

The London Borough of Hillingdon



Air Quality Action Plan, 2019-2024

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May 2019

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Abbreviations

AQ	Air Quality
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQNP	Air Quality Neutral Policy
AQO	Air Quality Objective
AQS	Air Quality Strategy
ASBET	Anti-social Behaviour and Environment Team
CHP	Combined Heat and Power
COPD	Chronic Obstructive Pulmonary Disease
DEFRA	Department for Environment, Food and Rural Affairs
EFL	Energy for London
EV	Electric Vehicle
GLA	Greater London Authority
HAL	Heathrow Airport Limited
HE	Highways England
HS2	High Speed 2 rail link
HWB	Health and Well Being
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LEZ	Low Emission Zone
LIP	Local Implementation Plan (transport)
LLAQM	London Local Air Quality Management
MAQF	Mayor's Air Quality Fund
MTS	Mayor's Transport Strategy
NO, NO ₂ , NO _x	Nitrogen monoxide, nitrogen dioxide, oxides of nitrogen (NO and NO ₂ combined)
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
RESPOC	Residents' and Environmental Services Policy Overview Committee
SMT	Senior Management Team
SPG	Supplementary Planning Guidance
STARS	Sustainable Travel: Active, Responsible, Safe (TfL's accreditation scheme for London schools and nurseries)
TfL	Transport for London
ULEV	Ultra low emissions vehicle
WHO	World Health Organisation

Foreword

Since the Council published its first Air Quality Action Plan in 2004, a significant number of actions have been undertaken to implement measures to improve air quality. Despite this, there are still areas within the borough where pollution levels are above the air quality limits set for health.

The Hillingdon Health and Wellbeing Strategy recognises that poor air quality increases the incidence of acute asthma and Chronic Obstructive Pulmonary Disease (COPD), and, that respiratory disease is the third highest cause of death in Hillingdon. It is therefore right that the Council should have a strong local focus on improving air quality. This Plan sets out a clear set of actions which aim to reduce emissions and prevent public exposure to pollution. We will be looking to our public health colleagues and health partners to help us raise awareness of the issue of air pollution and to jointly take forward actions to help protect the most vulnerable in our communities.

In regard to the causes of air pollution, the issue of road traffic is a common theme across London. In Hillingdon we have the additional burden of an international airport plus some of the busiest parts of the strategic road network such as the M4, the A40 and the Hayes Bypass over which we have no control. This is why our Plan has included clear actions on those responsible for these sources to play their part in helping deliver better air quality.

In addition there are the impacts of national infrastructure projects such as the construction of HS2 and the current threat of expansion at Heathrow which have been imposed upon us. These issues simply add to the pollution burden and the Council will continue its opposition to these major infrastructure projects which destroy our communities and add to the already unacceptable pollution levels.

Despite this we recognise there are actions the Council can take and these have been identified in this Plan. We have a clear set of priorities, which have been supported through our consultation process, such as improving the air quality around our schools, leading by example to improve our own fleet and buildings, using our planning policies to secure low emissions developments, improving our local neighbourhoods in a way that puts improving air quality as a key objective.

With this Plan we are putting in place actions over the next five years which will gain improvements where the pollution levels are the highest, but will also continue to put in place actions across the whole borough to bring about the added health benefits gained by our communities having better air quality.

Councillor Philip Corthorne

(Social Services, Housing, Health and Wellbeing)

Councillor Keith Burrows

(Planning, Transportation and Recycling)

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 the London Borough of Hillingdon between 2019 and 2024.

This action plan replaces the previous action plan which ran from 2004 to 2018. Highlights of successful projects delivered through the life-span of the past action plan include:

- all schools in Hillingdon now have travel plans;
- there are more dedicated cycle and walking paths to encourage active travel;
- there is focused use of the planning system to minimise the effects of new developments and secure improvements to proposals;
- residents and people working in the borough are able to sign up to a free pollution episode alert service;
- projects have been undertaken to use of green infrastructure to protect the vulnerable from pollution, for example at schools;
- there is borough-wide enforcement against idling vehicles;
- the adoption of cleaner vehicles has been encouraged both in Council operations and by the provision of the necessary infrastructure throughout the borough including in all council car parks.

Actions at the London level have also been beneficial, including the introduction of the London-wide low emission zone (LEZ), the use of cleaner technologies for buses and taxis, and guidance for local authorities for reducing emissions from construction sites and planning of new developments.

Air pollution is associated with a number of adverse health impacts. It is a contributing factor in the onset of heart disease and cancer. It particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. The Hillingdon Health and Wellbeing Strategy identifies respiratory disease as the third highest cause of death in Hillingdon. It is a contributory factor for at least 15% of hospital admissions, costing approximately £10m to the health service in Hillingdon annually, with additional costs of an estimated £5.7m in working days lost. Respiratory disease disproportionately affects people of lower socio-economic status due to lifestyle and environmental factors. As a result, Hillingdon Borough Council is committed to reducing the exposure of people in Borough to poor air quality in order to improve health.

In line with guidance from GLA, we have developed actions in under seven broad themes:

- **Monitoring and other core statutory duties:** maintaining monitoring networks is critical for understanding where pollution is most acute, and what measures are effective to reduce pollution. There are also several other important statutory duties undertaken by boroughs, such as the regulation of specific industrial processes, which form the basis of action to improve pollution;
- **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;

- **Public health and awareness raising:** increasing awareness can drive behavioural change to lower emissions as well as to reduce exposure to air pollution especially amongst those who are most vulnerable;
- **Delivery servicing and freight:** vans and lorries delivering goods and services often have high primary NO₂ emissions;
- **Borough fleet actions:** our fleet includes light and heavy duty diesel-fuelled vehicles such as mini buses and refuse collection vehicles with high primary NO₂ emissions. Tackling our own fleet means we will be leading by example;
- **Localised solutions:** these seek to improve the environment of neighbourhoods through a combination of measures; and
- **Cleaner transport:** road transport is the main source of air pollution in London. We need to incentivise a change to walking, cycling and ultra-low emission vehicles (such as electric) as far as possible.

The Council will prioritise the following actions that will be taken from 2019 to 2024:

- Lead by example in relation to emissions from the Council's fleet and building stock;
- Reduce public exposure and improve air quality around schools;
- Prioritise the implementation of improvement strategies in the AQ Focus Areas;
- Ensure the integration of Transport for London's Healthy Streets Approach in relevant council work programmes, ensuring that air quality is specifically addressed;
- Ensure the planning system supports the achievement of air quality improvements in relation to new developments;
- Raise public awareness via targeted campaigns for example concerning air quality risks and alternatives to car travel;
- Promote the use of greener walking and cycling routes to help the delivery of the Council's transport objective of an increased mode share for walking and cycling;
- Work with external stakeholders where they are responsible for sources of pollution that are outside the control of the Council. We will also lobby regional and central government on policies and issues beyond Hillingdon's influence.

The priorities are cross referenced in the Plan to show how they incorporate the recommendations of the Residents' and Environmental Services Policy Overview Committee (RESPOC) and the GLA selected measures. The Plan will be reviewed again in 2024.

RESPONSIBILITIES AND COMMITMENT

In addition to the GLA guidance the final Plan has been influenced by decisions and information provided by internal discussions at Hillingdon. This AQAP was prepared by the borough's Planning Specialist Department with the support and agreement of the following:

- Residents Services Senior Management Team - this includes the senior officers responsible for, amongst other aspects, council operations, schools, planning decisions, transportation and public health.
- Planning and Transport Steering Group - this includes officer representatives from planning policy and development, transportation and re-generation. The Group's objective was to further define the GLA AQ Focus Areas into Hillingdon-specific Air Quality Focus Areas for prioritised action.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the Senior Management Team. Progress each year will be reported in the Hillingdon Annual Status Reports, as part of our statutory London Local Air Quality Management duties.

This AQAP has been endorsed by:

Director of Public Health

Head of Planning, Transport and Regeneration

If you have any comments on this AQAP please send them to Val Beale, Air Quality officer, London Borough of Hillingdon, vbeale@hillingsdon.gov.uk.

1 Introduction

Air quality is taken seriously in the Council, which currently holds Cleaner Air Borough status awarded by the GLA in recognition of actions taken to deliver improved air quality. This plan replaces the current Air Quality Action Plan (AQAP) which ran from 2005 to 2018. Here, we outline the actions that the Hillingdon proposes to deliver between 2019 and 2024 to reduce concentrations of pollution, and exposure to pollution; thereby positively impacting on the health and quality of life of residents and visitors to the borough.

This draft plan fulfils the Borough's statutory duties under Part IV of the Environment Act, 1995, which requires local authorities to periodically review and assess the air quality within its area of jurisdiction and keep a current and updated Air Quality Action Plan (AQAP) for areas where there is non-compliance of the relevant UK National Air Quality Strategy (AQS) objectives.

The pollutant of concern in Hillingdon in terms of compliance with legislation is nitrogen dioxide. However, given the importance of particulate matter in terms of detrimental impacts on health, the Plan will continue to focus on actions which address reducing emissions of both pollutants.

Table 1. Summary of the National Air Quality Standards (AQS) most relevant to Hillingdon

Pollutant	Objective	Averaging period	Compliance date
Nitrogen dioxide – NO ₂	200 µg.m ⁻³ not to be exceeded more than 18 times a year	1 hour mean	31 December 2005
	40 µg.m ⁻³	Annual mean	31 December 2005
Particles – PM ₁₀	50 µg.m ⁻³ not to be exceeded more than 35 times a year		31 December 2004
	40 µg.m ⁻³	Annual mean	31 December 2004
Particles – PM _{2.5}	25 µg.m ⁻³	Annual mean	2020
	Target of 15% reduction in concentrations at urban background locations	3 year mean	Between 2010 and 2020

1.1 The importance of air pollution in Hillingdon

Air pollution is recognised as having a substantial impact on health, leading to a shortening of life expectancy for thousands of people across the UK every year. A recent report commissioned by the Greater London Authority (GLA) found that there are approximately 9,400 premature deaths from exposure to particulate matter (PM) and nitrogen dioxide (NO₂) in London. As noted in the Mayor of London's Environment Strategy, these health impacts fall disproportionately on the most disadvantaged communities affecting the poorest, the youngest, the oldest, those with pre-existing health conditions and those from minority ethnic groups the most.

Medical research found no evidence for thresholds for effect, even in areas where pollution levels are very low. Accordingly, neither the limit values, as above in Table 1, nor the guidelines provided

by the World Health Organisation (WHO¹) define completely 'safe' levels of pollution that pose no harm to the population. It follows then, that reductions in pollution will be of benefit wherever they occur in the borough, although the focus for priority action needs to be on those at highest risk from elevated levels of pollution.

The "Hillingdon Guide for Public Health Directors" report produced by the GLA quantifies the impact of air pollution on the residents of the borough in terms of mortality impacts, for which the Institute of Occupational Medicine has estimated that the total burden of fine particle exposure of the Borough's population is equivalent to 154 deaths annually. A subsequent report by King's College provides a broadly similar estimate, 125 equivalent attributable deaths, corresponding to 1,788 lost life years, for 2010². The King's report also provides estimates for deaths linked to NO₂ exposure of between 110 and 262 deaths and 1,579 and 3,768 life years lost annually. From this it can be concluded that air pollution has a significant role on mortality in Hillingdon.

However, the focus of quantification work on mortality should not obscure other aspects of the health burden of air pollution through effects on illness arising from exposure over the life-course. This was described in detail in a 2016 report from the Royal Colleges of Physicians and of Paediatrics and Child Health³.

Air pollution plays a role in many of the major health challenges of our day, and has been linked to cancer, asthma, stroke and heart disease, diabetes, obesity, and changes linked to dementia. Neither the concentration limits set by government, nor the World Health Organization's air quality guidelines, define levels of exposure that are entirely safe for the whole population. 2016 report from the Royal Colleges of Physicians and of Paediatrics and Child Health⁴.

The Hillingdon Health and Wellbeing Strategy identifies respiratory disease as the third highest cause of death in the borough. It contributes to at least 15% of hospital admissions and cost approximately £10m to the health service in Hillingdon annually, with additional costs of an estimated £5.7m in working days lost. Poor air quality is thought to contribute to a sizable proportion of acute exacerbations of asthma and Chronic Obstructive Pulmonary Disease (COPD). Respiratory disease disproportionately affects people of lower socio-economic status due to lifestyle and environmental factors. The number of residents with COPD is expected to increase to 10,799 by 2030.

Taken together, this information demonstrates that there is a pressing need to improve air quality in Hillingdon so that public exposure to harmful concentrations of pollution can be avoided and the health of people protected.

¹ <http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/activities/update-of-who-global-air-quality-guidelines>

² Walton et al (2015) Understanding the Health Impacts of Air Pollution in London.
https://www.london.gov.uk/sites/default/files/hiainlondon_kingsreport_14072015_final.pdf

³ RCP / RCPCH (2016) Every breath we take: the lifelong impact of air pollution.
<https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>.

⁴ RCP / RCPCH (2016) Every breath we take: the lifelong impact of air pollution.
<https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>.

1.2 History/Background

In 2003, in accordance with the duties for local air quality management as defined in the Environment Act Part IV, the Council declared an Air Quality Management Area (AQMA) over the bottom two thirds of the borough, for nitrogen dioxide (NO₂). This covered all the areas that were above the legislative limits set for health.



This was followed in 2004 by the development of an Air Quality Action Plan (AQAP). This set out the local measures to be implemented in working towards achievement of the relevant air quality objectives. The annual reports on progress, as requested by DEFRA, are all available on the Council website.

Since this time the Plan has set in place a significant number of measures to improve air quality. For example, all schools in Hillingdon now have travel plans; there are more dedicated cycle and walking paths to help encourage active travel; new developments are required to produce air quality assessments and include mitigation to reduce their impact on pollution levels; residents and people working in the borough are able to sign up to a free pollution episode alert service; pilot projects

have been undertaken in regards to the use of green infrastructure to protect vulnerable receptors from pollution, and there is now borough-wide enforcement against idling vehicles.

Also, from a regional perspective, there has been the introduction of the London-wide low emission zone (LEZ), the use of cleaner technologies for buses and taxis, and guidance for local authorities has been produced both for reducing emissions from construction sites and through planning guidance for new developments.

Despite this, there are areas in the Borough where pollution levels remain above the legislative air quality limits set to protect human health, and so further action is needed. Data from air quality monitoring stations across the UK, confirmed by those within Hillingdon, demonstrate that despite improvements of the vehicle fleet, pollution levels have remained more or less static and show few signs of a substantial reduction. Evidence from the increased use of diesel vehicles and non-compliance with vehicle emission standards is now accepted as being a major cause for the lack of sufficient improvement in air pollution in urban areas.

1.3 London Local Air Quality Management (LLAQM)

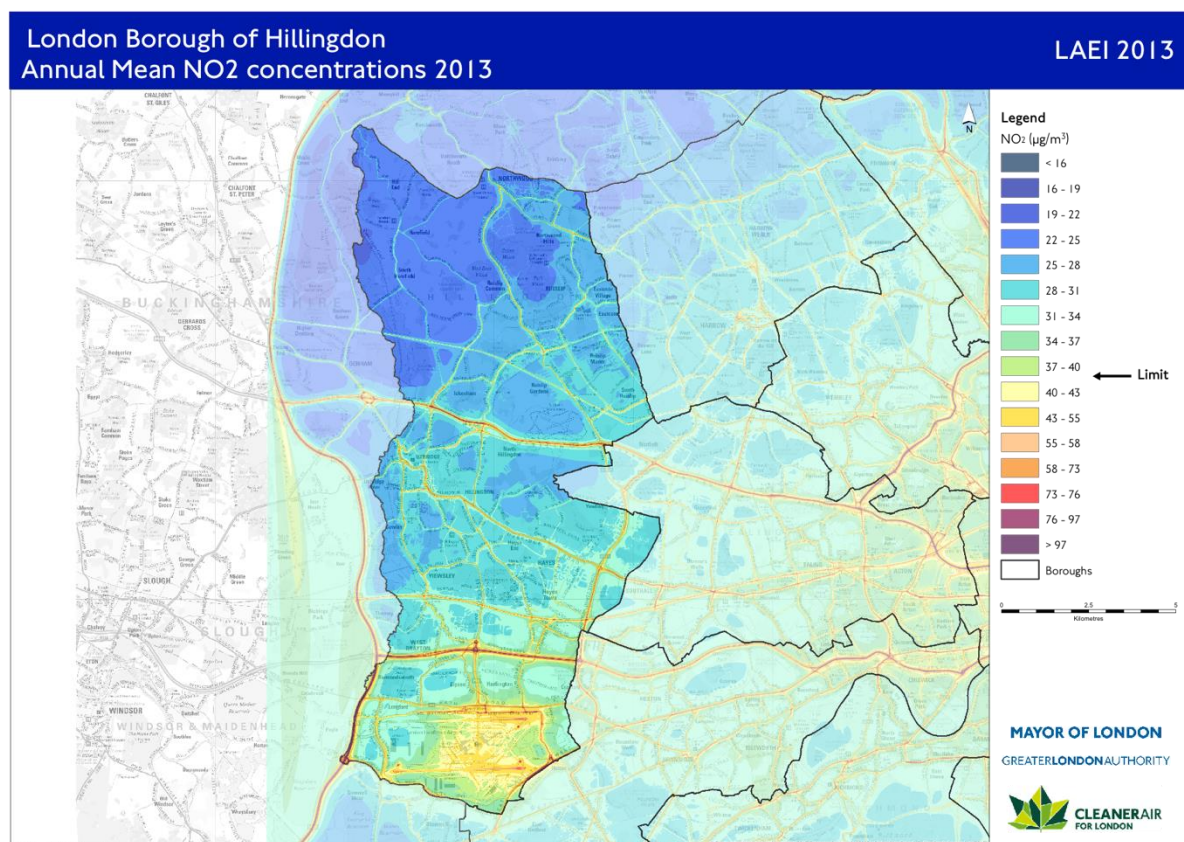
In 2016 the Mayor of London introduced the LLAQM system for London. Although the statutory framework outlined by National Air Quality regulations and Part IV of the Environment Act remains, the London specific local air quality management policy and technical guidance has been refined to reflect the unique challenges, and opportunities, faced by local authorities in London. All boroughs are now required to work in accordance with this new guidance. In regard to Action Plans there is the requirement to review them and update them regularly, every 5 years as a minimum.

This review of the Hillingdon Air Quality Action Plan has been informed by the release of updated information published by the GLA.

1.3.1 Hillingdon Pollution maps

It can be seen from the maps below that annual mean nitrogen dioxide levels in 2013 exceeded the limit values. This situation persists to the present day and is forecast to extend to 2020 and beyond.

Figure 1. Modelled map of annual mean NO₂ concentrations (from the LAEI, for 2013)



Updated maps for particulate matter (PM) indicate that Hillingdon is meeting current objectives (for PM₁₀ and PM_{2.5}). As with nitrogen dioxide, the highest concentrations are associated with the major road network. To a large extent, measures that are beneficial for NO₂ may be expected to also reduce PM concentrations. However, any measures adopted under the plan will need to be scrutinised to ensure that they will not worsen PM exposure, and that the potential for co-benefits via PM reduction alongside NO₂ are maximised.

In addition, recognising the importance of the inhalation of fine particulate matter on health, the latest GLA policy requirements have introduced a specific duty for London boroughs to work towards reducing emissions and concentrations of PM_{2.5} where this is possible. This is reflected in the proposed plan.

Figure 2. Modelled map of annual mean PM₁₀ (from the LAEI, for 2013)

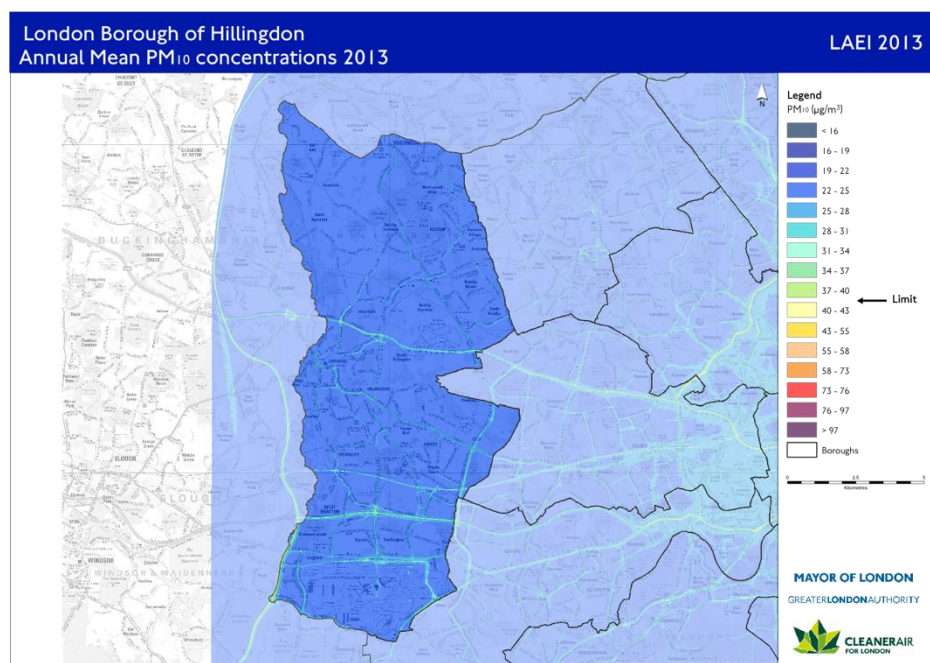
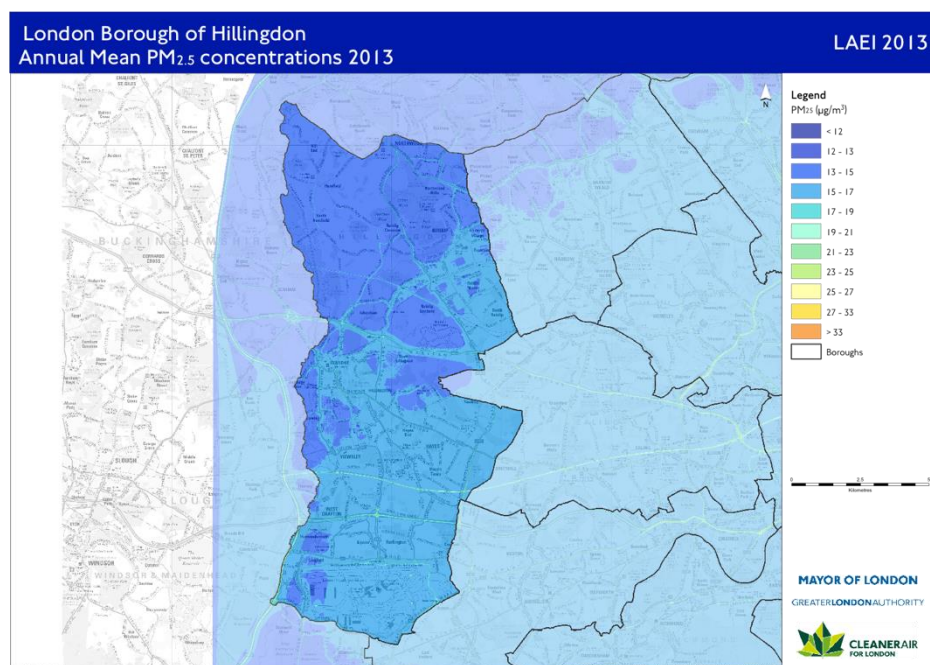


Figure 3. Modelled map of annual mean PM_{2.5} (from the LAEI, for 2013)

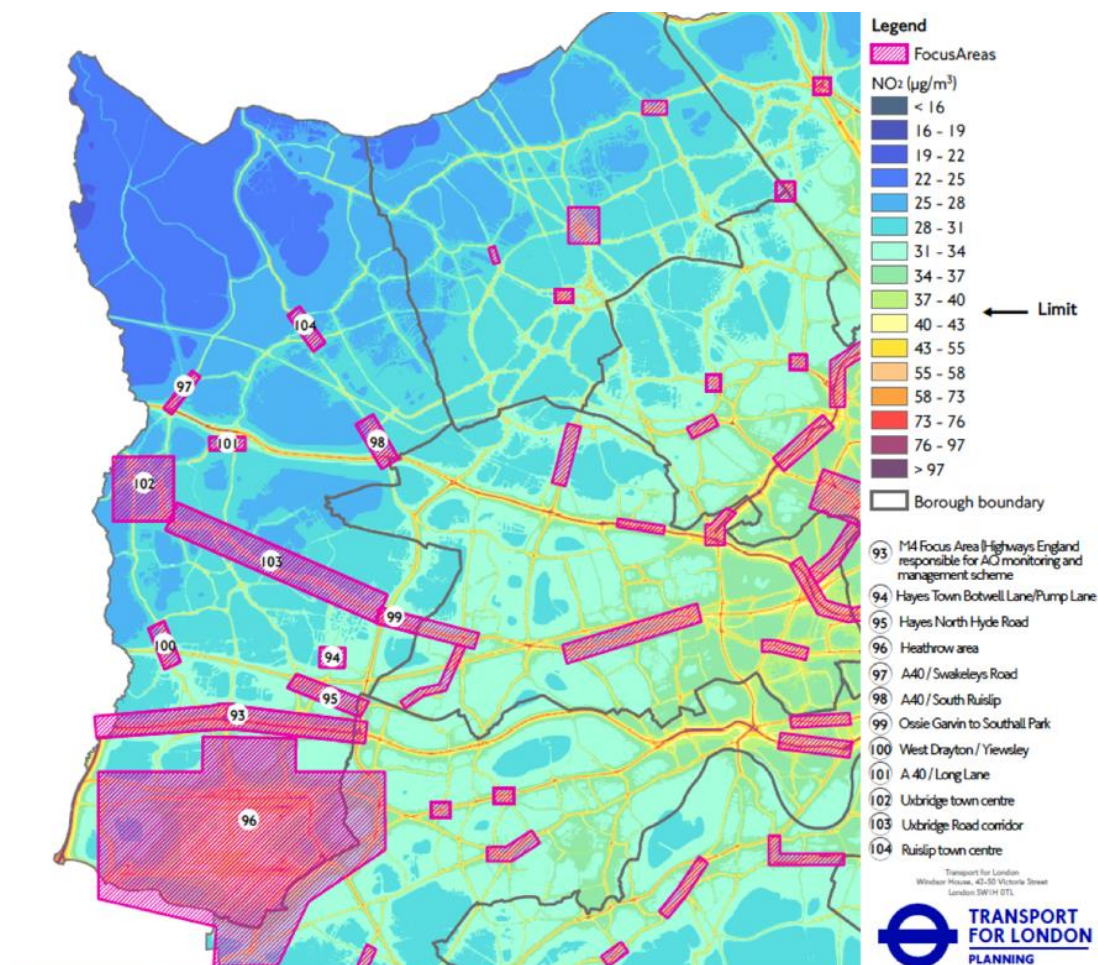


1.3.2 Introduction of Air Quality Focus Areas

Air quality legislation requires compliance with air quality limits to be met as soon as possible. In order to prioritise action the GLA introduced the concept of AQ Focus Areas across London. The Focus Areas are described as areas where the risk of exceeding pollution limits is high and there is

relevant public exposure. In Hillingdon the Focus areas are identified in the map below, though the Borough has done further work on them (described below).

Figure 4. TfL map of Focus Areas for Hillingdon



1.3.3 LLAQM Action Plan Guidance

The GLA's guidance⁵ sets out the actions and measures London authorities should consider when reviewing their Action Plans. It has been developed along a series of 25 actions to be considered under the following 'Themes':

- Monitoring and other core statutory duties
- Emissions from developments & buildings
- Public health and awareness raising
- Delivery servicing and freight
- Borough fleet actions
- Localised solutions
- Cleaner transport

⁵ <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-london-boroughs>.

Of the 25 measures listed in the GLA's guidance, there are a number of selected measures which the GLA consider should be a strong focus of action:

- Enforcing the Non-Road Mobile Machinery (NRMM) Low Emission Zone
- Promoting and enforcing smoke control zones
- Promoting and delivering energy efficiency retrofitting projects in workplaces and homes
- Supporting alerts services such as Airtex, and promoting the Mayor's air pollution forecasts
- Reducing pollution in and around schools, and extending school audits to other schools in polluted areas
- Installing Ultra Low Emission Vehicle (ULEV) infrastructure
- Improving walking and cycling infrastructure
- Regular Car Free days/temporary road closures in high footfall areas
- Reducing emissions from council fleets

The development of the proposed Hillingdon AQAP has taken all of the guidance above into account.

2 Current Pollution in Hillingdon

2.1 Sources of pollution

The original AQAP indicated that the major sources of NO_x⁶ and PM_{2.5} emissions within the borough were associated with the operation of Heathrow Airport and with road vehicles on the busy road network throughout the borough. This remains the case today although other sources such as energy sources, the operation of construction sites, can create significant local emissions sources.

The GLA has provided updated information for each borough on the major sources of pollutant emissions. This includes a detailed breakdown in terms of types of road vehicles e.g. diesel cars, petrol cars, buses and other sources such as domestic and commercial heating, industrial processes and emissions arising from construction sites. This information provides a focus for action plan measures.

2.1.1 Emissions at Heathrow Airport

Heathrow operation generates a substantial portion of NO_x emissions in Hillingdon, around 50%, of those released within the borough boundary. Whilst not all of the released emissions will necessarily contribute to NO₂ levels within the borough itself (for example, emissions from aircraft at higher elevation as they leave the borough boundary and beyond) the airport and airport related traffic on surrounding roads are clearly significant sources of pollution (Figure 1). More detail on how the Plan will address these sources is given in Table at the end of this document.

The Council will continue to press the airport to reduce their emissions as quickly as possible. The Council remains firmly opposed to expansion at Heathrow, or any changes to operations, which increase the pollution emissions even further and impact on the already poor air quality levels experienced by local communities.

2.1.2 Road vehicle and public transport emissions

Road vehicle emissions contribute significantly to the pollution in the borough. These arise from trips made by residents and businesses (including Heathrow-related traffic) within the borough plus a significant proportion from trips made on the strategic road network which includes traffic passing through the borough. The chart below identifies different vehicle types and their contribution to the emissions associated with road vehicles in the borough. Just over half of traffic emissions are associated with vans, heavy goods vehicles and buses, whilst just under half come from cars, including taxis.

⁶ Although the air quality limit is expressed against nitrogen dioxide (NO₂), assessment of sources considers oxides of nitrogen (NO_x, a mixture of nitrogen monoxide, NO, as well as NO₂) more broadly. Chemical reactions in the atmosphere convert NO to NO₂.

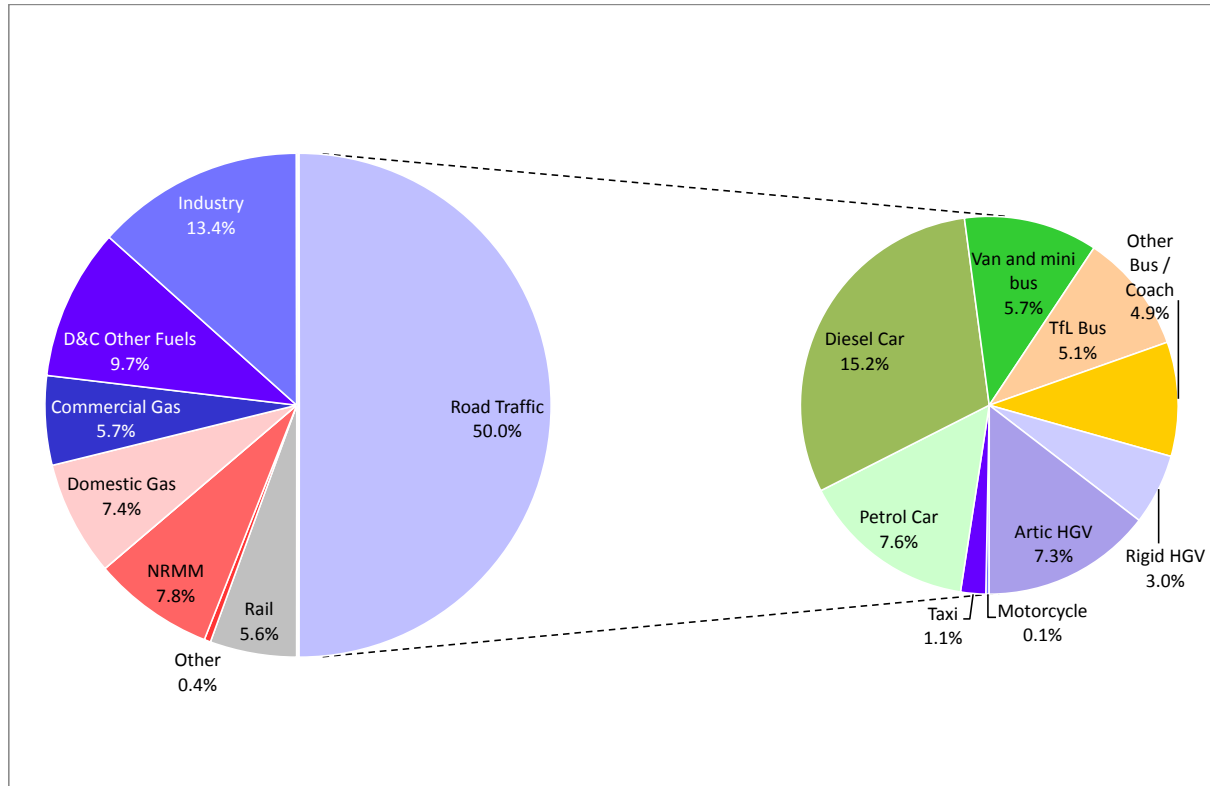


Figure 5. Sources of NOx emissions in Hillingdon in 2013, excluding emissions from on-site activities at Heathrow Airport.

Notes: D&C = domestic and commercial, NRMM = non-road mobile machinery such as cranes and diesel generators

2.1.3 Other emissions

Figure 5 shows that outside of the Heathrow Airport associated emissions and road traffic emissions, there is a significant proportion of NOx arising from industry, domestic and commercial use of gas and other fuels, non-road mobile machinery, and rail. These sources tend to be more dispersed across the borough and, whilst they add to background concentrations, do not dictate the pattern of limit value exceedance to the same extent as Heathrow Airport and road traffic. However, it is still appropriate to consider ways in which emissions from these sources can be reduced.

2.1.4 Summary

Pollution within the borough arises from several different sources as shown here. These vary in their impact across the borough:

- The operation of Heathrow Airport and strategic roads such as M4, dominate in the south;
- Congested traffic contributes significantly in the more urbanised areas;
- There is potential for more localised impacts arising from point sources;

- There is also transboundary pollution brought in from other boroughs, other parts of the UK and internationally. This is especially the case for particulate matter which can travel large distances.

In order for there to be effective reductions in pollution the Council will need to work collaboratively across departments within the Council itself and also include measures to address the sources that impact on the borough over which the Council has no direct control.

2.2 Current monitoring

The Council has provided annual reports on monitoring in the borough since the original action plan was introduced. These reports are available on the Council's website.

There are 11 automatic continuous monitoring sites in Hillingdon. All monitor concentrations of NO₂, 9 monitor concentrations of fine particles, 2 monitor ozone and 1 monitors carbon monoxide. There are a further 39 sites across the borough where NO₂ concentrations are monitored using diffusion tubes (relatively inexpensive passive sampling devices that provide information on long-term average concentrations). Sites are classified as being either roadside or background, providing information on exposure of both those in areas where pollutant concentrations are highest and those living away from major pollutant sources. Details of each site including information on location are given in the annual reports.

Summary results for NO₂ monitoring at two of the automatic monitoring stations are shown in Figure 6. The two sites were selected simply as providing high and low concentrations across the borough's monitoring stations. The figure shows that the stations are located at areas that show compliance and non-compliance with the regulated limit values (the red line indicates the annual mean limit value). There is clearly significant exceedance of the limit at the London Hillingdon site. There is some indication of a reduction in concentrations over time at both locations, but this is not rapid. Trends are not smooth, largely because of the effect of variation year on year in weather conditions.

Monitoring sites will continue to be kept under review in the revised action plan.

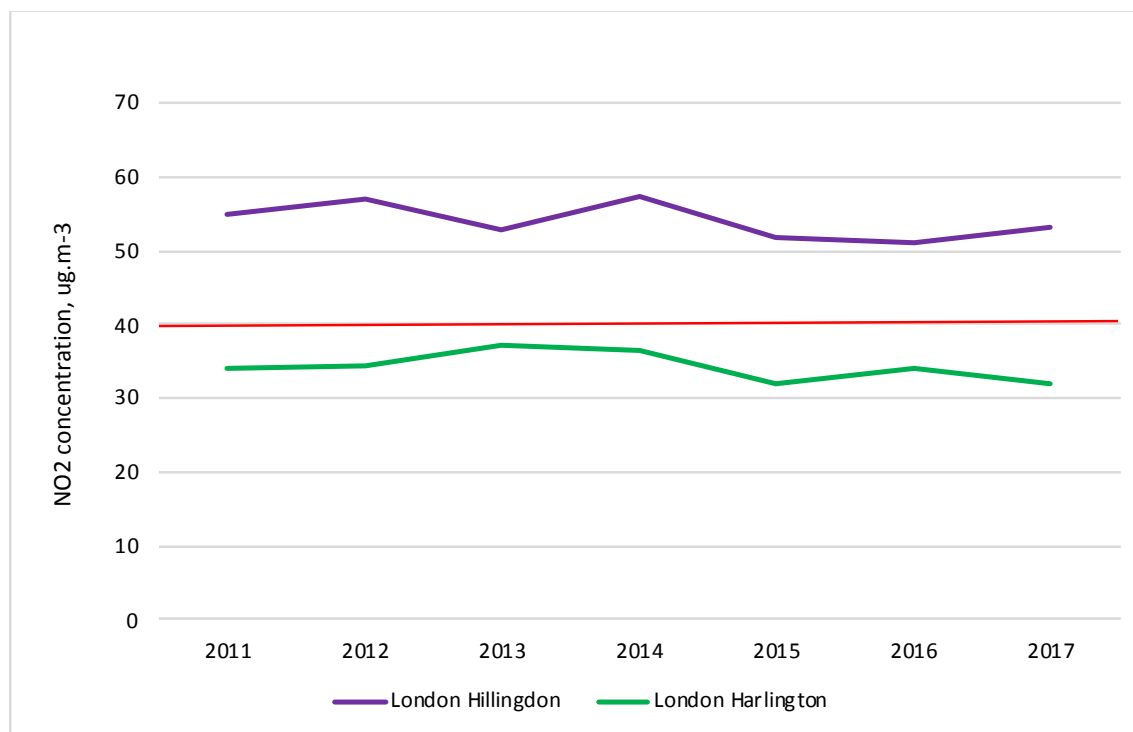


Figure 6. NO₂ concentrations for 2 of the borough's 11 sites, 2011 to 2017. The red line indicates the statutory limit value.

3 Development of the Hillingdon AQAP 2019-2024

The review of the Air Quality Action Plan (AQAP) has followed the LLAQM requirements. The proposed plan is intended to replace the current AQAP which has run from 2004 to 2018. It outlines the actions that the London Borough of Hillingdon propose to deliver between 2019 and 2024 in order to reduce pollution emissions and prevent public exposure to pollution. By doing this the plan will benefit the health and quality of life of residents and visitors to the borough.

3.1 Council delivery mechanisms

The Council has taken the opportunity to ensure that the AQAP has encompassed a “one Council approach”. This ensures workplans, projects and actions being undertaken across the council can be enhanced to add value by delivering benefits for improved air quality. These are cross-referenced within the Action Plan Table, examples are given below:

3.1.1 Local Implementation Plan (LIP3)

As shown above, road transport is a major source of pollution in the Borough. The LIP is a process by which Councils are funded by Transport for London to meet the objectives of the Mayor's Transport Strategy (MTS). LIP3 will be the means by which the Council will be funded to take forward transport improvements for the years from 2019-2022. The MTS includes a new Healthy Streets Approach, providing “*the framework for putting human health and experience at the heart of planning the city*”. It uses ten evidence-based indicators, one of which is improving air quality. Proposal 27 of the MTS directly addresses this issue In hotspot locations,:

The Mayor, through TfL and the boroughs, will tackle pollution from transport in local air quality hotspots and at sensitive locations (such as around schools) including through the Mayor's Air Quality Fund and other funding.

The review of the AQAP and the next round of the LIP3 are being carried simultaneously providing opportunity to ensure that measures to reduce pollution are embedded within the LIP.

3.1.2 Local planning policy

The GLA LLAQM Policy guidance states that the construction and operation of new developments can contribute significantly to air pollution in London, and that boroughs have a vital role to play in managing this through the planning system. Hillingdon has ensured its planning policies have ‘improving air quality’ as a key consideration. The Local Plan Part 1 was adopted in November 2012 and includes strategic policies to manage growth up to 2026. In terms of air quality, Policy EM8 states that:

All development should avoid deterioration in local air quality and ensure the protection of both existing and new sensitive receptors.

- *All major development within the Air Quality Management Area (AQMA) should:*
 - *demonstrate air quality neutrality (no worsening of impacts) where appropriate;*
 - *actively contribute to the promotion of sustainable transport measures such as vehicle charging points and the increased provision for vehicles with cleaner transport fuels;*
 - *deliver increased planting through soft landscaping and living walls and roofs; and*
 - *provide a management plan for ensuring air quality impacts can be kept to a minimum.*

In 2018 the Council consulted upon its Local Plan Part 2. This document further reiterates the requirement to minimise emissions from new developments. Part 2 has been through its Examination in Public and is anticipated to be adopted in 2019.

3.1.3 Health and Wellbeing Strategy

The Health and Wellbeing Strategy recognises that air pollution is one of the key risk factors in terms of respiratory illnesses. The development of the Air Quality Action Plan has been reported to the Health and Wellbeing Board and they will remain a key consultee through the life of the Action Plan. Opportunities will be taken to alert the vulnerable groups represented by the Board to interventions such as AirText, the free pollution alert service.

3.2 Consultation for development of the AQAP

In addition to the GLA guidance the proposed Plan has been influenced by decisions and information provided by internal discussions. These are addressed in the following sections.

3.2.1 Residents Services Senior Management Team (SMT)

The Residents Services SMT includes senior officers responsible for, amongst other aspects, council operations, schools, planning decisions, transportation and public health. This group, acting as the AQAP Steering Group, has helped define Hillingdon objectives and a series of Hillingdon-specific priorities for the AQ Action Plan prior to approval by the Council Leader/Cabinet Members. The SMT will continue in this capacity throughout the AQAP's 5-year timescale and will sign off each statutory report to the Mayor.

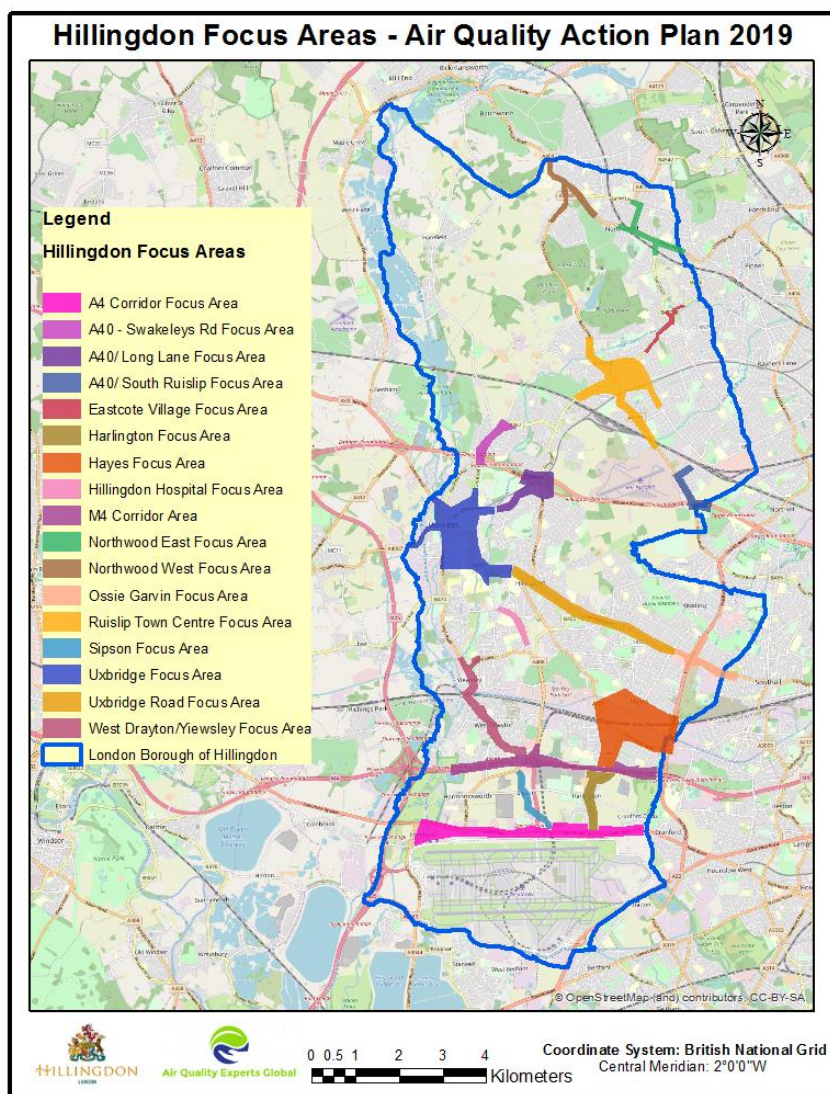
3.2.2 Planning and Transport Steering Group

The Steering group included officer representatives from planning policy and development, transportation and re-generation. Its objective was to further define the GLA AQ Focus Areas into Hillingdon-specific Air Quality Focus Areas. These areas have been drawn wider to fully encompass the GLA Focus Areas and to ensure that the sources contributing to the high levels of pollution, for example surrounding congested roads, are included. These Focus Areas are now embedded in the planning process for the assessment of new developments and the requirement to achieve pollution

emission reductions. They are also embedded in the Council's transport policies via the LIP funding mechanism.

A precautionary approach has been followed: areas where the updated GLA modelling indicated there may be risk of exceeding air quality limits where none had previously been identified were added as areas of concern and subject to further investigation.

Figure 7. Focus Areas in Hillingdon, defined by the Council to take better account of emission sources affecting each area



The Council will report progress on this issue by way of the annual reporting system to the GLA. Should the investigations support the requirement for a revision of the current AQMA boundary the Council will re-declare the AQMA in accordance with the GLA policy requirements.

The identification of these areas creates a priority list for action, where relevant these have been cross referenced in the table of actions.

3.2.3 Residents' and Environmental Services Policy Overview Committee (RESPOC) Review and Cabinet response

A review of air quality in Hillingdon has been undertaken by the Council's RESPOC to inform development of this plan ⁷. The four-month inquiry involved witness sessions from Council officers from planning, transportation, property services, fleet management, public health and external air quality experts. The Committee focused on actions that the Council itself could implement whilst recognising that the final Action plan would also seek actions from external organisations whose operations impact on air quality in the borough. The following recommendations were adopted by Cabinet for consideration in the AQAP:

1. The Action Plan should maintain a strong focus on Hillingdon school travel plans. It should prioritise work with schools most affected by air pollution, particularly to explore measures to tackle idling emissions from cars and coaches.
2. Further promotion of the Air Text service providing pollution alerts for Borough residents should be considered.
3. The Council should explore ways to work with businesses to help them and their employees improve air quality in the Borough.
4. The air quality monitoring networks across the Borough should be reviewed to ensure that there is appropriate coverage, particularly in Air Quality Focus Areas.
5. The Council will explore further ways to make businesses and residents aware of their responsibilities recognising that the whole Borough is designated a Smoke Control Area
6. Existing work by the Council to promote healthier and greener alternatives to driving, such as cycling and walking, and other practical ways to reduce pollution, should be integrated into the Action Plan along with ways to evaluate their impact in helping to reduce emissions.

These recommendations were warmly welcomed by the Cabinet, which agreed that they should go forward as part of the Borough's AQAP. The Cabinet recognised the work that had already been undertaken on air quality, but also that the Committee had identified areas that could be focussed on further to help manage key air quality issues affecting residents. Cabinet highlighted the impact on children of poor air quality and also the Council's recently announced legal challenge in respect of the Borough's main contributor of pollution, Heathrow Airport.

3.3 Additional Hillingdon Specific Actions

As noted above, the Council does not have direct control of all the polluting sources that impact on air quality in the borough. In such cases improvements in air quality will require actions by others. The Hillingdon AQAP has therefore incorporated additional measures to those identified by the GLA, to say how the Council will work with other stakeholders to ensure securing improvements in air quality in Hillingdon are implemented as soon as possible. These are described below:

3.3.1 Heathrow Airport

The operation of Heathrow involves several different pollution sources which contribute to the local pollution levels, from the aircraft and other on-airport operations within the boundary itself to

⁷ <https://www.hillingdon.gov.uk/media/40320/Review-into-Air-Quality/pdf/MajorReviewAirQuality1.pdf>

emissions associated with the road vehicles on the surrounding road networks associated with passengers, staff and freight operations. It is a major source of emissions in the borough.

The Council is opposed to the expansion of the airport. One of the key reasons for this is the air quality implications of expanding this pollution source in a densely populated area of the borough already subject to poor air quality. The Council also recognises the need to ensure that current Heathrow Airport operations reduce their emissions and contribute towards the improvement of air quality. Heathrow Airport has a Strategy aimed at reducing emissions from their activities. The Council will seek regular updates on progress and challenge both progress and the level of ambition contained in the Strategy when appropriate. This will be reported in the Council's annual status report to the GLA which is a requirement of the LLAQM process.

3.3.2 Highways England (HE)

The operation of the M4 is another a major source of emissions in the borough. It is recognised by the GLA as an Air Quality Focus Area with a requirement that it is subject to a "*full environmental management scheme by Highways England*". In addition, the M4 between junctions 3-12, is being upgraded to a Smart Motorway. As the M4 section passes through Hillingdon it will incorporate permanent hard shoulder running which will bring a lane of traffic closer to the residents than currently operated. This removes a buffer of distance between the source and the nearest sensitive receptors. The Council will be seeking regular updates from the HE on progress with the scheme and on the data from the air quality monitoring being undertaken as part of it. This will be reported in the annual status report which is a requirement of the LLAQM process. Again, the Council will provide challenge to Highways England when it is appropriate.

3.3.3 Transport for London (TfL)

The operation of the strategic road network in the borough is the responsibility of TfL. The impact this has on air quality is demonstrated by the fact that several Focus areas are associated with roads such as the A40, the A312 and the A4 that are under TfL control. The Council will work with TfL to ensure improvements in these areas are treated as a priority for action.

3.3.4 High Speed Two (HS2 Ltd)

The construction of the HS2 project within Hillingdon will occur within the lifetime of the AQAP. The impact of HS2 construction in terms of air quality arises mainly from the increase in construction traffic through an area already identified as an Air Quality Focus Area, where the limit values are exceeded and there is relevant public exposure.

The Council will be seeking regular updates from HS2 Ltd on progress with the scheme and on the data from the air quality monitoring being undertaken. This will be reported in the Council's annual status report to the GLA which is a requirement of the LLAQM process. Again, the Council will look to challenge performance where it is appropriate.

3.3.5 Neighbouring boroughs

The Council works with neighbouring boroughs through existing working groups such as the West London AQ Cluster Group and the WestTrans group. These groups share best practice and identify opportunities to work regionally on projects which have the potential to ease traffic congestion, and increase sustainable modes of transport. The Council will continue working jointly to seek funding and take forward actions which have the potential to improve air quality.

3.3.6 Central and Regional government

The Council will continue to provide feedback to the GLA on the Mayor's activities related to air quality, including those of TfL, regarding their implications for air quality in Hillingdon.

The Council will also provide feedback to Central Government where appropriate, for example in relation to the new Clean Air Act and aviation related policies particularly those that affect Heathrow and RAF Northolt. We will also look to Central Government to assist the Council in the event of dispute with external bodies such as Highways England, HS2 Ltd and Heathrow.

4 Hillingdon's Air Quality Priorities 2019-2024

4.1 Context

Hillingdon faces a number of challenges. The population of the borough has increased since the development of the Action Plan in 2004, some of the highest increases being in areas of poor air quality. In 2018 the population is estimated to be 314,300 people, by 2024 this is predicted to have increased to around 340,000. The Health and Wellbeing Strategy indicates that there will be a 16% rise in those aged 65 or over, and there will be more than 78,000 children and young people in the borough. The two age groups include many of those most sensitive to air pollution.

The Air Quality Focus Areas (the areas where pollution is highest) also coincide with areas which are identified for further development. These areas are also impacted by the construction of HS2 and the proposed expansion of Heathrow Airport, both of which threaten a substantial number of our existing communities in terms of increasing pollution.

There are, however, also opportunities for air quality improvements. For example:

- The arrival of Crossrail will provide another means of fast public transport in the borough
- There is a proposal for the first north-south bus route from Heathrow to Ruislip
- Increased planning development also brings a means by which to secure local improvements as part of the planning decision making process
- Increased access to the infrastructure for zero emission vehicle technologies is being taken forward with Electric Vehicle charging points in all council car parks, together with a strategy for the installation of public rapid chargers, the first being in Uxbridge, which will help to drive a change in vehicle fleets within the borough.

In terms of seeking reductions in pollution emissions the Council will influence the sources it is able to directly control. It will prioritise action on areas where air quality is poorest through its Focus Area approach. It will, as noted above, continue to put pressure on other stakeholders who bring pollution to our communities by means of their operations.

The objective and priorities for Hillingdon for the five years of the action plan are defined below.

4.2 Hillingdon's objectives

The objectives defined for Hillingdon's AQAP are to focus actions to:

a) improve the areas of poorer air quality as soon as possible

b) to continue to improve air quality across the borough and reduce public exposure to air pollution, especially for vulnerable groups within our communities such as the young, the old and those already suffering with associated respiratory illnesses.

4.3 Hillingdon priorities

The Council will prioritise the following actions that will be taken in the timescale 2019-2024 at which point the Plan will be reviewed again. The priorities have been cross referenced to show how they incorporate the RESPOC recommendations and the GLA selected measures (these being the actions that the GLA has highlighted as most important).

- **Lead by example**

The Council will undertake a review of its own fleet and develop a programme for reducing emissions from this source over the 5 years of this Plan. This approach will also be adopted in regard to reducing emissions from council buildings and the Council will both promote the use of, and seek funding to ensure the supply of, the infrastructure necessary for the increased use of low/zero emission technologies throughout the borough. (GLA selected measure, GLA 8 and 17)

- **Prioritise reducing public exposure and improving air quality around schools**

The Council will work with schools to help them implement measures to reduce exposure both at school and on the journey to school. This will focus initially on those in the areas of poorer air quality and where schools are close to busy roads. (RESPOC R1, GLA selected measure 14)

- **Prioritise the implementation of improvement strategies in the AQ Focus Areas**

The Council will investigate the development of an air quality improvement strategy for each AQ Focus Area on a rolling programme across the 5 years of this Plan. (RESPOC R4, R6, GLA selected measure 25 and others)

- **Ensure the integration of the Healthy Streets approach in relevant council work programmes**

The Council will ensure its transport management projects and town centre improvements programmes incorporate delivery outcomes which include reducing pollution emissions and protecting public exposure. (RESPOC R3, R6)

- **Ensure the planning system supports the achievement of air quality improvements in relation to new developments**

The Council will use its planning policies to ensure new developments incorporate air quality positive design measures from the outset. Suitable mitigation measures will be sought to reduce pollution increases associated with new development, especially in areas where the air quality is already poor. (RESPOC R6 and GLA selected measure 3)

- **Raise awareness via targeted campaigns**

The Council will develop a rolling programme of awareness and enforcement campaigns focused on the protection of public health such as; promotion of the free pollution alert system, AirText, to vulnerable groups in the borough; a renewed focus on the issues of health impacts from particulate matter arising from sources such as from the burning of wood, coal and other substances especially in domestic fireplaces, enforcement on pollution issues arising from construction site activities and

the enforcement of no idling throughout the borough (RESPOC R1, R2, R3, R5, GLA selected measures 3, 7 and 12).

- **Promote the use of greener walking and cycling routes to help the delivery of the Council's transport objective of an increased mode share for walking and cycling**

The Council will use available funding mechanisms to provide the necessary infrastructure and local improvements needed for increased cycling and walking facilities. Along with the use of enhanced green infrastructure to create greener walking and cycling routes away from the most polluted areas and roads, this will form an important integrated approach to reducing exposure to pollution and promoting healthier lifestyles as well as improving air quality by providing a zero-emission alternative to use of the car (RESPOC R6, GLA selected measures 24 and 25).

- **Work with external stakeholders**

The Council will ensure that external stakeholders, whose operations influence the pollution levels experienced within the borough, are actively engaged to deliver focused actions to reduce emissions from their operations and play their part in improving the air quality in the local communities.

4.4 Consultation

The Hillingdon Air Quality Action Plan has been the subject of a full public consultation process. This has included all the statutory consultees as defined in the GLA guidance (GLA/TfL, Environment Agency, Highways England, neighbouring boroughs, bodies representing local business interests) plus a local public consultation.

With the inclusion of the statutory consultees who have responded, the total number of responses to the AQAP consultation has totalled 106.

4.4.1 Statutory Consultation

The table below show how the results of the responses from statutory and other major consultees have been taken into account.

Table 1 Statutory consultee responses

Organisation	Comments (summarised)	How they have been addressed
GLA	It is a very well put together plan which demonstrates a good understanding of the specific air quality challenges and solutions in your borough.	The GLA has given official approval for the Air Quality Action Plan.
Highways England	Further information was requested in regard to the description of Air Quality Focus Area 93 and the burden it places upon	Highways England has been informed that the GLA are responsible for the description of Air Quality Focus Area 93, not the Council, therefore this needs to be addressed directly with the GLA.

	Highways England; Confirmation was given that the Smart Motorway DCO does not require Highways England to carry out air quality monitoring in the portion of Hillingdon impacted by the M4; In regard to partnership working with the Council, a meeting has been requested with the Council to discuss potential air quality improvement measures Highways England has been exploring and to consider actions that could be taken to help improve air quality alongside the M4.	The information in regard to air quality monitoring and the Smart Motorway DCO is noted. However this remains a matter of concern for the Council as residential areas are impacted by levels of pollution above the EU limits. The Council will continue to monitor air pollution in the vicinity of the M4 and report this annually to the GLA as an area of concern requiring partnership action to gain improvements as soon as possible; The Air Quality Action Plan table, (Action 28) has been updated to include a timescale of 2019/2020 for a meeting with Highways England to discuss potential solutions for the M4 corridor within Hillingdon with an aim to protect public exposure from this source.
Environment Agency	Whilst unable to provide detailed comments on every individual action plan the EA provided a set of principles for consideration in regard to air quality action plans. It is noted that there are no waste facilities or other industrial installations regulated by the EA within Hillingdon that are causing or contributing to failures of air quality standards installations.	The EA set of principles are all addressed in the GLA guidance for action plans therefore have been taken into account in the development of the Hillingdon Air Quality Action Plan This is noted and agreed. A dialogue will be maintained with the EA to review this situation on an annual basis.
Heathrow Airport Limited	Heathrow fully supports the need for coordinated action on air pollution and	This is noted.

	supports the intent of the AQAP to improve local air quality. Heathrow will continue to provide regular updates and information on the sustainability leadership plan, Heathrow 2.0, and allow the Council to review and challenge progress and the level of ambition Heathrow will continue to host the Heathrow Air Quality Working Group which works to share best practice, provides updates on emission reduction efforts and local air quality trends. The dedicated website provides information on air quality monitoring from around 25 sites around Heathrow and the surrounding areas.	This supports Action 27 in the Air Quality Action Plan table. The Group meets quarterly, updates on progress will be reported on an annual basis via the GLA required reporting mechanism
Hillingdon Health and Wellbeing Board	Supports the strong focus on improving air quality and the need to improve emissions proof nitrogen dioxide and particulate matter given the detrimental implications for health including respiratory disease and asthma. Supports the Council priorities of reducing public exposure, focussing initially on areas where air quality is poorer and the actions to work with schools and acknowledges the requirement to work with those external organisations necessary to securing air quality improvements for the	This is noted This is noted

	borough. The Board would welcome stronger links with public health and stronger engagement with health partners on issues such as hospital travel plans. The Board would welcome updates on the progress of the promotion of the Airtext service, plus progress on engagement with the school travel plans and the interaction with the community asthma service.	This supports Air Quality Action 10 in the Air Quality Action Plan table, the Board's influence to bring partners on board is welcome This supports Air Quality Action 10 in the Air Quality Action Plan table, the annual progress report on actions, as required by the GLA, will be presented to the board on an annual basis.
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4.4.2 Local consultation

In addition, the Council has undertaken a local consultation to ensure residents have been able to give their views on the Plan and on any potential air quality issues in their own local areas. The consultation was carried out via an online dedicated webpage over a six week period. The webpage included information on why improving air quality is important for health and included an overview of the Air Quality Action Plan including the objectives and the key priorities to be undertaken over the Plan period of 2019-2024. A link was provided to the full Air Quality Action Plan if more detailed information was required.

The consultation asked consultees to:

- Rank the priorities in terms of where the Council should take action first;
- Describe their perception of air quality in their area;
- If poor, state what do they believe are the main causes;
- List any practical suggestions for air quality improvements in their area;
- If responding as a business, identify the ways the Council could provide support in reducing pollution from the operation of their business.

The consultation was advertised via direct mailing to all ward councillors, all residents groups, the Council consultation database for interested groups, businesses and organisations and to voluntary organisations. In addition social media was used to promote the consultation on a regular basis throughout the consulting period via facebook (7,389 followers) and twitter (451k followers)

A summary of the consultation responses is detailed below. More detail on the consultation is provided in Appendix 1.

Council priorities

In regards to the Council priorities these were ranked in the following order in terms of implementation:

- Reduce exposure to pollution at, and on the journey to, school (53.7%);
- Ensure the planning system supports the achievement of air quality improvements in new developments (47%);
- Council to lead by example to reduce emissions from its own council fleet and buildings (40%);
- Implement the Healthy Streets approach (37.9%);
- Promote the use of greener walking and cycling routes (36.8%);
- Prioritise the implementation of improvement strategies in the Hillingdon Focus Areas (35.8%)
- Raise awareness via targeted campaigns (27.4%);
- Work with external stakeholders (20%)

Air quality concerns

A total of 66 responses were given, the majority of responses highlighted concerns over elevated pollution levels and the impact on incidences of asthma, respiratory conditions and COPD. Concerns over the impacts on children in particular were raised by a number of consultees. This supports the Councils' objective to continue to improve air quality across the borough and reduce public exposure to air pollution, especially for vulnerable groups within our communities such as the young, the elderly and those already suffering with respiratory illnesses.

Perception of air quality in your area

A total of 96 responses were received. Over 60% of people regarded the air quality in their area as poor, 25% as fair and around 10% as good. The majority of consultees having a perception of poor air quality were from wards where there is already an identified air quality focus area, other consultees asked for the Focus Areas to be re-examined to include local areas they felt were of concern that were not addressed.

Main causes of poor air quality

A total of 64 responses were received. A summary of the key themes are listed below:

- Road traffic was overwhelmingly the main identified cause of pollution, with gridlocked roads and congestion the main complaint. Specific areas of concern were highlighted where residential areas are impacted by the operation of the major road networks across the borough, in particular the A40 and the M4, and where residential areas are used as rat runs to avoid congested main roads;
- The impact of the operation of Heathrow Airport, and the congestion caused by the construction of HS2, were identified as serious concerns for the borough. RAF Northolt and its additional use as a commercial airport, as opposed to military, was considered a potential source for additional pollution;

- The impact of the school run was noted by many consultees as a cause for local concern along with high numbers of idling vehicles at drop off and pick up times;
- Planning developments such as intensive housing schemes, large retail and industrial parks were considered to be a source of additional traffic throughout the borough with particular concern raised over HGVs using residential roads;
- Bonfires and idling vehicles were noted as aspects of anti social behaviour that caused specific local pollution hotspots, industrial installations and their environmental control was a matter of concern.

Practical suggestions

A total of 74 responses were received. A summary of the general key themes are listed below:

- Effective management of road traffic required in congested areas including the addressing of rat running through residential streets, the restriction of HGV movements through residential areas;
- Cleaner vehicle technologies to be prioritised for example low emissions buses to be prioritised for use in the borough, consideration for taxis to be electric, local areas to be declared low emission zones;
- Planning developments (residential and retail/industrial parks) to ensure their impact in terms of additional traffic is properly managed and mitigated, adequate green infrastructure and green space to be included in all developments;
- Tackling of the impact of the school run with initiatives such as double yellow lines around the school entrances, stringent walk to school targets in school travel plans, no idling campaigns specific to the school and surrounding residential areas, more walking and cycling to school schemes;
- Raising awareness of air quality issues such as promotion of Airtex, no idling campaigns with notices targeted by schools, hospitals, doctors surgeries and clinics, to be accompanied by appropriate enforcement action, banning of all bonfires and ensuring adherence with the requirements of the need to use only approved wood burners and fuels in a smoke control area such as Hillingdon;
- More green infrastructure such as hedges along roads, parks, schools, raise awareness to all residents of the use of hedges in front gardens as a potential pollution barrier from roads, more tree planting to be included in all town centres and throughout the borough;
- Larger scale improvements included relocation of industry to less populated areas, improvement of the clearance under South Ruislip bridge to provide a direct access route for HGVs to the A40, the scrapping of HS2 and continuing to fight for no Heathrow Expansion.

In addition there were location specific issues raised by residents and residents groups which will be passed to the relevant departments for consideration and will be reported through the Action Plan process over the next five years.

5 Action Plan Table

5.1 Actions recommended for adoption

Table shows the measures that form the proposed Hillingdon Action Plan. It contains:

- a list of the actions that form the plan;
- the responsible individual and departments/organisations who will deliver each action;
- estimated cost to the council, noting that for many measures the responsibilities identified are part of existing duties (e.g. in respect to regulation of construction);
- expected benefit in terms of ratings provided by GLA;
- the timescale for implementation
- the outputs, targets and Key Performance Indicators
- how progress will be monitored.

Where costs are known they have been identified. In most cases, cost data are not currently available, and would require further development once the plan is agreed. For an indication of which measures are more and less expensive we have adopted the GLA's estimate for 'ease of delivery' in each case. These scores are as follows:

- 1-2: straightforward
- 3-4: medium
- 5: most difficult

Similarly, data on the magnitude of air quality benefits is not available directly at the present time, so GLA's scoring system has been used:

- 1: high air quality benefit
- 2: medium
- 3: low

The scores on ease of delivery and magnitude of air quality benefits are both referenced in the table as 'GLA ratings'.

Nine measures are highlighted with grey shading in the table: these are the ones recommended by GLA to be priority measures.

Table 2. Action plan measures for Hillingdon

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Monitoring and other core statutory duties	1	Maintaining and where possible expanding monitoring networks, Fulfilling other statutory duties including regulation of industrial sources	Planning Specialists team ASBET team for industrial regulation	S106/LIP GLA rating: 1 In-house	GLA rating: Not applicable, as measure does not directly influence air quality but provides the basis for managing the plan	Throughout Plan;	2019/2020 onwards implementation of reviewed monitoring scheme across the borough; Monitoring reported annually in ASR submitted to GLA Positive engagement with London-wide Air Sensor project, - (sensor located in October 2018.) Number of up to date authorisations; Number of complaints received and resolved in relation to industrial processes	Monitoring results from across the borough, plus pollution mapping from GLA will inform any requirement for re-declaration of the current AQMA and/or change to the individual Air Quality Focus Areas
Emissions from developments and buildings	2	Ensuring emissions from construction are minimised	Planning Specialists team, Development Management ASBET team for investigation of	In-house GLA rating:2	GLA rating: 2	Throughout Plan Embedded in council planning process and enforcement team duties	100% of all relevant developments to include specific construction dust planning condition Number of nuisance complaints received and	Planning condition requests compliance with Control of dust and emissions from construction SPG.

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
			dust nuisance from commercial premises including building sites.				enforcement notices served	
Emissions from developments and buildings	3	Ensuring enforcement of Non-Road Mobile Machinery (NRMM) air quality policies (addresses emissions from e.g. building sites regarding cranes, generators, etc.)	Planning Specialists team, Development Management	£4k for 2019/2021 secured via s106 GLA rating: 2	GLA rating: 1	Throughout Plan if further funding available 2019/2020 Approval secured to engage with MAQF funded bid for enforcement	100% of all relevant developments to include specific NRMM planning condition Anticipated target for MAQF project of reduction in emissions of 35% from visited sites.	GLA Selected measure Planning condition is placed upon all relevant developments requesting compliance with NRMM regulations;
Emissions from developments and buildings	4	Reducing emissions from CHP	Planning Specialist team, Development Management	In-house GLA rating: 4	GLA rating: 1, (nb there is very little CHP in Hillingdon)	Throughout Plan Embedded in council planning process	100% of all relevant developments to include specific construction planning condition	GLA Selected Measure Planning condition is placed upon all relevant developments requesting compliance with GLA Sustainable Design and Construction SPG
Emissions from developments and buildings	5	Enforce Air Quality Neutral (AQN) policy with more stringent application of mitigation required in the Hillingdon Focus Areas	Planning Specialist team, Development Management	In-house GLA rating: 2	GLA rating: 2	Throughout Plan Embedded in council planning process; To be reinforced by Policy DME1 of Local Plan Part 2, timetable for adoption Spring 2019	Number of planning proposals meeting AQNP; Number of planning proposals requiring NOx damage cost calculations; S106 secured for 100% of relevant developments and 100% of this is ring fenced and allocated to projects which will improve air	Air quality neutral assessments requested for all relevant development; In AQ focus areas NOx damage calculation costs are requested to form the basis of planning obligation for costs where the developer mitigation is insufficient

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
							quality	
Emissions from developments and buildings	6	Ensuring adequate, appropriate, and well located green space and infrastructure is included in new developments.	Development Management	Developers GLA rating: 2	GLA rating: 3	Throughout Plan Embedded in council planning process	Number of proposals where enhanced GI is used to provide exposure reduction	Development of best practice guide of enhanced GI schemes for air quality mitigation;
Emissions from developments and buildings	7	Raise awareness that Hillingdon is a declared Smoke Control Zone along with Council enforcement powers for non-compliance through an article in Hillingdon People magazine and distribution of point of sale posters/leaflets to fuel suppliers	ASBET - responsible for enforcement of Clean Air Act Comms team for promotion	In-house GLA rating: 2	GLA rating: 1	Throughout Plan as enforcement duties; 2019/2020 Awareness campaign across the borough in regard to the requirements for living/running a business in a Smoke Control Area	Numbers of complaints received in regard to emissions from domestic chimneys including number requiring enforcement action; 2019/2020 Hillingdon People magazine article, the magazine has a circulation of 113,000 individual households, with additional 4,000 for distribution via libraries, leisure centres and other Council establishments	GLA Selected Measure, RESPOC R5
Emissions from developments and buildings	8	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:NEW and RE:FIT and through borough carbon offset funds.	Property Services	In-house GLA rating: 3	GLA rating: 1	Throughout Plan Council commitment that all new boilers will meet GLA SPG requirements in terms of emissions; Three year planned programme for replacement of nine	100% of new boilers installed to meet GLA standards in terms of NOx emissions; Carbon reduction (CRC)- to date a 50% reduction has been achieved in the time period 2014/2015 - 2018/2019; The Energy Strategy will	GLA Selected Measure Programme to date: 2017/2018 - 207 boilers replaced 8 communal boiler house replaced; Existing programme is reactive, enhanced budget would be required to allow for a planned maintenance regime

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
						boiler houses Ongoing energy reduction replacement scheme to replace windows and doors and replace communal lighting; Council Energy Strategy commissioned to cover 3 year period	provide an annual reporting mechanism	
Emissions from developments and buildings	9	Master planning and redevelopment areas aligned with Air Quality Positive and Healthy Streets approaches	Development Management, Planning Specialists team	In-house GLA rating: 3	GLA rating: 2	GLA to provide AQ Positive guidance	Number of relevant developments incorporating AQ positive approach	RESPOC R7
Public health and awareness raising	10	Public Health department taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plans	Public Health team, Implementation of Health and Well Being (HWB) Strategy Hillingdon Children's Asthma Team	In-house GLA rating: 1	GLA rating: 2	Throughout the Plan. Implementation of the actions in the AQAP are reported to the HWB on a quarterly basis; Implementation of Hillingdon Asthma Friendly Schools programme	2019/2020 HWB to identify partnership opportunities to promote Air Text; Numbers of schools audited and receiving the Asthma Friendly School award. Ensure Airtex alerts are sent to appropriate contact in each school	Baseline survey measuring awareness of air quality to be sent out as part of the AQAP consultation. In the 2018 academic year the number of schools satisfying the criteria was 33.

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
							2020/2021 HWB to take forward the engagement with partners in regard to hospital travel plans;	
Public health and awareness raising	11	Development of promotional tool for use at business engagement opportunities to raise awareness of initiatives to increase active travel and improve air quality If MAQF bid unsuccessful, seek funding for development of Hillingdon-specific promotional tool and business engagement action plan	West London Cluster Group Transportation	MAQF bid £6,700 contribution from s106/LIP as match-funding GLA rating:3 Secure S106/LIP funding	GLA rating: 2	2019/2020 MAQF proposal timescale 2019/2020 Development of promotional tool; 2020/2024 Planned programme of promotional opportunities on annual basis	MAQF success criteria of active engagement with 150 SMEs with target of 50 to sign up to Clean Van Commitment. To include awareness raising in west London schools with 150 schoolchildren receiving tailored workshop on air pollution , causes, effects and solutions 2019/2020 Hillingdon Business Engagement Action Plan; 2020/2024 Number of annual events targeted, number of businesses represented eg Stockley Park annual event includes 28 corporate businesses including over 8,000 employees, Hillingdon Business Expo annual event, Uxbridge BID events;	RESPOC objective 3

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
							Number of businesses engaged, ,	
Public health and awareness raising	12	Supporting a direct alerts service such as AirText and promotion and dissemination of high pollution alert services	Comms team; Health and Wellbeing Partnership (HWB)	In-house GLA rating: 1	GLA rating: 2	2019/2021 Comms strategy for promotion of the AirText service campaign in borough 2021-2024 Work with HWB public health teams to identify further opportunities for raising awareness and increasing target	Awareness campaign via Hillingdon People magazine (see Action 11 for campaign reach) Number of Public Health-led awareness campaigns; Initial target of increase of 10% on numbers of people signed in Hillingdon from 2018/2019 baseline	GLA selected measure RESPOC R2
Public health and awareness raising	13	Encourage schools to join the TfL STARS accredited travel planning programme	Transportation team	In-house; LIP funds GLA rating:2	GLA rating: 2	Throughout Plan	Number of promotional events for STARS; Target to increase from 17 schools active in 2018 to 57 by 2021; LIP target to have 70% children travelling actively to school by 2021 Number of schools signed to STARS; Number of schools with increased STAR ratings	RESPOC R1;
Public health and	14	Air quality in and	Transportation	In-house,	GLA rating: 2	2019/2024	Target to work with	GLA Selected Measure

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
awareness raising		around schools - the introduction of a prioritised programme for schools in Focus Areas and/or close to busy roads for exposure reduction measures, active travel promotion and raising awareness education programmes	team, School Travel plan team, Planning Specialists team	S106/ LIP GLA rating: 2		Rolling programme throughout the Plan for schools in Focus Areas and/or at risk from road traffic emissions;	minimum of 5 schools per year;	RESPOC Objective R1 Throughout Plan (AQAP) and Transport LIP.
Delivery servicing and freight	15	Council procurement policies to promote use of cleaner vehicle technologies via contract tendering process	Procurement team	In-house GLA rating: 2	GLA rating: 3	2019/2020 Engagement with procurement team to include use of low/zero emission vehicles in contract where relevant to do so 2020 Update procurement policies with cleaner vehicle requirements in relevant contracts	2020/2024 Active promotion of low/zero emissions vehicles via Council contract tendering process	All contracts currently include the requirement to be FORS registered and a minimum of Euro V1/6 where applicable
Delivery servicing and freight	16	Inclusion of opportunities in new developments and current town centre and transport improvement workstreams to reduce emissions from deliveries to local businesses and residents	Development Management, Planning Specialists team, Transportation team; Town Centre Development team,	In-house GLA rating: 3 Town Centre Fund, LIP, s106, Chrysalis funds, other funding sources	GLA rating: 2	Throughout the Plan Three Town Centre Improvements within Plan timescale	100% of all relevant developments to include specific planning condition to be a minimum of FORS silver award Number of local businesses receiving zero and cleaner vehicle technologies information as part of	Planning condition is placed upon all relevant construction and logistics developments to be a minimum of FORS silver award See link to Action 11 The consultation process for local town centre improvements represents an opportunity to

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
				where available to bid			consultation process of each Town Centre improvement programme	promote the use of cleaner vehicle technologies, eg Ruislip has an audience of 84 businesses
Borough fleet actions	17	Reducing emissions from council fleets	Fleet Management team	In-house GLA rating: 2	GLA rating: 2	2019/2020 Trial of the EV Waste Truck; 2019-2024/2025 Implementation of Council Fleet replacement programme; New cleaner technology opportunities to be examined on case-by-case basis given specialist nature of vehicles; Eight pool cars to be replaced by 4 x EV and 4 x petrol/hybrid By April 2020 Development of a	All diesel powered Council vehicles to meet ULEZ standard as a minimum; Numbers of pool cars powered by low/zero emission technology; Hire vehicles contracts to consider low/zero emission technologies where feasible to carry our effective service	GLA Selected Measure

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
						plan for transitioning the fleet to zero/Ultra Low Emission in the shortest possible timeframe		
Localised solutions	18	Green Infrastructure	Green Spaces team	In-house GLA rating: 2	GLA rating: 3	Throughout Plan Identify opportunities for tree planting in Focus Areas which use correct species for AQ	Number of Planting schemes implemented,	Guidance to be given to green spaces team re AQ enhancement planting, eg: Mayor of London, April 2019 https://www.london.gov.uk/sites/default/files/using_green_infrastructure_to_protect_people_from_air_pollution_april_19.pdf
Localised solutions	19	Implementation of actions to improve air quality in the Hillingdon Air Quality Focus Areas to identify short, medium, long term solutions for measures to implement to improve air quality;	Transportation team, Town Centre team, School travel Plan team, Planning Specialist team	In-house S106 /LIP GLA rating: 4	GLA rating: 1	<u>2019/2020</u> Hayes and Long Lane Focus Areas studies for implementation; Uxbridge and West Drayton studies; <u>2020/2021</u> Implementation of Uxbridge and West Drayton schemes; Ruislip and Harlington studies; <u>2021/2022</u> Implementation of Ruislip and Harlington studies; Swakeleys Road and Hillingdon Hospital studies	Number of schemes for air quality improvements implemented; Each individual implementation scheme will identify and evaluate key reporting indicators eg Healthy Street indicators, reduced congestion, improved pedestrian/cycling infrastructure etc	Hillingdon define this as Actions within the Hillingdon Air Quality Focus Areas RESPOC R7

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
Localised solutions	20	Ensuring that Transport and Air Quality policies and projects are integrated via the implementation of the Healthy Streets in LIP projects	Transportation team, Planning Specialist team, Town centre team	In-house s106, LIP, other funding sources as available GLA rating: 1	GLA rating: 1	<u>2019/2022 (LIP3)</u> Delivery of 1 improved healthy neighbourhood each year plus one study for delivery the following year	Number of Healthy Neighbourhood projects implemented in Air Quality Focus Areas with an increase in Healthy Streets ratings of at least 30%	Hillingdon LIP3 identifies a number of Healthy Neighbourhood schemes; Liveable Neighbourhood Bids include objectives which have an air quality dimension including reduced traffic congestion, increasing take-up of public transport and improving cycling/walking paths
Cleaner transport	21	Discouraging unnecessary idling by taxis and other vehicles	ASBET team; Pan-London MAQF bid	In-house resource GLA rating: 1 MAQF bid	GLA rating: 3	Throughout Plan; Enforcement throughout the borough; Targeted no idling campaign via MAQF bid	Numbers of enforcement notices served MAQF bid criteria: Numbers of people engaged with ; Number of idling action days; Numbers of schools engaged on no idling assemblies and workshops	RESPOC R1 Links with school and STARS work
Cleaner transport	22	Regular temporary car free days	Transportation team, School Travel Plan team	In-house/LIP GLA rating: 3	GLA rating: 1	2019/2020 Investigate case study for school streets pilot in Hillingdon 2020/2024 Identify further	Numbers of school streets projects implemented	Play streets will be considered on a case by case basis if sufficient resident interest

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
						schools for consideration		
Cleaner transport	23	Using parking policy to reduce pollution emissions	Transportation team	To be investigated GLA rating: 3	GLA rating: 1	By October 2019 Provide briefing paper for Cabinet Member in regard to potential use of council car parking charges to prioritise and promote the use of	by March 2020 Decision to be considered in regard to whether implementation is supported Review of potential for implementation	Diesel surcharge as a mechanism was considered in the RESPOC review, concerns were raised as to the number of small business and residents owning diesel vehicles and the potential for adverse effects on those on low incomes.
Cleaner transport	24	Installation of Ultra-low Emissions Vehicle (ULEV) infrastructure (electric vehicle charging points, rapid electric charging points and hydrogen refuelling stations)	Transportation team, Development Management	In-house Cost to developers LIP and other available external funding mechanisms, GLA rating: 2	GLA rating: 1	Throughout Plan	Numbers of charging points installed <u>2019/2020</u> Rapid charging point to be installed in Uxbridge Focus Area; EV points to be installed in Council staff car park <u>2021/2022</u> Target for up to 20 rapid chargers to be installed in the Council's public car parks	GLA Selected Measure
Cleaner transport	25	Provision of infrastructure to support walking and cycling; Air Quality Focus Area	Transportation team , Town Centre team Development Management;	LIP and s106 GLA rating: 4	GLA rating: 1	Throughout Plan	Hillingdon target for increased mode share for walking, cycling and public transport journeys is to achieve 44% by 2021; 3 public footpath	GLA Selected Measure RESPOC R6

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
		studies, Healthy Neighbourhoods schemes, Town Centre schemes will all include the identification of opportunities for increased walking and cycling ;					improvements schemes a year; <u>2021</u> 44km cycle routes improvements implemented <u>2019/2020</u> Completion of upgraded towpath of Grand Union Canal from southern borough boundary to Cowley; Annual targets for awareness raising: 4 Bikespiration events a year; Bikeability training for 1,800 pupils; Pedestrian training for 10,000 pupils/adults a year 30 Dr Bike sessions a year, reaching 1,500 bike users,; 24 Led ride events a year reaching 200 users a year, ;	
Hillingdon added measure	26	Continue to work in partnership with TfL to prioritise actions required to improve local air quality in Hillingdon	Transportation team; TfL team	LIP		Timeline to be discussed & agreed with stakeholder 2019/2020 Engagement for low emission bus route through Focus Areas;	Programme to be defined for rolling out improvements to relieve congestion on TfL roads, the operation of which impact on the local air quality in the surrounding	

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
							communities;	
Hillingdon added measure	27	Continue to work in partnership with Heathrow Airport Limited (HAL), seeking clear strategy and framework to: Reduce airport related traffic; Mitigate adverse air quality impacts associated with on-airport operations	Transportation team; Planning Specialists team;	Heathrow Airport Ltd Heathrow Air Quality Working Group; Heathrow Transport Forum		Throughout Plan	Annual updates on actions taken; % changes to modal shift	Seek quantification of the Heathrow strategies in terms of emission reductions
Hillingdon added measure	28	Continue to work in partnership with Highways England to ensure effective mitigation of arising air quality impacts on the local communities	Transportation team, Planning Specialists team	HE		Request annual reporting of progress, data from AQ monitoring and mitigation to ensure protection of residents from operation of M4	Annual update from HE Improvements in AQ for residents close to the M4	
Hillingdon added measure	29	Continue to work in partnership with HS2 Ltd to ensure effective mitigation of any arising air quality impacts on the local communities relating to HS2 construction activities	Planning Specialists team; Transportation team	HS2 Ltd		Request annual reporting of progress, data from AQ monitoring and effective mitigation to ensure protection of residents from construction operations	Annual update from HS2 Provision of mitigation where necessary	
Hillingdon added measure	30	Continue to work in partnership with neighbouring	West London Air Quality Cluster Group;	LIP, funding bids where applicable		Ongoing throughout plan	Success with West London MAQF bid (Action No. 16 above)	

Theme	Action No.	Action Description	Responsibility	Cost	Expected emissions and concentration benefit	Timescale for implementation	Outputs, Targets and KPIs	Further information
		authorities to ensure collaboration on air quality where it will benefit the local communities	Westtrans group					

5.2 Reasons for Not Pursuing Action Plan Measures

In accordance with the GLA guidance the Council is required to identify measures which have been suggested by the GLA but will not be taken forward. None of the GLA measures are excluded from Hillingdon's plan, though Action 19 has been redefined for the borough as shown in the following table.

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)
Localised solutions Action 19	Low emissions neighbourhoods (LENS) This is re-defined to: Hillingdon Focus Area studies	The establishment of a full LENS bid application is resource intensive and unlikely to be actioned within the 5 years of the Action plan. Hillingdon will investigate the Air Quality Focus Areas to define short, medium and long term solutions for improving air quality. Two case studies are identified for Year 1 (North Hyde Road and Long Lane), Hillingdon will look to LIP funds and/or other bidding mechanisms to implement the findings.