

BARNET AIR QUALITY ACTION PLAN 2023-2028



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Caring for people, our places and the planet

BARNET·ZERO·

BARNET
LONDON BOROUGH

FOREWORD

Barnet council is committed to improving air quality across Barnet as well as becoming a net zero borough.

We recognise the impact poor air quality has on the health and wellbeing of everyone. This particularly includes children, the elderly, and people with existing health problems.

Barnet declared a Climate and Biodiversity Emergency in May 2022, we have an ambitious target of becoming a net zero council by 2030 and a borough as soon as possible after this, but no later than 2042. We recognise tackling air pollution is one of the key actions to achieve this ambition and this Air Quality Action Plan sets out how we will help to achieve this.

The consultation on this plan was carried out from March – June 2023. The 23 proposed measures within the plan were broadly supported by consultees, including residents, community groups, and volunteering groups and the Greater London Authority (GLA). These measures will be enacted and developed further over the 5-year period of the action plan. This is a working document, and updates will be available annually in Barnet Air Quality Annual Status Reports (ASRs).

We aim to become one of London's most sustainable boroughs and this is reflected in our commitment to reducing our emissions. We are retrofitting council buildings to run low/no emission equipment such as air source heat pumps, cleaning up the council's fleet by replacing polluting vehicles with electric vehicles, as well as making sure those we contract on our behalf also have clean fleets and equipment. We will continue to engage with partners, including TfL, National Highways, and the Environment Agency, to help clean up roads such as the A5, A406, and MI, and industrial installations such as waste transfer sites.

We will expand the range of pollutants we monitor in the borough to include PM_{2.5}; one of the more dangerous sizes of particulate matter, as part of our commitment to improving the health of people in Barnet.

Everyone can play a role in improving air quality in Barnet. We can all take actions, such as switching off our vehicle engines when idling, or to stop burning wood at home. We can also cycle, walk, or use public transport more often and especially over short distances, swap gas boilers for heat pumps, and switch to zero emission vehicles.

We aim to empower and support residents and volunteers in taking action to look after their communities. Initiatives such as Breathe London are promoted within the borough so that everyone can see the level of air pollution near their homes and schools, as well as providing advice on how to reduce exposure to poor air quality while going about daily life. Together we can all make a difference.

With your support we can all contribute and make this a borough which cares for people, our places, and the planet.

Cllr Alan Schneiderman



Councillor Alan Schneiderman, Cabinet Member for Environment and Climate Change

SUMMARY

This Air Quality Action Plan (AQAP) has been produced as part of our duty to London Local Air Quality Management. It outlines the action we will take to improve air quality in Barnet between 2023 and 2028, in line with the Barnet Corporate Plan “Caring for People, our Places, and the Planet: Our Plan for Barnet 2023-2026”; this action plan replaces the previous action plan which ran from 2017-2022. Highlights of successful projects delivered through the past action plan include:

- Launch of Barnet’s Anti-Idling Campaign at All Saints Primary School, Whetstone in June 2022.
- Publicising High and Moderate Air Pollution episodes through Barnet’s official communication channels e.g., twitter, council website
- Experimental Cycle Lane established on the A1000, which was at first a COVID-19 measure, now made permanent. This will help encourage modal shift to active travel.
- Over 1009 trees planted in 2021, in addition to 1637 trees planted in 2020 and 2019. A new Tree Policy¹ agreed in March 2023.
- Sustrans was contracted to complete a scheme of Air Quality engagement projects at Barnet Schools. The workshop themes and activities include Lichen investigation, air quality banner competition, air quality posters, pupil-led feedback assemblies, and writing a letter to an MP on air quality.
- Completion of a School Air Quality Audit at Martin School, East Finchley; identified opportunities to improve air quality around a school located on a busy A road. This is a continuation of the Mayor of London’s School Air Quality Audit programme, which two schools in Barnet participated in previously.
- Over 100 Schools in Barnet maintained STARS Accreditation by the end of the 2017-2022 period.
- Barnet has extended the North London Non-Road Mobile Machinery (NRMM) project led by L. B. Merton, which concluded in 2019, and continues to remain part of the collaboration, which enables the auditing of construction sites.

Air pollution is associated with several adverse health impacts; it is, for example, recognised as a contributing factor in the onset of heart disease and cancer. Air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, as areas with poor air quality are also often the less affluent areas^{2,3}. The annual health costs to society of the impacts of air pollution in the UK is estimated to be roughly £15 billion⁴. Focussing on London, research commissioned by the Greater London Authority and Transport for London estimates that if no action is taken to reduce current levels of pollution, by 2050 the cumulative cost of air pollution to the NHS and social care system in London will be £15.4 billion⁵.

As the second largest borough in London with a relatively high population of those vulnerable to poor air quality and particular issues raised by rapid growth and a substantial strategic road network, the London Borough of Barnet is committed to reducing the exposure of people in Barnet to poor air quality, to improve health and reduce emission caused by pollution.

Research by Imperial College suggests that in 2019 there were 201 deaths in Barnet attributable to air pollution, the second highest in London⁶. There are huge gains to be made in terms of the length and quality of life for residents, as well as for scarce health and social care resources to be redirected to other key priorities.

The public consultation for this AQAP ran from 30th March 2023, until 11th May 2023. We have taken comments received into account where possible. Barnet would like to thank all respondents for their time taken to engage with the consultation and provide feedback on this AQAP.

1 *Barnet Tree Policy - FINAL 16-3-23.pdf*

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

3 *Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006.*

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

5 *Health Lumen, Modelling the long-term health impacts of changing exposure to NO₂ and PM_{2.5} in London (2020)*

6 *Environmental Research Group - Imperial College London, London Health Burden of Current Air Pollution and Future Health Benefits of Mayoral Air Quality Policies (2022)*

We have developed actions that can be considered under seven broad topics which contribute to the progress of meeting our aims of Enhancing the Local Environment, under the Barnet Corporate Plan: “Caring for the Planet”:

- 1) Monitoring and other core statutory duties:** maintaining monitoring networks is critical for understanding where pollution is most acute, and what measures are effective to reduce pollution. There are also several other very important statutory duties undertaken by boroughs, which form the basis of action to improve pollution.
- 2) Improvement of Public Health and implementation/continuation of awareness campaigns:** air pollution has been linked to several respiratory and cardiovascular illnesses, and therefore is an important factor in being able to live a healthy life. Communities in Barnet must be supported and empowered in being able to influence change within their homes and in the wider community.
- 3) Reducing Transport Emissions:** road transport in Barnet is the largest contributor to air pollution in the borough. Actions such as installation of EV charging points and supporting a shift from private vehicle use to public transport are important measures to improve air quality across the whole borough.
- 4) Delivery servicing and freight:** vehicles delivering goods and services are usually light and heavy-duty diesel-fuelled vehicles with relatively high primary NO₂ emissions.
- 5) Borough fleet actions:** the council’s own fleet includes light and heavy-duty diesel-fuelled vehicles such as minibuses and refuse collection vehicles with relatively high primary NO₂ emissions. Tackling our own fleet means we will be leading by example.
- 6) Emissions from developments and buildings:** emissions from buildings account for about 15% of the NO_x emissions across London so tackling these is important in affecting NO₂ concentrations; this includes enforcement of smoke control areas, and NRMM.
- 7) Localised solutions:** these seek to improve the environment of neighbourhoods through a combination of measures.

Within these topics, several key actions have been identified for consideration along with supporting actions:

- **Enforcing the Non-Road Mobile Machinery (NRMM) Low Emission Zone**
- **Promoting and enforcing smoke control zones**
- **Promoting and delivering energy efficiency retrofitting projects in workplaces and homes**
- **Supporting alerts services such as Airtext, and promoting the Mayor’s air pollution forecasts**
- **Reducing pollution in and around schools, and extending school audits to other schools in polluted areas**
- **Installing Zero Emission Vehicle (ZEV) infrastructure, such as EV charge points**
- **Supporting implementation of the extension to the London Ultra Low Emissions Zone**
- **Improving walking and cycling infrastructure**
- **Supporting improved public transport and use of low emission vehicles and infrastructure**
- **Regular Car Free days/temporary road closures in high footfall areas**
- **Reducing emissions from council fleets**

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

In this AQAP we outline how we plan to effectively use local levers to tackle air quality issues within our control.

However, we recognise that there are many air quality policy areas that are outside of our influence (such as Euro standards, national vehicle taxation policy, management of Transport for London and National Highways roads, and regulation of taxis and buses), and so we will continue to work with and lobby regional and central government on policies and issues beyond Barnet Council’s direct influence.

RESPONSIBILITIES AND COMMITMENT

This AQAP was prepared by the Environmental Health Department of Barnet Council with the support and agreement of the officers within the following departments:

Sustainability

Highways

Assurance (Environmental Health)

Public Health Directorate

Represented by the following officers:

Alex Sexton - Highways

Andrew Barry Pursell - Sustainability

Janet Djomba - Public Health Directorate

Nicole Asante - Environmental Health

Ralph Haynes - Environmental Health

Robert Poole - Highways

Yogita Popat - Sustainability

This AQAP has been approved by:

Director of Public Health; Tamara Djuretic

Executive Director of Assurance; Clair Green

This AQAP will be subject to an annual review, appraisal of progress and reporting to Cabinet (These reviews will be carried out in conjunction with the Council's wider work on sustainability, carbon reduction and transport strategy - and our ambition to be a net zero borough no later than 2042 to ensure a coordinated approach). Progress each year will be reported in the Annual Status Reports produced by Barnet, as part of our statutory London Local Air Quality Management duties.

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

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ABBREVIATIONS

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LLAQM	London Local Air Quality Management
NRMM	Non-Road Mobile Machinery
PM ₁₀	Particulate matter less than 10 micron in diameter
PM _{2.5}	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

INTRODUCTION

This report outlines the actions that Barnet will deliver between 2023 and 2028 in order to reduce concentrations of pollution, and exposure to pollution; thereby positively impacting on the health and quality of life of residents and visitors to the borough.

It has been developed in recognition of the legal requirement on the local authority to work towards air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the London Local Air Quality Management statutory process⁷.

Barnet are committed to improving air quality within the borough and working towards our net zero targets. BarNET ZERO; our new borough-wide campaign with the aim of Barnet becoming one of London's most sustainable boroughs, is linked to this action plan's air pollution reduction strategies; continuing from the 2017-2022 Air Quality Action Plan, along with the introduction of new measures.

I SUMMARY OF CURRENT AIR QUALITY IN BARNET

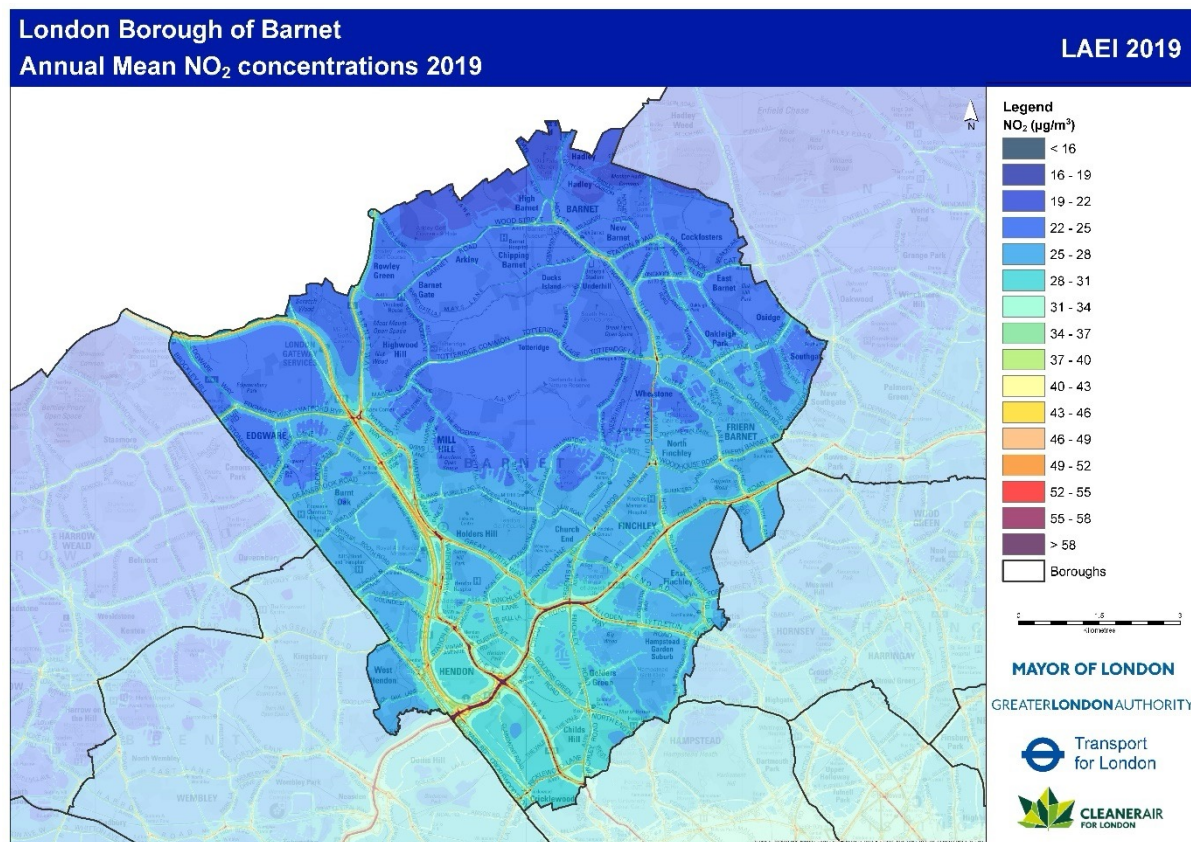
The UK Clean Air Strategy released in 2019, provides the overarching strategic framework for air quality management in the UK and contains national air quality standards and objectives established by the Government to protect human health. The Strategy objectives take into account EU Directives that set limit values which member states are legally required to achieve by their target dates.

Barnet is meeting all of the national objectives other than for the gas Nitrogen Dioxide (NO₂).

While Barnet is meeting the current national objectives for Particulate Matter (PM₁₀ and PM_{2.5}), the legal objective is significantly less rigorous than the World Health Organisation (WHO) recommended guideline limit. For this reason, in the London Environment Strategy the Mayor of London has committed to meeting the WHO health-based guideline limits across London by 2030. Barnet is still exceeding WHO guideline PM_{2.5} limits, as well as progressing towards the WHO recommended guideline for NO₂ and PM₁₀, and so a key area of focus will be to support the Mayor in meeting this 2030 target.

⁷ LLAQM Policy and Technical Guidance. <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs>

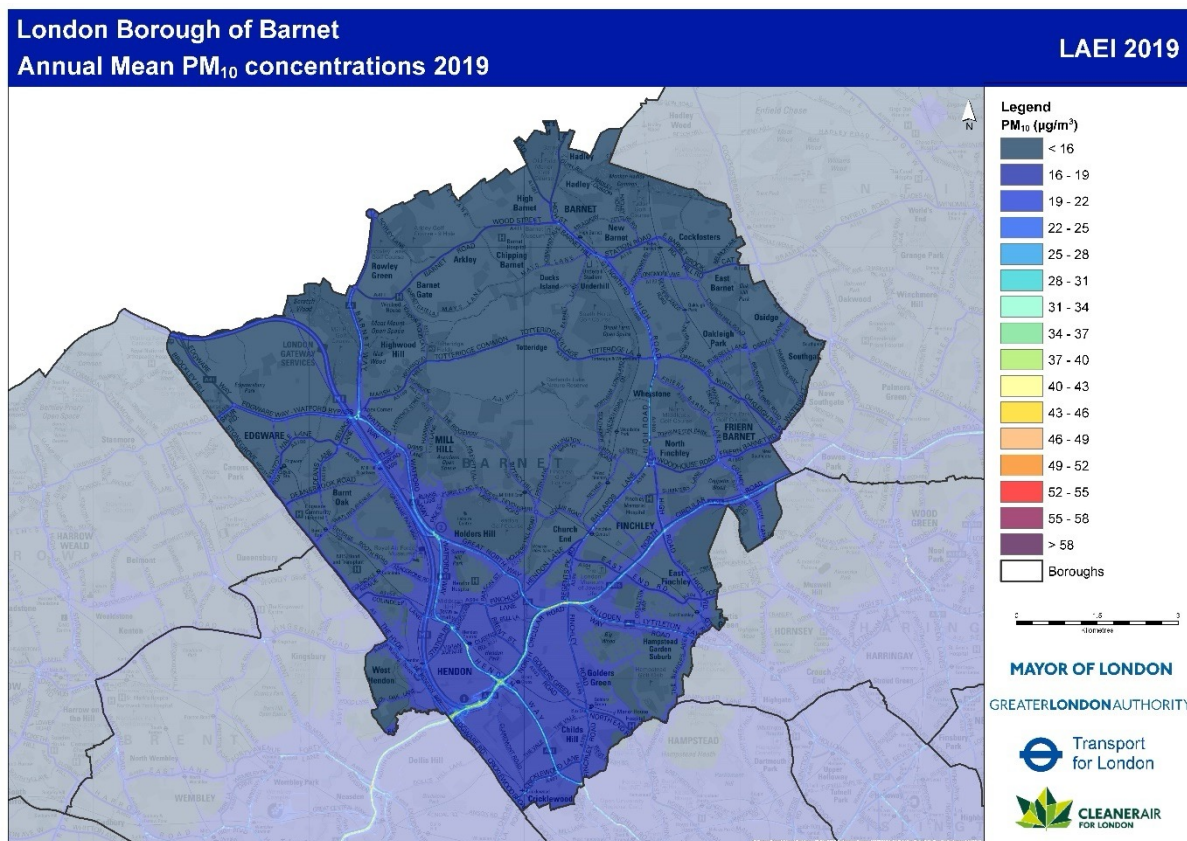
Figure I Modelled map of annual mean NO₂ concentrations (from the LAEI 2019)



Nitrogen dioxide concentrations increase markedly from the north to the south of the borough. The highest concentrations of NO₂ are found on busy roads such as the A406, the M1, the A1, the A41, and A1000. All mapped exceedances of in the national annual mean objective are also located on or adjacent to busy roads.

The WHO guideline for NO₂ (10 µg m⁻³) limit is exceeded in all modelled locations within the borough although the first interim target (30 µg m⁻³) is met in many parts of the north and central areas of Barnet. Transport is the main driver of NO₂ pollution in Barnet.

Figure 2 Modelled map of annual mean PM₁₀ (from the LAEI 2019)



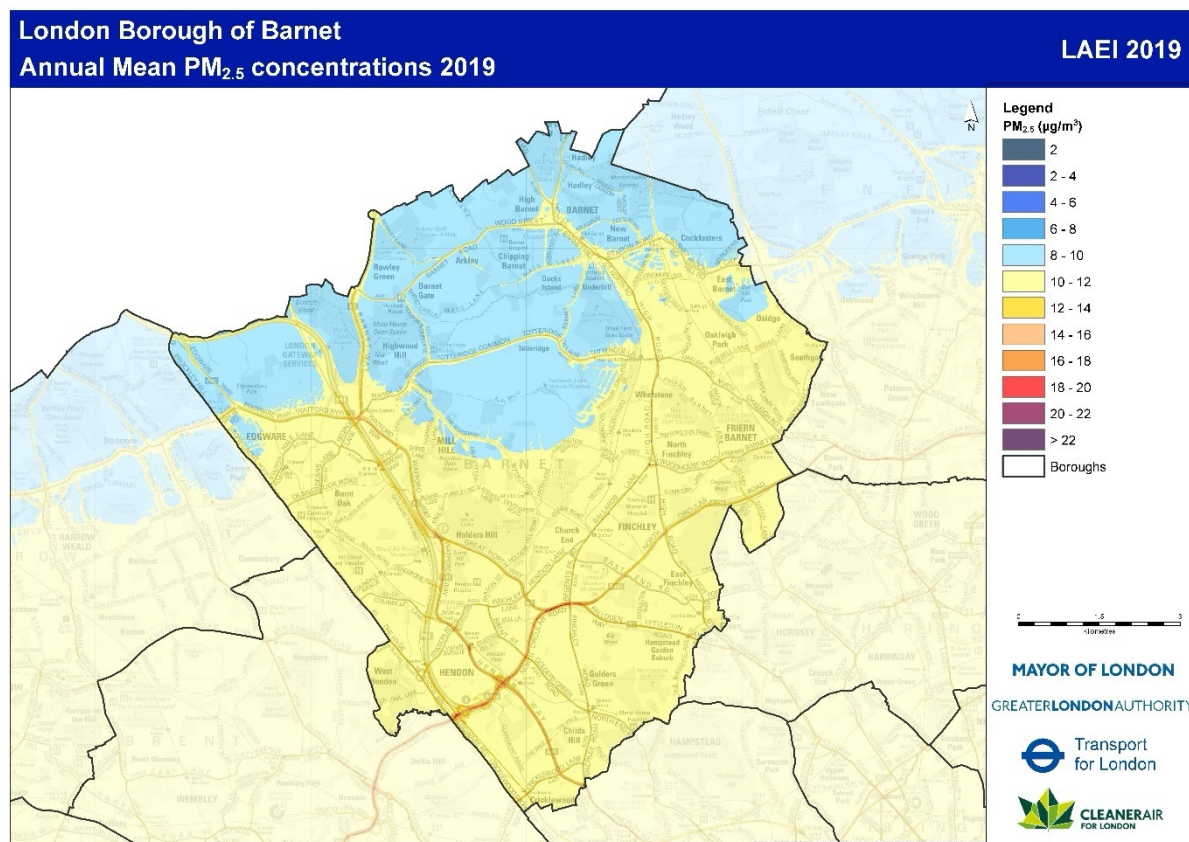
The highest PM₁₀ concentrations are located in the southwest of the borough and on busy roads. The A406, A41, A1, and M1 show the largest concentrations along their routes. In all other locations in the borough, the concentrations of PM₁₀ are well below the current statutory limit of 40 µg m⁻³. The WHO guideline limit (15 µg m⁻³) is likely to be met in the central and northern part of the borough.

The WHO guideline is exceeded in the southwest of the borough and along all main roads.

Elevated PM₁₀ concentrations in the southwest of Barnet are likely to be attributable to the traffic using the North Circular (A406); especially where it meets other large A Roads (A1, A41 etc), and in part to the ongoing regeneration of Brent Cross. The local topography of the area, being at a lower altitude than surrounding areas is also a likely factor resulting in higher concentrations of PM₁₀ due to impeded dispersion.

Transport on other strategic roads, is the likely driver of PM₁₀ pollution across the entirety of the borough, along with cross boundary deposition of pollution.

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



Councils are required to address PM_{2.5} in their administrative areas. Currently, there is no regulatory requirement to meet a limit value applicable to local authorities; however, the WHO guideline limit ($5 \mu\text{g m}^{-3}$), which the Mayor of London has committed to meeting by 2030, is exceeded over the entirety of the borough.

While actions which address NO₂ and PM₁₀ (of which PM_{2.5} contributes between 70 and 80%) will work towards reductions in PM_{2.5}, this is an area of particular focus. The LAEI (2019) map shows that PM_{2.5} concentrations are highest on parts of the A406, A41, and A1 at major junctions. PM_{2.5} pollution largely related to transport emissions.

Like larger particulate matter sizes, the topography of Barnet (i.e., altitude generally increasing to the north) may be a reason for the differences seen in PM_{2.5} concentrations in figure 3. These smaller particles can be entrained and airborne for greater distances. A similar pattern is seen across neighbouring boroughs.

I.1 AQMAs and Focus areas

In Barnet, an Air Quality Management Area (AQMA) was declared in the entirety of the borough 2001. The AQMA was amended in 2010.

The AQMA has been declared for the following pollutants:

Nitrogen dioxide (NO₂)

The Annual mean objective of 40 µg m⁻³ is currently exceeded in parts of strategic roads and A Roads in Barnet; currently we are exceeding the WHO guideline limit for this pollutant. The 1-hour mean limit (60 µg m⁻³) was previously exceeded in main road locations, and for many years at Golders Green Bus Station. However, more recent monitoring (since 2016) has shown concentrations of NO₂ at levels indicative of there being no exceedance of the hourly mean limits.

Particulate Matter (PM₁₀)

Barnet has declared an AQMA for 24-Hour Mean concentrations of PM₁₀. The daily objective for PM₁₀ has been met for several consecutive years. The AQMA remains in place, as the WHO guideline limit of 5 µg m⁻³ is being exceeded for PM₁₀.

While there is no AQMA for PM_{2.5}, it is acknowledged that the WHO guideline is being exceeded for PM_{2.5}. While Barnet currently does not employ reference monitoring for PM_{2.5} we recognise that we have a formal responsibility to reduce PM_{2.5} concentrations. PM_{2.5} accounts for up to 80 % of ambient PM₁₀ concentrations.

Air Quality Focus Area

An air quality Focus Area is a location that has been identified by the Greater London Authority based on LAEI data as having high levels of pollution and human exposure. There are 11 focus areas in the borough.

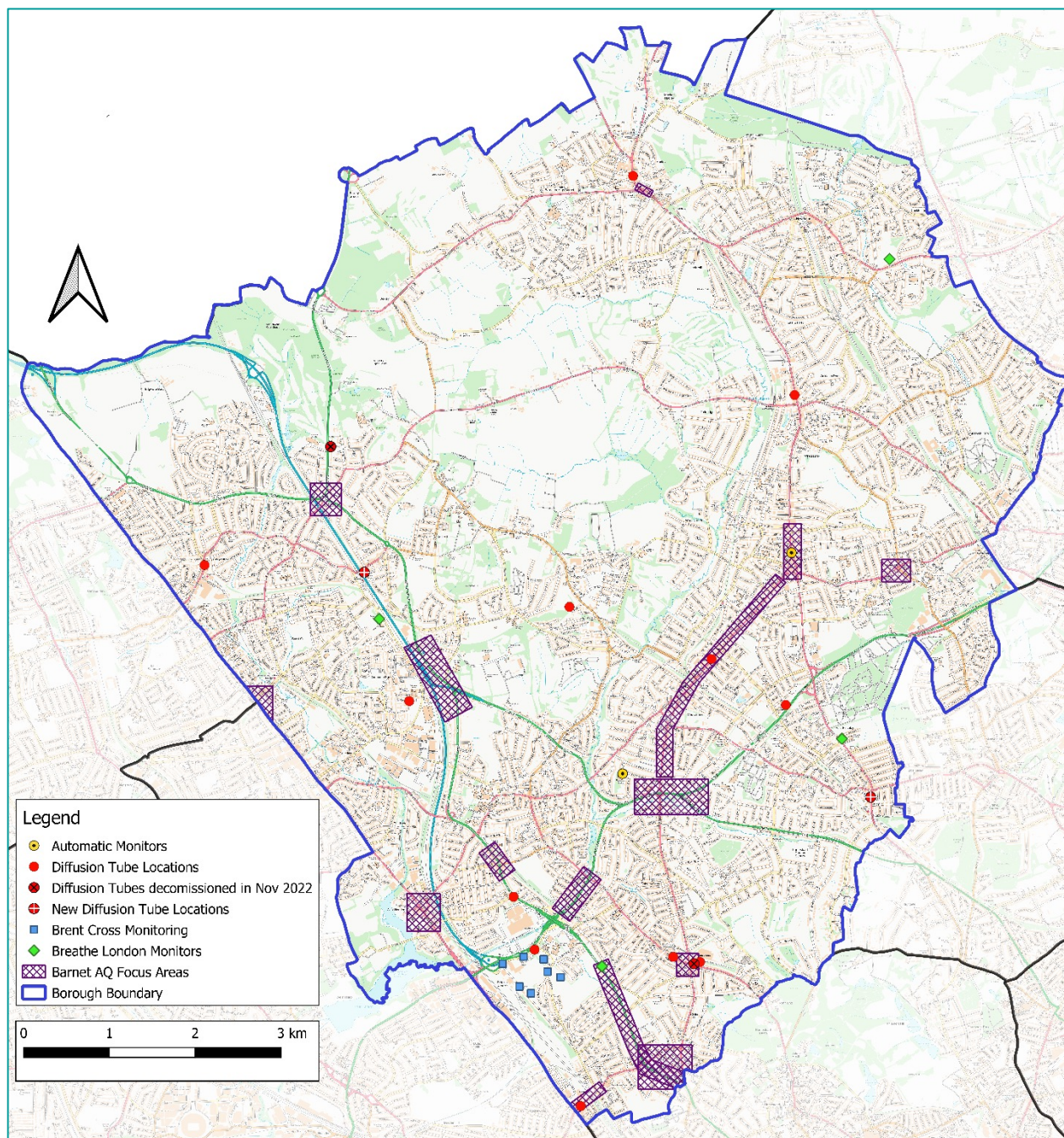
These are:

1	Cricklewood Junction A407 Cricklewood Lane/A5 Broadway
2*	Cricklewood A41 Hendon Way
3	Barnet High Street including junction with Barnet Hill
4*	Hendon M1 and A5
5	Hendon Central Town Centre
6*	Apex Corner near Mill Hill M1/A41/A5109
7*	A406 North Circular Brent Cross to Golders Green Road A502
8*	A406 Henlys Corner
9	North Finchley Town Centre
10	Friern Barnet A1003 Woodhouse Road junction with Colney Hatch Lane
11**	Fiveways Corner M1 Junction 2 and A1 Barnet Bypass

* ownership of TfL Roads

** ownership of National Highways

Air Quality Focus Areas (LAEI 2019) and Air Quality Monitoring Locations in Barnet (2022 Update)



1.2 Sources of Pollution in Barnet

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

Of the pollution that originates in the borough the main sources of NO_x are:

- Road transport: of which, the largest contributor is diesel vehicles, and
- Heat generation; used to warm residential and industrial/commercial buildings.

The main sources of particulate matter in Barnet are:

- Vehicles: from exhausts (diesels).
- Construction: e.g., new developments occurring within Barnet
- Resuspension: for PM₁₀ only, i.e., dust present on road surfaces that is not generated from tailpipe emissions, such as road, brake, and tyre wear. Windblown dust from other localities. Road additives such as de-icer and grit.
- Domestic wood/biomass for PM_{2.5} only, e.g., from the operation of wood burners.

NO_x concentrations in Barnet are mainly influenced by the emissions from vehicles. Like other outer London boroughs, there is a higher dependency on car travel, and less comprehensive public transport, particularly for orbital journeys. Barnet is well connected to the UK's strategic road network, and as such a high volume of vehicles travel through the borough daily.

Vehicles are also generally the greatest source of particulate matter pollution in the borough, for the same reasons as NO_x.

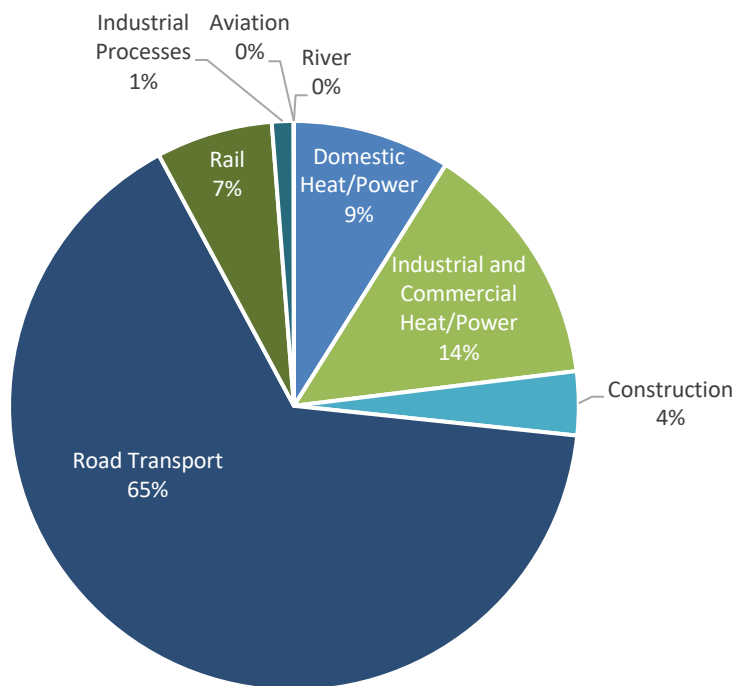
Industrial and commercial heat production is the next biggest contributor of NO_x concentrations in Barnet i.e., gas, oil and coal burning for non-domestic purposes e.g., to heat large office buildings, hospitals etc.

Barnet is undergoing a significant amount of regeneration, e.g., Brent Cross Regeneration project, and part of the process involves intensive amounts of construction. Construction is identified as which is one of the more significant portions of PM₁₀ emissions.

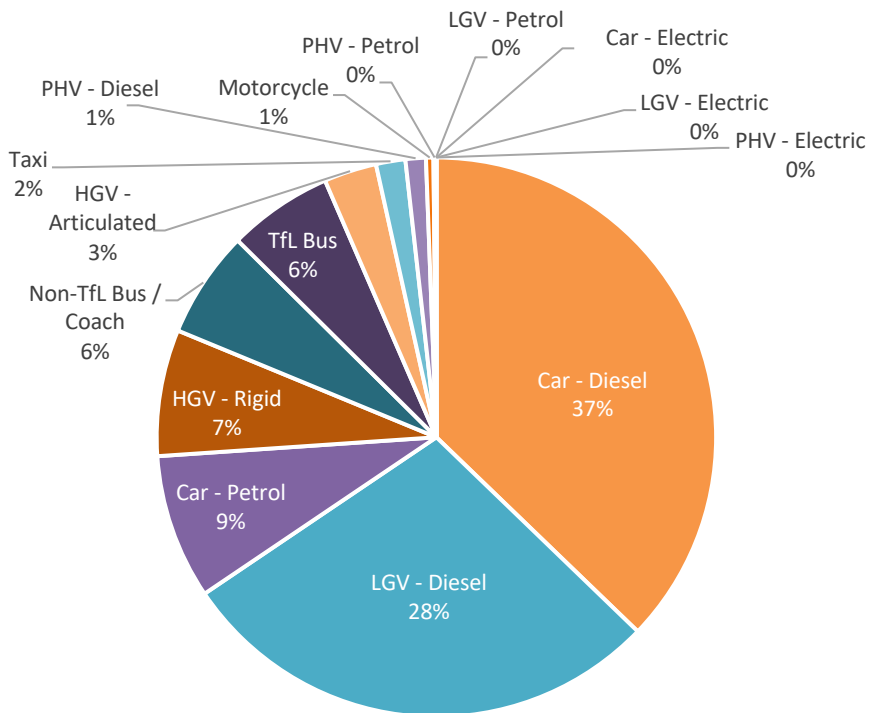
PM_{2.5} emissions are more likely to occur from combustion related processes; burning solid fuels, such as coal, wood, pellets, or briquettes, as well as gas. Burning wood domestically is the largest non-vehicle related source of this pollutant.

Figures 4-6 on the following pages provide a visual breakdown of the most polluting sources and vehicle types.

Figure 4 NOx Emissions by source and vehicle type – Barnet (from the LAEI 2019)

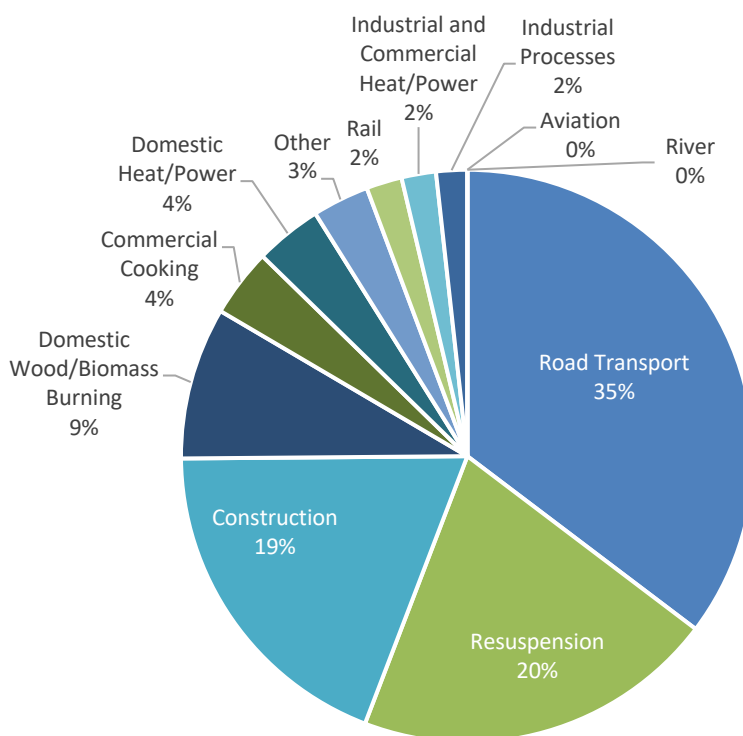


4a) Sources

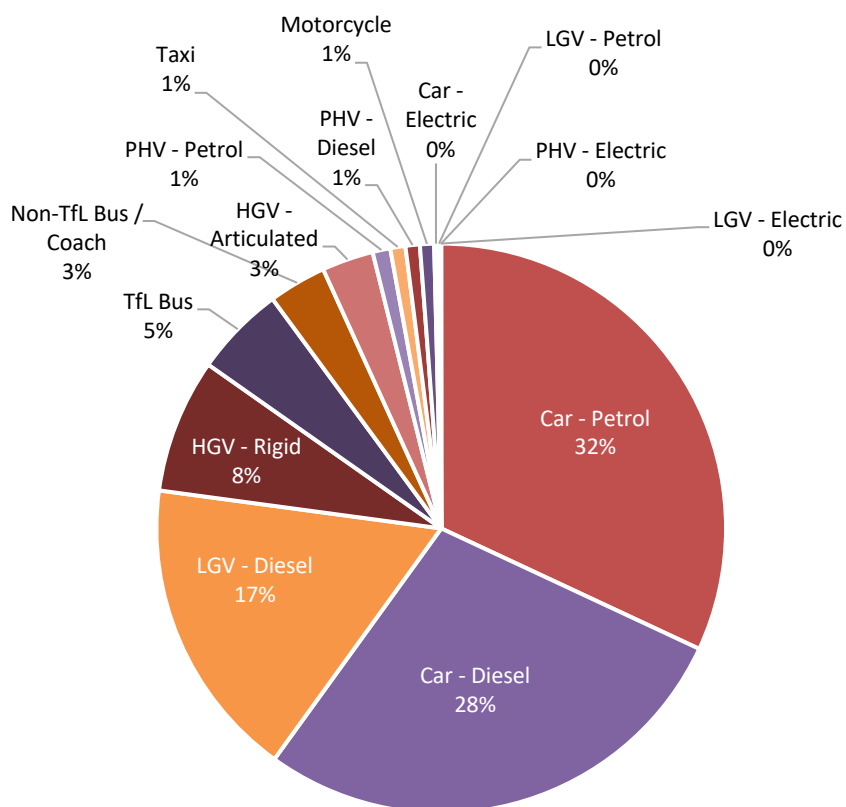


4b) Vehicle type

Figure 5 PM₁₀ Emissions by source and vehicle type – Barnet (from the LAEI 2019)

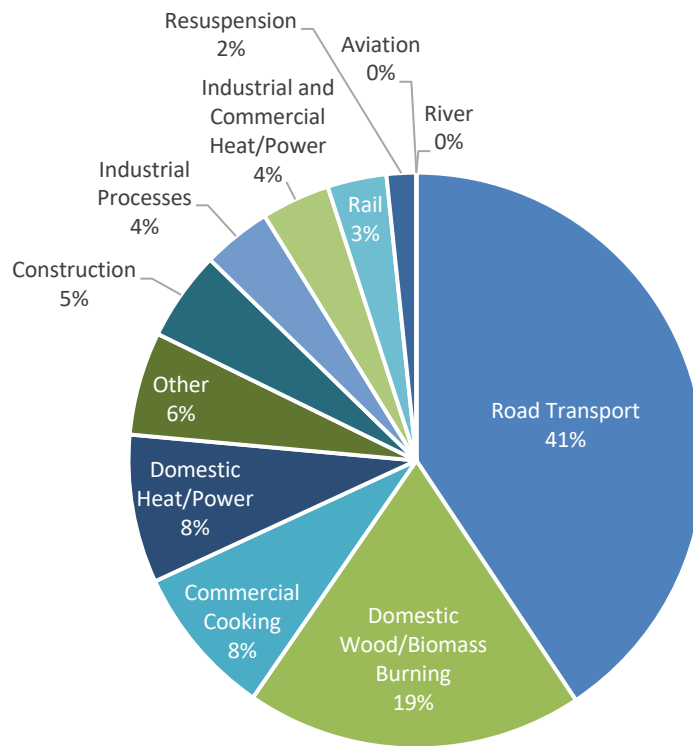


5a) Sources

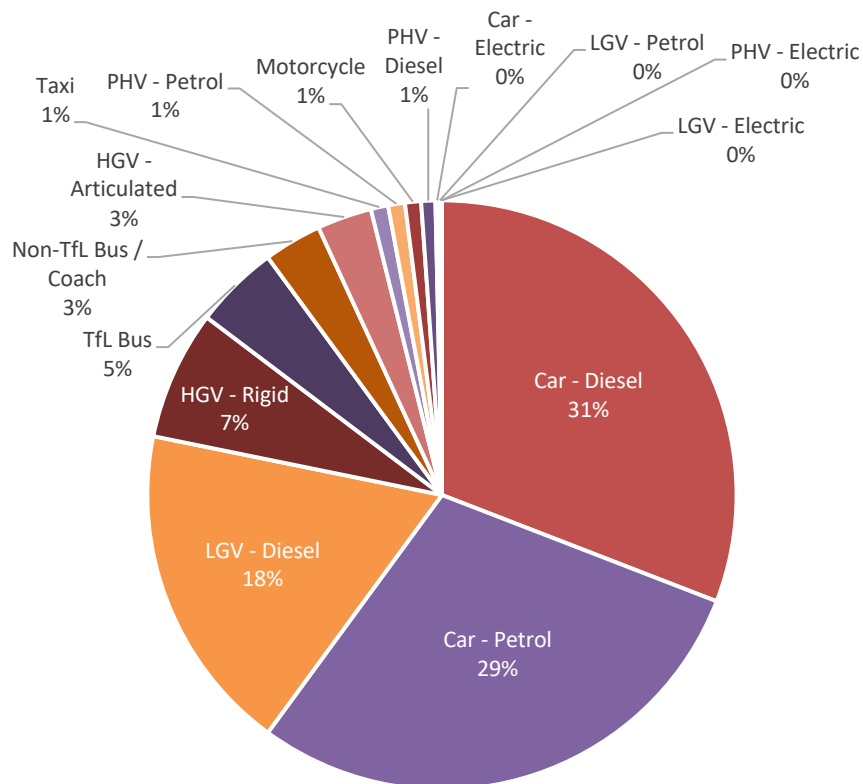


5b) Vehicle type

Figure 6 PM_{2.5} Emissions by source and vehicle type - Barnet (from the LAEI 2019)



6a) Sources



6b) Vehicle type

2 BARNET'S AIR QUALITY PRIORITIES

In Barnet, we are taking forward and evolving our strategies as set out in the 2017-2022 Air Quality Action Plan, as well as introducing new measures for this 2023-2028 Air Quality Action Plan; we recognise the impact of these actions on our Sustainability Action Plan and therefore have linked the two together where relevant. This plan also delivers on the vision set out in Our Plan for Barnet: Caring for people, our place and the planet, and Enhancing the Local Environment, by improving air quality. The following themes are addressed:

PEOPLE:

- **Consultation as part of being an effective and engaged council; finding out what Barnet residents and workers want.**
- **Tackling inequalities in the exposure to poor air quality, i.e., improving conditions for those who live near busy roads etc.**
- **Improving health outcomes by reducing air pollution exposure, and therefore providing people with opportunities to live well.**



PLACES:

- **Championing the development of healthier town centres where residents and workers of Barnet can experience a cleaner and safer environment.**



PLANET:

- **Reducing emissions from Buildings and vehicles so that residents benefit from cleaner air.**
- **Making sustainable choices and/or changes in how we live and work in Barnet in response to the Climate and Biodiversity Emergency declared in 2022.**



2.1 Reducing Emissions from Construction and Development

Construction activity and emissions from buildings are significant contributors to air pollution in Barnet. Emissions are often localised, particularly in case of construction, therefore those at risk of exposure are generally located in the immediate vicinity of these sites. Generally, the larger the construction site or building, the more risk there is of emissions of pollutants which may be harmful. Approximately 19% of particulate emissions in Barnet can be attributed to construction sites.

◆ Ensuring construction emissions are minimised.

Barnet is currently experiencing a period of particularly extensive and intensive construction works across the borough, with the draft Local Plan aiming to deliver a minimum of 35,460 new homes by 2036. The acts of demolition and construction work are well-known sources of pollutant emissions into the air; as well as open air storage of materials/waste, excavating and moving earth, cutting/grinding, are typical activities which may result in the generation of fugitive dust.

Therefore, the management plan enacted by contractors to complete construction and demolition work is important; poorly managed sites, or sites using unsuitable methods for the completion of works can have a big influence on the magnitude of the impacts felt in the immediate surroundings of a construction site.

To reduce the impact of emissions from construction and demolition activities, we will:

- Continue to use planning conditions as a mechanism to ensure that construction and/or demolition management plans submitted as part of planning applications are sufficient in the proactive prevention and/or mitigation of emissions of fugitive dust and particulates. In large construction sites this will include monitoring and site action levels.
- Subject vehicles serving construction sites to construction management plans/ transport management plans, to reduce impacts on residents close to construction sites.
- Continue to use planning regulations and environmental health mechanisms to take enforcement action against contractors and developers who do not abide by the guidelines required within the planning condition(s) or cause a statutory nuisance to nearby residents.
- Promote anti-idling on and around construction sites and encourage construction site managers and contractors to make use of management resources which aim to reduce the amount of idling during construction works.

Construction work often requires the use of mobile machinery (known as non-road mobile machinery or NRMM), such as piling rigs, excavators and bulldozers, mobile cranes, and generators, which often operate using diesel fuels, (generators are disproportionately responsible for increased levels of air pollution where they are used, despite their generally small size and limited use in comparison to other types of equipment). The movement of this machinery on construction sites can also be a significant source of several types of localised air pollution if not mitigated properly. Both NOx and Particulate matter are common emissions from the use of this kind of machinery.

In the fiscal year 2022-2023, Cleaner Construction for London undertook 21 audits across the borough. By the end of the year:

- 14 sites exceeded emission standards and registered all machinery correctly prior to the audit,
- 6 sites were non-compliant before audit but met required emission standards by enacting all recommendations made by officers,
- 1 site was non-compliant.

To reduce the impact of emissions from NRMM and generators on Barnet's air quality, we will:

- Continue to participate in the Cleaner Construction for London NRMM compliance project, which is led by the London Borough of Merton and GLA; this project uses audits and engagement facilitate contractors' compliance with standards. This project also focuses on research, which aims to provide better guidance and standards for NRMM.
- Periodically review planning conditions relating to NRMM and ensure that relevant planning applications are subject to planning conditions relating to NRMM standards.
- Seek opportunities to set borough-wide standards for construction generators and on-site power.

◆ **Emissions from buildings and development.**

The emissions from buildings may result from several everyday actions, including:

- Heating and Power Generation
- Cooking and Food Preparation
- Industrial Processes
- Waste Disposal

Of these, the largest contributor to NOx concentrations in Barnet is heating and power generation for Industrial/commercial use, followed by domestic heat and power (23 % cumulatively, LAEI 2019).

The burning of natural gas releases NOx and PM_{2.5} into the local atmosphere, and produces greenhouse gases, such as CO₂. In 2021 and 2022 no applications were received for Combined Heat and Power (CHP) or Biomass installations; instead, we noted an increase in the uptake of air/ground source heat pumps and PV solar.

To reduce the emissions and impact of air pollution from buildings, we will:

- Promote retrofitting projects to increase energy efficiency in existing workplaces, homes, and other public buildings in Barnet, aiming to achieve an average of EPC-B across council homes by 2030.
- Use the planning system to encourage the uptake of heating methods with no emissions at point of use e.g., Air/Ground Source Heat Pumps.
- Synergise our approach to decarbonisation across Barnet in line with the Sustainability Action Plan
- Require all relevant planning applications to meet benchmarking requirements of the Mayor's London Plan and Air Quality Neutral Policy, ensuring that new builds work towards Barnet's Sustainability Strategy target of new housing developments being whole life net zero by 2030 ahead of the introduction of the Future Homes Standard.
- Encourage behavioural change for how residents improve the energy efficiency of their homes, including through retrofit and the use of energy. Barnet are supplying links to resources and opportunities through the BarNET Zero campaign webpages: [Join our journey to becoming net zero carbon | Engage Barnet](#), that residents can use to obtain grants or estimate their energy efficiency and save money.
- Ensure that where new build developments are particularly large, e.g., Brent Cross Cricklewood Regeneration project, they are aligned with Air Quality Positive and Healthy Street approaches.

Use of fireplaces and burning appliances in the home or within commercial buildings, such as wood burning stoves and coal burners, can also be a significant contributor to air pollution; regardless of the efficiency of the appliance or the fuel chosen. Commercial buildings such as pubs and restaurants also contribute to local air pollution through the method of cooking used on their premises (e.g., the use of any solid fuel (coal, wood) in the preparation of a meal), and the use of appliances such as gas space/patio heaters for warming outdoor areas.

To reduce the emissions from wood burning, we will:

- promote and enforce Barnet's smoke control zones.
- enforce all current and future regulations regarding the burning of solid fuels within the home and commercially.
- use planning conditions to restrict the installation of new solid fuel heating systems within Barnet's administrative area.
- run public awareness campaigns to improve public understanding of the implications of wood-burning within the home, as well as encourage people not to burn garden waste, and provide resources for people to make informed decisions on the use of burning appliances within their homes; aligning these with the BarNET Zero campaign.

2.2 Public health and awareness raising

Air quality is known to have a significant impact on the health and wellbeing of people. Even short-term exposure to NO₂ is known to cause inflammation of airways, increase susceptibility to allergens, respiratory infections, and exacerbate the symptoms of those suffering from chronic lung and heart conditions.

In recent years, the particulate matter has increased in prominence as a factor affecting human health; fine particulate matter (particles of a diameter of 2.5 micrometres - μm and below) has been identified as a serious risk to health, as it can easily enter the bloodstream and be transported to vital organs such as the heart, brain, and lungs.

There is some evidence that exposure to particulates can be associated with an increased risk of dementia. Children are particularly vulnerable to the impacts of poor air quality.

◆ Increasing the availability of air quality data in Barnet.

Barnet's air quality data is free to access; continuous monitoring data is hosted on [Air Quality England's website](#), and our diffusion tube data is reported on our [website](#) every year as required by the Greater London Authority and the Department for the Environment, Food and Rural Affairs (DEFRA).

Barnet also participates in the [Breathe London](#) programme, which provides real-time air pollution data through low-cost sensors; several monitors are currently located in the Borough. However, working on increasing the accessibility of this data for the public, with an emphasis on delivering real-time data to those who are vulnerable to poor air quality episodes is a priority for the London Borough of Barnet.

In Barnet, we now publicise moderate and high air quality episodes, with links to our live air monitoring data on the Air Quality England website.

We will increase the availability of air quality data by:

- Investigating the viability of real-time alert services, such as AirTEXT, for use within Barnet
- Promoting the information provided by air quality forecasts, through Barnet's social media channels and the Council website.
- Investigating the viability of disseminating air quality alerts/bulletins through hospitals, GP surgeries, schools, and nurseries etc.

◆ Increasing the role of local authority Public Health in air quality.

Barnet Council's Public Health Directorate is an integral part of the management of air pollution given the direct relationships between air pollution and the general health of a population or community. Our cooperation between public health and environmental health departments enables a cohesive response to the challenges posed by air pollution.

Public Health provides an important pathway through which air quality data can be used to inform policy and disseminate air quality information, to those with chronic illnesses for example. Currently, our Director of Public Health signs off all statutory Annual Status Reports and all new Air Quality Action Plans. Public Health staff are members of the Air Quality steering group, and this enables regular updates to be shared with the Director of Public Health. We are currently drafting a guidance to have new developments subject to Health Impact Assessment. Barnet's Public Health Directorate, Planning department and Environmental Health groups will work together to maximise the health and wellbeing benefits of new developments, as well as identify the needs of population groups in Barnet to tackle health inequalities around the borough.

To increase the role of Public Health in air quality, we will:

- Continue to have the Public Health review, and remain a signatory of, air quality policy documents such as this Air Quality Action Plan.
- Continue to align the Air Quality Actions with the Health and Wellbeing strategy.
- Continue to use evidence from JSNA and have Public Health inputs on projects to tackle air pollution in areas in Barnet, such as local town centres, schools and residential areas.
- Require the use of Health Impact Assessments to assess Air Quality outcomes/ impacts in new developments/projects/policies, in conjunction with Barnet's Planning Department.

◆ **Reducing exposure to air pollution for schools and hospitals, health centres.**

Reducing the exposure to air pollution for the most vulnerable members of Barnet's community is a priority. Children and people with chronic illness are especially vulnerable to the impacts of poor air quality.

It is also important that those who live, and work in Barnet's communities also feel able to participate in the improvement of our Borough, we will work to support and empower people to create a borough which is safe, healthy, and clean for all.

The Barnet Public Health Directorate has worked with colleagues at Barnet Hospital on the implementation of their sustainability strategy, which aims to encourage staff to walk and cycle to work and supports cycle storage infrastructure at Barnet Hospital sites. We will continue to work closely with Barnet's other anchor institutions to ensure we are leading by example and raising awareness of air quality.

We will reduce exposure to air pollution for schools and hospitals, health centres and other hubs for vulnerable people by:

- Encouraging schools to uptake TfL Travel for Life (formerly STARS) accreditation or improve their level of achievement if not already gold status.
- Working with schools to promote actions which can be taken to reduce instances of polluting activities in and around the school.
- Supporting health centre, hospital, and schools', outreach to parents, patients, and the wider community encouraging them to avoid contributing to air pollution when travelling in and around Barnet.
- Continue providing air quality audits to Barnet schools in areas with poor air quality.

Along with the collaboration with the council with Barnet Hospitals, Public Health and Environmental Health are collaborating to provide Air Quality audits to schools in Barnet, which are in particularly polluted areas and/or areas with a relatively high level of deprivation. An audit was completed at Martin School in East Finchley in 2022, and there are plans to perform audits at schools in Edgware in 2023 and beyond.

Barnet encourage and support the initiatives of local community groups and schools to perform air quality monitoring and other air quality related projects; projects such as these provide information to schools and communities, which in turn provides schools and the public with the knowledge needed to target the drivers and impacts of poor air quality in their localities.

We will empower communities and schools to make an impact by:

- Continuing to promote and publicise opportunities, such as the Breathe London Community Programme, and the Asthma and Lung UK air quality monitoring project, to school and community groups.
- Providing guidance and advice to communities looking to take a proactive approach to the improvement of air quality in their localities.
- Continuing to use the Healthy Streets approach to encourage sustainable, healthy, and pleasant streets for residents and communities in Barnet.
- Building links with medical professionals and schools, explaining linkages between air pollution and illnesses such as asthma, so that teachers and parents are better able to protect children, and other vulnerable people.
- Address the health and environmental inequalities in Barnet, especially in locations with higher levels of deprivation.

◆ **Improve public awareness of air quality issues, such as anti idling, and indoor air quality.**

Encouraging public action to help tackle air quality issues requires public knowledge, understanding and cooperation. It is part of our role at Barnet Council to make these topics accessible to all and provide advice to organisations and groups regarding the improvement of air quality in their communities. This is an important step in reducing overall levels of air pollution in the borough. The Barnet Council website, Barnet First magazine, and social media have been identified as future sources for the dissemination of air quality information. Barnet has worked as part of the North London Integrated Care system to provide advice on local indoor air pollution issues.

We will promote public awareness of air quality issues by:

- Using Barnet and Barnet affiliated publications to highlight air pollution events, campaigns, and education opportunities.
- working with partners, such as the North London Integrated Care system, to produce and promote advice to reduce exposure to indoor air pollution.
- continue to promote anti idling within the borough.

2.3 Reducing emissions from road transport and adopting cleaner transportation methods

Road transport is the most significant contributor to air pollution in Barnet; 65% of NO_x, 35% of PM₁₀ and, 41% of PM_{2.5} can be traced back to this source.

All forms of motorised vehicles contribute to air pollution. Electric vehicles are much better than vehicles with internal combustion engines as they do not produce any gaseous emissions. There are, however, still some particulate emissions from road, brake, and tyre wear. Driving behaviours e.g., fast acceleration, engine idling, and hard braking, also contribute air pollutant emissions in Barnet, and have the biggest health impacts on those in the immediate vicinity of the vehicle – including those who are operating the vehicle.

The anti-idling campaign in Barnet launched in summer 2022, with a view to further promote anti-idling action following the strategies within the asthma-friendly schools action plan, Barnet's sustainability framework & the joint health and wellbeing strategy.

To reduce vehicle engine idling, we will:

- Discourage unnecessary idling by taxis and other vehicles by spot checks on taxi ranks and within transport hub areas e.g., bus and train stations.
- Provide Barnet schools with information to promote anti idling during school pick-up/drop off times.
- Develop our anti-idling campaign and spread awareness to the public regarding the air quality and health impacts of idling.

Logistics and servicing, including deliveries of food, clothing, building materials etc. are another significant source of emissions within Barnet. The COVID-19 pandemic drove an increase in online retailing, and while there have been falls more recently, people are now more likely to utilise delivery services more often than they would have previously. This is on top of the deliveries and servicing required by businesses across the borough

To reduce the impact of delivery, servicing, freight, and fleet in Barnet on air pollution and health, we will:

- Reduce emissions from Barnet Council's fleet; Barnet has made a commitment to transition to a fully decarbonised vehicle fleet by 2030, where possible
- Provide Safer Urban Driver training for drivers of vehicles in the Borough's fleet; fuel-efficient driving and providing regular re-training of staff.
- Update Council procurement policies to reduce pollution from logistics and servicing.

Many delivery vehicles, such as vans, use diesel fuels, which are polluting in terms of the proportion of NO₂ and particulate matter emissions in comparison to other fuels, and travel for long distances.

These issues are particularly acute in Barnet given the parts of the UK's strategic road network in the Borough. A significant proportion of emissions will come from commercial vehicles whose journeys start and end outside our area and use roads managed by other agencies and/or authorities.

To reduce the impact of road transport in Barnet on air pollution, emissions, and health, we will:

- Encourage modal shift from private road vehicles, by improving the walking and cycling infrastructure and promoting low emission public transport. This will include developing a programme for establishment of cycle routes across the borough, improving the pedestrian environment to make walking more attractive, new bus lanes and car clubs in new developments. We will also be installing Zero Emission Vehicle (ZEV) infrastructure throughout the borough.
- Continue to encourage the use of public transport (buses, trains) where active travel methods are not accessible, or available, and support transport infrastructure projects (e.g., Brent Cross West Railway Station, renewal of Colindale Underground Station and the West London Orbital) which will provide further capacity to transport residents and commuters.
- Perform air quality monitoring around “transport hubs” to assess the need for improvements, given the results from 2021’s Air Quality Annual Status Report, which suggests that there is further work to be done to improve conditions in these areas.
- Develop and implement a programme of school streets and other measures to increase/encourage the uptake of active travel in the locality of schools.
- Engage with businesses operating within Barnet regarding delivery choices, and encouraging a shift in in delivery methods, e.g., e-cargo bikes, to reduce emissions from deliveries to local businesses and residents. Following on from the Finchley Cycle Freight trialled in 2021.
- Engage with Transport for London, National Highways and other boroughs to identify opportunities to reduce air quality issues associated with the strategic road network.

The rail system is also a contributor to air pollution in Barnet; 7% of NO_x and 2% of PM₁₀ and PM_{2.5} respectively are linked exclusively to the operation of rail services. While this source is a lot less significant than others mentioned, it is important to prevent it from becoming a significant source, as we try to promote its use and accessibility to residents of Barnet. Even though there are some air quality impacts, rail freight is a more sustainable and air quality friendly choice for movement of goods than road transport. We will work with Network Rail and Transport for London to find ways to reduce these emissions.

The London-wide extension of the Ultra-Low Emission Zone was implemented in August 2023. It is estimated that in Barnet this will lead to a 6.9% reduction in traffic-generated NO_x emissions, a 1.2% reduction in PM₁₀ emissions and a 1.8% reduction in PM_{2.5} emissions⁸. Research on the long-term costs of poor air quality has estimated that over the period to 2050, the ULEZ extension could help save £118,631,800 in NHS and social care costs that would otherwise be spent on caring for those affected by poor air quality⁹.

The Council will work with TfL to ensure effective implementation of the ULEZ and to ensure its potential to improve air quality in Barnet is optimised.

⁸ Jacobs, London-wide ULEZ Integrated Impact Assessment (May 2022)

⁹ Health Lumen, Modelling the long-term health impacts of changing exposure to NO₂ and PM_{2.5} in London (2020)

2.4 Local Town Centre improvements and localised solutions

Barnet's 30 local town centres are hubs of activity in Barnet, and as identified with the 2021 Air Quality Annual Status Report for the borough, likely to be subject to increased levels of air pollution because of the way they are used and amenities which draw traffic to the area.

These town centres may also be a significant place of exposure for the population of people that live in these locations. Currently Barnet has 11 air quality focus areas, which are defined as areas that have been identified as having high levels of pollution and human exposure, some of these (including Barnet High Street, Hendon Central and North Finchley) cover town centre areas.

Some of the measures required to improve conditions in local town centres acts in conjunction with solutions identified for cleaner transport, construction and building emissions.

To improve air quality in local town centres we will:

- Assess the feasibility of Car Free days and temporary road closures/pedestrian events in high footfall areas. The Annual Car Free Day will be promoted in Barnet.
- Look at ways of reducing traffic in town centre areas and to promote active travel and public transport.
- Examine the scope to use parking policy to reduce pollution emissions in high street areas and adjacent locations.
- Improve the efficiency of road use within Barnet; consult with residents of Barnet to ascertain how they would like to see their roads being used.
- Investigate the feasibility of the implementation of Low Emission Neighbourhoods (LENs); potentially expanding on low emission delivery services.
- Engage in cross department (Environmental Health, Public Health, Sustainability) collaboration with Barnet's Town Centre teams to reduce the health impacts of these areas, and regenerate these areas e.g., Burnt Oak, North Finchley.
- Installing and improving existing Green Infrastructure (GI) and encourage the implementation of appropriate green space in new development, that is accessible for all visitors to the town centre areas.

3 DEVELOPMENT AND IMPLEMENTATION OF BARNET'S AQAP

3.1 Consultation and Stakeholder Engagement

In developing/updating the action plan we have worked with other local authorities, agencies, businesses, and the local community to identify and take forward steps to improve local air quality.

Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 3.1. In addition, we have undertaken the following stakeholder engagement:

- Online survey on the Barnet Council web site.
- Articles in local newsletters.
- Direct contact to local environmental and active transport organisations/campaign groups

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

Table 3.1 Consultation Undertaken

Yes/No	Consultee
Y	the Environment Agency
	Transport for London and the Mayor of London (who will provide a joint response)
Y	all neighbouring local authorities
Y	other public authorities as appropriate
Y	bodies representing local business interests and other organisations as appropriate

3.2 Steering Group

The Barnet Air Quality Steering Group acts as a forum for Environmental Health, Public Health, Highways, and Sustainability teams to facilitate a joined-up approach to tackling air quality issues within the borough and monitor the progress of the Air Quality Action Plan. The group meet quarterly for updates on the progress of the action plan.

The Plan is a working document. Progress is reported annually to the GLA and Defra. The group consists of Executive Director for Assurance and Public Health, and Assistant Directors(s) and officers within Public Health, Sustainability, Environmental Health, Town Centres, and Highways and School Travel Planning. Steering group meetings will concentrate on the progress of specific actions and make decisions regarding new actions for the improvement of air quality within Barnet.

4 ACTION PLAN TABLE

Table 4.1 shows the Barnet AQAP. It contains:

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

Table 4.1 Air Quality Action Plan

The actions have been grouped into seven categories: Monitoring and core statutory duties; emissions from developments and buildings; public health and awareness raising; delivery servicing and freight; borough fleet actions; localised solutions; and cleaner transport. This action plan is a working document, and therefore subject to change.

Updates to the action plan will be tracked, and published using Barnet’s annual air quality status report, as part of our review and assessment responsibilities.

Action category	Action ID	Action name and description	Responsibility	Cost	Expected emissions/ concentrations benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Monitoring and core statutory duties	1	Maintain the borough’s 2 automatic monitors and 15 diffusion tubes. Explore the potential for additional diffusion tube monitors and seek funding for PM2.5 monitor(s) Support community monitoring initiatives such as those provided by Breathe London and Asthma and Lung UK	Environmental Health	High (Maintenance, servicing, and data management)	No direct emissions/ concentrations benefits but critical in terms of understanding emissions and concentrations and the impact of action taken. Data obtained will contribute to the basis of campaigns to support new initiatives to improve air quality in Barnet. Community monitoring will bolster support information obtained from the statutory regime and provide better resolution for air pollution levels across the borough.	Ongoing for maintenance of monitors, and target to update new monitoring locations in 2023 onwards. Expansion of monitoring in currently unrepresented areas	All monitors maintained and over 90% data capture overall. New PM2.5 monitor(s) – 1 reference monitor. Increased numbers of indicative monitors e.g., Breathe London monitors, as funding allows. 10 proposed in AQ focus areas as part of DEFRA funding proposal. Air quality annual statement reports (ASRs) submitted on time annually	Details of our monitoring can be found here .
Emissions from developments and buildings	2	Raising awareness of new regulations for solid fuel and fully enforcing the borough-wide Smoke Control Zone. To include: an awareness campaign, engagement with suppliers, and active enforcement	Environmental Health Comms Team Trading Standards	Low (No further cost to the council)	It is estimated that domestic wood burning is produces approx. 38 % of total fine particulate emissions nationally. Domestic wood burning is estimated to contribute to 15 % of all London-wide PM2.5 emissions.	Ongoing; 2024-2028 focused comms leading up to and over the winter periods	All fuel suppliers in the borough engaged via a face-to-face meeting, and 50% showing point of sale information about cleaner fuels. Residents engaged via council newsletter articles and Engage Barnet platform timed for autumn and spring – 2 articles minimum in each season/ quarter. Action to be intensified over winter periods – incl. promotion of new initiatives such as Clean Air Night (starting January 2024) annually. All complaints of dark smoke investigated within 48 hours.	Details of our Smoke Control areas can be found on the Smoke Control Area Interactive Map by DEFRA

Emissions from developments and buildings	3	<p>Ensuring emissions from construction are minimised.</p> <p>This is currently controlled by planning conditions. Developers are required to submit construction management/logistics plans, which abide by construction Barnet 's condition. Submissions are assessed jointly between Highways, Environmental Health, and Planning.</p>	<p>Environmental Health, Planning</p> <p>Growth – development team</p>	Low (No further cost to the council)	Reduction of relevant pollutants is relative to the potential impact construction would have without these measures in place. LAEI 2019 apportions 19% of PM ₁₀ emissions in Barnet to construction activity.	Ongoing; 2023-28 onwards. Public complaints regarding dust and particulate emissions are assessed under nuisance, and monitoring is required from these sites if not already present. Monitoring is required at large construction sites and site action levels are implemented.	<p>A reduction in the number of complaints received regarding fugitive dust from construction sites.</p> <p>100% of relevant applications to include appropriate conditions on construction dust mitigation.</p>	Developers are advised to contact Barnet's planning department, to obtain advice on the requirements of the relevant planning condition(s)
Emissions from developments and buildings	4	Ensuring enforcement of non-road mobile machinery (NRMM) air quality policies	Environmental Health, Planning	Low (No further cost to the council)	<p>Exposure is minimised for residents nearby construction sites. NRMM used in construction currently accounts for approximately seven per cent of NO_x and eight per cent of PM₁₀ emissions in London.</p> <p>Current applicable standards are - Stage IV: construction machinery operating in the Central Activities Zone and Opportunity Areas</p> <p>Stage IIIB: construction machinery operating in the rest of London.</p> <p>There will be further tightening of the standards in 2025 and 2030.</p>	Ongoing; Barnet remains part of the London NRMM enforcement programme. NRMM is also a consideration in planning, Conditions are applied to ensure compliance. Construction sites within Barnet are audited annually, and enforcement is undertaken where compliance is not found.	<p>Success is monitored in comparing the number of compliant sites with the total number of sites within the borough. Metrics include those who were initially non-compliant and became compliant following engagement. Where complaints are received, we seek to achieve a reduction of complaints in the following years:</p> <p>Target 1: 100% of relevant applications to include a condition on use of only NRMM Low Emission Zone-approved machinery.</p> <p>Target 2: 100% compliance of sites following engagement.</p>	

Emissions from developments and buildings	5	Reducing emissions from CHP	Environmental Health, Planning, Estates and Decarbonisation	Low	Emissions can be reduced where older systems require replacement. In recent years there have been no applications for the installation of CHPs in Barnet, with applicants instead choosing to install low or no emission alternatives such e.g., air/ground source heat pumps.	Ongoing: 2023-28 onwards.	<p>Develop and implement removal / replacement plans as appropriate for older combustion-based CHP engines with cleaner, lower carbon heat sources.</p> <p>Monitoring number of existing combustion-based CHP engines removed/replaced with cleaner, lower carbon heat sources.</p> <p>100% of any new CHP installations to be compliant with London plan</p> <p>Develop the Local Area Energy Plan to identify and pursue any viable opportunities within the borough to install cleaner, lower carbon heat sources, ahead of the introduction of heat zoning legislation.</p>	
Emissions from developments and buildings	6	Enforce Air Quality Neutral policy. This is currently enforced in Barnet using planning conditions. AQN is a material consideration within the planning process.	Environmental Health, Planning	Low (no further cost to the council)	Ensuring that new developments abide by Air Quality Neutral guidance will mitigate or lessen the impact of their emissions, by encouraging the use of development design, onsite mitigation, and/or offsetting	Ongoing, air quality neutral is a material consideration. Barnet's Environmental Health and Planning departments work collaboratively to achieve this	<p>Measuring the number of applications which require air quality Neutral Conditions:</p> <p>100% of eligible developments meeting the air quality neutral standards per year.</p>	

Emissions from developments and buildings	7	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as PSDS, RE:FIT, RE:NEW, Government grant funding opportunities for homes in LAD, HUG and SHDF, and through borough carbon offset funds.	Estates & Decarbonisation Housing, Development and Economy	Low/ Medium	Participating in these programmes will directly impact emissions from buildings; gas boilers are the second largest source of Nox in London. Boilers within Barnet's administrative area are required to meet the Low Nox criterion as specified in The Mayor's Better Boilers scheme. Other methods for low/no emissions heat/power generation will have a positive impact in reducing emissions within the borough	Barnet's first RE:FIT project is complete. In future Barnet will investigate opportunities to embark on new projects within the 2023-28 period	RE:FIT, RE:New and PSDS projects track the reductions in emissions. Barnet's latest project: retrofitting the Councils non-domestic buildings, is estimated to save approx. 139 tonnes of CO2 per year. 100% of non-domestic council buildings retrofitted to net zero by 2030	Further details may be found at: RE:FIT Barnet Barnet Energy Carbon Copy Or; Case Study - London Borough of Barnet RE:FIT Initiative (gsecop26casestudies.org.uk) Or; Creating a net zero carbon council by 2030 Engage Barnet
Emissions from developments and buildings	8	Master planning and redevelopment areas aligned with Air Quality Positive and Healthy Streets approaches	Environmental Health, Planning, Highways, Public Health, Housing, Development and Economy	Low	Collaboration of relevant departments will allow efficient spatial planning of large regeneration projects, and in turn ensure that minimal emissions are generated once these projects are operational.	2023- onwards (from date of ratification of the New London Plan).	New planning condition requiring AQP for the larger developments and regeneration schemes (typically those that require EIA). 100% of all relevant applications will include these conditions	
Public health and awareness raising	9	Public Health and Environmental Health taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plans.	Public Health, Environmental Health, Comms Team	Low	This measure's primary benefit is the reduction of exposure to poor air quality for the people living and working within Barnet, rather than the reduction of emissions. Secondary advantages include increased support for campaigns, and improved coordination of projects e.g., communications, and access to funding.	Ongoing through the 2023-28 period and beyond;	<ul style="list-style-type: none"> • Director of Public Health reviews and is signatory of Annual Status Reports and Air Quality Action Plans • Public Health participate in Air Quality Steering Group • Air Quality information to be integrated into Joint Strategic Needs Assessment (JSNA) 	

Public health and awareness raising	10	Supporting a direct alerts service such as airTEXT, and promotion and dissemination of high pollution alert services	Environmental Health, Public Health, Communications	Low	This is an initiative that will impact exposure to air pollution rather than the instance(s) of emissions. This measure will form part of the basis of campaigns to change behaviours/attitudes towards air quality issues.	2023-28 onwards. Currently ongoing, Barnet began implementing its Public Health and Environmental Health Joint Communications Plan in 2022. airTEXT was previously deemed unsuitable for use within the borough but is now being considered for use again.	Increased engagement with vulnerable groups (e.g., those suffering with respiratory, or vascular illness). This will be measured by the number of GP practices/Health Centres opting to receive Air Quality health messaging. Assessing the reach of pollution alerts through Barnet's current comms channels providing links to monitoring data. Currently Barnet Social media channels engage the following numbers of followers: Twitter/X – 26.6k Facebook – 9.8k Instagram – 4.2k Targets will be aligned with Barnet's Wider Social Media Strategy (currently under review).	
Public health and awareness raising	11	Encourage schools to join the TfL STARS (Transport for Life) accredited travel planning programme	Highways (School Travel team), BELS, Public Health	Low	The programme saves about 22 million vehicle kilometres (VKM) annually between 8-9am. Total 44m VKM a year in London, saving approx. 8000 tonnes of CO2 and 96 tonnes of NOx annually.	Ongoing; The number of accredited schools in Barnet in 2022 was 96. Barnet will continue to engage with schools to encourage participation in the scheme	The success of metric will be to improve upon the number of accredited school and an increase in the proportion gold accreditations	https://www.barnet.gov.uk/schools-and-education/school-meals-travel-and-benefits/school-travel-and-transport/sustainable

Public health and awareness raising	12	Monitoring and improving air quality in and around schools; School Streets, Air Quality projects and School Air Quality Audits	Environmental Health, Public Health, Highways (School Travel Team), BELS	Medium	This measure focuses on reducing exposure to poor air quality in and around schools. This measure will lessen the impact of air pollution on the cardiovascular, cognitive, and respiratory health of children attending school. Switching to active modes of transport may reduce exposure to pollution in surrounding roads/ neighbourhoods by up to 50%.	2023-28 onwards. This is programme of works which will be ongoing throughout the period of this AQAP.	<p>Increased number of schools undertaking Air Quality Audits, with the support of the borough.</p> <p>Barnet has contracted Sustrans to carry out projects with schools in Barnet; the scheme of work includes delivery of 3 sessions in up to 15 schools across the borough. This is continuing from the end of the 2017-2022 period into the 2023-2028 period, with a view of continuing once the contract has been completed</p> <p>Barnet's anti-idling Campaign was launched in June 2022 at All Saints Primary School in Whetstone. An initial target of 33% of STARS (Transport for Life) accredited schools doing anti idling related activities after engagement via. the STARS (Transport for Life) programme</p> <p>Programme for new school streets being developed; local air quality is among the criteria for deciding on priorities. 15 additional school streets to be delivered within the 2023 –2028 period, on top of the 6 currently active.</p>	
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Delivery servicing and freight	13	Update of procurement policies to reduce pollution from logistics and servicing	Street Scene and Procurement	Low	Barnet complies with FORS, which provides minimum standards for vehicles within the Council's Fleet, as well as contractors. This ensures a minimum standard.	<p>2023-28 onwards. Ongoing. This is programme of works which will be ongoing throughout the period of this AQAP.</p> <p>Barnet intends to review social value delivery attainable through the procurement activity following L.B.</p> <p>Barnet's adoption of a Social Value Policy.</p> <p>The policy is aligned with 'Our plan for Barnet', the borough's corporate plan 2023-26, and Barnet TOMs to assess delivery against improved air quality aspects.</p>	<p>Monitoring the number of 'last mile' deliveries to borough premises that are ultra-low or zero emission in line with Barnet's Long Term Transport Strategy</p> <p>Number of Non-Road Mobile Machinery procured by the local authority that are zero emission or at least compliant with the NRMM Low Emission Zone standards. 100% by 2030</p> <p>Barnet can increase number of contracts with air quality requirements included as current contracts end. 100% of contracts to contain Air Quality requirements. as applicable, under Barnet's Social value Policy, TOMs and council's commitment to Net Zero.</p>	
Delivery servicing and freight	14	Reducing emissions from deliveries to local businesses and residents	Transport and Highways	Low-Medium	Overall reduction in the use of Light goods vehicles (LGV) to deliver goods, especially when travelling short distances, leading to overall reduction in pollutant emissions.	2024 Onwards	<p>In 2021 Barnet trialled an e-cargo bike delivery service in Finchley. Barnet will be investigating ways to reinstate this and potentially extend this service across the borough.</p> <p>The revised Transport Plan (due late 2024) will specify the relevant targets and KPIs, with reference to this AQAP; output may be quantified in number of cargo bike kilometres travelled, number of businesses participating, and estimated emissions saved. Targets will be developed as the project is developed.</p>	

Borough Fleet	15	Reducing emissions from council fleets	Street Scene and Procurement	Medium	<p>The Council's Fleet consists of vehicle compliant with Euro VI standards, which stipulates that NOx emissions must be no higher than 80mg/km (compared to 180mg/km).</p> <p>Barnet also participates in FORS and has maintained a bronze membership.</p>	<p>Barnet Council currently have 11 zero emission capable vehicles within our fleet, and a pool (hire) car fleet of 9/10 PHEV cars and 1 ICE van.</p> <p>Total of 20 zero emission vans in fleet by January 2024.</p> <p>FORS estimate an 11 per cent saving in fuel and emissions for scheme members</p>	<p>Continuing to maintain FORS membership.</p> <p>Safer driving courses for all fleet drivers; once every 2 years.</p> <p>Increase the number of clean vehicles in Barnet's Fleet in line with Barnet's wider Sustainability Strategy, by 10% over 23-28 AQAP period.</p>	
Localised solutions	16	Expanding and improving green Infrastructure (GI)	Planning, Regeneration	Medium	<p>The impact of green spaces can be difficult to gauge given the variety of factors that may impact exposure to air pollution and level of emissions (e.g., foliage density, location, plant species etc.). however, there are benefits to the improvement of urban environments and enjoyment of public spaces</p>	<p>2023-2028</p> <p>Barnet is currently embarking on a pilot scheme to introduce green spaces to very urbanised locations, which are currently impacted by poor air pollution</p>	<p>Barnet will measure the successes/ impacts of this measure by: Keeping a record of GI projects implemented by the council as far as is possible.</p> <p>This may also include monitoring the concentration monitoring in these locations and qualitative assessment e.g., surveys</p>	

Cleaner transport	17	Ensuring that Transport and Air Quality policies and projects are integrated	Environmental Health, Highways, Transport Strategy	Low	<p>The Council will be revising its Long-Term Transport Strategy, so it supports delivery of carbon reduction and wider public health policies. It is likely to give greater emphasis to improving walking/cycling infrastructure, encouraging public transport and support for electric vehicle roll-out.</p> <p>The experimental cycle lane on the A1000 (now made permanent) has seen a maximum of a 23 % reduction in NO₂ concentrations along its route since 2019 (in comparison with 2019 modelled data and monitoring data obtained over the 2021-22 period)</p>	<p>Following consultation in late 2022, the experimental A1000 Cycle Lane has been made permanent and the design and infrastructure improved. Investigation into further opportunities to link air pollution strategy to transport.</p> <p>Further cycling infrastructure projects are proposed; the environmental team has a representative in the advisory group for the revision of the Sustainable Transport Strategy.</p>	<p>The success of this measure raises the potential for further cycle lanes to be established. Work is underway to prioritise development of walking/cycling infrastructure, particularly on major road corridors. The revised Sustainable Transport Strategy will set targets and KPIs with reference to this AQAP. Improving facilities for active travel and public transport will be incorporated in the Council's regeneration plans (e.g., for Colindale, Edgware and North Finchley). these targets will be included within the Barnet's new Transport Strategy, due for delivery in 2024, and included in subsequent AQAP updates.</p>	<p>Barnet is currently revising its transport strategy; this new strategy will be in alignment with air quality and public health policies/ strategies including this Air Quality Action Plan.</p> <p>Barnet's current long-term transport strategy can be found here.</p>
Cleaner transport	18	Discouraging unnecessary idling by taxis and other vehicles	Environmental Health, Public Health, Highways, BELS		<p>A small-scale study by King's College suggested that concerted idling action campaigns could reduce local concentrations very close to the source of idling vehicles by 20-30 per cent.</p>	<p>2023-28 onwards</p> <p>Barnet launched its new anti-idling campaign in June 2022.</p> <p>Previous campaigns resulted in successes at Golders Green and Mill Hill Bus Stations. The new plan will focus on Tax Ranks and transport/shopping hubs.</p>	<p>Anti-idling Campaign and promotion at 100 % of STARS (Transport for Life) accredited Schools, and 20 % non-accredited Schools, Royal Free Hospital and affiliated health centres.</p> <p>Develop enforcement regimes to encourage anti idling; potentially including spot checks at transport hubs and taxi ranks.</p>	

Cleaner Transport	19	School Streets Town Centre pedestrianisation schemes/Road Layout modification	Environmental Health, Public Health, Highways	Low £1m is allocated for our Healthy Routes to Schools Programme for School Streets (2022/23 – 2025/26).	Road traffic is a very important source of air pollution in Barnet. Temporary road closures (e.g., play streets) are known to improve air quality in the immediate vicinity of the closure location	<p>Barnet is currently in the process of a scheme of work to increase number of school streets (15 in the 2023-2028 period minimum) within the borough, with air quality among the criteria for prioritisation.</p> <p>Plans for improvement works for North Finchley include proposals for pedestrianisation of part of Ballards Lane.</p> <p>The Council is trialling a play streets programme providing temporary road closures to support children’s play and a shared space for neighbours.</p> <p>There is also the potential for expansion of 20 mph zones, which is work that Barnet will be continuing from the old (2017-2022) air quality action plan, under the remit of Highways. 20 mph zones are a delivery indicator for LIP3, with a target of 2 km per annum.</p> <p>Barnet currently publicise World Car Free Day</p>	<p>Concentration monitoring of the impact of road closures/ layout changes could be undertaken.</p> <p>Monitoring Increases in active travel after road layout changes and /or events</p> <p>Assessment of trial and consideration of further roll-out.</p>	
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Cleaner transport	20	Using parking policy to reduce pollution emissions	Parking Team, Planning	Low	This measure will not in itself reduce NO ₂ or particulate matter concentrations in the Borough, but will encourage a change in behaviours regarding the frequency and/or length of car journeys	Revision of the Council's Long-Term Transport Strategy is likely to include consideration of new approaches to parking policy to help enable reprioritisation of space for active modes/public transport and provision for electric vehicles	Measuring the proportion of residential permits issued to both most polluting and cleanest vehicles.	Barnet is currently revising its transport strategy; this new strategy will be in alignment with air quality and public health policies/ strategies including this Air Quality Action Plan. Barnet's current long-term transport strategy can be found here
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Cleaner transport	21	Rollout of the requisite infrastructure to support the shift to low and zero emissions vehicles	Street Scene	Medium – High	<p>This measure will not have a direct impact on emissions by itself. By enabling the uptake of EV (Electric Vehicle) in Barnet, vehicles with tailpipe emissions will be increasingly absent from roads in the borough.</p> <p>The measured total kW of charging in Barnet may be used as a proxy to estimate the amount of NO₂ saved by EV miles driven, depending on estimated vehicle mix.</p>	<p>The Sustainability Strategy Framework outlines our commitment to installing a comprehensive network of charge points by 2030.</p> <p>In FY 2022/23, through its partnership with Trojan Energy, the council has installed 463 fast charge points across 33 residential streets. This was supported by the securing of over £3.5m of OZEV grant funding and council match funding of over £1.15m. Furthermore, through the LEVI scheme, the council has secured an additional £2.1m of funding to support the rollout of up to 120 JOLT 25kW DC charge points within town centre locations; however due to the type of charging infrastructure, the delivery of these is subject to planning permission being secured. In early 2023, The Council heard it had been successful in a further ORCS bid, securing £5.2m for the rollout of a further 1,293 charge points throughout FY2023/24. This will allow the council to build upon its existing network of over 200 lamp column charge points, four freestanding car park charge points, and two community charging hubs.</p>	<p>In 2022, Barnet's new administration set the target to 'increase electric vehicle charging points working towards the FoE target of 1219 by 2030'. As of time of writing, Barnet is set to meet and exceed this target by the end of 2023/24 FY. Further targets will then be set and approved within the forthcoming Integrated Transport Strategy and Electric Vehicle Infrastructure Strategy.</p> <p>Additionally, progress is monitored in Barnet's Corporate Performance Reporting through two measures:</p> <ul style="list-style-type: none"> • number of charge points installed. • kW of charging undertaken across the network. <p>These reporting measures will be updated following the approval of the Integrated Transport Strategy and Electric Vehicle Infrastructure Strategy.</p>	<p>The Sustainability Strategy Framework</p> <p>Long Term Transport Strategy 2020-2041</p> <p>Forthcoming Electric Vehicle Infrastructure Strategy</p>
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Cleaner Transport	22	Provision of infrastructure to support walking and cycling	Strategic Transport, Highways	Medium- High	Work is underway to prioritise development of walking/cycling infrastructure, particularly on major road corridors and by schools. Air quality is likely to be among the criteria for prioritisation. Improving facilities for active travel and public transport will be incorporated in the Council's regeneration plans (e.g., for Colindale, Edgware and North Finchley)	Ongoing through the 2023-28 period and beyond;	Using the DfT funded Propensity to Cycle Tool (PCT), we have identified 15 potential cycle routes; both for leisure and commuting, with identified destinations such as transport hubs and town centres. Reallocation of road space to enable walking and cycling infrastructure. Proposed upgrade on A1000 (3.2 km) 2024 onwards 2024 onwards: Proposal for the new Barnet Loop Cycle Network (approx. 17 miles) (inclusive of the new A5 parallel route)	
Localised Solutions	23	Improvements in Town Centres, and Air quality focus areas (where feasible) to Create Healthy Town Centres	Town Centres team (with support where/when required and if available from external agencies e.g., TfL)	Medium- High	We are supporting local town centres and high roads to become more active, healthier, and more sustainable; for example, the Cricklewood Pocket Park Proposal to create a new green space on an underutilised area of Cricklewood Broadway; the Finchley Central Town Square; Greening in Burnt Oak/Watling avenue; the North Finchley regeneration proposals which are intended to reduce dominance by motor vehicles, with greater priority given to active modes. Air Quality Monitoring will form the basis of the rationale behind this action	Ongoing through the 2023-28 period and beyond;	Healthier town centre and high street areas, which are more pleasant to use. Reduced exposure to air pollution in these locations by either reducing congestion, or aiding dispersal of pollutants. This is planned to be quantified via monitoring; Barnet has applied for grant funding to do this. Along with promoting the expansion Breathe London monitoring in the borough. Given that parts of the strategic road network (controlled by TfL) run through these areas, it is acknowledged that some options may be limited.	General development strategies are being produced for Barnet's 30 Town Centre areas. Published strategies can be viewed on our Town Centres webpages .

Appendix A Response to Consultation

Table A.1 Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
The Barnet Society	Local Campaign Group	<p>“We generally welcome Barnet’s draft Air Quality Action Plan 2023-28, and particularly the addition of monitoring and core statutory duties to the six categories of action in the Council’s 2017-22 Air Quality Action Plan....</p> <p>We particularly support its recognition of the importance of raising public awareness of indoor air pollution, and would like to see more guidance on the design of new and retrofitting of old buildings to ensure proper air quality...</p> <p>...we would like to see specific actions added for Chipping Barnet in view of the numerous housing proposals in and around the town centre, including major developments for The Spires...</p> <p>We would also like information about the human and other resources the Council will need to implement the Plan. In our experience, the community is concerned at least as much about lack of enforcement of existing policies”.</p>
Barnet Cycling Campaign	Local Campaign Group	<p>“We think that the plan needs to make a clear commitment to favouring active travel modes and public transport over the use of private motor vehicles</p> <p>We are surprised that the plan does not refer at all to the introduction of 20-mph speed limits for motor traffic across the borough, particularly as the borough came last on this indicator in the healthy streets scorecard published in 2022</p> <p>We are particularly disappointed that draft plan shows a lack of commitment to low emission neighbourhoods, a retrograde move away from the previous administration’s Transport Strategy in our view”</p>
Environment Agency	Non-departmental public body	<p>General commentary provided, were there is commonality between borough and Environmental Agency interests. Subjects addressed include traffic, NRMM, Development and Waste Management. There are currently no EA managed waste sites which significantly impact on air quality in the borough. The EA acknowledge that Barnet participate in the North London Air Quality Cluster Group, with neighbouring boroughs and EA representatives.</p>
Epping Forest District Council	Local Authority	<p>“Thank you for consulting Epping Forest District Council with regards to LB Barnet’s draft AQAP. We have reviewed the draft document and have no objections to the proposed action plan.</p> <p>We welcome the measures within the draft document and any opportunity to work together to address transboundary air quality issues.”</p>

<p>Various comments submitted via email outside of the Barnet consultation survey</p>	<p>Residents</p>	<p>“It is very positive that the draft plan:</p> <ul style="list-style-type: none"> • recognises the need to help London meet updated WHO guidelines by 2030 and that Barnet air pollution exceeds these guidelines. • sets out a clear signal that clean air is a priority for Barnet, that currently our air is not clean enough and does not describe Barnet air quality as “good”. • highlights inequality issues relating to air pollution and vulnerable people. • sets out the need to act on public health grounds. • highlights the connections between the air quality plan, sustainability, health, and other council strategies • goes beyond current statutory requirements, is focused on delivery against tighter objectives rather than reporting and acting against current objectives. • reads more like something written for a general (rather than expert) audience as this can help improve awareness and drive action. <p>However:</p> <ul style="list-style-type: none"> • The plan is technical and difficult for the general public to read and comment on • the action plan table lacks SMART objectives and targets • the plan is based on 2019 assessment of air pollution and does not provide any information or insight about the latest available air pollution data or research. • there is little discussion about the resources, skills and knowledge that are needed by council and council officers to deliver the plan or about how to involve the community in delivering clean air for Barnet.
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Results of the public consultation can be seen in the document entitled Appendix C; **Final Report New Air Quality Action Plan Consultation 2023**

Appendix B Reasons for Not Pursuing Action Plan Measures

Table B.1 Action Plan Measures Not Pursued and the Reasons for that Decision – to be discussed with the GLA prior to finalisation.

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Localised solutions	Low Emission Neighbourhoods	The feasibility of implementing LENS will be assessed by the Strategic Transport Team over the coming years, as part our general town centre and neighbourhood improvement plans. We are first focusing on other measures as described in the plan/table above.
Cleaner Transport	Regular temporary Car Free Days and pedestrianisation scheme	Given Barnet's situation with the strategic road network and TfL controlled roads, the amount of work and cost involved in implementing this action (for full road closures in town centre areas and High streets etc.) for the areas in Barnet that need it most, generally outweighs the actual benefits.

