

ENFIELD
Council



Air Quality Action Plan

Enfield Air Quality Action Plan 2022-2027

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 Enfield between 2022 and 2027.

This action plan replaces the previous action plan which ran from 2015. Highlights of successful projects delivered through the past action plan include:

- Setting up an effective process for input into all planning applications, requesting planning conditions to protect air quality and mitigation where appropriate;
- Continued and enhanced joint working across the local authority, particularly with transport, planning, public health and climate change colleagues;
- Joint working across the borough has led to a number of specific projects such as green walls;
- Joint working with other boroughs has opened up a number of wider opportunities such as public awareness projects [airText](#) and [Anti Idling Campaigns](#).

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

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

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

- **Reducing Emissions from Transport:** despite emissions from transport reducing, it is the main source of air pollution in Enfield and hence will be a priority for measures within this Action Plan;
- **Emissions from developments and buildings:** emissions from buildings account for about 15% of the NO_x emissions across London so are important in affecting NO₂ concentrations;
- **Raising awareness:** increasing awareness can drive behavioural change to lower emissions as well as reducing exposure to air pollution;
- **Lobbying and partnership working:** As a local authority, we cannot tackle the problem of air pollution alone and are not responsible for many of the contributing sources. As such, more effective actions will come about through collaboration; and
- **Monitoring:** air quality monitoring will be utilised to not only assess compliance with Government set objectives, but importantly to support and evaluate our policies and projects.

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

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006.

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

Our priorities are to build on the projects which are being implemented to accelerate the modal shift to active modes of travel (walking and cycling) and away from private vehicle use. There are many current initiatives, with major investment being made in relation to these measures which include promoting cycling and walking, and work around schools in particular (such as the School Streets project). It is, however, recognised that not all of the population in Enfield will be able to switch to active travel, and not all trips will be suitable for modal change. Therefore, a switch to electric vehicles and ensuring that the public transport network is accessible and is the natural choice for longer trips, is also a priority. In order to increase the proportion of electric vehicles in the fleet, a number of specific measures have been included to improve the EV infrastructure, both for residents, visitors and for the Council fleet. As traffic emissions reduce, building emissions are proportionally becoming more important. Therefore, this Action Plan also targets this source, largely through the planning system for new buildings, but also ensuring that existing buildings reduce their emissions of both greenhouse gases and oxides of nitrogen (NO_x). Decarbonising heat sources is a key way to reduce related emissions and there is a programme of improvements across council buildings looking to achieve this in line with the Council's Climate Action Plan target of being a carbon neutral organisation by 2030. The Climate Action Plan also includes actions to support a reduction in the use of fossil fuels for heating and energy supply across the borough, with a target of carbon neutrality by 2040. In addition, collaborative working across the borough, in particular with public health, transport, planning and climate change colleagues, will continue in order that air quality is considered within these other policy areas, and the overarching aims of the Council are implemented as effectively as possible.

We have worked hard 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 a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards, national vehicle taxation policy, taxis and buses), and so we will continue to work with, and lobby regional and central government, the GLA and TfL on policies and issues beyond Enfield's influence.

RESPONSIBILITIES AND COMMITMENT

This AQAP was prepared by the Development Management Team of Enfield Council, with assistance from Air Quality Consultants Ltd. with the support and agreement of the following officers and departments:

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This AQAP will be subject to an annual review, progress each year will be reported in the Annual Status Reports produced by Enfield, as part of our statutory London Local Air Quality Management duties.

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Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
EV	Electric Vehicle
FORS	Fleet Operator Recognition Scheme
GLA	Greater London Authority
JSNA	Joint Strategic Needs Assessment
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LIP	Local Implementation Plan
LLAQM	London Local Air Quality Management
NO ₂	Nitrogen dioxide
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
ULEZ	Ultra Low Emission Zone
WHO	World Health Organisation

Foreword

Introduction

This report outlines the actions that Enfield Council will deliver between 2022 and 2027 in order to reduce concentrations 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 process⁴.

Air quality is embedded across the work of Enfield Council. Notably, Enfield Council's Transport Plan, incorporating the third Local Implementation Plan, aims to bring communities and people together, making journeys convenient, accessible and safe, particularly by encouraging walking and cycling. In addition, Enfield is currently updating its Local Plan, with air quality fully considered at an early stage of the Plan process. The air quality impacts of housing and employment allocations are being assessed and robust policies included to ensure that future air quality is protected. Enfield has declared a climate emergency and produced a Climate Action Plan which responds to the declaration. A number of actions in that plan, for example around encouraging active travel and reducing GHG emissions from a variety of sources, are complementary to those to improve air quality. As such, these and other policy areas have been fully considered in the writing of this Action Plan.

Following the death of Ella Adoo-Kissi-Debrah in 2013, who lived near the South Circular Road in Lewisham, an inquest has found air pollution "*made a material contribution*" to her death. Ella was the first person in the UK to have air pollution listed as the cause of death on their death certificate, following the inquest ruling in December 2020. This has added to an increased awareness by the public with regards to air quality and has highlighted the need to ensure that measures to increase public awareness of air quality is maintained.

This Air Quality Action Plan is split into two key parts. The first provides the context for Enfield's actions on air pollution, setting out our statutory requirements, summarising the key pollutants of concern, the health impacts of pollution and the key council policies and strategies that this Action Plan links to, and how our work on air quality fits within the council's wider work. This is followed by a summary of air quality in Enfield: highlighting where pollution is highest, where it comes from, and the trends in pollution levels across the city over time. The second part of this Air Quality Action Plan focusses on the Actions. The actions are split into commitments across five broad themes: reducing emissions from transport, reducing emissions from buildings and new development, raising awareness, lobbying and partnership working, and monitoring. Each of these five themes are introduced before specific actions are set out. The action plan matrix in Appendix A sets out in more detail, all the actions we, as a council, are committing to taking to meet our statutory requirements and to reduce levels of all pollutants as far as we are able.

⁴ LLAQM Policy and Technical Guidance. <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs>

1 Air Quality in Context

What are the main pollutants of concern?

The main pollutants of concern are nitrogen dioxide and particulate matter (small dust particles made up of a variety of different chemicals and metals). Each has different sources, health effects and chemical behaviours.

What is nitrogen dioxide (NO₂)?

Nitrogen dioxide (NO₂) is a gas produced as a result of road traffic and other fossil fuel combustion processes. Its presence in air contributes to the formation and modification of other air pollutants, such as ozone and particulate matter, both of which are also harmful to health. Breathing air with a high concentration of NO₂ can irritate the airways in the lungs.

What is Particulate Matter?

Particulate matter is the most important air pollutant in terms of health effects and is different from the gaseous pollutants in that it is not a clearly defined chemical compound. It is a mixture of small particles which are usually described by their size. PM₁₀ are particles below 10 micrometres in diameter and PM_{2.5} are below 2.5 micrometres (approximately 30 times smaller than the width of a human hair). The larger particles can penetrate into the upper airways, while PM_{2.5} can penetrate deeper into the lungs. Both groups contain much smaller particles which are much more numerous and can penetrate all areas of the lungs and even pass into the bloodstream or brain.

What are the health effects of air pollution?

There is an ever-growing evidence base for the connections between air pollution and heart and lung health and the link to premature mortality, with connections also being made to other conditions such as diabetes, dementia, mental health and birth outcomes, and most recently potential links to Covid-19.

Some of the effects occur over a short period, from minutes to days, whereas others result from long term exposure. Air pollution is known to cause some health conditions, and can also exacerbate existing health conditions, such as triggering an asthma attack. These short- and long-term health effects are reflected in the air quality objectives, which have both short- and long-term averaging times for pollution measurements.

While the majority of the published evidence relates to the long-term impacts of fine particulate matter (PM_{2.5}), evidence is also strengthening for the health impacts of nitrogen dioxide (NO₂), mainly around pulmonary and cardiovascular effects and the link to premature mortality.

It is generally accepted that air pollution can be harmful to anyone. However, some people are more likely to suffer than others because they live in deprived areas, which often have higher levels of air pollution; they live, learn or work near busy roads; and/or are more susceptible because of medical conditions. Therefore, groups that can be considered vulnerable include, but are not limited to, the old, the young, deprived communities and those with existing health conditions.

Further information on the health effects of air pollution can be found [here](#).

2 Air Quality: the role of Local Authorities

The [UK Air Quality Strategy](#) (AQS), released in July 2007, 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 AQS provides the framework for local authorities to implement Local Air Quality Management (LAQM), which includes annual reviews of air quality, and measures being implemented at local level, which are then reported to the GLA and Government.

Measures to improve air quality are being implemented by London Boroughs, the GLA, the UK Government and internationally. In Enfield, projects such as those delivered under Healthy Streets, including Quieter Neighbourhoods, will be key to the way people travel in the future; this Action Plan complements this overarching aim, but also provides a wider set of measures tackling other sources of pollution. Other measures underway include those to reduce building emissions, for example retrofitting existing buildings to decarbonise heat sources in order to reduce greenhouse gas emissions, will also reduce local air pollutants. These local measures implemented by the borough are underpinned by work being undertaken by the GLA, for example the Ultra-Low Emission Zone, which now includes the area of Enfield south of the A406 road. All of these measures being implemented at different levels of government have the overall aim to improve health.

3 Enfield Context

3.1 What are the Key Council Policies which may influence this plan?

Enfield Council Plan 2020-2022

The Enfield Council Plan sets out the overarching priorities for the Council. The second of three priorities is for Safe, Healthy and Confident Communities which includes delivering healthier neighbourhoods where residents are supported to be active, be smoke free and be socially connected, and aims to reduce and slow down traffic - particularly around schools, work with partners to reduce reliance on cars and increase the number of journeys taken by walking, cycling and public transport.

Air Quality and Climate Emergency

Air quality is far from the only environmental issue facing Enfield and in July 2019 the Council declared a Climate Emergency. Since then, the Council has produced a [Climate Action Plan \(2020\)](#) which explains how the Council will become a carbon neutral organisation by 2030, and a carbon neutral borough by 2040. It sets out current carbon emissions (baseline) and the action the Council needs to take to achieve net zero targets.

Enfield Transport Plan

The core of the Transport Plan is Enfield's third Local Implementation Plan (LIP), which sets out how the Council proposes to deliver an active, safe and sustainable transport network in line with the Mayor of London's Transport Strategy. The heart of the Plan is the focus on improving people's health, for example through the Healthy Streets approach, bringing communities and people together, making journeys convenient, accessible and safe. Central to this is encouraging residents and businesses to embrace active travel, walking and cycling, through continuously improving cycle and walking routes and facilities for all residents within the borough.

Local Plan

The current Local Plan Core Strategy (LB Enfield, 2010) was adopted in 2010, and includes a policy which refers to air quality. Work on a [new Local Plan](#) is currently underway. The update to the Local Plan incorporates air quality as a key issue and the evidence base on air quality is being progressed with the aim to model the impacts of the allocations within the Local Plan on the attainment of relevant air quality objectives. The updated Local Plan reflects many of the objectives of both the Transport Strategy, and this Air Quality Action Plan, in encouraging a modal shift to walking and cycling through use of the Healthy Streets approach.

The “Healthy Streets” approach is described as an evidence-based approach to improve health and reduce health inequalities, which will help Londoners use cars less, and walk, cycle and use public transport more. It supports the delivery of the Mayor’s aim that by 2041 all Londoners will be able to undertake at least the 20 minutes of active travel each day needed to stay healthy. It also requires better management of freight so the impact of moving goods, carrying out servicing and supporting construction on London’s streets is lessened.

There is some major redevelopment planned over the time period of the new Local Plan. For example, Meridian Water is a major £6bn, 25-year London regeneration programme led by Enfield Council, bringing 10,000 homes and thousands of jobs to Enfield, next door to the Lee Valley Regional Park.

[Joint Strategic Needs Assessment \(JSNA\)](#)

The JSNA is an on-going process that identifies the current and future health and wellbeing needs of the local population. The JSNA is a web-based resource with interactive tools and profiles, which is being updated on an ongoing basis. It informs the way in which decisions about health, wellbeing and social care services are planned and arranged. A topic-based approach has been undertaken, with Healthy Streets being one of the topics with the overarching aim to increase active travel within Enfield. This not only improves health by reducing emissions (and therefore concentrations), but also directly by increasing physical activity.

A number of other strategies and plans, for example the [Enfield Blue and Green Strategy](#) will also influence future air pollutant emissions in the borough. Enfield Blue and Green Strategy will help to reduce air pollution by expanding the borough’s cycle and pedestrian network.

3.2 *Summary of current air quality in Enfield*

What are the main sources of pollutants in Enfield?

NO₂ is both a primary and a secondary pollutant. In other words, it is both emitted directly from polluting sources and is also formed from chemical reactions of pollutants in the atmosphere. Nitrogen oxides (NO_x – a combination of NO and NO₂) is produced when fossil fuels (coal, natural gas) are burned. Road transport is the largest source of both primary and secondary emissions overall in Enfield, but industrial processes also account for a large proportion.

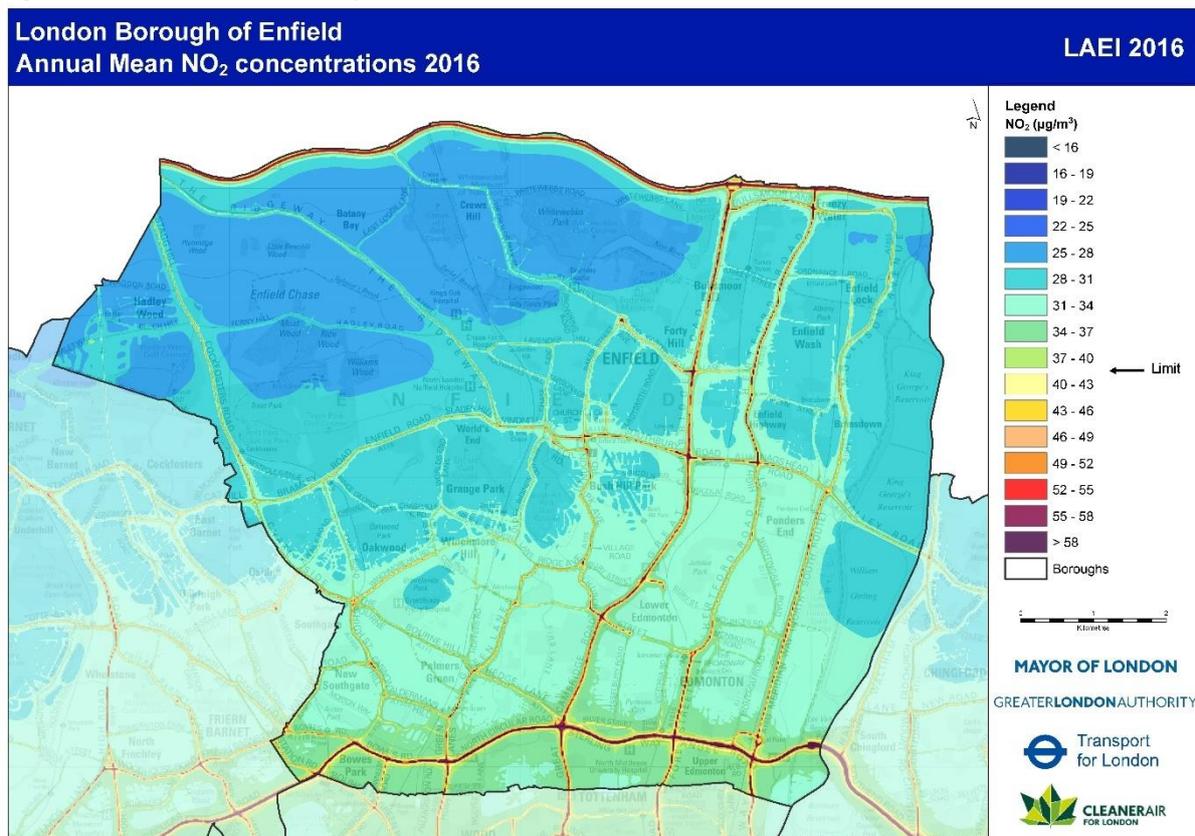
Particulate matter is a mixture of both primary and secondary components, which contains those which are either human-made or naturally occurring. Sources of primary particles include combustion processes, such as diesel engines and woodburning, but can also include mechanically derived particles such as tyre, brake and road wear, windblown dusts (including, for example, dust

from the Sahara) and sea salt. Mechanically derived particles tend to be larger in size (PM₁₀) whereas combustion derived particles are smaller (PM_{2.5}). Fine particles and, in particular, secondary particles⁵ can travel long distances and are known as transboundary pollutants. This means that the particles measured in London, often originate from emissions in European countries.

Enfield Council is meeting all of the national Air Quality Strategy (AQS) objectives other than that for Nitrogen Dioxide (NO₂) (the air quality objectives can be found in Table 2 of The Air Quality Strategy for England, Scotland, Wales and Northern Ireland). Enfield Council is meeting current objectives for Particulate Matter (PM₁₀ and PM_{2.5}) but as this pollutant is damaging to health at any level, this remains of concern, and is therefore included within this Plan. The Mayor of London has also committed to reduce PM_{2.5} in line with World Health Organisation (WHO) guidelines by 2030.

The following figures provide an indication of modelled pollutant concentrations across Enfield. The data are from the last release of the London Atmospheric Emissions Inventory, and it should be noted that they represent 2016 annual mean concentrations. Concentrations of these pollutants will have reduced since then due to improvements in vehicle technology and changes to the vehicle fleet, but regardless, the figures show that the highest concentrations are along the busiest and most congested roads in the borough. Because the human activity related primary component contribution to particulate matter is much lower than the contribution to nitrogen oxides, the figures for PM₁₀ and PM_{2.5} show less of an increased concentration along busy roads, although this general observation is still evident.

Figure 1 Modelled map of annual mean NO₂ concentrations (from the LAEI 2016)



⁵ Secondary particles occur due to chemical reactions in the atmosphere generally downwind some distance from the original emission source

Figure 2 Modelled map of annual mean PM₁₀ concentrations (from the LAEI 2016)

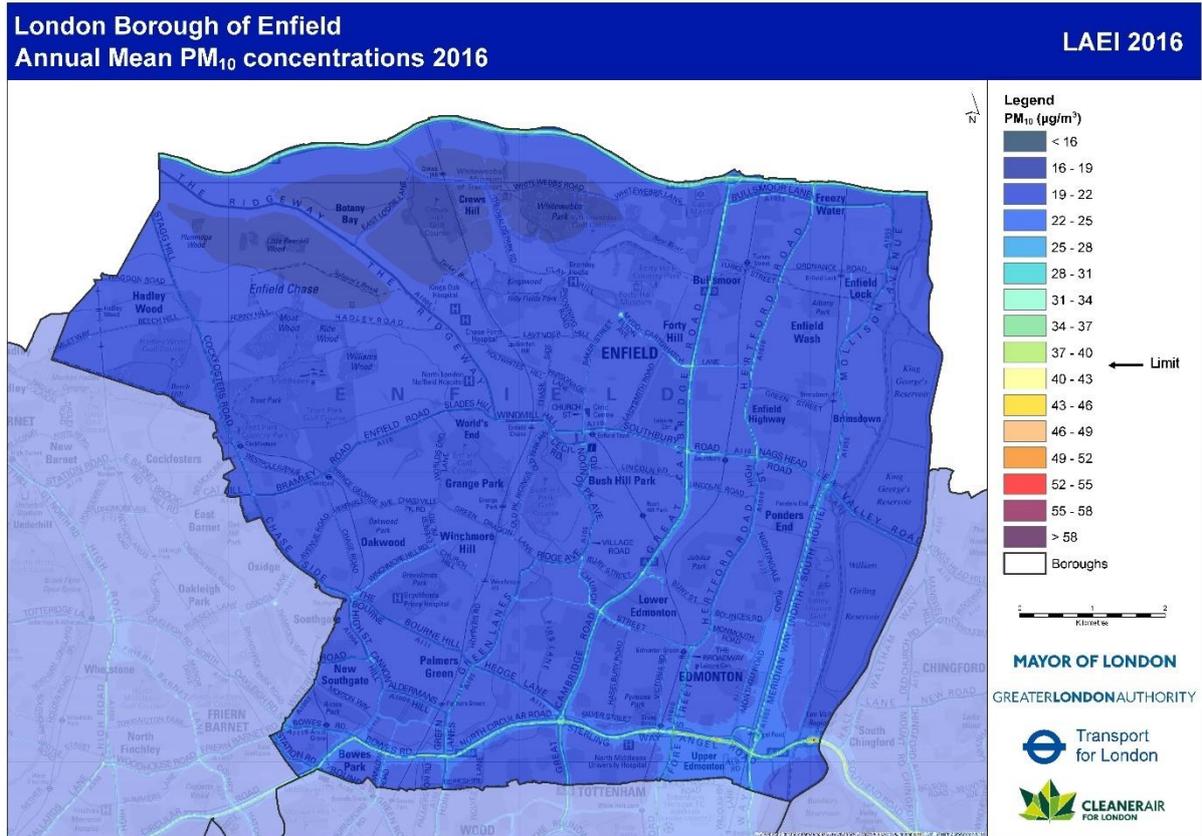
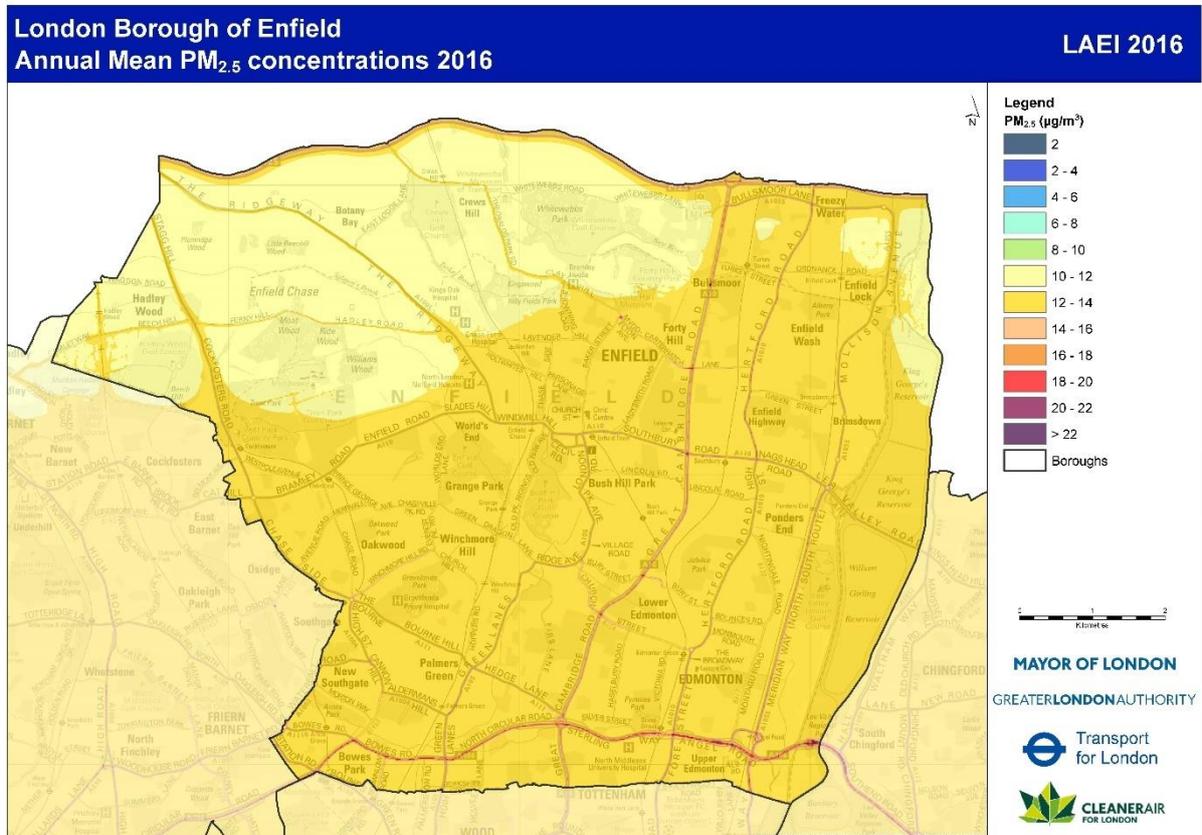


Figure 3 Modelled map of annual mean PM_{2.5} concentrations (from the LAEI 2016)



Monitored Concentrations

Enfield Council operates four automatic NO₂ monitors, which include two roadside sites at Bowes Road and Derby Road, and two urban background sites at Bush Hill Park and Prince of Wales School. The Bowes Road site also measures PM₁₀ concentrations. In addition, the Council also operates twenty one NO₂ diffusion tube monitoring sites.

Annual mean concentrations of NO₂ at long-term monitoring sites have generally declined in recent years, especially at the roadside, although there is year-on-year variability at some sites. None of the automatic sites recorded exceedances in 2019, other than at Bowes Primary School, close to the North Circular Road. Many of the diffusion tube sites were moved in January 2018 at the request of the GLA to monitor in the Air Quality Focus Areas (see Figure 4), meaning that the identification of long terms trends is not possible. There was only one diffusion tube site which exceeded the annual mean NO₂ objective in 2019, located in Church Street (A110). This is a congested canyon location (i.e. tall buildings either side of a narrow road which reduces the dispersion of pollutants), where high concentrations would be expected. Concentrations of PM₁₀ have remained generally stable in recent years. Monitored data suggests that air quality objectives are achieved at most locations in the borough, with some exceedances of the annual mean NO₂ objective in 2019. A borough wide modelling study is currently underway for the Local Plan, which will use 2019 as a base year and will provide further information about concentrations of NO₂, PM₁₀ and PM_{2.5} across Enfield. Actions within AQAP should be proportionate to the level of exceedance.

Data from the [London Atmospheric Emissions Inventory](#) also provides an estimate of proportion of the total population of Enfield that is subject to NO₂ concentrations in excess of the annual mean objective of 40 µg/m³. Based on modelled data for 2016 this was 3.5%.

3.3 AQMAs and Focus Areas

In Enfield an Air Quality Management Area (AQMA) was declared in 2001 which covers the whole borough. The AQMA has been declared for both nitrogen dioxide and PM₁₀. At present, air pollution policy is mainly driven by exceedances of the NO₂ annual mean objective or EU limit value, although the greater health impact of PM_{2.5} is acknowledged. This is because, at present, the objective for PM_{2.5} is higher than the World Health Organization (WHO) guideline, and is met in most places in the UK. However, as WHO recognises, the health evidence shows that there is no safe level of PM_{2.5}, so any concentration-based target does not fully reflect the health evidence. For this reason, although not formally within the LAQM process this Action Plan recognises that Enfield Council has its part to play in working towards reductions of PM_{2.5}.

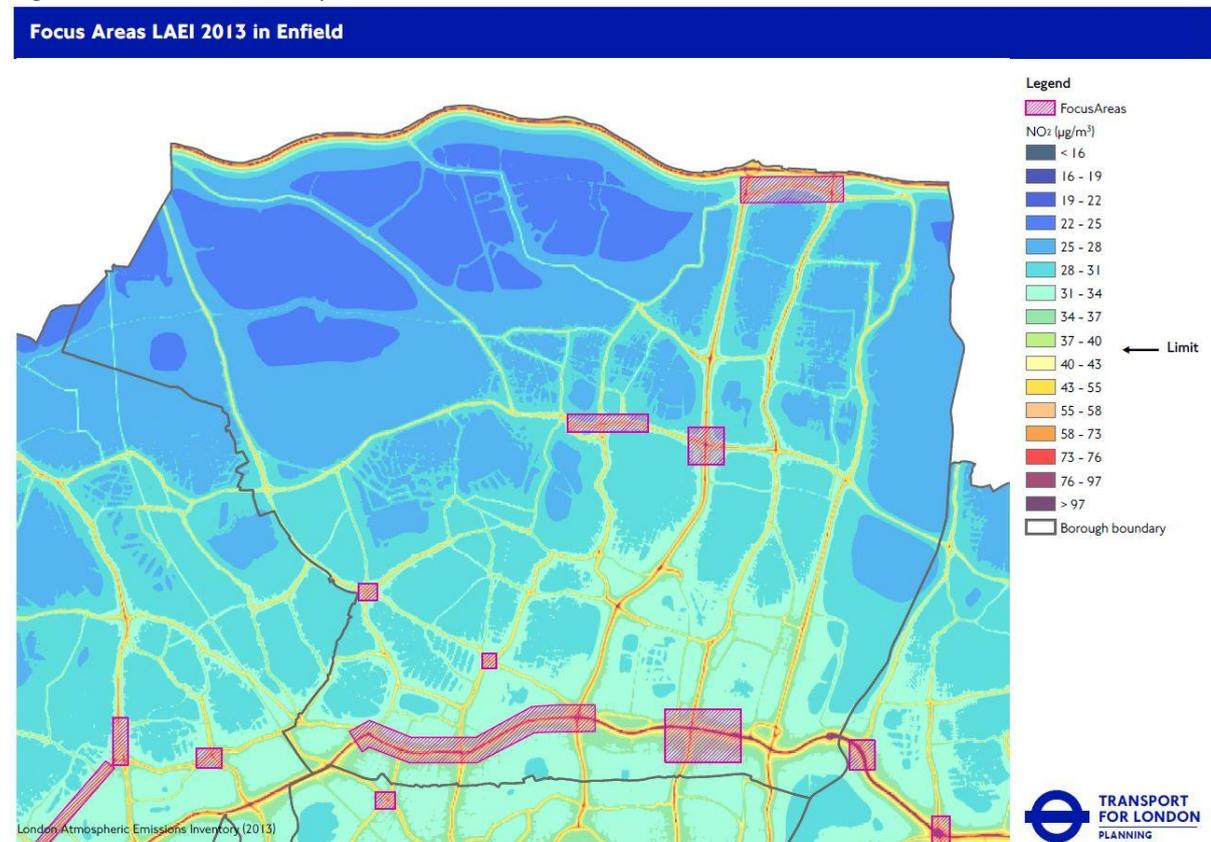
The GLA has identified 187 Air Quality Focus Areas in London. These are locations that exceed the EU annual mean limit value for nitrogen dioxide, and also have high levels of human exposure. They do not represent an exhaustive list of London's air quality hotspots, but locations where the GLA believes the problem to be most acute. They are also areas where the GLA considers there to be the most potential for air quality improvements and are, therefore, where the GLA and Transport for London (TfL) will focus actions to improve air quality.

There are seven Focus Areas in Enfield (Figure 4). These are:

- A406 North Circular between Bowes Road and Great Cambridge
- A406 North Circular Edmonton A1010 and Fore Street A1010
- Bullsmoor Lane
- Enfield Great Cambridge Road A10 junction with Southbury Road A110
- Enfield Town Church Street/Southbury Road/London Road

- Palmers Green junction Green Lanes A105/Hedge Lane A111
- Southgate Circus A111/A1004

Figure 4 Air Quality Focus Areas in Enfield



3.4 Sources of Pollution in Enfield

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

Of the pollution that originates in the borough the main sources of NO₂ are road transport, industrial processes, industrial/commercial heat and power and domestic heat and power. The main sources of particulate matter are road transport, construction and biomass, with resuspension also a significant source of PM₁₀.

Figure 5 NOx Emissions by source and vehicle type (from the LAEI 2016)

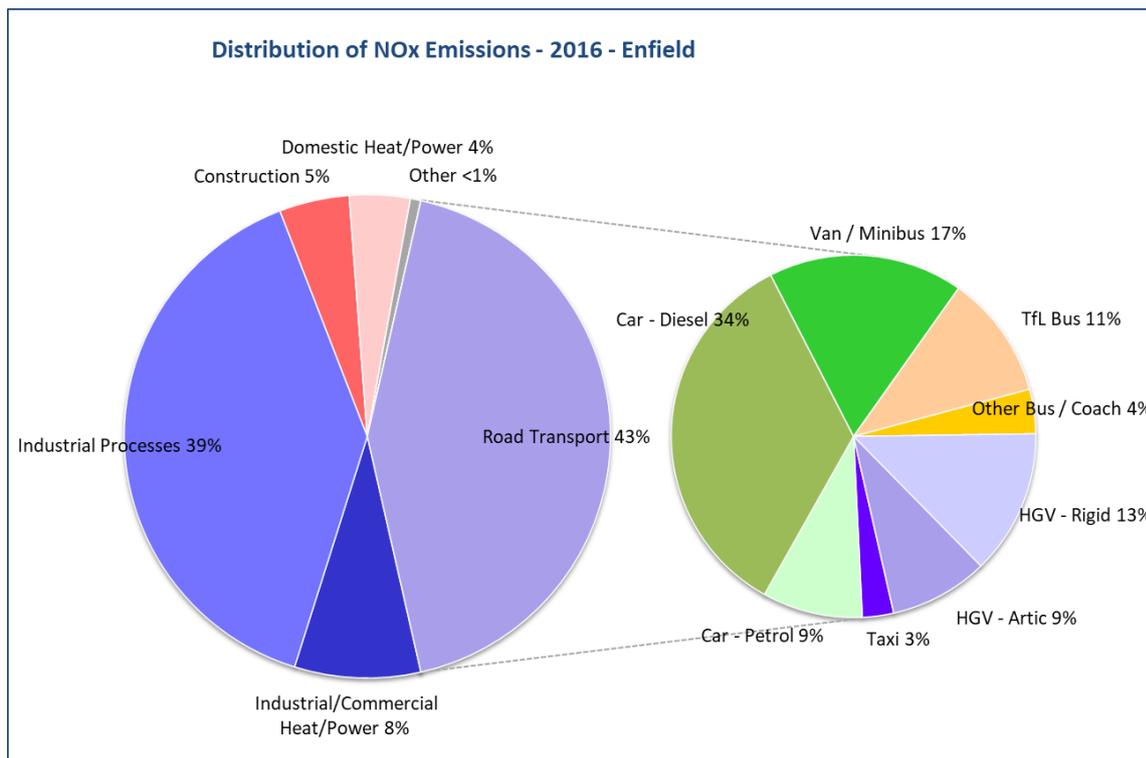
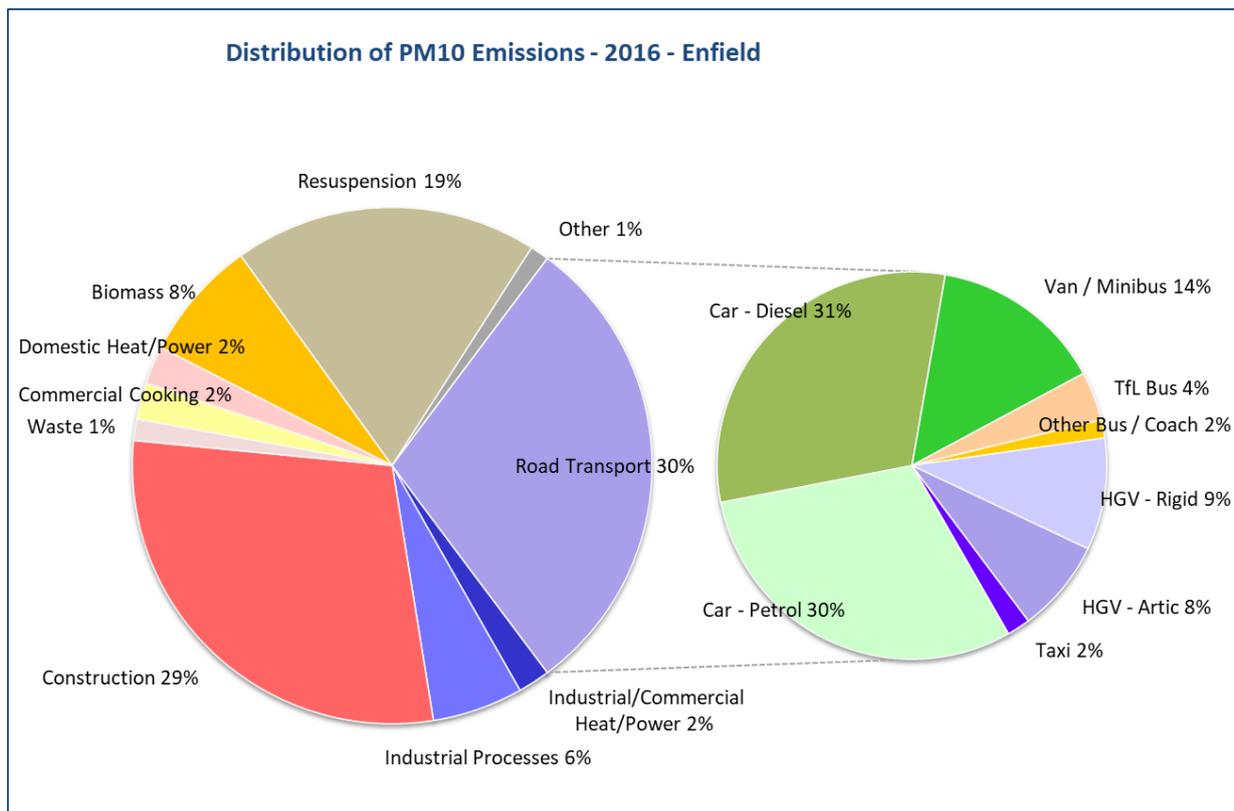


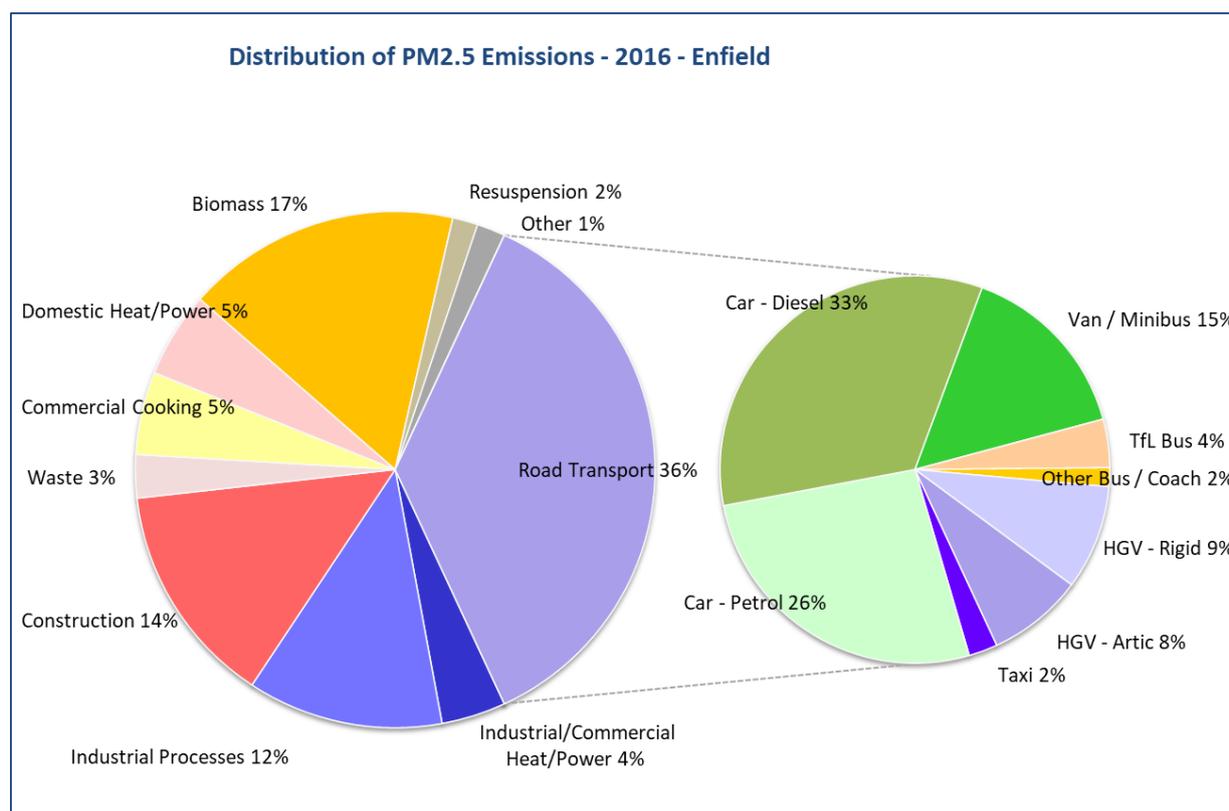
Figure 5 shows that the main source of NOx emissions in Enfield is road transport, as is the case across most of Greater London. Diesel cars, along with vans, buses and heavy goods vehicles, contribute to the majority of road transport NOx emissions. The large industrial presence in the borough also means that these processes contribute 39% of Enfield's total NOx emissions. Industrial and commercial heat and power, construction and domestic heat and power also contribute.

Figure 6 PM₁₀ Emissions by source and vehicle type (from the LAEI 2016)



As shown in Figure 6, construction and road transport are the main contributors to PM₁₀ in Enfield, with cars and vans making up three-quarters of the road transport contribution. Resuspension is also a significant source of PM₁₀ in the borough. Industry, biomass, commercial cooking and domestic heat and power are all contributors to a lesser extent.

Figure 7 PM_{2.5} Emissions by source and vehicle type (from the LAEI 2016)



As shown in Figure 7, road transport is the main source of PM_{2.5} in the borough, and similarly to PM₁₀, cars and vans contribute almost three-quarters of the road transport contribution. Biomass is the second largest contributor to PM_{2.5}, followed by construction and industrial processes. Commercial cooking, industrial heat and power and domestic heat and power are also notable contributors.

4 Air Quality Priorities in Enfield

Based on available air quality data priority areas for action have been identified:

- make active travel the natural choice, particularly for those trips less than 2km (1.2 miles)
- make more school trips safe, sustainable and healthy
- reduce the impact of private vehicles on our streets (through a reduction in emissions)
- make the public transport network more accessible and the natural choice for longer trips
- reduce emissions from both existing buildings and new development

These priorities will be supported by:

- delivering new cycle routes and supporting measures which encourage more cycling and walking in the borough
- promoting safe, active and sustainable transport to and from schools
- monitoring air quality and delivering interventions which address local issues
- managing growing demand for on-street parking
- improving local reliability of and accessibility to the public transport network
- maintaining and improving the transport network in Enfield

- supporting low carbon development and the retrofitting of existing buildings
- working collaboratively across the borough, and across other boroughs and London wide.

5 Development and Implementation of Enfield's AQAP

5.1 Consultation and Stakeholder Engagement

In developing/updating the Action Plan we have consulted with other local authorities, agencies, businesses and the local community. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 3.1. The consultation, which will begin in January 2022 for 12 weeks from the start date of the consultation process, will be undertaken by making the report available on the Council website, and publicising through social media as well as direct contact with neighbouring authorities, the GLA and Defra.

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

Table 3.1 Consultation Undertaken

Yes/No	Consultee
Yes	the Secretary of State
Not relevant	the Environment Agency
Yes	Transport for London and the Mayor of London (who will provide a joint response)
Yes	all neighbouring local authorities
Yes	other public authorities as appropriate
Yes	bodies representing local business interests and other organisations as appropriate

6 The Air Quality Action Plan

Actions to improve air quality are split into five categories:

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

This section sets out the five themes in turn, highlighting key achievements and work we will be prioritising as part of this Air Quality Action Plan. The five themes are overlapping, for example a Quieter Neighbourhoods Scheme will not only aim to reduce emissions from transport, but will also raise awareness of sustainable travel modes, require extensive partnership working both within Enfield Council and potentially with neighbouring authorities and TfL, and will also require monitoring in order to evaluate its effectiveness. For this reason, some actions are likely to appear in more than one category. As part of its statutory London Local Air Quality Management duties, the GLA has produced an air quality matrix with 25 actions for boroughs to consider within the action planning process. Enfield is committed to taking forward 23 of the 25 the actions in this matrix. The two actions not progressed from the GLA actions matrix are discussed in Appendix C.

All of the actions are described in Appendix A, which include:

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

6.1 Reducing emissions from Transport

Reducing emissions from transport is a key priority. Transport is the biggest, single source of pollution in the borough, particularly where air quality objectives are not met. As outlined earlier, our priority is to accelerate modal shift to active forms of travel and away from private vehicle use. It is recognised that not all of the Enfield population will be able to switch to active travel, so for remaining trips, a switch to electric vehicles will reduce emissions further. Transport is, however, also an area of emissions we have limited control over. For example, on issues ranging from the tax regime for diesel vehicles (responsibility of central Government), allowable emissions from taxi's and buses (responsibility of TfL and the Mayor of London) to traffic management on the North Circular Road (responsibility of TfL). We will, however, commit to reducing emissions where we are responsible. Where we are not responsible we will work in partnership, where possible, with the relevant authorities to bring forward changes to improve air quality. In terms of the Enfield fleet we are committed to electrifying the entire fleet by 2030.

The following are key Actions from the Air Quality Action Plan:

- Implementation of schemes to support cycling and walking borough-wide and a series of additional routes that will connect to these major projects, developing a cycling network across the borough. These are complemented by other actions such as cycle training, cycle checks, guided rides, cycle parking and cycle hubs.
- Continue with electrification of the circa 300 vehicles in the borough fleet, with 60% of the Council fleet electric by 2026 and 100% by 2030, although this may not be entirely possible as some specialist vehicles currently do not have electric models;
- Continue to deliver STARS and Schools Streets at schools in Enfield;
- Manage growing demand for on-street parking; and
- Continue to support the roll out of electric vehicle charging infrastructure.

6.2 *Reducing emissions from Buildings and New Developments*

We will mitigate and minimise emissions from both existing buildings and from new development using a combination of policy, partnership working, and specific projects and interventions. Much of the recent attention in terms of policy on air quality has focused on transport emissions; policies to increase modal shift to active travel and Mayoral policies such as the ULEZ mean that as transport emissions decrease, emissions from buildings will proportionally rise. As a result, we are committed to reducing emissions from the built environment. Emissions from current building stock are mainly from gas boilers. Emissions from construction works are key sources of particulate matter and can cause localised spikes in pollution. The new Local Plan will provide the policy background to how we will reduce emissions from new development, being enshrined in a variety of planning policies. The work on reducing emissions from buildings (both existing and within new development) will be in collaboration with measures to reduce greenhouse gas emissions. In addition, policy SI1 in the London Plan provides for a new concept of ‘Air Quality Positive’ which aims to ensure that major new developments are designed and built, as far as is possible, to improve local air quality and reduce the extent to which the public are exposed to pollution.

The following are key Actions from the Air Quality Action Plan:

- Ensuring that the emerging new Local Plan fully considers emissions from future development in the borough;
- Enforcing planning conditions to ensure that the reduction of emissions from construction and NRMM in line with GLA requirements under the London Plan;
- Enforce Air Quality Neutral and Air Quality Positive in line with the London Plan to reduce the impacts of cumulative emissions over time and ensuring the concept of “better by design”;
- Ensuring adequate green space within new developments, in line with Enfield’s Blue Green Strategy; and
- Continue with the long-term investment in Council Buildings to reduce both Greenhouse Gas and local air quality emissions.
- Support the retrofit of existing buildings including by making them more energy efficient, decarbonising heat sources and increasing renewable energy generation.

- Enforce the Smoke Control Zone.

Case study – Update of the new Local Plan

Work on a new Enfield Local Plan has commenced so that the Council can proactively plan for appropriate sustainable growth, in line with the Mayor of London’s “good growth” agenda, up to 2039. The new Enfield Local Plan will establish the planning framework that will ensure projected levels of growth alongside the delivery of key infrastructure projects. As a local planning authority, Enfield needs to ensure that it has effective plans in place to meet the housing needs of the borough, accommodating for both existing and future residents up to 2039. An Air Quality Assessment is being undertaken to support the future spatial growth options for the borough, and will be considering the role of the emerging Local Plan in minimising air pollution (including supporting reduced air pollution in existing hotspots and avoiding the creation of new air pollution hotspots); contributing to the achievement of the national and London- wide targets; the potential exposure of future occupants of the proposed site allocations to poor air quality; and the role of the emerging Local Plan in exposure in minimising inequalities in levels of exposure to air pollution. There is currently a strong correlation between areas of poor air quality and areas of social deprivation, with the east of the borough particularly affected. It is anticipated that this work will provide an up to date baseline of concentrations across the borough on which to base this Action Plan, and will also be pivotal in ensuring that the Local Plan does not cause an unacceptable deterioration in air quality at any sensitive locations.

6.3 Lobbying and Partnership Working

As a local authority, we cannot tackle the problem of air pollution alone. Many of the contributors to pollution in Enfield are not within our control, and in many cases the measures which have the greatest impact need to be implemented at a wider scale. Although the measures outlined in this Air Quality Action Plan are those we have an influence over, wider collaborative working will provide a greater impact in improving air quality. As a result, we will continue to work collaboratively across our borough, and also with other London boroughs, and more widely at a London level with the GLA and TfL. In addition, we will lobby for greater action where we feel that others can contribute more. This may be through consultation processes with the GLA and Defra, or through more direct working relationships. For example, we will continue to work with TfL to ensure that public transport coverage is adequate across the borough. Some examples of collaborative working include the Mayors Air Quality Grant funded projects such as the ‘Vehicle Idling Action’ campaign. We will also maintain close working relationships with planning, transport, public health and climate change colleagues on a day-to-day basis and collaborative working with schools on different elements of school streets, monitoring and travel plans.

The following are key Actions from the Air Quality Action Plan:

- Continue to work collaboratively across the borough, particularly with Public Health, Planning, Transport and Climate Change colleagues;

- Where possible, work with TfL where projects are identified to improve conditions on the north Circular, for example to relieve congestion or reduce traffic, or to improve public transport provision;
- Undertake projects to improve air quality, or reduce exposure with other London Boroughs, for example the London Wide ‘Vehicle Idling Action’ campaign; and
- Through the procurement process, work with suppliers who are committed to switching to low or zero emission modes of transport.

Case Study – collaborative project with Bowes Primary School

Bowes Primary School, with the support of Enfield Council, secured £10,000 in funding for schemes which will reduce pollution in and around the site on the North Circular Road. The school has extended an existing green wall and provided further cycle parking with the additional funding. The £10,000 award is part of the Mayor of London’s School and Nurseries Air Quality Audit Programme where 50 primary schools in London were audited with the aim of reducing emissions and children’s exposure to polluted air.

6.4 *Raising Awareness*

Awareness raising in Enfield is centred around behaviour change to active modes of travel. We will continue to work with residents and businesses to encourage small changes that will both reduce the contribution to emissions and help reduce peoples’ exposure to poor air quality. Increasing public understanding of the sources and effects of air pollution can also influence changes in behaviour which can help improve air quality. The impacts of awareness raising projects on behaviour can be difficult to measure. However, messaging around increasing public awareness of air pollution tie in with wider Council behaviour change priorities: i.e., the importance of supporting healthy lifestyles through increased walking and cycling. Working collaboratively with Public Health colleagues is particularly important as a way to increase awareness around air pollution; health professionals are trusted and independent voices who are able to help us reach out to members of the community that are most adversely affected by air pollution, such as the elderly, and those who are hardest to reach, such as those whose English is not their first language. In some cases, the Covid 19 pandemic has heightened awareness to air quality issues.

The following are key Actions from the Air Quality Action Plan:

- Work collaboratively with public health teams in raising awareness of air quality through specific projects such as Cycle Enfield;
- Work with the Borough’s Communications Team to promote the air quality work being undertaken by Enfield Council;
- Work with schools to promote walking and cycling through the scheme;
- Work with businesses through the Climate Action Plan, with a focus on SME’s to encourage active travel to work; and

- Through the LAQM process ensure that data and progress with measures is publicly available, including documents like this one.

Case Study – [“Vehicle Idling Action’ campaign](#)

Vehicle Idling Action is a London-wide behaviour change campaign which is helping to reduce localised air pollution caused by motorists leaving their engines running when parked. The project has expanded to 31 boroughs including Enfield. The project includes the delivery of idling action events, in which teams of volunteers, local authority officers and project staff work to educate both motorists and pedestrians. School workshops are also being delivered and engagement with businesses, offering vehicle fleet training, whilst working with all local authorities to ensure idling regulations are enforced across London. There have been 14 action days in Enfield to date with more planned in 2022. No enforcement notices have been served during the events; with the emphasis on education of drivers on the effects of idling vehicles on pollution levels and the health of children rather than a fine-based approach.

6.5 *Monitoring*

We will utilise our air quality monitoring to not only assess compliance with Government set objectives, but importantly to support and evaluate our policies and projects. Monitoring is also used for verification of air quality models in order that they perform correctly. We will continue to share our data as part of the London Air Quality Network and support the [Breathe London](#) network, which is using sensor technology to provide publicly accessible data across London. More details on current pollution levels were described earlier in this Action Plan. Monitoring air quality is crucial to our statutory duties within the Local Air Quality Management regime.

The following are key Actions from the Action Plan:

- Continue monitoring using both automatic monitors and diffusion tubes, focussing on pollutants of concern;
- Ensure that interventions such as School Streets and Quieter Neighbourhoods Schemes are monitored at key locations, with long term data sets; and
- Explore the possibility of using different monitoring technologies for different purposes.

Case study – School Streets monitoring

As an example of an innovative monitoring project, AQC, working with partners of the “Breathe London” project carried out monitoring at sites in Enfield over a period of 12 weeks in order to assess the impacts of the School Streets intervention. Sensors were installed adjacent to, and at the ends of, sections of road that were closed at certain times of the day on school days as part of the School Streets initiative. Comparator sites were also installed outside schools where no interventions were implemented.

The confounding effects of the COVID-related traffic restrictions and day-to-day changes in the weather have made it difficult to identify the precise effects of many of the individual interventions. However, at some sites, a clear benefit was identified. The comparison of concentration profiles at similar sites (typically one with a School Streets intervention and one without), has identified average reductions in NO₂ during the school drop-off period, estimated as being up to 23%. The morning intervention alone is thus expected to have reduced daily average NO₂ by up to 2%. Full report is available [here](#).

Appendix A. Air Quality Action Matrix

Following guidance from the GLA, the actions set out in the Air Quality Action Matrix within the GLA template have been grouped into seven categories: Air pollution monitoring; Emissions from developments and buildings; Public health and awareness raising; Delivery servicing and freight; Borough fleet actions; Localised solutions; and Cleaner transport.

Table A.1 Air Quality Action Plan

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
Air Pollution Monitoring	1	Continue to monitor air quality and ensure the network of monitoring sites is appropriate	Development Management (Principal Officer, Pollution)	Medium - 2	Ongoing	Data for automatic monitoring sites to be published on the Londonair website. Ensure maintenance of all existing monitors and over 90% data capture. Seek funds/opportunities to add new monitors where possible.	The automatic monitoring sites and passive sites provide data for both background and roadside locations in the borough.
Emissions from developments and buildings	2	Ensuring emissions from construction are minimised	Development Management (Principal Officer, Pollution)	Medium - 2	Ongoing	Ensure 100% of major developments have a construction management plan to control dust and emissions during construction and demolition	Undertaken through reviewing planning applications, with conditions applied in relation to SPG on the control of dust and emissions from construction and demolition. Visits to construction sites are complaint based. When complaints occur, compliance with planning conditions and nuisance requirements are checked.
Emissions from	3	Ensuring enforcement of	Development Management	Medium - 2	Ongoing	100% of sites registered on the	Conditions relating to NRMM applied as above. Condition applied to anything with construction.

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
developments and buildings		Non Road Mobile Machinery (NRMM) air quality policies	(Principal Officer, Pollution)			NRMM website to be inspected through the London-wide NRMM project 100% of relevant planning applications to include the appropriate NRMM planning condition.	
Emissions from developments and buildings	4	Reducing emissions from CHP	Development Management (Principal Officer, Pollution)	Medium - 2	Ongoing	100% of relevant planning applications to have an air quality assessment for CHP and Biomass, with mitigation included, where necessary	Where CHPs and biomass are proposed, planning conditions applied. CHP tend to be gas fired, very few biomass applications.
Emissions from developments and buildings	5	Enforcing Air Quality Neutral policies	Development Management (Principal Officer, Pollution)	Medium -2	Ongoing	100% of relevant planning applications to have an air quality neutral assessment	AQN reviewed through Air Quality Assessments for planning applications. In the cases where applications are not AQN, review with planners re measures required. Very few non-compliant applications.
Emissions from developments and buildings	6	Ensuring adequate, appropriate, and well located green space and infrastructure is included in new developments	Development Management (Planning Service)	Low - 3	10 year plan for Enfield's Blue and Green Strategy - longer for Climate Change Action Plan	Blue Green Strategy has 7 aims with specific targets for monitoring. Also monitored through Climate Change Action Plan	Draft Local Plan has section on Blue and Green Spaces and six associated policies. Draft Blue Green Strategy (https://letstalk.enfield.gov.uk/blueandgreen) also available. Both set ambitious targets and link with Climate Change. Enfield aims to be internationally recognised as the greenest borough in London at the cornerstone of London's national park. Climate change action plan has target that by 2040 net

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
							increase in green infrastructure of 25% compared to 2020.
Emissions from developments and buildings	7	Ensuring that Smoke Control Zones are appropriately identified and fully promoted and enforced	Development Management (Principal Officer, Pollution)	High - 1	Ongoing	100% of complaints related to smoke control areas to be investigated and appropriate enforcement action taken where necessary	The whole borough is covered by Smoke Control Area Orders. Enforcement of Smoke Control Zones is reactive (complaints based). For domestic complaints, the envirocrime team send warning letters about the Smoke Control Zone. For commercial premises, warning letters are sent (following the Clean Air Act Section 20).
Emissions from developments and buildings	8	Promoting and delivering retrofit projects.	Climate Action and Sustainability	Medium - 2	Ongoing - existing programme to improve corporate buildings alongside wider Retrofit London Programme	All Enfield Council buildings to be an average of EPC B by 2030	There is an ongoing programme of upgrades to corporate buildings, the current round of which is delivering interventions including insulation, heat pumps and solar PV to a number of sites, including the Civic Centre. The current focus is on residential properties, with an Action Plan launched in October 2021.
Emissions from developments and buildings	9	Master planning and redevelopment areas aligned with Air Quality Positive and Healthy Streets approaches	Development Management (Planning Service)	Medium - 2	Ongoing	Masterplans will align with Air Quality Positive and Healthy Streets approaches	The most recent adopted masterplans are for Enfield Town and Meridian Water. Both include elements of the Healthy Streets approach. Future masterplans will be aligned with Air Quality Positive and Healthy Streets approach.
Emissions from	10	Carry out air quality	Healthy Streets Team	Low - 3	Ongoing	100% of all Low Emission	There are currently 2 Low Emission Neighbourhoods and their impact is undergoing assessment.

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
developments and buildings		assessments of the impact of the existing Low Emission Neighbourhoods and any future schemes				Neighbourhoods to have an air quality assessment of the impacts	
Public health and awareness raising	11	Director of Public Health to sign off Statutory Annual Status Reports and all new Air Quality Action Plans	Public Health	Low - 1	Annually for ASRs, 5 yearly for AQAPs	Inclusion in governance process for LAQM reports.	DPH will sign off LAQM reports such as ASRs and AQAPs. This will also have some influence on the air quality workstream (and vice versa) and ensure that public health are up to date with current air quality concentrations and trends.
Public health and awareness raising	12	Engagement with businesses	Climate Action and Sustainability and Economic Development	Low - 3	Ongoing	The number of businesses being engaged will be defined in the next iteration of the Council's Climate Action Plan which is being developed.	The Climate Action Plan includes actions around engaging with businesses both as suppliers to the Council and as part of economic development work. A Sustainable and Ethical Procurement Policy is being developed which includes climate action requirements for suppliers. There is also ongoing engagement with businesses, including looking at the opportunities for transitioning to green sectors and skills.
Public health and awareness raising	13	Promotion of availability of airTEXT	Development Management	Medium - 2	ongoing	Maintain membership of AirText	Currently part of the the AirText consortium but no specific promotion of the service.
Public health and awareness raising	14	Encourage schools to join the TfL STARS	Traffic and Transportation	Medium - 2	Ongoing	There are 42 schools with STARS:	Delivering STARS and School Streets under Enfield Transport Plan 2019: Objective 2: Promote safe,

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
		accredited travel planning programme				26 Gold 1 Silver 7 Bronze 8 Engaged There are no specific targets for increase in schools but the team engage with all interested schools and continuously promote the scheme.	active and sustainable transport to and from schools.
Public health and awareness raising	15	Implement School Streets in appropriate locations to improve air quality at schools	Traffic and Transportation	Medium - 2	Ongoing	There are 14 Schools Streets with plans for a further 10 in 22/23 and another 10 in 23/24.	School Streets being implemented.
Delivery servicing and freight	16	Reducing emissions by working with suppliers who are committed to switching to low or zero emission modes of transport	Procurement Services	Low - 3	Ongoing	Through the procurement process.	The draft Enfield Sustainable and Ethical procurement policy focusses on four main themes: social value, ethical procurement, supporting the local economy and climate action. Where relevant and proportionate, sustainable logistical measures may be required, dependant on the specific contracts being let.
Borough fleet actions	17	Reducing the emissions from the Council's fleet	Fleet Services	Medium - 2	100% of vehicles to be EV by	60% fleet to be EV by 2025/26, 100% of vehicles to be EV by	The Council actively updates the vehicle fleet, the exception to electric vehicles will be specialist vehicles which do not have electric models.

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
					2030 (where appropriate models are available)	2030 where appropriate models are available	
Localised solutions	18	Green Infrastructure	Development Management (Planning Service)	Low - 3	10 year plan for Enfield's Blue and Green Strategy - longer for Climate Change Action Plan	Climate change action plan has target that by 2040 net increase in green infrastructure of 25% compared to 2020	Draft Local Plan has section on Blue and Green Spaces and six associated policies. Draft Blue Green Strategy (https://letstalk.enfield.gov.uk/blueandgreen) is also available. Both set ambitious targets and link with Climate Change. Enfield aims to be internationally recognised as the greenest borough in London at the cornerstone of London's national park.
Localised solutions	19	Low Emission Neighbourhoods (LENs)	Healthy Streets	Low - 3	Ongoing	Number of schemes implemented	Quieter Neighbourhoods aims to reduce the volume of motor traffic in residential neighbourhoods, reduce the speeds that people drive at on our residential streets, reduce the ability for people driving to 'rat run' through residential streets thus enabling residents to walk and cycle safely from their front door, to connect with public transport or major walking and cycling routes. Quieter Neighbourhoods and the wider Healthy Streets programme will therefore increase walking, cycling or using public transport for short trips in the borough. The Quieter Neighbourhoods programme has been refocussed to follow the main road corridors, with flexibility where necessary to address local priorities.
Cleaner transport	20	Discouraging unnecessary idling by taxis and	Development Management (Principal	Medium - 2	Ongoing	Undertake anti idling events with schools	The London-wide project came to an end in 2022, the Healthy Streets Team has good connections with schools and where schools are interested in running

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
		other vehicles through anti-idling campaigns or enforcement activity	Officer, Pollution)			where help is requested	some form of anti-idling event we will provide assistance, where possible.
Cleaner transport	21	Ensure that transport and air quality policies and projects are integrated	Traffic and Transportation	Medium - 2	Ongoing	Integrating policies and projects will ensure maximum benefits for air quality improvements	The link between air quality and transport policies has been established for many years in Enfield and this will continue to be the case going forward. This is achieved through regular meetings and joint working on projects such as school streets.
Cleaner transport	22	Regular Car Free Days	Traffic and Transportation	Low - 1	Ongoing	Number of road closures applied for per year. The Council will support play streets but there are no fixed targets as applications are not in our control	The Council support play streets which can be applied for usually on the basis of 1 day per month for a year, the council will cover the cost of 1 road closure per year linked to specific events (eg world car free day)
Cleaner transport	23	Installation of residential electric charge points	Traffic and Transportation	High - 1	Ongoing	The total number of electric charging points in the borough to be 250 by 2025. There are currently 161 charging points in the borough	Enfield Climate Action Plan includes the vision: 'There will be enough electric vehicle charging provision to enable people to choose electric vehicles if they have their own vehicle'. Research showing Enfield likely to need more than 250 additional charging points. Currently this action will include council managed points (car parks and on street). Grants also available to homeowners (Electric Vehicle Homecharge Scheme).
Cleaner transport	24	Installation of rapid chargers to help enable the	Traffic and Transportation	High - 1	2030	installation of 5 rapid charging hubs by 2030. There is 1	The installation of rapid charging hubs will encourage the uptake of electric vehicles by allowing operators to recharge their vehicles quickly.

Action category	Action ID	Description	Responsibility	Expected benefit	Timescale	Targets & outcomes	Further information
		take up of electric taxis, cabs and commercial vehicles				rapid hub in the borough	
Cleaner transport	25	Provision of infrastructure to support walking and cycling	Healthy Streets	High - 1	Ongoing	Ensuring that the KPIs in the LIP programme are met	The provision of cycling and walking infrastructure is ongoing. There are several large-scale plans which are dependent on funding being secured.
Localised solutions	26	Inspect authorised processes in line with the risk based approach	Development Management (Principal Officer, Pollution)	Medium - 2	Ongoing	Complete 100% of inspections due each year	Risk based approach used to determine which processes are due inspections
Localised solutions	27	Continued enforcement of the smoke nuisance provisions of the Environmental Protection Act 1990	Envirocrime & Pollution Control	Medium - 2	Ongoing	Investigate 100% of complaints received and take the necessary enforcement action where necessary	The Council investigates all smoke nuisance complaints and takes action to resolve any issues found.

Appendix B Response to Consultation

Table A.2 Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
GLA	Statutory	<p>Action 1 add: Ensure maintenance of all existing monitors and over 90% data capture. Seek funds/opportunities to add new monitors where possible</p> <p>Action 2 change ‘all’ for 100%</p> <p>Action 3 add: 100% of relevant planning applications to include the appropriate NRMM planning condition.</p> <p>Action 5: The planning section is missing action 9 from the matrix – it either needs to be included or an explanation added in the table below as to why it isn’t included.</p> <p>Action 11: needs to include some air quality specifics here and/or targets of how many businesses will be engaged with.</p> <p>Action 13: Needs to include current numbers of schools signed up and a target for increase in schools/awards.</p> <p>Action 14: This should also include information on any plans around AQ audits as per action 14 in the matrix; needs current numbers and any targets/plans; I’m not aware of any MAQF school streets projects in Enfield.</p> <p>Action 16: Add the dates from the column on the right in here.</p> <p>Action 19: This project has come to an end – although it will still co-ordinate some activity it will be limited – will Enfield continue to provide some of the interventions?</p>

		<p>Action 20: Need to say (either here or in adjacent column what/how this is achieved – e.g. is it through regular meetings/working groups? Shared objectives.</p> <p>Action 21: Change title to ‘Regular Car Free Days’ as per new matrix; add in target (based on info in adjacent column?).</p> <p>Action 22: Good clear target – please just state how many there are at the moment.</p> <p>Action 23: Ditto,</p>
Epping Forest District Council	Statutory	<p>Thank you for consulting Epping Forest District Council with regards to LB Enfield’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 that impact both human health and the Epping Forest Special Areas of Conservation (EFSAC).</p>
Borough of Broxbourne	Statutory	<p>Thank you for consulting the Borough of Broxbourne with respect to your AQAP.</p> <p>There are a lot of positive actions in this.</p> <p>Re: Action ID 24, there are various Cycle route projects which have either been completed or are pending within the Borough of Broxbourne. I would recommend contacting our Head of Infrastructure and Regeneration, to ensure any cycling infrastructure schemes within Enfield will complement those within Broxbourne and vice versa.</p>
EnCAF	Public	<p>Enfield Climate Action Forum (EnCAF): Response to Enfield Council’s Draft Air Quality Action Plan (AQAP) 2022</p> <p>Introduction</p> <p>EnCAF welcome the fact that a new action plan to improve air quality in Enfield is in the process of being developed. As an umbrella organisation which includes more than one hundred affiliated local groups and EnCAF sees it as our civic responsibility to contribute to the discussion on how to tackle air pollution in our borough, even though we have not been included in the ‘official’ list of consultees. Our response here is based on the assumption that this initial draft will undergo a number of improvements and we hope that our suggestions and recommendations will help to create an AQAP which incorporates the views and the concerns of the residents of</p>

Enfield and not just the statutory requirements expected from the council. We believe that an ongoing public engagement is essential for its progression and successful implementation, and we see our contribution as part of this engagement.

The introduction to the 2022 Draft AQ Action Plan says “We have worked hard to engage with stakeholders and communities which can make a difference to air quality in the borough.” It is thus very regrettable that the Council has failed to widely publicise this consultation or engage with stakeholders in the community in developing this draft plan. We are disappointed to note that it does not appear on your website under the Consultations section and that Enfield Climate Action Forum found out about it by chance (as it was a tiny item on the Pollution page of the council’s website). We also note that the consultation period coincides with local elections and purdah. We therefore urge the Council to consider ensuring that community groups have further opportunity to feed back to the process when an updated draft AQA report is produced and before it is finalised.

Part 1: General Recommendations

1. Update the sources of information used by this initial draft. Whilst we commend the “Air Quality in Context” part of the plan, we also found that important information with regards to the Enfield context is now out of date or has been overlooked. We especially recommend that the authors consider the following:

A. London Atmospheric Emissions Inventory 2019 (the 2016 version is now dated)

The study of Enfield’s emissions in this updated Inventory shows that a comprehensive approach to air quality in our borough requires full consideration of emissions not only from transport but from other significant sources of air pollution, such as:

- **70% of PM_{2.5}** emissions in the Domestic sector come from **wood burning**. A public health campaign to tackle air pollution needs to set some clear actions and targets in this area.
- Engagement with the Industrial and Commercial sector must also be given priority, given that its **nitrogen oxides emissions are roughly equal to the ones from transport – 47%**.
- The same can be said about the Construction sector, as it produces **50% of PM₁₀** emissions from the industrial sector.
- **61% of nitrogen oxide emissions from the Industrial sector** in Enfield come from the Edmonton Incinerator (euphemistically described as ‘Industrial Processes Part A1’). It is rather incomprehensible that an AQAP has nothing to say about the pollutants from a waste incinerator which is able to operate in our borough. Such pollutants include not only nitrogen dioxide and particulates but also other toxic substances such as dioxins and heavy metals.
- See also Appendix A below with the GLA key recommendations on PM_{2.5} emissions calling for “an increased focus on **non-transport emissions**”.

B. Enfield Air Quality Appraisal (Vol. 1, 2 & 3)

It would also be necessary that the new AQAP takes note of the findings of this independent report from air quality consultants WSP, commissioned by the council. *“Proposed site allocations for development within Enfield were assessed for potential exposure of future occupants to poor air quality”*. In particular it would seem very important that Enfield’s AQAP takes notice of the following findings:

- Out of the total 48 sites designated for development, with a total of 23,428 housing units, 18 sites and 14, 806 housing units would potentially expose future residents to poor levels of air quality. This represents **63% of the total housing units** proposed in the draft Local Plan. (our italics)
- The potential air quality impact on the local area was examined at 65 sites and found that at **38 sites** there will be a **significant negative effect**. (our italics)
- The risk assessment of adverse impacts at designated ecological sites found that 2 sites would be exposed to moderate risk (Lea Valley Ramsar, South, and Wormley Hodderson Park Woods), whilst Epping Forest Special Area of Conservation will be exposed to high risk of air pollution.
- The report also noticed that Council’s “monitoring coverage is limited” and that it was necessary to rely on modelling undertaken by the Greater London Authority for 2016 right across London in order to identify the Air Quality Focus Areas in the borough. Particularly notable being areas alongside the M25, the A406 North Circular, the A10 Great Cambridge Road and the A1055 Bullsmoor Lane.

These findings must be included in the new AQAP. The plan also must include a full set of proposals on the **measures necessary to protect new, as well as existing residential population from poor air quality once the new Local Plan is finalised.**

Other updates to be incorporated:

A new report by [City Hall](#) published in January this year revealed that from 2016-2019 nitrogen oxide emissions in the outer boroughs reduced at just half the rate compared to both central and inner London boroughs.

The percentage reduction in particulate matter (PM.10) was also 10 times greater in inner and central London than in outer London and the percentage reduction of fine particulate matter (PM2.5) was five times greater in central London than in outer.

These findings are a signal that Enfield (an outer borough) needs to significantly increase its efforts to tackle air pollution, and that more resources need to be dedicated to deal with this serious public health problem.

The same research also showed that those exposed to the worst air pollution are more likely to be deprived Londoners and from black, Asian and minority ethnic communities.

However, the present draft has ***no actions specifically aimed at improving air quality in deprived communities***, especially in the east of the borough. Such actions need to become an essential part of the plan: first by by acknowledging the exposure to high level of pollution in areas near the North Circular Road, Bowes Road, Fore Street, Montagu Road and other areas near the Edmonton incinerator; and secondly by setting out a clearly drawn ***strategy*** on how these areas could become ***more protected from air pollution***.

2. The role of local authorities:

- It is essential to refer to the new Environment Act 2021 and explain how this central piece of legislation affects the role of local authorities in tackling air pollution.
- It would be helpful to outline clearly which other regional and national authorities have statutory responsibility in the management of different types of roads and define clear actions on how the council intends to work with these to reduce air pollution from transport.

3. Collaborative approach

- More clearly defined aims and measurable objectives would be very helpful, even if these will be carried out by other departments in the council.
- Emphasise the public health department's co-leading role and shared responsibility for air quality issues as well as the implementation of the AQAP. This should be reflected in the council's Public Health Strategy in a concrete way and highlighted in this AQAP.
- Given the high profile recognition of air pollution as a public health emergency, a joint public health campaign on air pollution coordinated with all council departments and led by Public Health to be initiated as soon as possible.
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4. Engagement with stakeholders.

This AQAP should also describe how the council plans to engage with all sectors of society. For example the council could identify local businesses as well as community-led initiatives that tackle air pollution and provide them with publicity, guidance and whatever support is available. This in turn could inspire other groups and individuals to become engaged with the issues of air pollution in a constructive way.

5. Language and terminology

	<p>To foster positive engagement with the public in Enfield, the AQAP will benefit from providing user friendly information and explanations through and through, to ensure that the plan becomes more accessible to the public. We propose:</p> <ul style="list-style-type: none"> • Explanations on the legal limits of air pollutants on one hand and the need for tighter air quality targets in the light of the new WHO guidance on the other. Last year WHO recommended new, much lower limits to permitted levels of NO₂, PM₁₀ and PM_{2.5} <i>in recognition that there are no safe limits for these and other air pollutants</i>. This should be included and explained. • Clear explanations and definitions are also needed for 3 politically sensitive concepts: <i>Low Emissions Neighbourhoods</i>, <i>Healthy Streets</i> and <i>Quieter Neighbourhoods</i> (action 9 & 18). There seems to be a tendency to use these terms as interchangeable and thus create unnecessary confusion. If there is an overlap, this should also be explained. With regard to achieving these actions, it is necessary to have clear and concretely defined targets, including time scales. This could be very helpful especially in the light of the fact that so far the <i>Quieter Neighbourhood</i> schemes have resulted in only a very minor change in concentrations of nitrogen dioxide. • Many actions are vague and lack concrete information such as at the locations where they should occur as well as the time frame; most are designated as “ongoing”, even where it would be possible to define annual targets. This entails the risk of undermining the credibility of the action or target or both. • It is assumed that this plan is intended to inform the public and not just for bureaucratic consumption. Hence it is recommended to reduce the amount of bureaucratic terms and phrases as these will not help to engage the public. <p>6. Resources:</p> <ul style="list-style-type: none"> • It is clear to us that there is now urgent need for Enfield council to increase the resources allocated to tackling air pollution. • Such resources could be used to recruit more employees with relevant skills to work in the Air Pollution Office. • Use this increased capacity to join (among others) initiatives generated by the GLA, identify sources of funding for such initiatives as well as develop targets which are measurable and time sensitive. <p>7. Some targets for Enfield Draft AQ Action Plan, as recommended by the GLA (see Appendix A):</p> <ul style="list-style-type: none"> • Meet the interim WHO target of 10ug/m³ by 2030 for PM_{2.5} • Prioritise PM_{2.5} monitoring • Include clear measurables and targets in AQ Action Plans • Communicate pollution alerts <p>The GLA made a specific recommendations for North London boroughs:</p>
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- All boroughs could consider following Waltham Forest in monitoring PM2.5 to ensure the objective is achieved and to assess the effectiveness of their PM-targeted action plan measures [WF introduced a new automatic PM2.5 monitoring site in 2020].

There is no evidence that these recommendations have been addressed in this draft AQAP which does not, for example, include any plan to instal a PM2.5 automatic monitoring site.

Part 2: Areas of Action

The Draft Plan identified 5 areas for developing actions:

- 1. Reducing emissions from transport**
- 2. Reducing emissions from buildings and developments**
- 3. Raising awareness so that the public acts to lower emissions and to reduce exposure to air pollution**
- 4. Lobbying and partnership working**
- 5. Monitoring air quality to assess compliance with Government objectives as well as support and evaluate local policies and projects.**

In addition the Draft Plan singled out the following priorities:

- Accelerate shift to active modes of transport – walking and cycling, and away from private vehicle use, through school streets and low traffic neighbourhoods/healthy streets; alongside switching to electric vehicles, accessible public transport, improved EV infrastructure.
- Use the planning system to reduce emissions from new developments and buildings; programme of improvement of council buildings
- Continue collaboration with public health, transport, planning and climate change departments so that “air quality is considered within these other policy areas”.
- Engage with stakeholders and communities.

The proposals that follow refer to the above framework and priorities:

Reducing air pollution in areas of social deprivation and poverty should be included in the list of the Plan’s priorities. Specific actions, targets and measures are urgently needed to protect the communities affected and which are know to include high percentages of people from black, brown or other racial or ethnic groups.

Air Quality Monitoring.

It is clear that this area requires urgent improvements:

- Recognise (in actions and not just in words) that data gathering through monitoring is essential to any effective plan of action.
- Significantly expand the monitoring of NO₂ and particulate matter thus sending a clear message that Enfield takes the issue of air pollution as central in its overall strategy.
- Expand monitoring especially around schools, nurseries, playgrounds and care homes. Immediately start monitoring in the playgrounds of all schools situated near air pollution hot spots. Use the results as educational tools as well as to inform future action.
- As a matter of urgency, substantially increase the number of NO₂ diffusion tubes in areas other than schools, in order to obtain detailed, accurate and real (rather than modelled) information on the air pollutions situation in the borough and especially along roads with heavy traffic, such as A406, A10, Green Lanes, Church Street (Enfield Town), Southbury Road, Fore Street and other heavily congested roads.
- Introduce at least two more PM₁₀ monitors and at least one PM_{2.5} monitor as part of the automatic monitoring system as well as adding two more NO₂ reference sites to the automatic monitoring system.
- Consider also installing lower cost monitors for NO₂ and PM_{2.5}. This should be less of a financial burden than in the past, as sophisticated and relatively low cost devices have become available. Such monitors are connected to a live feed, which can be used to inform the public on the air quality situation locally, according to post code. Such monitors are available at a relatively low annual cost through the Breathe London project, supported by the Mayor of London.
- As the table below indicates, Enfield has a very limited number of monitoring sites, lagging behind many other London boroughs, and resulting in limited information available.

Enfield Council AQ Monitoring Comparison

Borough	Size	NO ₂ non-automatic monitoring sites	NO ₂ Automatic monitoring sites	PM ₁₀ Automatic monitoring sites	PM _{2.5} Automatic monitoring sites
Enfield (2022)	82.21 km ²	21*	4	1	0

Waltham Forest (2020)	38.82 km ²	59	3	3	1
Lewisham (2020)	38.82 km ²	96	5	3	3

**incl. 11 NO₂ diffusion tubes added in 2021 for traffic schemes*

- Monitoring locations should be representative of public exposure, *so that no distance adjustment is required when presenting the data.*
- Where schemes are introduced that may affect air quality, *robust baseline data* should be collected in advance of implementation.
- Surrounding roads should be monitored using NO₂ diffusion tubes where traffic has increased or is likely to increase due to a traffic scheme.
- Commitment to keep such monitoring sites in place for at least 3 years or until such time as the AQ shows consistent improvement
- Publicly available data on AQ monitoring should be available on the council's website, including information from the previous 5 years.

Monitoring around the Edmonton incinerator & nearby housing developments

- Commit to PM_{2.5}, PM₁₀ and NO₂ monitoring in dense housing developments near the Edmonton Incinerator.
- Investigate health issues in areas near the incinerator, including existing or proposed high rise blocks of flats with the help of academic institutions; these could undertake an independent study of health effects using biomonitoring research methods, which are the most reliable.

Transport

	<p>We identified public transport as an area of high priority to achieve the aim of reducing private cars. Thus working with TfL and the Mayor of London to achieve the following improvements should become also a high priority. We identified the following targets:</p> <ul style="list-style-type: none"> • Trains – improved frequency (as this has declined in the aftermath of the pandemic). If people have to wait a long time for trains they may choose to drive instead. Reduced train services have serious impacts on those who rely on these services and does not help the transition away from private car use. Enfield Council should work with TfL and train service providers to ensure that train services are improved. • Buses – increase the frequency of buses in areas where congestion has caused delays and, where possible, prioritise segregated bus lanes particularly at peak times. These measures are necessary in outer London in order for public transport to become a viable alternative to car use. • Buses – increase the number of bus routes in areas identified as poorly served by public transport. • Prioritise rolling out clean buses on the busiest roads, e.g., Fore Street, Green Lanes, North Circular etc. <p>Private car use:</p> <ul style="list-style-type: none"> • Consider council tax reduction or a bonus or other financial incentives for households choosing to give up existing cars. • Initiate or contribute to a campaign with London Mayor to make large SUVs an unfashionable choice in Enfield • Work hard to introduce a lot more car clubs in the borough (Waltham Forest has 72 car club bays) • Continue with sustained public campaign to discourage car idling, with specific yearly targets. • Work with London Mayor on the consultation to implement expansion of the ULEZ to outer London and lobby for a financial scheme to support those least well off to transition to cleaner vehicles. • Devise a strategy to roll out a 20 MILE PER HOUR LIMIT across the borough. • EV infrastructure: The aim of 250 charging points by 2025 and 4 rapid charging points by 2030 should be set out in year by year targets and should be monitored. All charging points should be dedicated for EV charging only as otherwise they will be used as parking spaces. Publish usage data for the EV chargers to assess effectiveness. Enfield is much behind other North London boroughs, such as Waltham Forest, with regards to developing this infrastructure and should consider increasing the target number of charging facilities to be implemented over the course of the plan.
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	<p>Roadworks:</p> <ul style="list-style-type: none"> • Consolidate roadworks and make them more efficient to reduce the traffic congestion they cause. • Fine companies who do not complete work on time. • Consider the effect on air quality when issuing work permits. <p>Walking and cycling:</p> <ul style="list-style-type: none"> • Publish an updated list of improvements required for walking and cycling infrastructure across the borough and an action plan to implement them. Ensure that walking paths <i>accessibility embraces the rights of those with disabilities and are wheelchair and pram friendly</i>. • Increase safe pedestrian crossings on busy roads, e.g., Fore Street and Bourne Hill, and introduce pedestrian crossing lights at all major junctions. Ensure pavements are regularly inspected and safe for pedestrians, prioritising improvements on those roads with highest usage. • Provide a network of cycle hire facilities • Set specific targets for increases in cycling, cycling to work and cycling to school and measure them. • Increase level of publicity of safe walking and cycling routes through sustained information in the council’s website and newsletters <p>Main road residents, employees and users:</p> <ul style="list-style-type: none"> • Address the air quality issues of people living on main roads since these residents, both adults and children, are at most risk of health conditions caused by pollution. Devise a strategy to address the high levels of pollution on main roads first before introducing any traffic scheme that would adversely affect residents and those who walk and cycle on these main roads, which are the most direct routes to get to school, work, shops and to access public transport. • Find out at-risk groups and have a strategy to protect vulnerable workers who spend a lot of time on the road e.g. bus drivers/delivery drivers, or work in businesses on streets with heavy traffic. • Offer green screens for homes, offices, shops and cafes facing main roads. <p>Schools, nurseries and care homes:</p>
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		<ul style="list-style-type: none"> • Continue to implement a borough wide School Streets programme. Parents 'focus groups could be useful to develop awareness and gain support in the community where school streets have less support. Use the results of extended monitoring described above to raise awareness and change behaviours such as idling, and strengthen support for school streets. • Produce a detailed strategy for mitigation for schools on main roads unable to join school streets programme (e.g., money for air filters/green screens). Green screens for schools near main/busy roads should be placed on the list of highest priorities in the Action Plan. • In high areas of pollution offer monitoring and mitigation advice for care homes and nurseries. <p>Greening:</p> <ul style="list-style-type: none"> • Tree Planting – consider putting measurable targets in the plan. Enfield Blue & Green Strategy says 500 street trees will be planted in 2022, but it is not clear how many are replacements and how many are new. • A sustained effort to plant more trees and shrubs in the streets, both residential and commercial, especially in the eastern and southern parts of the borough which have a significant deficiency of greenery and green spaces. There should be clear targets specifying locations and time scales. • Commitment to replace trees felled in any accounting so that the net increase in tree planting is clear. • Greening around schools, nurseries and care homes on busy roads should be given high priority and should be included in the Blue and Green Strategy. <p>BUILDINGS AND DEVELOPMENTS</p> <ul style="list-style-type: none"> • In the light of the fact that 50% of PM10 emissions in Enfield are produced in the Construction Sector, there needs to be an increased effort to ensure that all developments are subject to robust monitoring and enforcement. • Require that developers join the Considerate Constructors Scheme, to promote practices that reduce emissions from construction and demolition. • The Annual Status Reports should give a yearly account of progress in retrofitting and other improvements in buildings owned by the council, including council owned housing. • Produce a “How to” guide on insulation and heat pumps on the Council’s website for homeowners which could include average costs and endorse trusted providers in Enfield. Make it easy for the people who can afford it to make improvements on insulation, boiler switches and heat pumps, etc.
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- Promote any grant schemes that support residents in transitioning to energy saving, less polluting homes.

Domestic wood burning:

- Enforce Enfield’s Smoke Control Area Orders. Enforcement action needs to be pursued and resources should be allocated for this purpose. Make it easy for residents to report issues to the Council. Consider changing the focus of public messages on wood burning stoves, making wood burners an unfashionable choice and placing more emphasis on phasing them out and promoting less polluting, alternative heat sources.

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Appendix A: Extract from GLA LOCAL AUTHORITIES AND AIR QUALITY A summary of action taken by London boroughs to improve air quality in 2020 Published January 2022:

Key Recommendations

Priorities for the coming year should include:

- Meeting the interim WHO health-based target of 10ug/m3 by 2030 target for PM2.5. with an increased focus on non-transport emissions. All boroughs are encouraged to commit to and work towards this target alongside the Mayor. Please note that the GLA will also undertake research on how and when we will be able to meet the latest WHO targets for PM2.5 and NO2, which is likely to be published in summer/autumn 2022.
- Ensuring that the case for tackling air pollution is well understood within the council and with residents, to help secure existing resource and monitoring networks.
- When opportunities for providing additional monitoring arise, these should prioritise PM2.5 where possible.
- Working in partnership with the GLA and other boroughs and organisations to help maximise limited resources.
- Ensuring Air Quality Action Plans are up to date and include clear measurables and targets so success can be effectively assessed each year.
- Utilising local public health and communications channels to make residents aware of how to receive pollution alerts, and methods to limit their exposure. This will help to fulfil one of the key recommendations from the Coroner in his Prevention of Future Deaths report after the inquest into the death of Ella Adoo-Kissi-Debrah.

		https://www.london.gov.uk/sites/default/files/gla_compendium_report_final_jan_2022.pdf
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Appendix C Reasons for Not Pursuing Action Plan Measures

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

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Delivery servicing and freight	Reducing emissions from deliveries to local businesses and residents	The Council is not implementing such a policy.
Cleaner transport	Surcharge on diesel vehicles below Euro 6 standards for Resident and Controlled Parking Zone permits	The Council has no plans to implement this type of scheme.

Appendix D Monitoring Site Locations

Automatic monitoring sites



Diffusion tube monitoring sites

