-london-report-11.pdf>

Theme 1 - Cleaner transport

1. Provide walking and cycling infrastructure
2. Encourage walking and cycling in the borough by providing support
3. Discourage unnecessary idling
4. Reduce emissions from deliveries
5. Reduce emissions from council fleets
6. Install electric vehicle charging infrastructure



Theme 2 - Monitoring air pollution and other core statutory duties

7. Share air quality monitoring data in an easy-to access format, reporting against both UK Air Quality Objectives and WHO targets
8. Maintain and expand monitoring networks and fulfil other statutory duties



Theme 3 - Public health and awareness raising

9. Work with schools and nurseries to improve air quality and to raise awareness about pollution in the local area
10. Brent's Public Health team will drive awareness and behavioural change, collaborating with health partners to reduce exposure of those most vulnerable to poor air quality, both indoor and outdoor
11. Promote air pollution alerts and route planner tools



Theme 4 - Reducing emissions from homes, buildings, and developments

12. Promote and deliver energy efficiency and retrofitting projects in workplaces and homes throughout Brent
13. Enforce non-road mobile machinery (NRMM) air quality policies and reduce emissions from developments
14. Ensure the Smoke Control Zone is promoted and enforced.



Theme 5 - Localised solutions:

15. Introduce Green Neighbourhoods across the borough, focussing sustainable solutions in priority areas
16. Develop location specific action plans for Air Quality Focus Areas as part of the Local Implementation Plan (LIP) programme

Progress against each action will be reported each year in our Annual Status Report, and published on our website. Details on how we will measure success and timescales for each action can be found in Section 5.



3.1 HEALTH CONTEXT AND MAIN SOURCES

A review of the Indices of Multiple Deprivation (IMD) for 2019 has been carried out. The IMD is an aggregated national statistics dataset published by the Government(19). The IMD are based on seven different domains of deprivation: income, employment, education, health, crime, barriers to housing & services and living environment.

The published data are grouped in discrete geographical areas and organised into 'deciles', where decile 1 is the most deprived 10% of the population, and decile 10 is the least deprived 10% of the population.

Figure 11 shows the IMD dataset across Brent, together with the AQFAs identified within this AQAP. It is clear that areas with high exposure to poor air quality correlates to areas that have higher levels of deprivation. This is particularly clear along the North Circular and the A5. The North Circular and the A5 are the main sources of pollution within Brent and pass through some of the most deprived areas.

3.2 PLANNING CONTEXT

The Local Plan identifies 8 Growth Areas and various major, district and local town centres (see Local Plan policies map: Brent Local Plan 2022 Policies Map). When prioritising areas of improvement, town centres and Growth Areas have been taken into consideration, as these are areas with high predicted population growth, high number of sensitive receptors and heavy footfall.

3.3 COUNCIL POLICIES

The actions outlined in this AQAP are aligned to tie in with the following key council policies:

- LBB's Long Term Transport Strategy
- Climate & Ecological Emergency Strategy
- Brent Borough Plan
- Health and Wellbeing Strategy
- Brent's Local Plan

This was undertaken through close liaison with the relevant LBB officers and departments through steering groups and other communication channels.



4 DEVELOPMENT AND IMPLEMENTATION OF LONDON BOROUGH OF BRENT'S AQAP

In developing/updating the action plan we have worked with other local authorities, agencies, businesses, and the local community in order to improve local air quality for all.

4.1 DEVELOPING THE AQAP - COMMUNITY OUTREACH

At the beginning of the AQAP development process, we undertook extensive community outreach to understand the priorities of people who work and live in Brent, in relation to air pollution. The community outreach ensured that Brent's community had the opportunity to help to shape the AQAP and that those who are most impacted by the health impacts of air pollution have their voices heard (20).

The outcome of this can be found in Appendix B. The headline statistics from this outreach are

- 27 days of outreach engagement with individual and small group conversations.
- Engagement over twenty-one locations within Brent, including all Town Centres in the borough and all Air Quality Focus Areas (AQFAs).

- Online survey promoted by Brent and open for 2 months.
- 488 people gave their views.
- 303 people shared views in-depth in one-on-one conversations in the community.
- 86% live in Brent. 27% work in the borough and 2% run a business in Brent.
- Those engaged via outreach were broadly reflective of the known Brent demographics.
- 94% of people engaged via outreach said that their views had never been consulted before (83%) or not much before (11%).

4.2 DEVELOPING THE AQAP - STEERING GROUP

An Air Quality Steering Group was established in January 2022 to monitor the implementation of the AQAP. The group consists of members of the following teams:

- Healthy Streets and Parking team
- Public Health
- Planning Policy

- Energy and Sustainability
- Employment Skills and Enterprise
- Communications
- Regulatory Services
- Environmental Strategy and Climate Change

The group met up on seven occasions over the course of developing this AQAP. Meetings covered the following topics:

1. Introduction and reviewing progress against current actions.
2. Update on AQAP programme inc. community outreach, modelling methodology and modelling scenarios.
3. Update on baseline modelling, population exposure methodology.
4. Review of baseline modelling outcomes, options for AQMA boundary updates (based on modelling) and group discussion on AQMA boundary options.
5. Review of outcomes of population exposure assessment, setting the vision statement, setting the core aims, setting the AQAP themes and priorities.

4 DEVELOPMENT AND IMPLEMENTATION OF LONDON BOROUGH OF BRENT'S AQAP (continued)

6. AQFA defining in the context of planning and growth areas.
7. AQFA overview, methodology for defining the LBB AQAP AQFAs, proposed LBB AQAP AQFAs. At each meeting, members were encouraged to discuss each element so that feedback could be provided and incorporated to the process and so that questions and clarifications could be raised and answered.

Further to the steering group meetings, there were five action planning workshops for each of the five key themes to go through the list of actions and to allow each stakeholder a chance to comment on the actions and to provide insight on how best to go about achieving them. These were held between September and October 2022 and included the steering group members as well as other relevant stakeholders such as members of the NWL NHS Clinical Care Commissioning Group, Brent CVS, and TfL. These action planning workshops allowed for cross-group discussion on each of the air quality actions. The outcomes of these discussions were then incorporated into the final list of air quality actions within this AQAP.

4.3 CONSULTATION ON THE DRAFT AQAP

In developing/updating the action plan we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 4.

An online survey was live for six weeks and was promoted as detailed in the consultation report (21). Pop-up events also took place at a range of locations across the borough, along with presentations at community forums to inform the local community about the draft plan and signpost to the online survey.

Full details on the consultation process and the list of stakeholders can be found in the consultation report (21) and a summary in Appendix C of this report. In total over 400 people interacted with the engagement team during pop-up events and were informed about the draft AQAP and how they could see the plan and share their views. 92 people gave their views either online or on a paper questionnaire with the following headline views:

- 62% of people responded positively (saying "Love it" or "Like it") to the Council's vision statement around air quality
- 71% believe that Core Aim 1 - "Reduce Pollutions Concentrations" should be the main priority
- 57% thought that "Discourage unnecessary engine idling" would be the most impactful proposed action, followed by "Provide infrastructure to support walking and cycling" (56%)
- Overall, only 10% of people who gave their views expressed a negative opinion of the draft plan. 40% of people expressed a positive view, 41% said "it's OK", and 8% weren't sure.

In response to the consultation, the key changes that have been made to the Air Quality Action Plan are:

- Changing the prioritisation of the actions to reflect resident priorities
- Adding a new action (CT12) **Encourage walking and cycling in the borough by providing support** to reflect the need to provide services to enable more walking and cycling
- Additional actions to work more closely with the Canal & River Trust

- More specific information on which greening projects we expect to deliver

The Air Quality Action Plan sets out the Council's priorities for tackling air pollution. Specific schemes will be prioritised as funding becomes available and in accordance with other Council Plans, such as the Long Term Transport Strategy.

Table 4 Consultation undertaken

Yes/No	Consultee
Yes	Greater London Authority
Yes	Defra
Yes	Environment Agency
Yes	Transport for London
Yes	NHS North West London Integrated Care Board
Yes	All neighbouring boroughs Lead Members and Air Quality Officers (Harrow, Barnet, Camden, Westminster,
Yes	Ealing, Hammersmith and Fulham, Kensington and Chelsea
Yes	Brent residents and community groups
Yes	Medical Practices through NHS ICB
Yes	Businesses



5 ACTION PLAN TABLE

This section details the specific actions that we will take over the next five years to improve air quality and raise awareness of its impacts. The actions have been grouped into five themes:

- 1) Cleaner transport
- 2) Monitoring air pollution and other core statutory duties
- 3) Public health and awareness raising
- 4) Homes, buildings, and developments
- 5) Localised Solutions

Table 5 shows the London Borough of Brent's AQAP. It contains:

- A list of actions that form part of the plan;
- The responsible individual and departments/ organisations who will deliver this action;
- Estimated cost to the council;
- Expected benefit in terms of emissions and concentration reduction;
- The timescale for implementation;



- The outputs, targets and Key Performance Indicators
- How progress will be monitored

Table 5: Air Quality Action Plan
THEME 1: CLEANER TRANSPORT

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT1	Ensure that Transport and Air Quality policies and projects are integrated	CT1.1. Long-term transport strategy has been adopted; emerging plans must adhere to this strategy	LBB Air Quality Officer, LBB Transport Team LBB Healthy Streets and Parking Team	Low	Reduced emissions from transport within the borough	Throughout 5 years	CT1.1. Transport officers to sit on the quarterly Air Quality Steering Group
CT2	Update Council Procurement policies to reduce pollution from logistics and servicing	CT2.1. Annual review of the Procurement process (linked to the Sustainability policy) to embed best practice into the tender process where a contract involves vehicles and transport	LBB Air Quality Officer LBB Procurement Team	Low	Reduced emissions from logistics and servicing by following sustainable procurement policy	Annual review of Procurement sustainability policy	CT2.1. Number of vehicle and transport tenders procured where sustainability questions have been included in the tender process

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT3	Installation of Ultra-low Emission Vehicle (ULEV) infrastructure (electric vehicle charging points, rapid electric vehicle charging point and hydrogen refuelling stations)	<p>CT3 1. Increase number of electric vehicle charge points installed (including at LBB property where there is demand). Ensure key messages include benefits of active travel as this is the priority</p> <p>Promote benefits of electric vehicle uptake to local businesses</p> <p>Identify additional opportunities for electric mooring for canal boats</p>	LBB Air Quality Officer, LBB Transport Team LBB Healthy Streets and Parking Team LBB Planning Team	Low (because funding is likely be available from TfL/OLEV)	Reduced emissions from transport within the borough	Ongoing, with: Year 1 develop infrastructure plan	<p>CT3.1. Development of an infrastructure plan to identify suitable locations for different types of chargers, including analysis of existing charge point usage statistics</p> <p>Continued applications for funding and review of lessons learnt with each application.</p> <p>Report on the number of charging points installed per year the total number of charge points required is estimated to be between 1,100 –1,300 by 2025 That equates to around 200 charge points a year.</p> <p>Review options for “at-home” charging infrastructure for residents with no off-street parking</p>

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT4	Continue to work in partnership with TfL to prioritise actions required to improve local air quality in Brent	<p>CT4.1. Local Implementation Plan developed in line with TfL</p> <p>CT4.2. Identify TfL schemes that impact Brent's roads and how we can collaborate on this e.g. how can Brent feed into existing schemes such as. bus route electrification/ other bus route works to increase efficiency, Harlesden to Wembley cycle lane</p> <p>CT4.3. Hold regular partnership meetings between LBB & TfL</p>	LBB Air Quality Officer, LBB Transport Team, LBB Healthy Streets and Parking Team, TfL	Low	Reduced emissions from buses and other forms of road transport through various schemes/ plans	Year 1 and ongoing – LBB and TfL partnership meetings have been reinstated post-COVID	CT4.1. TfL schemes to take into account air quality and ensuring positive outcomes in air pollution and modal shift for example by collaborating closely on TfL's plan to decarbonise the bus network, which aims to introduce new electric buses on 7 routes across Brent

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT5	Encourage Car Clubs to use low emission and alternative fuel vehicles in their fleet by increasing the proportion of electric, hydrogen and low emission vehicles	<p>CT5.1. Review the approach for Car Club, and other forms of shared mobility, provision in the borough, to encourage increased uptake</p> <p>CT5.2. Maintain dialogue with operators to work towards replacing fleet with ULEVs, including provision of charging infrastructure to enable this</p>	LBB Air Quality Officer, LBB Transport Team, LBB Healthy Streets and Parking Team, LBB Procurement Team	Low	Reduced reliance on private vehicles and increased uptake of shared low emission vehicles. Will reduce emissions from the individual car club vehicles as well as having the potential to reduce overall traffic flows on the roads.	Ongoing – understand supply and demand and use this to set benchmarks for realistic expectations with car club operators. Dialogue with suppliers and other boroughs	<p>CT5.1. Publication of a shared mobility action plan</p> <p>Report on utilisation of car club vehicles across the borough</p> <p>CT5.2. Proportion of car club vehicles using low emissions vehicles</p> <p>100% of car club vehicles to be low/zero emission by 2030</p>

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT6	Hold regular temporary car free days	CT6.1. Support Car Free Day annually and continue providing free Play Streets for residents, promoting this service effectively	LBB Healthy Streets and Parking Team	Low	Reduced exposure for local residents on car free days, with the aim of incremental change in driver behaviours	Years 1-5	CT6.1. Aim to have at least ten streets participate in London car free day in year 1, with the aim to increase this year on year. To be reported in ASR Work with communities to promote and carry out other car free days
CT7	Discouraging unnecessary engine idling	CT7.1. Build upon previous anti-idling work to promote anti-idling guidance and carry out anti-idling events at schools, hospitals and other institutions or at events that reach out to large numbers of the Brent community. This can be tied in with measures such as RA7.1.	LBB Healthy Streets and Parking Team; Environmental Enforcement	Medium	Reduced emissions from idling across the borough	Year 1 – promotion of 2021 anti-idling guidance to as many Brent residents/ schools/ hospitals/ businesses as possible Years 1-5 – carry out anti-idling events with the aim to run one idling event per month	CT7.1. Delivery of one idling event per month Report on number of drivers engaged with Number of idling complaints per year received

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT8	Provision of infrastructure to support walking and cycling	<p>CT8.1. Incorporate the Healthy Streets approach into the Local Implementation Plan, ensuring schemes prioritise walking/cycling infrastructure</p> <p>CT8.2. Work with TfL to implement active transport infrastructure as per action CT4.1.</p> <p>CT8.3 Work with planning team to implement site permeability measures at all major developments to facilitate active travel in line with air quality positive measures and action HD4.</p> <p>CT8.4. Partner with the Canal & River Trust to create improvements to the Grand Union Canal towpath</p>	LBB Healthy Streets and Parking Team, LBB Air Quality Officer, LBB Planning Team, LBB Transport Team, TfL	High	Increased uptake of walking and cycling, lowering emissions from road transport	Years 1-5	<p>CT8.1. Production and publication of the Active Travel Action Plan Where possible, report on improvements in Healthy Streets scores, or similar, for public realm improvement schemes</p> <p>Increase the proportion of residents who have access to a safe and pleasant cycle network. This is measured by the proportion of borough residents living within 400m of the London-wide strategic cycle network. Target of 80% by 2041</p> <p>Deliver a way-finding “Legible London” project in Alperton with a view to identify other areas for similar schemes, to improve ease of walking in the borough</p>

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT9	Use parking policy to reduce pollution emissions	<p>CT9.1. Maintain the emissions based pricing scheme for resident permits and diesel surcharge, currently at £100, to encourage motorists to switch to less polluting vehicles.</p> <p>CT9.2. Review policies to identify measures that will encourage an impact on driver behaviour</p>	LLB Healthy Streets and Parking Team, LBB Air Quality Officer, LBB Transport Team	Low	Changes in driver behaviour to reduce emissions from road transport	Ongoing	<p>CT9.1. and CT9.2. Reduction in diesel parking permits issued per year</p> <p>Reduction in number of households with multiple vehicle permits</p>
CT10	Reducing emissions from deliveries to local businesses and residents	<p>CT10.1. Borough wide cargo bike business engagement scheme with subsidies to encourage trials by businesses</p> <p>CT10.2. Investigate feasibility of delivery consolidation lockers in the borough</p>	LBB Healthy Streets and Parking Team, LBB Air Quality Officer, LBB Transport Team, LBB Procurement Team	Medium	Reduced emissions from delivery vans	Year 1-2 roll out borough-wide cargo bike engagement scheme	<p>CT10.1. Number of businesses engaged and cargo bike trials completed</p> <p>Aim to engage with 280 businesses and to have 30 businesses trial cargo bikes by April 2024</p>

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
CT11	Reducing emissions from council fleets/ accelerate uptake of new low emission vehicles in borough fleet	CT11.1. The council will speed up the upgrade or replacement of vehicles used for council business with those of the lowest, current emission standard. The council will upgrade or replace vehicles used for council business with low emission, electric vehicles where feasible	LBB Healthy Streets and Parking Team, LBB Air Quality Officer, LBB Transport Team, LBB Procurement Team, Climate Emergency Team	High	Reduced emissions from LBB fleet and drivers	Year 1. Corporate review of fleet management processes Years 2-5. provide statistics year on year on: % increase of new vehicles in council fleet which meets highest standards % increase in new / upgraded in council fleet which use alternative fuels % increase in number of clean buses in operation in borough Years 1-5. Roll out and refresh Smarter Driver Training Year 2. Develop a Corporate Travel Plan	CT11.1. Report year on year turnover rates for LBB fleet retiring combustion engine vehicles and replacing with electric vehicles Consultancy being commissioned to review the fleet management process Annual report on fleet renewal/ replacement/ upgrade to less polluting standards, aiming for 100% of fleet to be low/zero emission by 2030 Develop and roll-out a Corporate Travel Plan Potential to roll out Smarter Driver Training to train borough fleet drivers to improve fuel efficiency

5 ACTION PLAN TABLE (continued)

THEME 1: CLEANER TRANSPORT(Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations/ benefit	Timescale for implementation	Outputs, Targets and KPIs
CT12	Encourage walking and cycling in the borough by providing support	<p>CT12.1. Continue to provide free adult and child cycle training</p> <p>CT12.2. Continued provision of Peddle My Wheels service – maintaining the Try Before You Bike scheme (including electric, cargo, and normal bikes)</p> <p>CT12.3. Complete a trial of social prescribing and social influencers in the Green Neighbourhoods</p> <p>CT12.4. Provide free bike maintenance sessions for residents through Dr Bike sessions a minimum of 10 a year</p> <p>CT12.5. Deliver Cargo bike coffee morning trials in schools to reduce car use for getting to school in five schools</p>	LLB Healthy Streets and Parking Team,	Medium	Reduced emissions from transport across the borough through reduction in traffic	<p>Year 1-5 Continued delivery of CT12.1, CT12.2, CT12.4</p> <p>Year 1-2 Complete a trial of social prescribing and social influencers in the Green Neighbourhoods and provide cargo bike coffee morning trials to five schools</p>	<p>CT12.1. Report on the number of cycle training sessions delivered annually</p> <p>CT12.2. Report on the number of residents using the Try Before you Bike scheme and how this has been advertised</p> <p>CT12.3. Share outcomes of the social prescribing trials</p> <p>CT12.4. Hold a minimum of 10 Dr Bike sessions per year</p> <p>CT12.5. Hold cargo bike sessions in at least 5 schools</p>

THEME 2: MONITORING AIR POLLUTION AND OTHER CORE STATUTORY DUTIES

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
M1	Maintaining and where possible expanding monitoring networks, and fulfilling other statutory duties	M1.1. Maintain all existing automatic and diffusion tube monitoring in Brent's core monitoring network, with a high standard of data capture	LBB Regulatory Services	Low	Ability to pinpoint problematic areas due to enhanced monitoring coverage	Monthly records to be kept for diffusion tube changeovers and reported in ASRs. Maintenance records to be kept for any maintenance/ repair work undertaken on automatic stations Annual summaries to be included in ASRs.	M1.1. Data capture to be reported in ASRs and comments included to explain any data gaps (e.g. diffusion tube missing on arrival when changeover was taking place) Add in current number as of ASR 2021 Continue to maintain the polycyclic aromatic hydrocarbon (PAH) monitor as part of the Defra network

THEME 2: MONITORING AIR POLLUTION AND OTHER CORE STATUTORY DUTIES (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		<p>M1.2. Enhance the monitoring network by installing further PM2.5 monitors and upgrading NOx analysers, liaising with the GLA as appropriate</p> <p>M1.3. Complete and submit Annual Status Reports to the GLA on time and make these publicly available once approved</p>				<p>Records to be kept as and when upgrades/ installations occur and should be reported annually in the ASR.</p> <p>Two new PM2.5 monitors installed in 2023/2024; one at Neasden Lane and one at John Keble Primary School.</p> <p>Also upgrading two NOx analysers, modernising the equipment.</p> <p>Annually</p>	<p>M1.2. Records kept of station upgrades/ additional monitoring sites (as well as removed sites along with a reason for removal) to be logged year on year and reported against this action in the ASRs. To include number of new locations and upgrades compared with previous year and a running total for the AQAP period</p> <p>M1.3. Air Quality Annual Status Report submitted to GLA by deadline and published online at https://www.brent.gov.uk/environment/air-quality/air-quality-reports</p>

5 ACTION PLAN TABLE (continued)

THEME 2: MONITORING AIR POLLUTION AND OTHER CORE STATUTORY DUTIES (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
M2	Review Brent's monitoring network identifying areas which require further monitoring to ensure it meets our aim of protecting the most vulnerable in the borough	M2.1. Produce a report identifying gaps in monitoring. Use existing data to investigate gaps in monitoring (e.g. Church End area).	LBB Air Quality, Public Health Team	Low (staff resource is required)	Ability to identify vulnerable receptors that are at risk from air pollution issues	By end of 2024	M2.1. Production of a report identifying gaps in monitoring, with recommendations.
M3	Support new monitoring technologies e.g. supporting the GLA/ICL Breathe London monitoring regime	M3.1. Maintain the three Breathe London nodes which are currently in place until the end of the Breathe London programme (currently end of 2024) with a view to extending support to the programme beyond this, subject to funding	LBB Air Quality	Low (staff resource is required)	Supplementary expanded monitoring network to identify areas where air pollution is a problem, encourage community engagement, and to inform appropriate mitigation to improve air quality in worst affected areas	Ongoing until end of 2024, with a view to continue after	M3.1. 100% of Breathe London nodes in place for the duration of the programme

5 ACTION PLAN TABLE (continued)

THEME 2: MONITORING AIR POLLUTION AND OTHER CORE STATUTORY DUTIES (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
M4	Monitor the impact of Transport schemes implemented in the borough by working with Healthy Streets and Parking	M4.1. Schemes which involve changes to traffic flow will have AQ monitoring /modelling incorporated into the project	LBB Air Quality, LBB Healthy Streets and Parking, Planning and Development Service	Low-Medium (staff resource is required)	Ability to quantify effectiveness of various schemes in order that the most effective can be rolled out more widely	Year 1 and ongoing	M4.1. To record number of relevant initiatives that include air quality monitoring, with the aim to have all relevant schemes including air quality monitoring with results shared in the ASR or on the council website
M5	Share air quality monitoring data in an easy-to access format	M5.1. Continue to provide automatic monitoring data through LondonAir	LBB Air Quality	Low-Medium (staff resource is required)	Will directly feed into awareness raising action category and will empower users to understand air quality issues in their areas and what can be done about it.	Annually	M5.1. Continued membership of LondonAir
		M5.2. Create reporting dashboard for ease of viewing data and air quality trends across the borough	LBB Air Quality	Low-Medium (staff resource is required)	Aim to lead to good dialogue between residents and council to further identify problem emitters and undertake necessary actions to reduce emissions.	Dashboard in place by end of year 1. Refinement of dashboard by end of year 2 following user feedback.	M5.2. Online dashboard for easy access to Air Quality data for Brent residents and other users. To include a function to easily provide feedback to improve dashboard user experience. Data to be updated annually

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA1	Public Health department taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plans	RA1.1. Ensure that Directors of Public Health (DsPHs) are regularly briefed on the scale of the problem in the local authority area; what is being done, and what is needed	LBB Air Quality Officer, LBB Public Health Department	Low-Medium (staff resource is required)	Exposure reduction for local residents, particularly those who are especially vulnerable with health conditions that could be worsened by poor air quality. Development of a communications pathway to facilitate an effective process by which local communities are empowered to make their voices heard about air pollution issues such that LBB can focus specific actions on these and reduce emissions and exposure.	Annually/Quarterly	RA1.1. Air Quality Action Plan is formally signed off by the Director of Public Health Annual status report to be circulated to the Director of Public Health and presented to the Health and Wellbeing Board Implementation of the actions in the AQAP to be reported to the Health and Wellbeing Board on a annual basis

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		RA1.2. Public health officials are actively involved in air quality engagement with local stakeholders (businesses, schools, community groups and healthcare providers)	LBB Air Quality Officer, LBB Public Health Department			Ongoing communication to identify events and prepare materials. Annual reporting in ASRs	<p>RA1.2. Create a series of air quality information assets which include simple actions that vulnerable groups can take to lower their exposure, to promote at health and wellbeing events and through CVS Brent</p> <p>Report on number of events with air quality information in the ASR</p> <p>Asthma data to be collated from asthma clinics/ primary care with potential for this to be used to highlight problem areas for asthma such that focussed action can be applied</p> <p>Senior Public Health Analyst to sit on quarterly air quality steering group</p>

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		RA1.3. We will incorporate up to date air quality information within the Joint Strategic Needs Assessment (JSNA) and to include air quality within Health and Wellbeing Board priorities	LBB Air Quality Officer, LBB Public Health Department Performance Team			Annual updates to be provided to Public Health Department Performance Team	RA1.3. Review and update of the AQ JSNA every other year

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA2	Raise awareness of the health impacts of air pollution, encouraging community action through the Brent Environmental Network, Brent Schools' Climate Champion Network, and through Brent volunteering organisations (e.g. Brent CVS), giving the private sector, community organisations and campaign groups information on air quality, what is going on in the borough and the opportunity to take action	<p>RA2.1. Have an active two-way dialogue between LBB and local communities to discuss air quality issues</p> <p>RA2.2. Introduce a rolling plan of air quality pop-up events in Air Quality Focus Areas, with information tailored to the local area (one per quarter). Year 1 pop-up to include Harlesden, Church End and Alperton</p>	LBB Healthy Streets and Parking Team, LBB Air Quality Officer, LBB Public Health Department, LBB Climate Emergency Team	Low	Reduced exposure and emissions on action days	<p>Annual support of Clean Air Day and Car Free Day.</p> <p>Year 1. Identify community groups and appropriate LBB point of contact, develop a communications plan</p> <p>Year 2. Roll out communications campaign with communities and introduce mechanism by which LBB can be contacted about air pollution issues</p> <p>Years 3-5. Continued monitoring/ actions/ dialogue with communities with the aim to have regular face to face information sharing activities</p>	<p>RA2.1. and RA2.2.</p> <p>Number of air pollution action days to be reported in the ASR</p> <p>At least one newsletter a month to be sent to the Brent Environmental Network</p> <p>Number of meetings with the Brent Schools' Climate Champion Network per year and the number of meetings with each Green Neighbourhoods' cluster.</p> <p>Setup of local Brent Environmental Advisory Groups and report on number of meetings</p>

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA3	Ensure schools join the TfL STARS accredited travel planning programme	<p>RA3.1. Encourage schools and nurseries to engage with the STARS scheme and gain accreditation through a programme of engagement, led by members of the Road Safety and Travel Planning team</p> <p>RA3.2. Ensure Air Quality information is included in the School Travel plan programme</p>	LBB Healthy Streets and Parking Team, Individual Schools, LBB Climate Emergency Team	Low	Exposure reduction for pupils, emission reductions from reduced car usage.	<p>By 2024, 70% of schools to have a School Travel Plan. By 2028, 80% of schools to have STARS accredited travel plan . Of the AQAP delivery. 85% of school travel plans to have achieved gold standard by Year 5</p> <p>As of 2021, 47% of schools had a STARS accredited travel plan, of which 77% are at gold standard</p>	<p>RA3.1. Percentage of schools in the borough which have engaged with the scheme and mode shift achieved away from private vehicles</p> <p>Success to be measured by the level of accreditation obtained by the schools (bronze, silver or gold). Report on number of schools which have upgraded their accreditation each year</p> <p>Promote the STARS programme at least once a year at the Early Years Provider Forum. Report on number of nurseries engaged</p> <p>RA3.2. Air Quality element of the programme to be reviewed on an annual basis</p>

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA4	Work with schools and nurseries to improve air quality and to raise awareness about pollution in the local area	<p>RA4.1. Promote the London Mayor’s School Pollution Helpdesk to all schools and nurseries</p> <p>RA4.2. Deliver a programme of air quality engagement at schools and nurseries, prioritising those in Air Quality Focus Areas and Green Neighbourhoods</p> <p>RA4.3. Produce low pollution route maps for all schools and Local Authority nurseries in the borough.</p> <p>RA4.4. Continue the expansion of the School Streets programme</p>	LBB Healthy Streets and Parking Team	Low	Reduced exposure for school children.	<p>Annual reporting of number of schools in programme/ audited per year.</p> <p>All schools and nurseries in Focus Areas to have had air quality engagement by end of Year 3</p> <p>Annual reporting of school streets</p>	<p>RA4.1. Promotion of the service in quarterly Head Teacher bulletin and as part of School Travel Planning engagement</p> <p>RA4.2. 100% of schools and nurseries receive air quality engagement by 2028</p> <p>Number of meetings with the Brent Schools’ Climate Champion Network per year and the number of meetings with each Green Neighbourhoods’ cluster</p> <p>RA4.3. 100% of school and nurseries to have pollution maps</p> <p>RA4.4. At least two new school streets per year, increasing from 26 to 36 by 2028 , and look at expanding existing schemes where needed</p>

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA5	Engage with businesses, supporting them to reduce emissions from their operations	RA5.1. Publish guidance on reducing local air quality impacts for Brent businesses	Economic Development Team, Climate Emergency Team	Medium	Reductions in local emissions	RA5.1. Guidance to be developed, published and disseminated to businesses operating within the borough by end of Year 2	RA5.1. Air Quality Guidance to be included in sustainable business communications and Green Business Guides
RA6	Brent's Public Health team will drive awareness and behavioural change, collaborating with health partners to reduce exposure of those most vulnerable to poor air quality, both indoor and outdoor	RA6.1. Produce resources to share with the Brent ICP for dissemination to primary care organisations such as videos on exposure reduction	LBB Healthy Streets and Parking Team LBB Air Quality Officer, LBB Public Health Department	Low	Reduce exposure of vulnerable patients to air pollution	Years 1-5. Disseminate annual Clean Air Day resources to put on display at GP surgeries, including health messaging	RA6.1. Number of resources created RA6.2. Number of primary care organisation which have received resources and number displaying resources RA6.3. Production of asthma statistics for GPs in Air Quality Focus Areas RA6.4. Introduce the Clean Air Hospital Framework at Brent hospitals and also share travel planning information to 100% health care settings in Air Quality Focus Areas

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		<p>RA6.2. Engage with GP surgeries, pharmacies and care providers to reach vulnerable groups. The council commits to an annual communications campaign providing information on pollution exposure reduction and the airTEXT service (as per action RA7), working with Brent ICP to encourage messaging to be shared by GP surgeries all year round</p> <p>RA6.3. Work with Brent ICP to improve access to asthma data so that resources can be tailored</p> <p>RA6.4. Support health settings to reduce emissions from their own operations</p>					

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA7	Promote air pollution alerts and route planner tools	<p>RA7.1. Providing and promoting the airTEXT service, especially to people with heart and/ or lung conditions through communications networks (Public Health, GPs etc.). Promote and disseminate high pollution alerts</p> <p>RA7.2. Provide tools to reduce personal exposure to outdoor air pollution (e.g. clean air walking route on website)</p> <p>RA7.3. Promote air quality information more widely through GPs, schools, nurseries, at health care facilities, libraries, pharmacies and other frequently used facilities</p>	LBB Air Quality Officer LBB Public Health Department	Low - use existing communication channels and those that will be developed as part of this air quality action plan e.g. RA1.6	Exposure reduction as a result of people changing habits on high pollution days and changing usual travel routes to those that are less polluted	<p>Ongoing signup to airTEXT</p> <p>Year 1/2 publish guidance on options for low-pollution routes for walking/ cycling, alternative travel and other action to be taken on high pollution days.</p> <p>Year 1/2 and ongoing incorporate airTEXT awareness to ongoing GP communications e.g. including a link/ QR code on GP surgery slide reels as per action RA6.1.</p> <p>Year 1 and ongoing record view/ reshare statistics from air quality related social media posts</p>	<p>RA7.1. Continue to fund the subscription to AirTEXT (or similar) and increasing from 206 to 1,000 subscribers by the end yr5 by developing a communications plan for promoting the service</p> <p>Share 100% of the Mayor's social media pollution alerts through own social media channels.</p> <p>Cascade the London Mayors High and very High pollution alerts, investigating how this can be shared with health care professionals within the borough. Record social media view statistics where possible.</p>

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA7						<p>Year 1 – produce 5 low pollution route maps to schools with a view to producing more during Years 2-5</p> <p>Year 1 and ongoing use slides/ reels/ videos from action RA7.1 and expand location types that these are shown at (e.g. health care facilities, libraries, pharmacies)</p>	<p>RA7.2. Embed a Clean Air Route Finder on Brent’s website. Publish guidance on options for low-pollution routes for walking/ cycling, alternative travel and other action to be taken on high pollution days on the website.</p> <p>RA7.3. Producing and sharing via social media low pollution route maps for schools and nurseries, as well as other key community hubs such as libraries, community centres and parks. Record how many maps have been produced</p> <p>Report number of facilities with AQ information present</p>

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
						<p>Year 1 – produce 5 low pollution route maps to schools with a view to producing more during Years 2-5</p> <p>Year 1 and ongoing use slides/ reels/ videos from action RA7.1 and expand location types that these are shown at (e.g. health care facilities, libraries, pharmacies)</p>	<p>RA7.2. Embed a Clean Air Route Finder on Brent’s website. Publish guidance on options for low-pollution routes for walking/ cycling, alternative travel and other action to be taken on high pollution days on the website.</p> <p>RA7.3. Producing and sharing via social media low pollution route maps for schools and nurseries, as well as other key community hubs such as libraries, community centres and parks. Record how many maps have been produced</p> <p>Report number of facilities with AQ information present</p>

5 ACTION PLAN TABLE (continued)

THEME 3: PUBLIC HEALTH AND AWARENESS RAISING (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
RA8	Raise awareness of indoor air pollution and how to reduce exposure	RA8.1. Produce and promote a toolkit on indoor air pollution and how to reduce personal exposure. Add information (both simple 'headline' information e.g. using extraction hoods when cooking, ensuring good ventilation when drying clothes indoors etc.) to the LBB website and share via social media and through other outreach initiatives e.g. action RA7.1	LBB Air Quality Officer	Low	Reduced exposure for residents and some workers in the borough 69% of respondents to the outreach survey were concerned about air pollution at home or at work	Year 1 and ongoing	RA8.1. Number of website visits to indoor air pollution page and number of times indoor air pollution information included in communications
RA9	Share air pollution data transparently with residents, reporting against both UK Air Quality Objectives and World Health Organisation targets	RA9.1. Share air quality monitoring data through a digital, interactive platform as per action M5.2 Link in with the JSNA as this will be interactive and updated every other year	LBB Air Quality Officer	Low	Making the data easier to access and understand can help make residents aware of the progress made and the current status of air quality in their local area	Year 1: JSNA dashboard to be developed Year 2-3: Interactive dashboard to be published	RA9.1. Online dashboard for easy access to Air Quality data for Brent residents and other users. To include a function to easily provide feedback. Data to be updated annually

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations/ benefit	Timescale for implementation	Outputs, Targets and KPIs
HD1	Ensuring emissions from construction are minimised by adhering to London Plan and LBB planning policy	<p>HD1.1. Update the London Borough of Brent (LBB) Code of Construction Practice (COCP), and the "Sustainable Environment and Development in Brent" Supplementary Planning Document (SPD), which sets requirements for AQDMPs and dust monitoring</p> <p>HD1.2. Ensure all major developments have detailed Demolition and Construction Management Plans during planning stage</p>	LBB Planning Team, LBB Nuisance Control Team, Environmental Monitoring (Regulatory Services)	Low-Medium (staff resource is required)	Analysis of complaints data will indirectly demonstrate that LBB approved Construction Environmental Management Plans (CEMPs)/ Air Quality and Dust Management Plans (AQDMPs) are being successfully implemented in line with the LBB COCP and adhered to, leading to minimised emissions from construction activities. Results of construction dust monitoring will indicate which sites are potentially giving rise to dust issues	Reporting/ recording of records to begin Q1 2023	<p>HD1.1. Reduction in number of dust complaints made. Nuisance control team to provide AQ team with quarterly reports on dust complaints</p> <p>HD1.2. Management plans to be collated via the LBB document management system and audited to ensure all major developments have relevant plans</p>

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		HD1.3. Ensure Construction Dust Monitoring is required through planning conditions					HD1.3. 100% of all relevant developments to include specific construction dust planning condition Ensuring that all medium and high dust risk sites undertake construction dust monitoring in their planning conditions
HD2	Ensuring enforcement of non-road mobile machinery (NRMM) air quality policies	HD2.1. Review NRMM planning condition wording to ensure most up to date version is being used HD2.2. Continue to subscribe, where possible, to LB Merton's NRMM scheme, who conduct audits on an annual basis and record the findings on a register	Environmental Monitoring, LBB Enforcement Team, LBB Property Department, LB Merton	Low-Medium (enforcement required, tools are being developed by the GLA to assist)	This will ensure that NRMM emissions standards are adhered to and that emissions do not exceed those specified by the GLA	HD2.1. From now and ongoing HD2.2. Contact to be made with LB Merton before next set of audits	HD2.2. Continued subscription to the NRMM scheme LBB to work with LB Merton so that non-compliant sites are flagged LBB to share a list of active construction sites with LB Merton prior to audits being undertaken 100% of all relevant applications to include appropriate NRMM planning condition

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations/ benefit	Timescale for implementation	Outputs, Targets and KPIs
		HD2.3. Conduct internal audits of operations using NRMM to ensure that construction of LBB owned property/ road maintenance continues to strictly adhere to NRMM and other construction requirements. (e.g. for construction of Brent owned developments, including property, road maintenance and NRMM associated with events)				HD2.3. From now and ongoing	HD2.3. LBB Property Department to provide information on all LBB property construction projects clearly outlining the air quality related planning conditions put in place for construction of LBB property. LBB Highways team to provide similar information for roadworks

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
HD3	Reducing emissions from Combined Heat and Power	HD3.1. Ensure planning policy is followed and that all major developments have heat predominantly provided by heat pumps and any supplementary boilers to be ultra-low NOx or electric boilers	LBB Energy & Sustainability Team, LBB Planning Team, Environmental Monitoring	Low-Medium (staff resource is required)	Significant reductions in local NOx emissions associated with centralised combustion sources	HD3.1. From now and ongoing HD3.1. anticipating changes in legislation that will require to change CHP engines and boilers to heat pumps, expected 2030-2035	HD3.1. All major developments to have a low emission heat source Annual reporting of ultra low NOx boilers and heat pumps installed each year Data to be compiled from Sustainability SPD checklists and assessed annually to ensure that the number of boilers installed is decreasing and number of heat pumps increasing. If not seen to be the case, further action required with LBB Planning/ Energy & Sustainability teams to ensure reduction in boilers being installed

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		<p>HD3.2. All major developments to comply with London Plan energy hierarchy and fully assessed for air quality where relevant</p>				<p>HD3.2. Planning policy to reflect this. Annual appraisal for previous year in Q1 each year</p>	<p>HD3.2. Planning policy to require this and annual appraisal of all major developments to ensure hierarchy included in energy strategies. Sustainable Environment and Development in Brent SPD checklist can be used to compile this data</p>
		<p>HD3.3. Encourage existing gas fire heat networks to decarbonise by signposting to relevant grants and encourage them to expand their networks as they decarbonise</p>					<p>HD3.3. Work with local heat network operators to develop a Decarbonisation strategy</p> <p>The number of fossil fuel based systems taken away as a result of linking to a decarbonised system</p>

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
HD4	Enforce Air Quality Neutral, Air Quality Positive policy and Healthy Streets approaches, with more stringent application of mitigation required in the Brent Air Quality Focus Areas and Growth Areas	HD4.1. Require all major developments in AQFAs and the borough's Growth Areas to be Air Quality Positive (AQP) and all other developments to be air quality neutral, as detailed in the Sustainable Environment and Development in Brent SPD	Environmental Monitoring, LBB Planning Team	Low-Medium (staff resource is required)	Reduced emissions due to air quality positive measures, contribution fund to go towards air pollution offsetting	HD4.1. From now and ongoing	HD4.1. All major developments in AQFA and the borough's Growth Areas to have an Air Quality Assessment and Air Quality Positive Statement submitted at planning application stage. Early engagement with the Council and developer on air quality positive and healthy streets measures. Engagement with GLA and TfL where relevant. This should be documented against each planning application in order to evidence this for all major developments. Ensure 100% of relevant developments adhere to Brent's Sustainable Environment and Development SPD air quality requirements

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
HD5	Ensuring adequate, appropriate, and well-located green space and infrastructure is included in new and existing developments	<p>HD5.1. Ensure the relevant greening policies of the London and Local Plan are followed by developers, such as biodiversity, trees and adequate provision of open green space</p> <p>HD5.2. Air quality and parks officers to jointly comment on green infrastructure</p>	LBB Planning Team	Low-Medium (staff resource is required)	Screening of receptors from emissions sources	From now and ongoing	HD5.1. Report on number of new developments meeting the Urban Greening Factor of 0.4 (residential) and 0.3 (commercial)

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
HD6	Promote and enforce Smoke Control Zones and ensuring they are fully promoted and enforced	HD6.1. Review fuel guidance on council website	LBB Air Quality Officer	Low	17% of PM2.5 comes from wood burning within LBB, so even though complaints not currently being generated the source apportionment is quite high. Potential to significantly reduce this percentage. An overall output from this action will be to see if the total annual emissions and/ or source apportionment reduce in the next round of LAEI assessment	HD6.1. Dissemination of fuel guidance currently being undertaken	HD6.1. Share fuel guidance on multiple platforms and evidence this
		HD6.2. Monitor wood suppliers within the borough and investigate non-compliance. Suppliers are required to provide information on solid fuel burning equipment and how this complies with legislation	Trading Standards				HD6.2. Register of suppliers who have been audited, identify suppliers where non-compliance has been flagged and provide guidance
		HD6.3. Review the borough process for handling smoke complaints in accordance with Environment Act 2021	LBB Air Quality Officer, Environmental Monitoring Team (Regulatory Services), and Nuisance Control Team			HD6.3. To be actioned once Environment Act 2021 has been published	HD6.3. Publish the process on the website. To be actioned once Environment Act 2021 has been published

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		HD6.4. Undertake an annual awareness raising campaign on the impacts of wood burning and smoke pollution	LBB Air Quality Officer			HD6.4. Annually from 2023	HD6.4. Evidence that campaign has taken place and to collate any feedback received and action if necessary
		HD6.5. Reduce bonfires and waste burning, for example through improved information of garden waste services and provide advisory and enforcement interventions where applicable	LBB Air Quality Officer, LBB Nuisance Control Team			HD6.5. Information campaign to be tied in with annual awareness campaign	HD6.5. Report annually on the number of bonfire complaints
		HD6.6. Continue membership of the GLA wood burning group	LBB Air Quality Officer			HD6.6. From now and ongoing	HD6.6. Evidence of information sharing on tackling wood burning issues and involvement in any wider campaigns being run by the group

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations/ benefit	Timescale for implementation	Outputs, Targets and KPIs
HD7	Promoting and delivering energy efficiency and retrofitting projects in workplaces and homes throughout Brent	<p>HD7.1. Distribute information on support available for local SME businesses to become more energy efficient</p> <p>HD7.2. Distribute information on support available for residents to reduce their energy use</p> <p>HD7.3. Use of RE:FIT for projects targeting council owned infrastructure such as offices or other council buildings</p> <p>HD7.4. Work with community schools to develop decarbonisation plans and support delivery of these, where possible, as well as distribute information on support available for schools to reduce their energy use</p>	Energy and Sustainability Team	Low-medium	Reduced emissions from workplaces and homes due to improved energy efficiency	From now and ongoing as these programmes are already underway	<p>HD7.1. Pilot of the Energy Efficiency Advice Service for businesses. Take learnings from the pilot, report on the emissions reductions and the number of businesses impacted. Produce case studies to share with other businesses</p> <p>HD7.2. Continuation of Brent's energy advice service ("Green Doctors") for residents. Report on number of residents accessing service. Roll-out of "Brent Warm and Well" - 1000 referrals per year, providing energy advice for the most vulnerable in the borough</p> <p>HD7.3. For RE:FIT, report on the amount of CO2 emissions reduced</p>

5 ACTION PLAN TABLE (continued)

THEME 4: HOMES, BUILDINGS, AND DEVELOPMENTS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
		<p>HD7.5. Decarbonise Brent's own housing stock</p> <p>HD7.6. Ensure that any applications for heating system replacements or upgrades under these programs use low emission alternatives</p>					<p>HD7.4. 100% of community schools to have received information on reducing energy use</p> <p>To report on number of schools which have a decarbonisation plan and number which have commenced delivery</p> <p>HD7.5. Apply for the social housing decarbonisation fund</p> <p>Report on the reduction in carbon linked to this work</p> <p>Track the percentage of boroughs' social housing stock which has been updated through the scheme.</p> <p>HD7.6. Where the boiler emission rate or NOx class is known direct savings can be calculated from reductions in the boiler use/savings achieved through entire replacement of fossil fuel system</p>

5 ACTION PLAN TABLE (continued)

THEME 5: LOCALISED SOLUTIONS

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
L1	Expand and improve green Infrastructure across the borough (GI)	<p>L1.1. Undertake assessment/ review to identify areas where upgrades to green infrastructure are required that will have a positive impact on air quality, especially linked in with Air Quality Focus Areas</p> <p>L1.2. Implement a range of greening projects across the borough, working towards delivery of the Council's Green Infrastructure Vision, and the aim to make Brent one of the greenest boroughs in London</p>	Environmental Enforcement	Medium	Reduced exposure to air pollutants in key locations through encouraging walking and cycling through a more pleasant public realm	<p>Year 1 – LBB Air Quality Officer to share Mayor of London Green Infrastructure air quality guidance with Parks, Leisure, and Cemeteries and Highways Management Teams</p> <p>Year 2-5 – AQ officer to work with the GI programme team to focus on areas of specific benefit (e.g. AQ focus areas) and where possible look to assist in securing funding</p>	<p>L1.1. Number and impact of green infrastructure projects per year for the borough as a whole and per Air Quality Focus Area and Green Neighbourhood areas</p> <p>Report on modal shift where green infrastructure enhances the walking and cycling environment</p> <p>Measure the impact on air quality where green infrastructure is installed as a dispersion barrier e.g. green screens, and report in the ASR</p> <p>Report on reduction in green space deficiency</p> <p>Report on local changes in tree canopy cover and numbers of trees planted</p>

THEME 5: LOCALISED SOLUTIONS

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
							<p>L1.2. Continue the borough's tree planting programme – aimed at areas of low canopy cover, poor air quality and deprivation, reporting on number of trees</p> <p>Install new rain gardens in Silver Jubilee Park, Kensal Corridor and along four School Streets</p> <p>Implement new biodiversity information boards in Brent parks</p> <p>Work with partners to create a new mini-forest in King Edwards Park</p> <p>Install new Bee and Bug Hotels in Brent parks</p> <p>Refurbish Northwick Park Pavilion as the borough's first eco-pavilion</p> <p>Establish a wildflower area along the length of the river Brent feeder that runs through Northwick Park</p>

5 ACTION PLAN TABLE (continued)

THEME 5: LOCALISED SOLUTIONS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
L2	Introduce Green Neighbourhoods across the borough, with the aim of focussing sustainable solutions in priority areas	L2.1. Implement Church End and Kingsbury Green Neighbourhoods in 2022- 2024 and roll out a subsequent programme	LBB Healthy Streets and Parking Team LBB Air Quality Officer, Climate Emergency Team	High	Reduced emissions at street level in neighbourhoods with high air pollution levels and therefore reduced exposure for local residents in these areas	Years 1-5 implement Green Neighbourhoods programme	L2.1. Report on the lessons learnt from the two pilot Green Neighbourhoods. Roll-out of two new development-led Green Neighbourhoods. Number of air quality pop-up information events held in Green Neighbourhood areas.
L3	Ensure AQAP is aligned with LBB Climate Emergency strategy	L3.1. Climate Emergency and Air Quality Officers to sit on relevant steering groups.	LBB Climate Emergency Team LBB Air Quality Officer	Low	Alignment with emissions reductions strategies as a result of the Climate Emergency Strategy	Throughout 5 years	L3.3. Steering group attendance and number of AQ information events in Green Neighbourhoods

5 ACTION PLAN TABLE (continued)

THEME 5: LOCALISED SOLUTIONS (Continued)

Action ID	Action name	How will this action be achieved?	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs
L4	Develop location specific action plans for Air Quality Focus Areas as part of the Local Implementation Plan (LIP) programme	L4.1. Develop and implement a rolling program to alleviate congestion in Air Quality Focus Areas and delivering these year on year. Investigate link with TfL buses and bus routes and maintain partnership with TfL on this	LBB Health Streets and Parking Team LBB Air Quality Officer	Low (if funding can be secured)	Improvements to air quality in Focus Areas – reductions in emissions and therefore concentrations	Year 1 – undertake one study for a scheme linking with LIP programme Year 2 – if successful, implement the funded scheme, and undertake a study for a different scheme. Years 3-5 repeat process using lessons learnt from previous years.	L4.1. Develop prioritised list of studies. Feasibility study of improvement in Harlesden Town Centre in yr 1, with delivery from year 2 Deliver one study and one implementation per year

APPENDIX A POPULATION EXPOSURE ANALYSIS

Table A1: 2019 Baseline Annual Mean NO2 population exposure

Overall Class	UKAQO/ WHO Interim Target 1		90% UKAQO/ WHO Interim Target 1		WHO Interim Target 2		WHO Interim Target 3		WHO AQG Level	
	40µg/m3		36µg/m3		30µg/m3		20µg/m3		10µg/m3	
	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting
Schools Summary	123	2	120	5	86	39	0	125	0	125
Nurseries Summary	93	2	90	5	64	31	0	95	0	95
Playgrounds (inc. School and Nursery Playgrounds) Summary	171	2	167	6	123	50	5	168	0	173
Other Education (Colleges, Further Education) Summary	9	1	9	1	8	2	0	10	0	10
Hospitals/ Hospices Summary	8	0	8	0	3	5	0	8	0	8
GP Surgeries Summary	78	7	68	17	43	42	0	85	0	85
Care/Nursing Home Summary	95	1	88	8	76	20	0	96	0	96
Residential Summary	126,479	4,385	121,620	9,244	98,403	32,461	2,806	128,058	0	130,864
TOTAL	127,056	4,400	122,170	9,286	98,806	32,650	2,811	128,645	0	131,456

APPENDIX A POPULATION EXPOSURE ANALYSIS (Continued)

Table A2: SC1 2022 Annual Mean NO2 population exposure

Overall Class	UKAQO/ WHO Interim Target 1		90% UKAQO/ WHO Interim Target 1		WHO Interim Target 2		WHO Interim Target 3		WHO AQG Level	
	40µg/m3		36µg/m3		30µg/m3		20µg/m3		10µg/m3	
	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting
Schools Summary	125	0	125	0	122	3	20	105	0	125
Nurseries Summary	95	0	94	1	90	5	13	82	0	95
Playgrounds (inc. School and Nursery Playgrounds) Summary	173	0	173	0	168	5	30	143	0	173
Other Education (Colleges, Further Education) Summary	9	1	9	1	9	1	1	9	0	10
Hospitals/ Hospices Summary	8	0	8	0	8	0	1	7	0	8
GP Surgeries Summary	85	0	83	2	73	12	6	79	0	85
Care/Nursing Home Summary	96	0	95	1	93	3	25	71	0	96
Residential Summary	129,997	867	129,278	1,586	124,546	6,318	22,884	107,980	0	130,864
TOTAL	130,588	868	129,865	1,591	125,109	6,347	22,980	108,476	0	131,456

APPENDIX A POPULATION EXPOSURE ANALYSIS (Continued)

Table A3: Population exposure change SC1 2022 annual mean NO2 – 2019 Baseline annual mean NO2

Overall Class	UKAQO/ WHO Interim Target 1		90% UKAQO/ WHO Interim Target 1		WHO Interim Target 2		WHO Interim Target 3		WHO AQG Level	
	40µg/m3		36µg/m3		30µg/m3		20µg/m3		10µg/m3	
	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting
Schools Summary	▲2	▲2	▲5	▼5	▲36	▼36	▲20	▼20	0	0
Nurseries Summary	▲2	▲2	▲4	▼4	▲26	▼26	▲13	▼13	0	0
Playgrounds (inc. School and Nursery Playgrounds) Summary	▲2	▲2	▲6	▼6	▲45	▼45	▲25	▼25	0	0
Other Education (Colleges, Further Education) Summary	0	0	0	0	▲1	▼1	▼1	▼1	0	0
Hospitals/ Hospices Summary	0	0	0	0	▲5	▼5	▲1	▼1	0	0
GP Surgeries Summary	▲7	▼7	▲15	▼15	▲30	▼30	▲6	▼6	0	0
Care/Nursing Home Summary	▲1	▼1	▲7	▼7	▲17	▼17	▲25	▼25	0	0
Residential Summary	▲3,518	▼3,518	▲7,658	▼7,658	▲26,143	▼26,143	▲20,078	▼20,078	0	0
TOTAL	▲3,532	▼3,532	▲7,695	▼7,695	▲26,303	▼26,303	▲20,169	▼20,169	0	0

Table A4: 2019 Baseline Annual Mean PM10 population exposure

Overall Class	UKAQO		WHO Interim Target 3		WHO Interim Target 4		WHO AQG Level	
	40µg/m3		30µg/m3		20µg/m3		15µg/m3	
	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting
Schools Summary	125	0	125	0	106	19	0	125
Nurseries Summary	95	0	95	0	85	10	0	95
Playgrounds (inc. School and Nursery Playgrounds) Summary	173	0	173	0	150	23	0	173
Other Education (Colleges, Further Education) Summary	10	0	10	0	8	2	0	10
Hospitals/ Hospices Summary	8	0	8	0	8	0	0	8
GP Surgeries Summary	85	0	85	0	65	20	0	85
Care/Nursing Home Summary	96	0	96	0	87	9	0	96
Residential Summary	130,864	0	130,693	171	116,550	14,314	0	130,864
TOTAL	131,456	0	131,285	171	117,059	14,397	0	131,456

Table A5: SC1 2022 Annual Mean PM10 population exposure

Overall Class	UKAQO		WHO Interim Target 3		WHO Interim Target 4		WHO AQG Level	
	40µg/m3		30µg/m3		20µg/m3		15µg/m3	
	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting
Schools Summary	125	0	125	0	124	1	0	125
Nurseries Summary	95	0	95	0	92	3	0	95
Playgrounds (inc. School and Nursery Playgrounds) Summary	173	0	173	0	168	5	0	173
Other Education (Colleges, Further Education) Summary	10	0	10	0	9	1	0	10
Hospitals/ Hospices Summary	8	0	8	0	8	0	0	8
GP Surgeries Summary	85	0	85	0	75	10	0	85
Care/Nursing Home Summary	96	0	96	0	93	3	0	96
Residential Summary	130,864	0	130,829	35	125,945	4,919	19	130,845
TOTAL	131,456	0	131,421	35	126,514	4,942	19	131,437

Table A6: Population exposure change SC1 2022 annual mean PM10 – 2019 Baseline annual mean PM10

Overall Class	UKAQO		WHO Interim Target 3		WHO Interim Target 4		WHO AQG Level	
	40µg/m3		30µg/m3		20µg/m3		15µg/m3	
	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting
Schools Summary	0	0	0	0	▲18	▼18	0	0
Nurseries Summary	0	0	0	0	▲7	▼7	0	0
Playgrounds (inc. School and Nursery Playgrounds) Summary	0	0	0	0	▲18	▼18	0	0
Other Education (Colleges, Further Education) Summary	0	0	0	0	▲1	▼1	0	0
Hospitals/ Hospices Summary	0	0	0	0	0	0	0	0
GP Surgeries Summary	0	0	0	0	▲10	▼10	0	0
Care/Nursing Home Summary	0	0	0	0	▲6	▼6	0	0
Residential Summary	0	0	▲136	▼136	▲9,395	▼9,395	▲19	▼19
TOTAL	0	0	▲136	▼136	▲9,455	▼9,455	▲19	▼19

Table A7: 2019 Baseline Annual Mean PM2.5 population exposure

Overall Class	UKAQO		WHO Interim Target 3		WHO Interim Target 4		WHO AQG Level	
	20µg/m3		15µg/m3		10µg/m3		5µg/m3	
	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting
Schools Summary	125	0	125	0	0	125	0	125
Nurseries Summary	95	0	95	0	0	95	0	95
Playgrounds (inc. School and Nursery Playgrounds) Summary	173	0	172	1	0	173	0	173
Other Education (Colleges, Further Education) Summary	10	0	9	1	0	10	0	10
Hospitals/ Hospices Summary	8	0	8	0	0	8	0	8
GP Surgeries Summary	85	0	84	1	0	85	0	85
Care/Nursing Home Summary	96	0	96	0	0	96	0	96
Residential Summary	130,831	33	129,617	1,247	0	130,864	0	130,864
TOTAL	131,423	33	130,206	1,250	0	131,456	0	131,456

Table A8: SC1 2022 Annual Mean PM2.5 population exposure

Overall Class	UKAQO		WHO Interim Target 3		WHO Interim Target 4		WHO AQG Level	
	20µg/m3		15µg/m3		10µg/m3		5µg/m3	
	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting	Number meeting	Number not meeting
Schools Summary	125	0	125	0	0	125	0	125
Nurseries Summary	95	0	95	0	0	95	0	95
Playgrounds (inc. School and Nursery Playgrounds) Summary	173	0	173	0	0	173	0	173
Other Education (Colleges, Further Education) Summary	10	0	10	0	0	10	0	10
Hospitals/ Hospices Summary	8	0	8	0	0	8	0	8
GP Surgeries Summary	85	0	85	0	0	85	0	85
Care/Nursing Home Summary	96	0	96	0	0	96	0	96
Residential Summary	130,861	3	130,010	854	0	130,864	0	130,864
TOTAL	131,453	3	130,602	854	0	131,456	0	131,456

Table A9: Population exposure change SC1 2022 annual mean PM2.5 – 2019 Baseline annual mean PM2.5

Overall Class	UKAQO		WHO Interim Target 3		WHO Interim Target 4		WHO AQG Level	
	20µg/m3		15µg/m3		10µg/m3		5µg/m3	
	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting	Change in number meeting	Change in number not meeting
Schools Summary	0	0	0	0	0	0	0	0
Nurseries Summary	0	0	0	0	0	0	0	0
Playgrounds (inc. School and Nursery Playgrounds) Summary	0	0	▲1	▼1	0	0	0	0
Other Education (Colleges, Further Education) Summary	0	0	▲1	▼1	0	0	0	0
Hospitals/ Hospices Summary	0	0	0	0	0	0	0	0
GP Surgeries Summary	0	0	▲1	▼1	0	0	0	0
Care/Nursing Home Summary	0	0	0	0	0	0	0	0
Residential Summary	▲30	▼30	▲393	▼393	0	0	0	0
TOTAL	▲30	▼30	▲396	▼396	0	0	0	0

APPENDIX B RESPONSE TO COMMUNITY OUTREACH

Summary

Outreach engagement was undertaken for 27 days with individual and small group conversations.

Engagement was undertaken at over twenty-one locations of Brent, including all Town Centres and AQFAs.

An online survey was promoted by Brent and open for a period of 2 months.

- 488 people gave their views.
Of these respondents:
 - 303 people shared views in-depth in one-on-one conversations in the community
 - 3 people gave their views over the phone
 - 108 people took part in 35 Street Focus Groups
 - 74 people gave their views online
 - 86% of respondents live in Brent
 - 27% work in the Brent
 - 2% run a business in Brent

Those who responded online who were not representative of the Borough demographics, however those engaged via outreach

were broadly reflective of the known Brent demographics.

94% of people engaged via outreach said that their views had never been consulted before (83%) or not much before (11%).

Respondents' views on air quality and air pollution:

- 53% think that the air quality in their local area is bad or very bad
- 85% believe that air quality is important or very important to them as an issue
- 69% are "quite" or "very" concerned about the indoor air quality in their home or place of work
- 94% think there's a connection between air pollution and health
- 51% think air quality in Brent has worsened in the last 3 years
- 33% of people said they had personal experience of health problems made worse by pollution in their local area

- Traffic, petrol or diesel cars and deliveries and freight via road are perceived to be the top contributors to air pollution in Brent

Respondent's priorities for Brent's updated AQAP

- 80% said that improving air quality should be a high priority for the Council (ranking 4 or 5 on a scale of 5)
- There was large majority support for all of the proposed AQAP priority themes
- The themes that were highest ranked as priorities were cleaner transport, monitoring air pollution, and awareness raising of public health impacts

Summary

The consultation on the draft plan was delivered by Brent Council over a six-week period from late March to early May 2023.

There were a range of methods used to both share the draft plan and encourage and support residents to share their views:

- The draft AQAP was hosted on the Brent Council "Have your say" website and emailed to stakeholders. A range of materials were prepared to make the draft plan more accessible for residents.
- An online survey¹ was hosted by Brent Council and was open for six weeks (20th March to 2nd May). The link to this survey was published on Brent Council's website and social media, promoted through a press release, and distributed through Brent's resident and community networks.
- Pop-up events took place at a range of locations across the borough in order to inform the local community about the draft plan and signpost to the online survey. Roll-up banners were displayed to increase visibility of the pop-up stall, and the engagement team had hard copies of an 'easy read' version of

the Action Plan as well as leaflets and other materials

- Tablets were used as an interactive tool to show a promotional video about the process, to view the draft plan, to preview the online questionnaire, and on some occasions to enable a person to complete the online questionnaire on the spot. Paper questionnaires were also available. The pop-up locations included libraries and community hubs and thirteen Air Quality Focus Areas (AQFAs). The programme of these events was publicised through Brent Council. Kaizen engagement team provided support for the pop-ups.
- Presentations at Forums and Brent Connects Sessions – there were 2 presentations at community forums, with one virtual and one in person event, and 3 at Brent Connects sessions.
- Two online sessions were held for residents to hear about the draft Action Plan, to ask questions and to share their views.
- Residents could also share feedback on the draft plan via email, phone, and post.

Who shared views

- 92 people gave their views either online or on a paper questionnaire
- 23 people who attended forums shared their views via Mentimeter during the event
- 2 people shared their views via email or phone
- Of those who completed a survey:
 - 96% live in Brent. 20% work in the Borough and 3% run a business in Brent
 - 56% of people said that their views had never been consulted before (27%) or not much (29%)
- Additionally, over 400 people interacted with the engagement team during pop-up events and were informed about the draft AQAP and how they could see the plan and share their views

Views on the draft Air Quality Action Plan

- 62% of people responded positively (saying "Love it" or "Like it") to the Council's vision statement around air quality
- 71% believe that Core Aim 1 - "Reduce Pollutions Concentrations" should be the main priority

- 57% thought that “Discourage unnecessary engine idling” would be the most impactful proposed action, followed by “Provide infrastructure to support walking and cycling” (56%)
- Overall, only 10% of people who gave their views expressed a negative opinion of the draft plan. 40% of people expressed a positive view, 41% said “it’s OK”, and 8% weren’t sure.

Main concerns with the plan:

- Over a third of people who shared their views believed the draft plan could be clearer or desired more specific action from the Council
- One in five people suggested more could be done in terms of traffic reduction, improvement of public transport and parking
- A similar number of people also believed walking and cycling could be encouraged more
- A small number of people thought more green spaces and trees were needed

