



**London Borough
of Hounslow**

London Borough of Hounslow:

Air Quality Action Plan 2018-2023

v 4.13 (27th September, 2018)



Responsibilities and commitment

This AQAP was prepared by the Environmental Strategy team of Hounslow Council with the support and agreement of the following officers and departments:

Officer	Department
Mark Frost	Transport
Laura MacLehose	Public Health
Danalee Edmund	Planning Policy
Matthew Rees	Development Management (Planning)
Rod Willis & Wendy Cheesewright	Vehicle Fleet Management
Daniel Austin	Procurement
Rory Prendergast	Housing Investment Team
Charles Pipe	Corporate Energy Manager, Facilities Management

In addition the issue was also a focus for Scrutiny Committee in 2017/18.

This AQAP has been approved by:

Laura MacLehose, Asst. Director of Public Health;

Michael Sudlow, Director of Asset Management and Major Projects; and

Mark Frost, Head of Traffic, Transport and Environment Strategy.

The document was approved by cabinet.

This AQAP will be subject to review annually or at other appropriate interval, appraisal of progress and reporting to the Cabinet member responsible for Air Quality. Progress each year will be reported in the Annual Status Reports produced by Hounslow, as part of our statutory London Local Air Quality Management duties.

If you have any comments on this AQAP please send them to Surinderpal Suri at:

Address: Civic Centre, Lampton Road, Hounslow TW3 4DN

Telephone: 0208 583 5216

Email: Surinderpal.suri@hounslow.gov.uk

Council website: www.hounslow.gov.uk

Air quality website:

https://www.hounslow.gov.uk/info/20006/environment/1515/air_quality_pollution_and_aviation_noise/1

Table of contents

Responsibilities and commitment	2
Summary.....	4
Abbreviations.....	6
1 Objectives.....	7
2 Air pollution in Hounslow.....	8
3 Hounslow’s Air Quality Priorities	20
4 Development and Implementation of Hounslow’s AQAP	21
5 Pollution control measures	23
Appendix A: Response to Consultation	50

Summary

This Air Quality Action Plan (AQAP) has been produced as part of Hounslow Council's duty to London Local Air Quality Management. It outlines the action we will take to improve air quality in the London Borough of Hounslow between 2018 and 2023.

This action plan replaces the previous AQAP which ran from 2005 to 2018. Although numerous activities were undertaken to reduce emissions of air pollutants in the Borough, levels of nitrogen dioxide (NO₂) have remained above statutory limits in some locations. Air pollution is associated with a number of adverse health impacts, and is a contributing factor in the onset of heart disease and cancer. Across Hounslow it has been estimated that more than 100 deaths can be attributed annually to poor air quality. Air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. Many of the respondents to the Council's consultation on the air quality action plan reported impacts on themselves, or friends and family. There is also often a strong correlation with equalities 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. The Council is committed to reducing the exposure of people in Hounslow to poor air quality in order to improve health. Accordingly, we have reviewed our previous plan, taking account of our own past experience, the experience of others and available guidance particularly from GLA and developed actions that can be considered under seven broad topics:

- **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;
- **Delivery servicing and freight:** vehicles delivering goods and services are usually light and heavy duty diesel-fuelled vehicles with high primary NO₂ emissions;
- **Borough fleet actions:** the Council will continue with existing actions to ensure the performance of vehicles under its control;
- **Localised solutions:** these seek to improve the environment of neighbourhoods through a combination of measures;
- **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.

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

<http://jech.bmj.com/content/jech/59/11/948.full.pdf>.

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006. https://uk-air.defra.gov.uk/assets/documents/reports/cat09/0701110944_AQinequalitiesFNL_AEAT_0506.pdf.

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

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69340/pb13378-air-pollution.pdf.

- **Lobbying and Partnership working:** engaging positively with other stakeholders such as Highways England, TfL and Heathrow Airport to take action on emissions which they have ability to influence

Our priorities are to provide sustainable transport, reduce peak-time congestion, reduce exposure to harmful roadside pollutants and install electric vehicle charging points. Also, to liaise with external bodies that have a significant influence on Borough air quality, namely: Transport for London, Heathrow Airport Limited and Highways England. This recognises limits on the powers of the Borough Council to take direct action.

In respect to Heathrow, the Council has a long-held position that Heathrow should be better, not bigger. Whilst the council has been opposed to a bigger Heathrow, either by additional flights, addition of a third runway or a relaxation on runway operations and night flights, we nevertheless want the airport to be successful as it plays such a huge role in our economic success. This success however must be within legal constraints that relate to safeguarding public health and wellbeing and this applies especially to air quality. The Government's recently approved National Policy Statement on Heathrow makes clear that expansion will not be permissible unless those legal limits are achieved and this will require significant work to be done by the airport on surface access in particular. Whilst Heathrow's recent initial consultation suggests some welcome options for reducing that impact, the council does not currently believe these go far enough to address the scale of the problems a third runway will result in, particularly in relation to surface access issues. We will therefore continue to engage proactively with the airport as they develop their ideas further to ensure that our voice is heard and we win the best possible deal for residents should expansion proceed

In respect to the Mayor of London's and TfL's proposals for an Ultra Low Emission Zone for inner London (up to the North Circular) we are broadly supportive of the principle however believe strongly that an expansion of the ULEZ to the existing LEZ boundary (broadly at the M25) would deliver much greater outcome for less cost whilst also helping to further reduce exceedances in particulates around Heathrow Airport.

In this AQAP we have focused on 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 emission standards, national vehicle taxation policy, taxis and buses, traffic on the major road network and access to and operation of Heathrow), and so we will continue to work with and lobby regional and central government on policies and issues beyond Hounslow's direct control.

Cllr. Katherine Dunne Lead Member for Communities & Workforce

Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
AQS	Air Quality Strategy
CEMP	Construction Environmental Management Plan
CHP	Combined Heat and Power Plant
CO ₂	Carbon dioxide
COMEAP	Committee on the Medical Effects of Air Pollutants
DsPH	Directors of Public Health
EU	European Union
EV	Electric vehicle
FORS	Fleet Operator Recognition System
GLA	Greater London Authority
HAL	Heathrow Airport Limited
HE	Highways England
HGV	Heavy goods vehicle
JSNA	Joint Strategic Needs Assessment
LAEI	London Atmospheric Emissions Inventory
LBH	London Borough of Hounslow
LENS	Low Emission Neighbourhoods
LEZ	Low Emission Zone
LGV	Light goods vehicle
LIP	Local Implementation Plan (for transport)
MAQF	Mayors Air Quality Fund
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen, a mix of NO and NO ₂
NRMM	Non-Road Mobile Machinery
OLEV	Office for Low Emission Vehicles
PM	Particulate Matter
PM ₁₀	Fine Particulate Matter less than 10 micrometres in diameter
PM _{2.5}	Fine Particulate Matter less than 2.5 micrometres in diameter, able to penetrate deep into the lung
RHI	Renewable Heat Incentive
SCOOT	Split Cycle and Offset Optimisation Technique (demand responsive urban traffic control system, via adjustments to traffic light intervals)
STARS	Sustainable Travel: Active, Responsible, Safe (TfL accreditation scheme for schools, https://stars.tfl.gov.uk/About/About)
TBC	To be confirmed
TfL	Transport for London
ULEZ	Ultra Low Emission Zone
WHO	World Health Organization

1 Objectives

This Air Quality Action Plan (AQAP) has the following objectives:

1. Report on the current status of air pollution in Hounslow and compliance with the limit values.
2. Outline the actions that Hounslow Borough Council will deliver between 2018 and 2023 to reduce concentrations of pollution, and exposure to pollution in the Borough. This will improve the health and quality of life of residents and visitors to the Borough. The AQAP 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 associated regulations and to meet the requirements of the London Local Air Quality Management statutory process⁴.

The development of the list of actions contained in this AQAP takes account of:

- The location of the worst areas of exceedance
- The desire to improve health across the Borough
- What worked from the earlier AQAP
- Measures suggested by the GLA where appropriate (the Greater London Authority)
- The need to highlight the responsibility of external bodies, particularly where Hounslow Council has limited control over emissions
- Feedback from public consultation held in November 2017

Section 2 sets the scene for the action plan, considering:

- The legislation
- Hounslow's Air Quality Management Area
- Hounslow's Air Quality Action Plan, adopted in 2005
- Current levels of pollution in the Borough
- Sources of air pollution in the Borough
- Estimated health impacts in the Borough

Following guidance from the GLA to whom the Borough Council are required to report, the following chapters then describe:

- Focus areas agreed with the GLA, where pollutant levels are highest. It must be noted that whilst these provide a focus for action, the plan addresses pollution across the Borough. (Section 3)
- Details of consultation, etc. (Section 4)
- Measures that the Council will undertake to improve air quality. (Section 5)

Appendices then report on feedback from consultation, measures identified by the GLA that are given low priority here, and the management plan for ensuring that these measures are carried out. (Section 6)

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

2 Air pollution in Hounslow

2.1 Air Quality Limit Values

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. Underpinning this impact on mortality, air pollution is associated with numerous other impacts on health throughout the life course, as reviewed by the UK's Royal Colleges of Physicians and Paediatrics and Child Health⁵.

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 objectives take into account EU Directives that set limit values which Member States are legally required to achieve by their target dates. In cases where the concentration of one or more pollutants exceeds objectives laid down in the UK's Air Quality Strategy and EU legislation, it is necessary for Hounslow, like other Local Authorities to declare an Air Quality Management Area (AQMA) and then to develop an AQAP. The AQAP defines measures that the Council can take, or influence others to take, to reduce emissions of pollutants and hence to improve air quality. Progress on air pollution is reported by the Borough to the GLA (Greater London Authority), and in turn, to Defra (Department for Environment, Food and Rural Affairs).

Current air quality limit values for the two pollutants of most concern in Hounslow and London more generally, NO₂ and fine particles (expressed as both PM₁₀ and the finer fraction PM_{2.5}), are shown in Table 1. Research has failed to identify thresholds for effect of these pollutants, even in areas where pollution levels are very low (such as rural Canada) and so neither these limit values, nor the guidelines provided by the World Health Organisation (WHO) 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 action needs to be on those at highest risk.

Limit values exist for several other air pollutants, but none of these are exceeded in Hounslow. It will be noted that the compliance dates for NO₂ and PM₁₀ have long since passed, though for NO₂ especially, problems remain in Hounslow as in other parts of London.

⁵ 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>.

Table 1. Summary of the National Air Quality Standards and Objectives most relevant to this report

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

2.2 Pollutant concentrations in Hounslow

Hounslow Borough Council is meeting all of the national AQS objectives other than for NO₂. Hounslow is meeting the current objectives for PM₁₀ and PM_{2.5} but as this pollutant is damaging to health at any level, it remains a pollutant of concern.

Figure 1, showing annual mean concentrations of NO₂ across the Borough in 2013, shows that exceedances of the limit value follow the major road network. Exceedances are greatest in the North East of the Borough along the M4-A4 corridor but also present in the South West towards the A30 and M3.

Data from the automatic monitoring sites run by the Council show that there has been some decline in concentrations since 2006. However, in 2016 readings at 4 sites remained above the 40 µg.m⁻³ limit value. Results from automatic monitoring stations are supported by information from 48 passive sampling devices (diffusion tubes) spread across the Borough. These broadly support the evidence from the automatic monitoring sites.

Figure 2 shows forecast concentrations for 2020, with a general reduction in pollutant levels across the Borough, reflecting the 20% fall in emissions of NO_x in Hounslow that is anticipated between 2013 and 2020 (see Table 3, below). However, it is predicted that there will remain exceedances around many parts of the strategic road network that cross the Borough.

Figure 1. Annual mean concentrations of NO₂ in Hounslow in 2013 (Source: GLA/LAEI⁶)

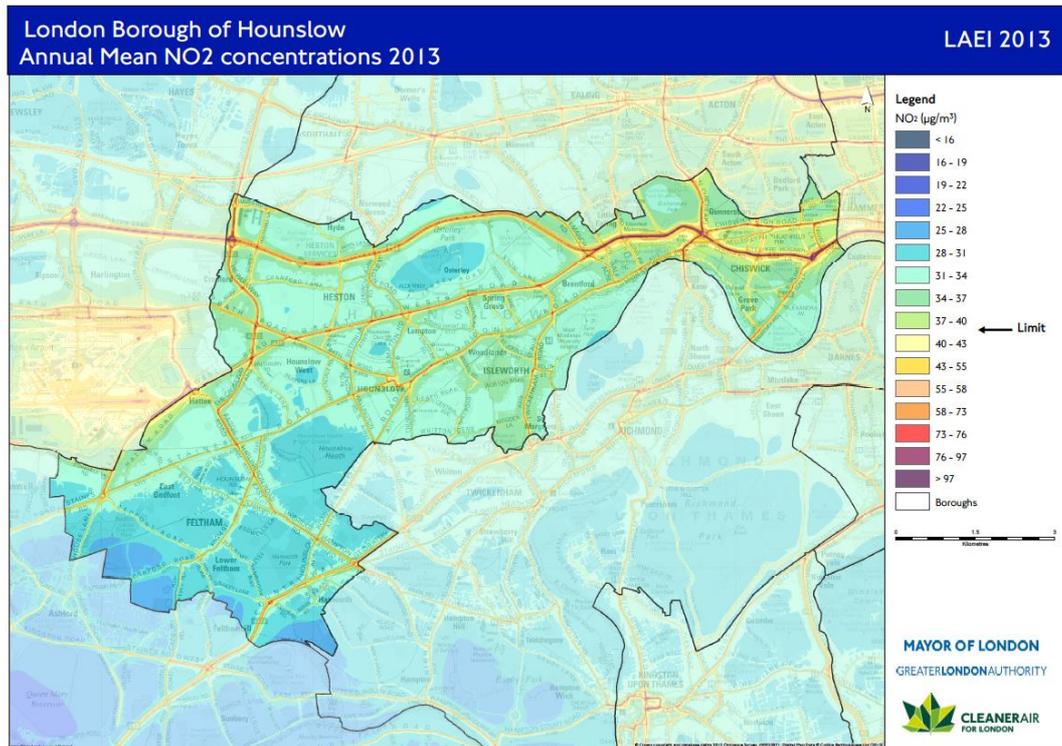
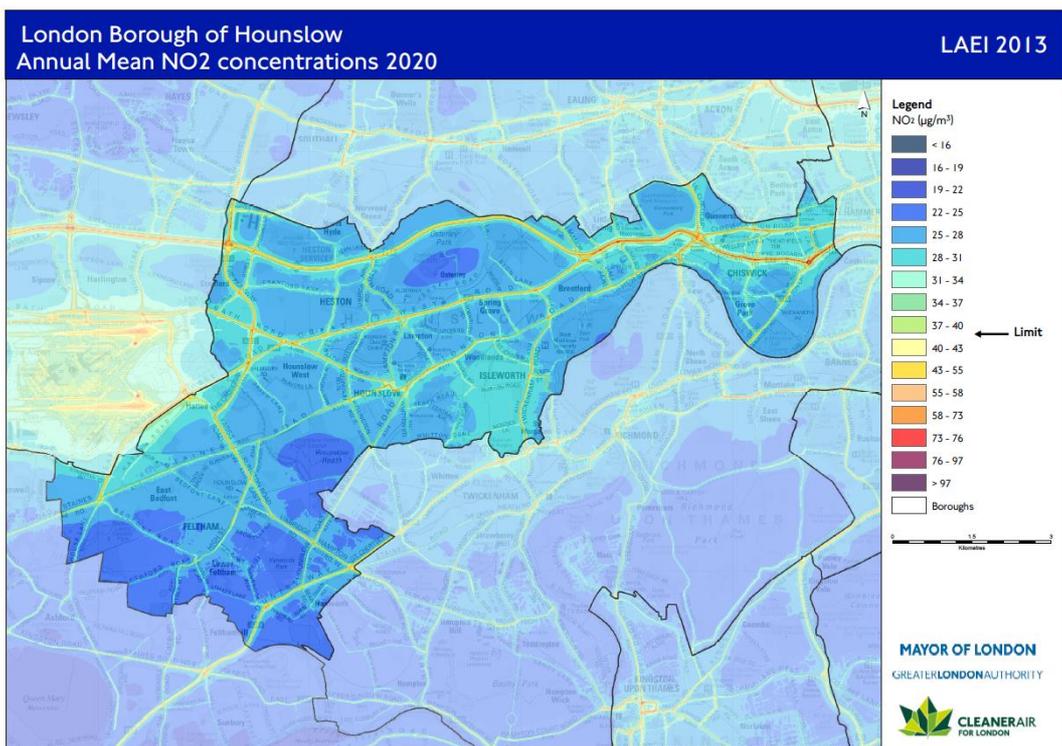


Figure 2. Estimated annual mean concentrations of NO₂ in Hounslow in 2020 (from GLA)

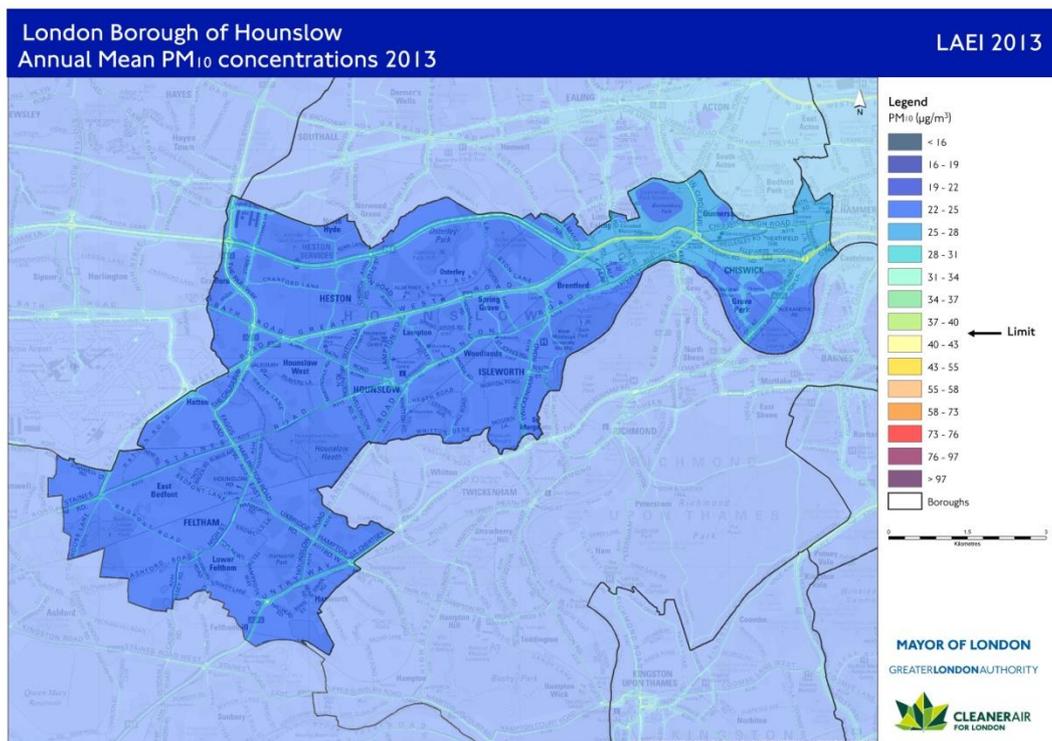


⁶ The LAEI is the London Atmospheric Emissions Inventory developed by the GLA. Data and forecasts from the LAEI are referred to extensively in this report.

There have been two exceedances of the short term limit value for NO₂ at Chiswick in 2008 and Gunnersbury in 2014. There are also elevated levels of fine particles (PM₁₀) along the road network.

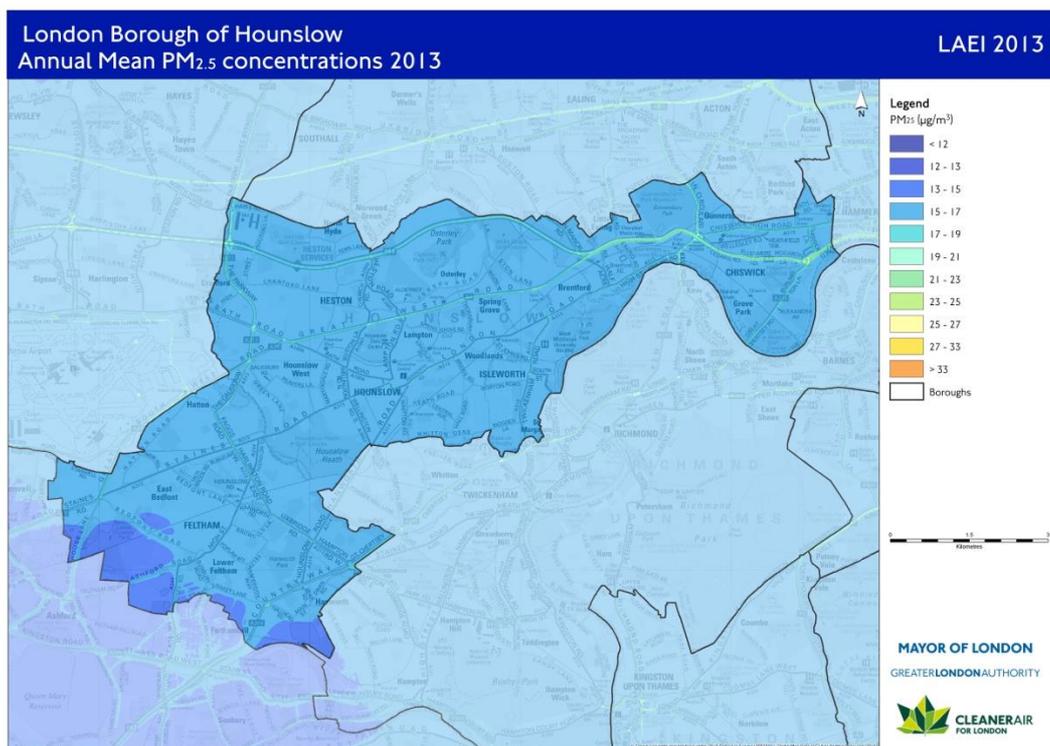
Modelled data for particulate matter are shown in Figure 3 for PM₁₀ and Figure 4 for PM_{2.5}, both for 2013. Maps from the GLA forecasting the situation in 2020 show a decline in concentrations compared to 2013 and so are not reproduced here.

Figure 3. Annual mean concentrations of PM₁₀ in Hounslow in 2013 (from GLA)



The areas of exceedance for both NO₂ and PM follow the major road network through the Borough. Given the similarities between NO₂ and PM with respect to the location of pollution hotspots and the source of emissions, the two pollutants can be addressed using very largely the same set of measures in the Action Plan.

Figure 4. Annual mean concentrations of PM₁₀ in Hounslow in 2013 (from GLA)



2.3 Hounslow’s air quality management area (AQMA)

As noted above, pollutant modelling and monitoring has found that levels of nitrogen dioxide (NO₂) exceed the annual mean objective of 40 µg.m⁻³ in several parts of the Borough. An AQMA was declared for the whole Borough in 2002 (Figure 5), and then revised in 2006. Levels of other pollutants comply with the objectives, though there is some concern about compliance with the hourly limit for NO₂ at Gunnersbury Avenue (North Circular). There is also the formal responsibility to work to a reduction in exposure to PM_{2.5} (Table 1).

2.4 Focus areas in Hounslow

In collaboration with the London Boroughs, TfL has defined 187 Focus Areas for air quality across London. These were defined as locations where the EU’s limit value for NO₂ was exceeded and there was high human exposure. The list of Focus Areas is not intended as an exhaustive list of London’s air pollution hotspots, but a list of those locations where the problem is most acute. Under London Local Air Quality Management guidelines, boroughs are required to have regard to the Focus Areas in their borough when devising their air quality action plans. The Focus Areas for Hounslow, based on modelling using LAEI (London Atmospheric Emissions Inventory) 2013 are shown mapped in Figure 6 and listed in Table 2. The Table includes 3 Focus Areas that just cross into Hounslow from Hillingdon, in the west of the Borough.

Figure 5. Hounslow's Air Quality Management Area

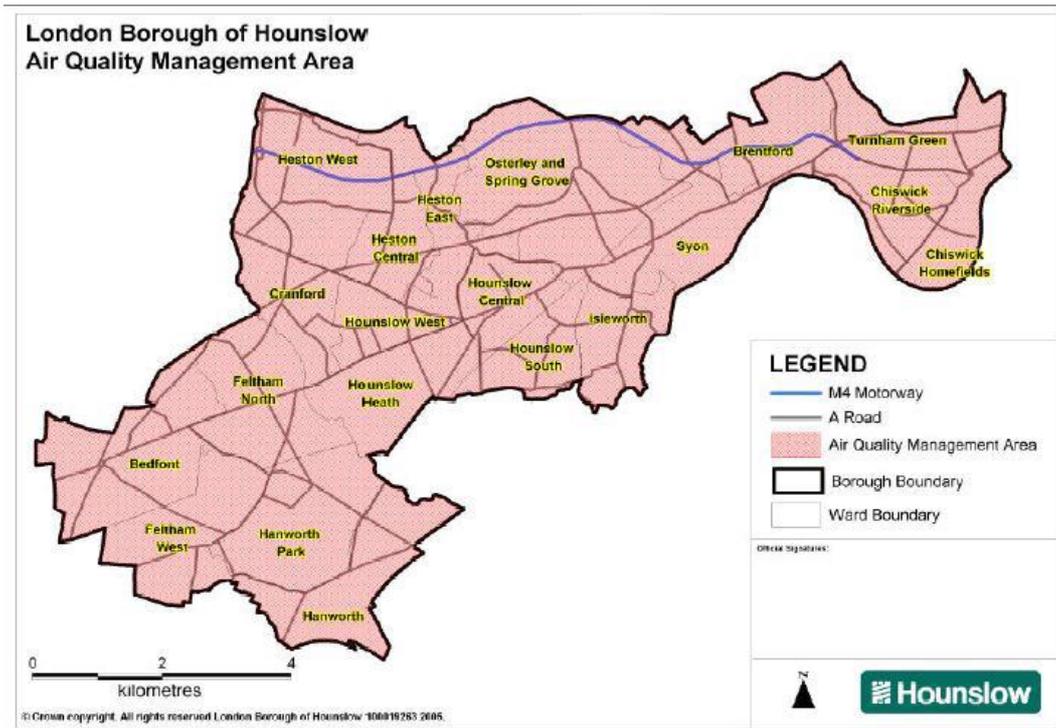


Figure 6. Focus Areas in Hounslow defined using LAEI 2013.

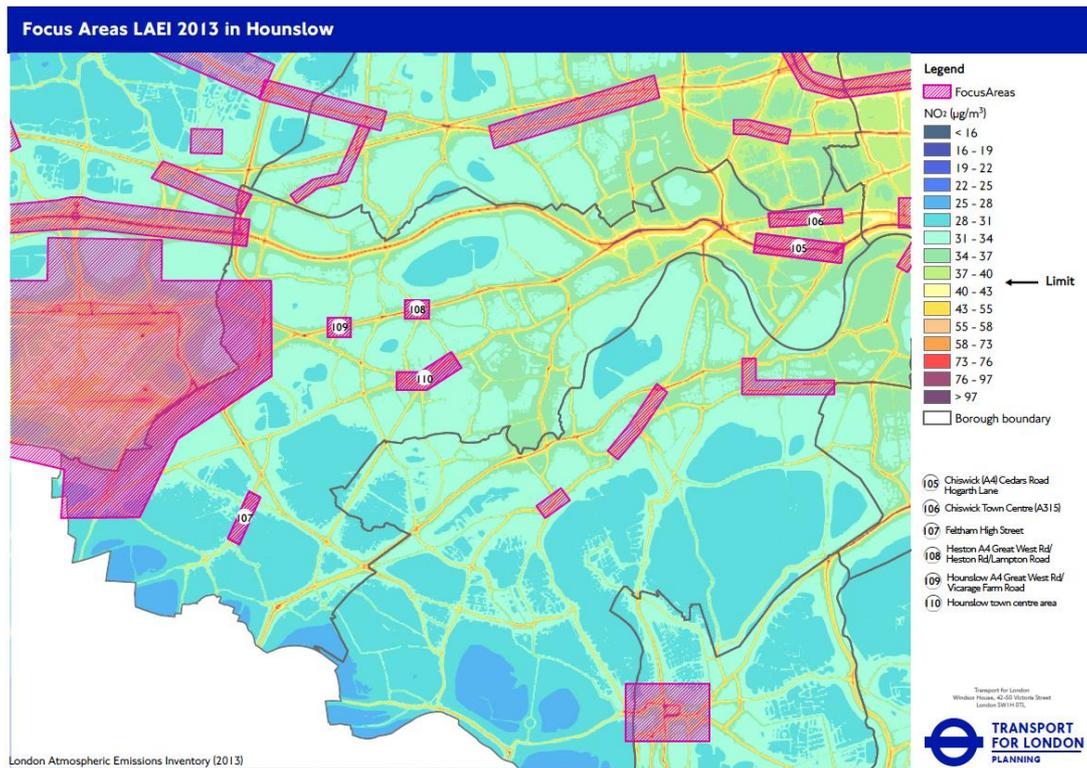


Table 2. List of Focus Areas in Hounslow from LAEI 2013.

Focus Areas in Hounslow	
105	Chiswick (A4) Cedars Road/Hogarth Lane
106	Chiswick Town Centre (A315)
107	Feltham High Street
108	Heston A4 Great West Rd/Heston Rd/Lampton Road
109	Hounslow A4 Great West Rd/Vicarage Farm Road
110	Hounslow town centre area
Focus Areas mainly in Hillingdon, but also in Hounslow	
93	M4 Focus Area (Highways England responsible for AQ monitoring and management scheme as required under The M4 Motorway (Junction 3 to 12) (Smart Motorway) Development Consent Order 2016, SI 2016/863 Schedule 2 Part 1 Section 26)
95	Hayes North Hyde Road
96	Heathrow area

The Great West Road (A4), Brentford, represents another focus area omitted from the LAEI 2013 list: the Council would consider all relevant measures in this focus area as any other, in conjunction with stakeholders. It is noted more generally that the Focus Areas for Hounslow need to be kept under review to ensure that they highlight the areas of most concern. It is also noted that potential linkages between different Focus Areas (e.g. through use by the same vehicles), and between Focus Areas and other areas where limit values are exceeded should be kept under consideration, to ensure that actions in one location do not cause greater problems elsewhere.

2.5 Sources of NO_x and PM in Hounslow

Emission sources in Hounslow, quantified through the London Atmospheric Emissions Inventory, are shown in Table 3 for NO_x, PM₁₀ and PM_{2.5}. The major sources of NO_x in Hounslow in 2013 were Heathrow Airport and road transport. Emissions from the domestic, public and commercial sectors are also significant. By 2030 it is anticipated that emissions from road transport will have reduced to a similar level to those of industry, domestic and commercial (D&C) fuel use and 'other'. For particles, however, road transport via both exhaust emission and re-suspension of road dust, remains dominant throughout the period. Between 2008 and 2030 it is forecast that NO_x emissions will fall by 50%, PM₁₀ by 24% and PM_{2.5} by 39%. The slower decline of PM₁₀ relative to PM_{2.5} is a result of the lack of available measures for addressing re-suspension of road dust, which is concentrated in the PM₁₀ fraction and shows no real change over the time period.

Table 3. NO_x, PM₁₀ and PM_{2.5} emissions in Hounslow, 2008-2030 (Source: LAEI⁷)

NO_x	2008	2010	2013	2020	2025	2030
Road transport	1,269	1,111	966	566	351	220
Aviation	647	603	644	559	498	437
River	1	2	2	2	2	2
Rail	9	8	8	6	6	6
Industry	120	120	201	201	201	201
Non-road mobile machinery (NRMM)	271	201	114	133	129	129
D&C gas	365	324	264	218	211	228
D&C other fuels	61	57	52	19	13	11
Other	241	242	249	263	261	274
Total	2,985	2,667	2,499	1,966	1,671	1,507
PM₁₀	2008	2010	2013	2020	2025	2030
Road transport	111	107	96.9	88.4	85.2	85.5
Aviation	3.4	3.1	3.3	3.2	2.6	2
River	0.1	0.1	0.1	0.1	0.1	0.1
Rail	0.1	0.1	0.1	0.1	0.1	0.1
Industry	5.4	6.9	7.9	7.9	7.9	7.9
Non-road mobile machinery (NRMM)	27.3	20.5	11.4	8.8	8.8	8.8
D&C gas	4.7	4.4	3.6	2.9	2.8	3
D&C other fuels	7.5	8.3	5.3	1.9	1.2	0.8
Other	9.1	8.2	7.3	7.7	7.9	8.2
Re-suspension of road dust	42.2	41.7	40.6	41	41.4	41.7
Construction/demolition	2.4	2.3	2.1	4.2	4.2	4.2
Total	213	203	179	166	162	162
PM_{2.5}	2008	2010	2013	2020	2025	2030
Road transport	66	62	54.9	45.4	41.3	40.6
Aviation	3.4	3.1	3.3	3.2	2.6	2
River	0	0	0	0	0	0
Rail	0.1	0.1	0.1	0.1	0.1	0.1
Industry	5.4	6.9	7.9	7.9	7.9	7.9
Non-road mobile machinery (NRMM)	25.6	19.2	10.7	8.3	8.3	8.3
D&C gas	4.7	4.4	3.6	2.9	2.8	3
D&C other fuels	2.5	3.4	2.8	1.1	0.7	0.5
Other	8.3	7.5	6.6	7	7.2	7.4
Re-suspension of road dust	1.6	1.5	1.5	1.5	1.5	1.5
Construction/demolition	0.2	0.2	0.2	0.4	0.4	0.4
Total	118	109	92	78	73	72

Earlier analysis published in 2011 using the 2010 LAEI dataset and reported by GLA (2013)⁸ included further information on the source of pollution in various parts of the Borough (Table 4). This provides a breakdown of emissions by vehicle type at sensitive locations, showing that the largest sources of NO_x pollution from road transport are bus (31%), cars (29%) and HGVs (26%). Data from the tables has been used to generate summary information on emissions in a series of pie charts (Figure 7 to Figure 9) for 2013, though it should be noted that the strength of emission sources changes in future years, reflecting developments in legislation.

⁷ <https://data.london.gov.uk/dataset/llaqm-bespoke-borough-by-borough-air-quality-modelling-and-data>

⁸ GLA 2013 reference: [London Air Quality Dataset](#)

Table 4. NOx emissions from transport sources in Hounslow (from GLA, 2013)

Check year	% of road transport NOx emissions from each mode				
	Taxi	Car	Bus	LGV	HGV
Clockhouse Roundabout and Great Southwest Road A30 to T4	2	37	16	10	35
Feltham High Street / Hounslow Rd / Harlington Rd / Uxbridge Rd / Hanworth Rd	1	25	40	9	26
Hounslow A4 Great West Rd / Vicarage Farm Rd	1	26	20	11	42
Heston A4 Great West Rd / Heston Rd / Lampton Rd	2	36	23	11	29
Hounslow Grove Rd / London Rd / High Steet	1	18	65	7	9
Brentford M4 J2 and Boston Manor Rd / A4	7	30	23	11	28
Chiswick Rdbt M4 J1 / A4 / A406 Chiswick High Rd Kew Bridge	5	32	28	11	23
Chiswick High Rd from Heathfield Terrace to Chiswick Lane	3	22	51	8	16
Chiswick A4 Cedars Rd / Ellesmere Rd from M4 J1 to Dukes Ave	11	31	20	12	26
Hogarth Rdbt Great Chertsey Rd / Dorchester Grove	6	32	23	12	27
Average	4	29	31	10	26

Figure 7. Share of emissions of NOx in Hounslow in 2013, by source.

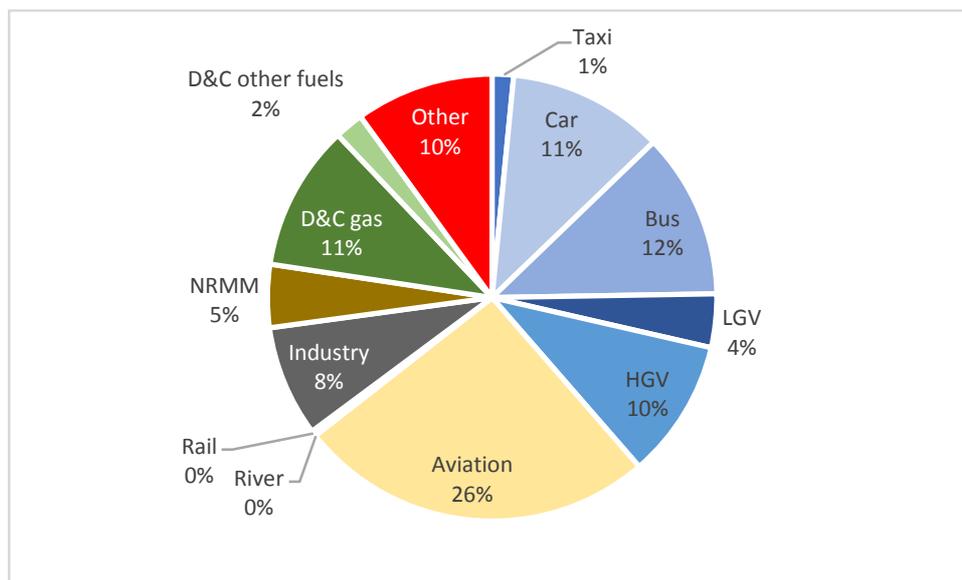


Figure 8. Share of emissions of PM₁₀ in Hounslow in 2013, by source.

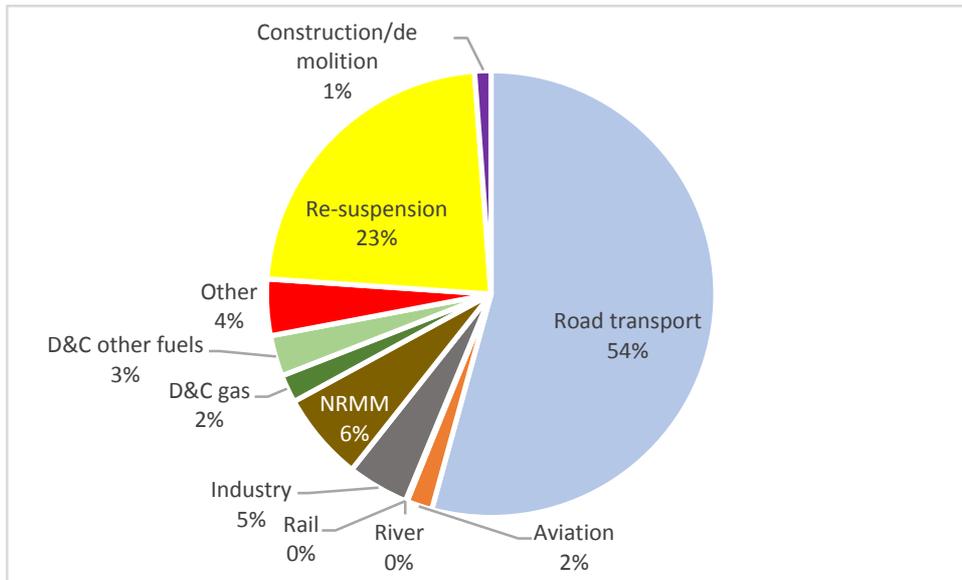
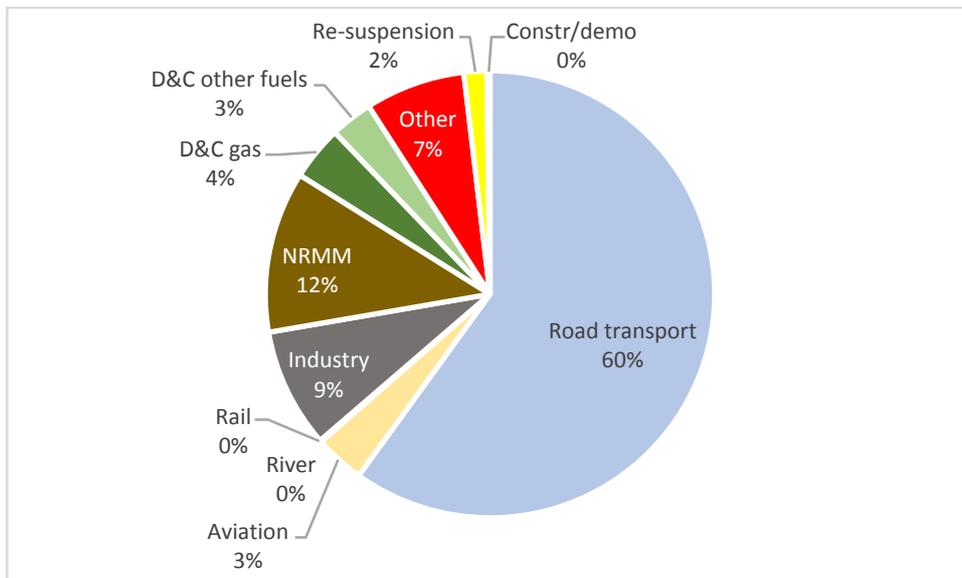


Figure 9. Share of emissions of PM_{2.5} in Hounslow in 2013, by source.



Further analysis has been undertaken by the Borough Council at two specific locations, Chiswick High Road (A315) and the A4 Great West Road at the Junction with the M4. Results are shown in Table 5 and Table 6. Comparison for the two sites shows some significant differences in source strength, but confirms the importance of cars, goods vehicles and buses. The analysis continued with appraisal of options (smoothing traffic flows using SCOOT, using hybrid buses, tighter LEZ criteria, targeting HGV deliveries and introducing high occupancy vehicle lanes). This analysis has informed the subsequent assessment of options for the present plan.

Table 5. Source apportionment for Chiswick High Road

	Moped	Motorcycle	Car	Taxi	LGV	Bus	Coach	Rigid HGV	Artic HGV
NOx (%)	0.0%	0.5%	27.7%	7.3%	5.9%	47.0%	0.6%	10.1%	1.0%
PM ₁₀ (%)	0.2%	0.9%	33.7%	25.2%	13.4%	21.5%	0.2%	4.6%	0.3%
CO ₂ (%)	0.0%	1.3%	50.8%	4.4%	7.4%	29.9%	0.3%	5.3%	0.0%
v.km (%)	1.0%	3.2%	73.0%	4.1%	8.4%	7.5%	0.1%	2.5%	0.2%

Table 6. Source apportionment for Great West Road (A4, junction with M4)

	Moped	Motorcycle	Car	Taxi	LGV	Bus	Coach	Rigid HGV	Artic HGV
NOx (%)	0.0%	1.0%	37.2%	2.1%	10.8%	9.4%	3.7%	25.3%	10.6%
PM ₁₀ (%)	0.5%	1.7%	52.1%	7.0%	21.3%	3.0%	1.6%	9.7%	3.1%
CO ₂ (%)	0.1%	1.6%	63.7%	1.2%	10.1%	4.5%	1.5%	11.7%	0.0%
v.km (%)	0.6%	1.7%	80.3%	1.0%	9.7%	1.3%	0.5%	3.8%	1.1%

2.6 Health impacts of air pollution in Hounslow

GLA (2013) provides guidance about air pollution for Public Health Professionals in Hounslow⁹. The report cites analysis by the Institute of Occupational Medicine that estimates that the total burden of fine particle exposure of the Borough's population is equivalent to 116 deaths annually, distributed by Ward as follows:

A subsequent report by King's College provides a broadly similar estimate, 102 equivalent attributable deaths, corresponding to 1,564 lost life years, for 2010¹⁰. The King's report also provides estimates for deaths linked to NO₂ exposure of 79-174 deaths and 1,200-2,700 life years lost annually. These estimates for NO₂ were based on preliminary conclusions of a working group of the Department for Health's Committee on the Medical Effects of Air Pollution (COMEAP)¹¹ and that the final conclusions of the group may well be more conservative. Even if this is the case, the finding that air pollution has a significant role on mortality in Hounslow will remain. There will of course also be further effects on health, through the onset of cardiovascular and respiratory diseases. A 2016 report from the Royal Colleges of Physicians and of Paediatrics and Child Health¹² indicates that these effects occur throughout the life course.

⁹ GLA (2013) Air Quality in Hounslow: A Guide for Public Health Professionals.

https://www.london.gov.uk/sites/default/files/air_quality_for_public_health_professionals_-_lb_hounslow.pdf.

¹⁰ 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

¹¹ COMEAP (2015) Nitrogen Dioxide: interim view on long-term average concentrations and mortality.

<https://www.gov.uk/government/publications/nitrogen-dioxide-interim-view-on-long-term-average-concentrations-and-mortality>.

¹² 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>.

Table 7. Number of equivalent attributable deaths¹³ attributed to exposure to PM_{2.5} pollution in 2008 in wards in Hounslow.

Ward	Annual deaths attributed to PM _{2.5} exposure
Bedfont	5
Brentford	7
Chiswick Homefields	6
Chiswick Riverside	6
Cranford	6
Feltham North	5
Feltham West	7
Hanworth	7
Hanworth Park	6
Heston Central	6
Heston East	6
Heston West	6
Hounslow Central	6
Hounslow Heath	6
Hounslow South	6
Hounslow West	6
Isleworth	6
Osterley and Spring Grove	6
Syon	1
Turnham Green	6
Total	116

Information gathered during the public consultation (Appendix A) revealed a number of local residents had experienced illness, either directly, or via friends and family that they considered could be related to exposure to air pollution in the Borough:

- Breathing difficulties
- Asthma
- Persistent cough
- Pneumonia
- Itchy scalp
- Stinging eyes
- Lingering colds
- General malaise
- Sleepless nights

Some noted that they experienced improved breathing when in the countryside outside of the Borough.

¹³ COMEAP (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304641/COMEAP_mortality_effects_of_long_term_exposure.pdf) concludes that the number of deaths linked to air pollution to some degree is likely to be significantly higher than the estimate given in the table (and similar work besides), but, recognising the role of additional factors (diet, lack of exercise, smoking, etc.) the burden on mortality can be expressed as the number of 'equivalent attributable deaths' as shown here. Other calculations provide estimates of the loss of life expectancy.

3 Hounslow's Air Quality Priorities

The information presented in the previous section shows that Hounslow's Air Quality Management Area remains as relevant today as it did when first implemented in 2003: there remain exceedances of the air quality limit values at sites across the Borough.

The burden of air pollution on the health of those living and working in Hounslow is significant, being linked with over 100 deaths annually. The largest problems in the Borough in regards to meeting the statutory limit values are linked to NO₂ and the major road network and Heathrow Airport. However, concerns associated with exposure to fine particulate matter remain, given the extent of health impacts linked to this pollutant. Accordingly, reduction of the population to PM exposure is considered a priority alongside reduction of NO₂ levels.

Most of the measures that are contained in the original AQAP which was published in 2005 have been successfully implemented to a degree, though it would be possible to go further in many cases if additional budget were to be provided. At the same time, a number of measures included in the plan have not been successful, including areas where the Council has control and areas where its control is very limited (e.g. in relation to Heathrow Airport). A number of barriers to progress over the life of the previous plan have been identified, linked to:

- Limited influence of Hounslow Council on some major stakeholders, including those responsible for the major road network and those responsible for Heathrow Airport.
- The failure of motor manufacturers to meet vehicle emission standards in real world conditions
- Continued growth in diesel vehicles
- Absence of a clear Government policy to dis-incentivise use of diesel fuels/vehicles
- Limits on funding for air quality improvement measures

It is acknowledged that there is now movement on some of these issues, leading for example to a reduction in diesel car sales and the introduction of more realistic emission testing procedures for vehicles.

Priorities for action concern:

1. Increased partnership working across Borough departments, including transport and public health.
2. Increased partnership working with organisations outside of the Council, especially Heathrow Airport, Highways England and Transport for London.
3. Regular re-evaluation of adopted measures (see next section) to ensure the AQAP is cost-efficient.
4. Re-evaluation of the Focus Areas for the Borough at regular intervals, to ensure that action in those areas benefits public health, leads to broader improvements in air quality throughout the Borough, and does not pass problems from one area to others.

4 Development and Implementation of Hounslow's AQAP

4.1 Consultation and Stakeholder Engagement

In developing/updating the action plan we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed below. In addition we have undertaken the following stakeholder engagement:

- Consultation engagement events across the Borough;
- Web site questionnaire;
- Social media; and
- Air quality awareness campaign through poster distribution/display at primary schools and libraries

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

Table 8. Consultation Undertaken

Yes/No	Consultee
Once the plan is complete	the Secretary of State
Yes	The Environment Agency
Via the draft	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
Yes	Residents

4.2 AQAP Steering Group

Hounslow AQAP Steering Group has been set up to ensure clear governance and ownership of the plan and the actions/measures. The Steering Group consists of representatives from Environment Strategy, Transport, Public Health, Development Management (Planning), Social Housing, Corporate Energy, Vehicle Fleet Management and other relevant teams. Representatives from TfL, HAL, HE, GLA and other representatives from interested organisations will also be asked to join. A selection of residents and representatives from local pressure groups and charities will also be invited. The group will aim to meet twice a year (Sep. & Mar.) to evaluate AQAP progress and provide steer, by considering the following:

- if there are existing programmes in other areas that will contribute to emissions reductions (or increases) that should be accounted for within the AQAP;
- what factors may influence the local pollution situation in the near future (i.e. 5 to 10 years)

- the future trends that are likely to contribute (regional emissions trends as well as local factors);
- if more technical assessment may be required before proceeding to updating the AQAP;
- if traffic management interventions are required;

It is proposed that the AQAP Steering Group will be chaired by the Cabinet Member responsible for air quality. Further details of the proposed agenda for the group through the period covered by the plan are provided in the next section.

5 Pollution control measures

5.1 Hounslow's original Air Quality Action Plan (AQAP)

Following declaration of the AQMA the Council published its first AQAP in 2005, and has been implementing it since that time. The original AQAP was comprised of 88 separate actions brought together within a series of 7 'packages':

- Package 1: Cleaner transport
- Package 2: Through traffic
- Package 3: Cleaner vehicles
- Package 4: Heathrow Airport
- Package 5: Local industry and business
- Package 6: Local developments (current and future)
- Package 7: Corporate measures and actions to be taken in liaison with the Mayor

Many of the measures contained in the original plan remain relevant and have been carried through to the revised AQAP.

5.2 AQAP for Hounslow for 2018-2023

Table 10 shows the revised AQAP, in the form of an extended version of the Air Quality Action Matrix provided by the GLA¹⁴. It contains:

- A list of the actions that form the plan;
- The responsible departments/organisations who will deliver actions;
- Source of funding;
- A qualitative assessment of the expected benefit in terms of emissions and concentration reduction on a scale of 1 to 3, where 1 = highest effect and 3 = lowest effect¹⁵;
- The timescale for implementation; and
- How progress will be monitored.

Following release of the draft plan for consultation, numerous comments were received from interested parties (Appendix A). These have been factored into the list of measures, to the extent considered appropriate. In addition, feedback from the council's Scrutiny Committee has also been considered.

To ensure progress is being made on these proposals a regular series of special reports will be provided to the AQAP steering group. These are indicatively scheduled as set out in Table 9 below. These reports will summarise the work that has been done to date on progressing the actions set out in Table 10 under the relevant theme alongside any evidence of effectiveness in improving air quality. They will also detail any emerging best practice/new concepts for exploration and may suggest recommendations for revisions to the AQAP if appropriate.

¹⁴ https://www.london.gov.uk/sites/default/files/air_quality_action_matrix.pdf

¹⁵ Some measures that score low on reduction in emissions or concentrations remain useful for example by providing information to those at risk, for example through the *AirText* service.

Table 9. Schedule of special reports for the air Hounslow AQAP steering group.

Theme	Report due
Links with Public Health	Q2 2019/20
Borough fleet management	Q1 2020/21
Engagement with businesses	Q2 2020/21
Planning Policy/Development Management	Q1 2021/22
Transport	Q2 2021/22
Procurement/Housing	Q1 2022/23

Table 10. Measures forming the AQAP for Hounslow for 2018-2023.

Key: Measures purposed in addition to those suggested by GLA;

 Measure fully/part implemented or operational;

 Measure under review/consideration/planned;

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
Emissions from developments and buildings	1	<p>The council will ensure developers submit construction environment management plans (CEMPs) and that they incorporate adequate, effective and enforceable measures (with triggers) to protect inhabitants, their amenity and sensitivity of the surrounding area.</p> <p>The council will ensure that all major developments submit a CEMP.</p> <p>The council will also undertake a benchmarking activity against approved CEMPs in other boroughs to take place in 2019/20 to understand best practice. Report to AQAP Steering Group in Q1 21/22</p>	Development Management /Planning (DM)	Developers	n/a (Benefits potentially significant but unquantifiable)	<p>Review further measures (2018-19);</p> <p>Implement (2019 onwards)</p>	<p>Construction Environment Management Plans (CEMP) are already reviewed as part of the planning application process. However, Officer's believe CEMPs could be made more effective in line with emerging best practice from other London boroughs/GLA.</p> <p>Measures to secure CEMPs for developments in sensitive areas with large exposure such as near schools already in operation. Effectiveness in other areas shall be reviewed and appropriate measures considered & implemented</p>

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
	1.1	<p>The council will develop and implement enhanced planning conditions for new developments in respect to Air Quality Neutrality - ensuring discharge of any such conditions is carried out subject to submission of relevant post completion test reports based on evidence</p> <p>Ensure enhanced planning conditions drafted/agreed and applied from 2019. Monitored regime for successful/effectiveness to be agreed with Development Management/implemented in 2020</p> <p>Report to AQAP Steering Group in Q1 21/22</p>	Development Management /Planning (DM)	Developers	n/a (Benefits potentially significant but unquantifiable)	<p>Review further measures (2018-19);</p> <p>Implement (2019 onwards)</p>	<p>Planning applications for major developments are required to demonstrate that their proposals are <i>air quality neutral</i>, in accordance with LBH Local Plan policy EQ4, London Mayor's Sustainable design & construction SPG however we have identified that enhanced conditions may improve outcomes.</p>
Emissions from developments and buildings	2	<p>The council will ensure appropriate enforcement of Non-Road Mobile Machinery (NRMM) air quality policies</p> <p>Borough is currently being assisted by GLA in implementing this to 2019.</p>	<p>Env. Strategy /Development Mgm't</p> <p>MAQF plus £2k per annum (TBC)</p>	In-house	(Benefits potentially significant but unquantifiable)	Throughout Local Plan/AQAP	

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		<p>After funding expires in March 2019, the council will either submit another bid for MAQF and/or seek alternative funds or methods to continue this activity</p> <p>Success may be measured by monitoring the proportion of construction sites that are compliant with NRMM, relative to the total number of sites monitored.</p> <p>Report to AQAP Steering Group in Q1 21/22</p>					
Emissions from developments and buildings	3	The council will ensure that all Combined Heat & Power plant (CHPs) that are approved and installed will be compliant with the latest GLA CHP requirements, and this will be monitored by recording the details of all CHPs requested and approved through the planning process	Development Management (Planning) /Env. Strategy	In-house	Helps to minimise exposure of residents to emissions from new developments, and helps to prevent onsite energy generation as a new major source of emissions.	Throughout Local Plan/AQAP	Operational. Developers are currently expected to quantify impact of CHP/biomass on air quality to support their air quality neutral proposal, rather than offering qualitative approach to justify their proposals.
	3.1	The council will look to implement and enforce more stringent planning	Development Management	In-house	Use of equipment compliant with GLA emissions standards	Throughout Local Plan/ AQAP	Discuss, agree and implement new and more stringent planning condition(s) with Development Management.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		conditions, in line with provisions set out in new London Plan, on use of CHPs to prevent or limit new sources of emissions from major developments or otherwise	(Planning) /Env. Strategy		for APEC A (0.7g/kW for gas fired spark ignition) CHP plant rather than the RHI emissions standards would help reduce NO _x emissions by 30%.		https://www.london.gov.uk/sites/default/files/gla_energy_planning_guidance_-_march_2016_for_web.pdf
Emissions from developments and buildings	4	The council will ensure that all relevant developments will meet air quality neutral standards, to be measured by recording all relevant planning applications and whether the AQ neutral standard has been met.	Development Management (Planning) /Env. Strategy	In-house	(Benefits potentially significant but unquantifiable)	Throughout Local Plan/ AQAP	Operational. All new major developments are required to demonstrate, through use of appropriate planning conditions and assessment, that proposed development is compliant with 'Air Quality Neutral' significant criteria given in GLA SPG (GLA Sustainable Design & Construction SPG), taking into account emissions from transport and building elements.
	4.1	The council will undertake air quality training for DM Officers and Planning Committee (Local Plan Policy EQ4). 2x DM officer training sessions and 1x presentation to planning committee completed by end 2019.	Development Management (Planning) /Env. Strategy	In-house	(Benefits potentially significant but unquantifiable)	Throughout Local Plan/ AQAP	Environment Strategy will offer training to Planning Officers to complement their knowledge in air quality. Guidance will also be provided to Councillors on the Planning Committee to enhance their knowledge of air quality issues.
Emissions from developments and buildings	5	The council will seek to secure adequate, appropriate, and well located green space and	Development Management (Planning) / Planning Policy	Development Mgm't/Developers	(Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	Operational: Secured through planning regime and planning conditions as part of building regulations and obligation to provide suitable external amenity.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		<p>infrastructure is included in new developments.</p> <p>Report on this to be provided to AQAP Steering Group in Q1 2021/22 to provide detail on the number of schemes where green infrastructure is used or enhanced to provide low exposure walking and cycling routes</p>					This action to be pursued in accordance with Local Plan policy GB9, and the London Plan. The Council would promote this through planning in the context of sustainable development.
Emissions from developments and buildings	6	<p>The council will ensure that Smoke Control Zones are appropriately identified and fully promoted and enforced.</p> <p>The council will aim to respond to all complaints within 28 days and undertake appropriate enforcement action in the event of multiple breaches by a single party.</p>	Env. Strategy / Pollution	In-house (Pollution)	(Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	Operational: The Council currently enforces illicit wood burning and such activities, in line with London being a Smoke Control Zone (SCZ), where people voluntarily should not light bonfires and burn wood. Such activities take place on irregular basis, and may constitute nuisance and enforcement action may follow, if incident is reported.
	6.1	The Council will raise awareness of the impact of illicit wood burning and fires in Smoke Control Areas (SCA).	Env. Strategy / Pollution	In-house (Pollution)	(Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	The Council will raise awareness of illicit wood burning & fires generally through Hounslow Matters magazine, distribution of a leaflet in air quality focus areas and using Council social media.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		This will be done through the provision of one article in Hounslow Matters magazine in 2019/20 and an annual campaign using the council's social media outlets. We will also distribute a leaflet direct to residents in all air quality focus areas.					
Emissions from developments and buildings	7	<p>The council will promote and deliver energy efficiency retrofitting projects in workplaces and homes using the GLA RE:NEW and RE:FIT programmes to replace old boilers /top-up loft insulation in combination with other energy conservation measures;</p> <p>Hounslow Housing is continuing to invest in measures including: Domestic boilers replacement scheme with high efficiency boilers across social housing: circa £6.5m between 18/19 and 21/22; District and communal heating network upgrades</p>	Property Services /Social Housing	In-house	(Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	<p>Operational: Energy efficiency measures being implemented as part of boiler replacement programme, external wall insulation and roof renewal/insulation schemes, by Property Services.</p> <p>As most of the measures outlined are at the early stages, therefore only budgetary information is available at the current time and targets for cost savings, emission reductions and rate of % completion are not available yet.</p>

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		<p>across social housing: circa £5.5m between 18/19 and 21/22; Insulation upgrades across social housing: circa £4m primarily for EWI programmes between 18/19 and 21/22; LED street lighting upgrades: circa 1200 lamps to be upgraded to LED.</p> <p>Update presented to Air Quality Action Plan Steering Group in Q1 2022/23</p>					
	7.1	<p>The Council has identified over 30 schools to identify suitable measures for energy efficiency & emissions reduction.</p> <p>70 schools responsible for 70% CO₂ emissions targeted under GLA's RE-FIT programme;</p>	Council Energy Mgm't /Env. Strategy	In-house/School Gov. bodies/Govt. bodies	(Benefits potentially significant but unquantifiable)	2018-2023	5-year plans being drawn-up before seeking Cabinet approval; business case would be prepared

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		<p>11 schools have now completed the Investment Grade Proposal (IGP) that provides 320kWp of Solar PV (Phases 1 & 2);</p> <p>Further 13 schools have signed-up (agreed works to commence) to IGP and agreement is in pipeline with further 10 schools – these 23 schools are projected to save ~£230k/ann. (with < 8yr. payback), which accounts for ~ 23% of CO₂ emission reductions and similar order of magnitude of NO_x emissions</p> <p>High Level Appraisal survey completed (for energy savings under RE-FIT) in 42 schools in the past 18 months: 10 schools have taken up this initiative;</p>					
Public health and awareness raising	8	The council will ensure that the Director of Public Health (DPH) is fully briefed on current Air Quality issues. 1x briefing per year provided to DPH plus DPH	Environmental Strategy /Pub. Health	In-house (Pub. Health)	n/a (Benefits potentially significant but unquantifiable)	2019/20	<p>Director of Public Health and other leads have been briefed about the scale and complexities of issues.</p> <p>Further measures are under consideration, including our ability, through AirTexT, to identify</p>

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		(or representative) invited to Air Quality Steering Group.					and target members that may be more vulnerable to adverse impacts of air pollution, and to increase the number of subscribers of AirText.
Public health and awareness raising	9	<p>The council's Public Health Team will support engagement with local stakeholders (businesses, schools, community groups and healthcare providers) by helping raise awareness about air quality issues and what can be done to reduce emissions. They will be asked for their support via the DsPH when projects are being developed.</p> <p>The Public Health team engage with stakeholders via the Health & Wellbeing Board and regular meetings with CCG. Working with DPH, the council will do two presentations on air quality issues, during lifetime of this action plan.</p>	Pub. Health /Env. Strategy /Transport	In-house	n/a (Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	Public Health is engaged with many initiatives in communities, including 'Beat the Streets' AirText/AirText app, aimed at raising awareness in schools, parents (review of travel plans), and further dialogue with GPs surgeries & Hounslow CCG is planned.
Public health and awareness raising	10	The council's Director of Public Health will have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) has up to date information on air	Public Health /Env. Strategy	In-house	n/a (Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	<p>Implemented by:</p> <ul style="list-style-type: none"> • Making Air Quality a lead indicator in accordance with JSNA guidelines, including a composite dialogue with stakeholders as identified in action 9 above;

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		quality impacts on the population and that this is published and updated when required					<ul style="list-style-type: none"> Considering other ways, including tackling obesity by promoting active travel to/from schools, to improve public health outcomes
Public health and awareness raising	11	The council's Environmental Strategy team will seek to strengthen co-ordination with Public Health by ensuring that at least one Consultant-grade public health specialist within the borough has air quality responsibilities outlined in their job profile (as part of a wider role, not a dedicated air quality post)	Public Health	In-house	n/a (Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	A number of measures are in place and are being pursued as part of on-going work with CCGs, GPs surgeries and other groups to bring about greater awareness & understanding of impacts of poor air quality, associated with our behaviour on travel and other activities.
Public health and awareness raising	12	The council will ensure that the Director of Public Health to sign off Statutory Annual Status Reports and all new Air Quality Action Plans	Env. Strategy /Public Health	In-house	n/a (Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	Implemented
Public health and awareness raising	13	The council will ensure that the Head of Transport has been fully briefed on the Public Health duties and the fact that all directors (not just Director of Public Health) are responsible for delivering them, as well as on air quality opportunities and risks related to transport in the borough.	Public Health /Env. Strategy /Transport	In-house	n/a (Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP)	<p>Implemented by:</p> <ul style="list-style-type: none"> Close collaboration exists between the Transport, Public Health Env. Strategy teams, who jointly fund the Beat the Street initiative; The head of traffic and transport works with NICE to develop guidance on environment and active travel (PH8) Education & awareness raising campaigns through engagement, such as that during AQAP consultation, in borough schools most affected

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		Provide a briefing covering impacts of transport on air quality and potential techniques/solutions for mitigating impact to be disseminated amongst the Transport team. 2 x 'lunch and learn' training sessions on Air Quality to be held with transport team during lifetime of this action plan.					by poor air quality, including AQ audits in schools.
Public health and awareness raising	14	<p>The Council will take action to raise awareness of Air Quality amongst the business community with 1x briefing to the Hounslow Economic Business Forum. This is made up of the 30 largest businesses in the borough and also the local chambers of commerce who together disseminate information to circ. 12,000 local contacts.</p> <p>The briefing will look to promote the Mayor's new Cleaner Vehicle Checker</p>	Public Health /Env. Strategy	In-house	n/a (Benefits potentially significant but unquantifiable)	<p>To be discussed/agreed with businesses</p> <p>Review possible measures (2018-19);</p> <p>Implement 2019 onwards</p>	<p>Action to be discussed with stakeholders, promoted and implemented.</p> <p>Mayor's Newer Vehicle Checker - BETA London City Hall. This will be promoted via the Hounslow Economic Business Forum and local chambers of commerce.</p>

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
Public health and awareness raising	15	The Council will raise awareness about air quality by promoting AirText through articles on Air Quality in local magazine, 'Hounslow Matters' once a year, using social media and by distributing leaflets, with an aim to increase subscription of AirText in Hounslow by 10% on 2017 level (178).	Public Health /Env. Strategy	In-house	?	2019 onwards	Engagement with PH planned to explore new ways to further promote AirText campaign (using other measures & AirText app now available)
Public health and awareness	16	The council will encourage schools to join the TfL STARS accredited travel planning programme by providing information on the benefits to schools and supporting the implementation of such a programme. With the aim of having 50% Schools accredited by end of 2018/19, 55% by end 2019/20 60% by end 2020/21, 65% by end 2021/22.	Public Health /Transport /Env. Strategy	In-house	n/a (Benefits potentially significant but unquantifiable)	Throughout Plan (AQAP) and Transport LIP.	Implemented - The Traffic & Transport team assist schools to get their travel plans accredited each year and run initiatives such as free pedestrian training, cycle training, small grants that schools can access free. However, further work (action) through education / awareness and behavioural change specifically on air quality issues in/around schools and options to reduce exposure, will be considered. Note: link to action 27.1.
Public health and awareness raising	17	The council will raise the issue of air quality with school pupils and communities through STARS	Env. Strategy /Public Health /Transport	MAQF/LIP	?	Throughout Plan (AQAP) and Transport LIP.	Note action 16, 27.1. Potential to work with schools to promote routes with less pollution or have a bigger focus on air quality in our current

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		accreditation, and also via a dedicated Theatre in Education intervention run in 2019/20 for all primary schools on the subject of air quality (target 60% of eligible schools to take up). Letters home to all parents of primary age pupils in 2019/20 on actions they can take to reduce pollution outside school gates and generally (note action 27.1)					mode shift work. To be reported to Air Quality Action Plan Steering Group in Q2 2021/22.
	17.1	The council will work with schools to implement proposals contained in GLA/TfL air quality audit reports for schools in poor air quality areas. Key recommendations implemented at audited schools by April 2020	Env. Strategy /Public Health /Transport	MAQF/LIP	?	Throughout Local Plan/AQAP	Implementation of measures outlined in the schools' AQ audits will be reviewed and see what remedial measures could be considered and how to fund these measures. Although measures aimed at exposure reduction may be appropriate in the short term. See action 16,17,27.1. Report to Chiswick Area Forum/Local Ward Councillors on interventions proposed from Air Quality Audits in 2019.
Delivery servicing and freight	18	The council's procurement policy will be reviewed to include a requirement for suppliers with large fleets to have attained silver Fleet Operator Recognition Scheme (FORS)	Procurement /Env. Strategy	In-house	n/a (Benefits potentially significant but unquantifiable)	Develop procurement policy (Dec.2018) and implement revised policies (Jun.2019 onwards)	LBH to update procurement policy requiring business that use large vehicle fleet operators to have attained the Silver FORS accreditation. Procurement policy would also need to be aligned with Construction Logistics and Cyclist Safety (CLOCS) and TfL's Work Related Road Risk (WRRR) requirements. Though it should be noted that FORS does not monitor compliance.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		accreditation or other equivalent standard					
Delivery servicing and freight	19	The council will update our procurement policies to ensure sustainable logistical measures are implemented (and include requirements for preferentially scoring bidders based on their sustainability criteria).	Procurement	In-house	n/a (Benefits potentially significant but unquantifiable)	2019 onwards	As above (in 18) – large fleet operators to comply with silver FORS accreditation. 2018 Parks contract is opportunity to have it included. Criteria with objective scoring will be developed and implemented, which will be set out in the tender documentation. This could include things like CO2 offset, miles reduced etc.
Delivery servicing and freight	20	The council's 'New Civic team' will explore options to reduce deliveries to new Civic centre site. Deliveries reduced by circ. 50% on 2017 base reported on in 2020. Delivery reduction target to be agreed with Procurement.	Procurement /Regional co-operation	In-house/Regional coordination	n/a (Benefits potentially significant but unquantifiable)	To be determined/agreed with regional participants	Wider application will be considered through new transport strategy where appropriate.
Delivery servicing and freight	21	The Council will consider best practice from schemes to incentivise low emission freight delivery options implemented elsewhere. This will be progressed via a liveable neighbourhoods bid to TfL in 2019/20.	Transport	Businesses	?	To be discussed/agreed with businesses	
Borough fleet actions	22	The council will maintain, through excellent practices	Borough Vehicle Fleet Management	In-house	?	Ongoing	Already implemented & achieved. Will be maintained for lifetime of the plan.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		on our fleet, our Gold FORs standard.					
	22.1	The council's Vehicle Fleet Mgm't team will complete a feasibility study on measuring real-world emissions that sets a baseline against which to base future emission reductions. Feasibility complete end 2019. Implementation from 2020 onwards	Borough Vehicle Fleet Management /Env. Strategy		?	By end 2018/19	This programme should help monitor & reduce emissions further, subject to project outcome and approval by the Vehicle Fleet Department - this is under discussion and will be reviewed in next 6 months (Q4 2018).
Borough fleet actions	23	The council will look to increase the number of hydrogen, electric, hybrid, bio-methane and cleaner vehicles in the boroughs' fleet. The council will explore opportunities to introduce EVs and make future vehicle fleet as clean as possible in future, however noting that the in-house fleet is now quite small. Action to procure 4x electric vehicles (EV) for use by Pest Control & Animal Wardens	Borough Vehicle Fleet Management	In-house/Ext. Funding	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	Judged as low priority/impact by GLA. Plans to procure EVs and install EV charging points will be discussed further with 'Animal wardens team' (intended users) and get demo vehicles in for trials, before reviewing and making final decision.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		Future report to AQAP Steering Group Q1 20/21.					
Borough fleet actions	24	The council will look to accelerate uptake of new Euro VI vehicles in borough fleet	Borough vehicle fleet Management	In-house	?	Substantively complete	90% of waste vehicle fleet is Euro VI, works to increase percentage where feasible
	24.1	The council will look to fit speed control technology to reduce emissions	Borough vehicle fleet Management	In-house	?	Completed	This action controls vehicle speed limit, which is fitted to significant proportion of vehicle fleet. All new small vans are fitted with stop / start technology as a catalyst to reduce emissions. All vehicles are now speed restricted to 62mph, to reduce emissions, and are fitted directly by vehicle manufacturer.
	24.2	The council will explore fitting the vehicle fleet (Euro IV) with acceleration restriction technology to reduce emissions	Borough vehicle fleet Management		?	2018 - 2019	Under consideration: This measure is expected to limit rate of vehicle acceleration and therefore reduces emissions (not quantifiable); fitted to majority of fleet This measure limits vehicle acceleration to be implemented to significant proportion of vehicle fleet. All new small vans are fitted acceleration control to aid reducing emissions.
	24.3	The Council will use the Mayor's new 'Cleaner Vehicle Checker', when purchasing new vehicles and engaging with local businesses and residents	Borough vehicle fleet Management	In-house	Benefits potentially significant (but quantifiable)	2018 -2019	Action to be discussed with stakeholders, promoted and implemented. New clean vehicle checker may be found at: Mayor's Newer Vehicle Checker - BETA London City Hall
Borough fleet actions	25	The council will offer Smarter Driver Training for drivers of vehicles in Borough Own Fleet i.e.	Borough vehicle fleet Management	In-house	Benefits potentially significant (but quantifiable)	On-going (due to turnover in fleet drivers)	Operational: Currently we offer Safer Urban Driving Courses for fleet drives, the focus of which is improving road safety, but does include some element of 'eco-driving'.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		through training of fuel efficient driving and providing regular re-training of staff. Intervention to be offered in to all staff in 2019/20.					
Localised solutions	26	The council will submit an application for a 'Low Emission Neighbourhood' if funding becomes available.	Transport /TfL	In-house	?	For progression in 2019/20 (if bid is successful)	To be further developed through the borough's new LIP and bids to TfL's Liveable Neighbourhoods programme/MAQF. To be monitored by AQAP steering group.
Localised solutions	26.1	The council will explore options to increase the number of street and parks trees from the 2017/18 base, including making a bid to GLAs greener city fund and other such opportunities as identified in 2018/19.	Transport/ Regen/ Commissioning	In-House	?	For progression in 2019/20 (if bid is successful)	
Cleaner transport	27	The council will discourage unnecessary idling by taxis, coaches and other vehicles through the implementation of an anti-idling Traffic Management Order in 2019 and undertake targeted enforcement activity at host spot areas such as taxi ranks, coach parking and outside schools. Enforcement activity will take place bimonthly and	Transport /Env. Strategy	In-house	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	Regular anti-idling campaigns will be undertaken in identified hot spots, with impacts reported to AQAP steering group

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		reported to AQAP Steering Group in Q1 21/22					
	27.1	<p>The Council has signed up to the City of London's anti-idling campaign idlingaction.london</p> <p>Two anti-idling events to be held across the borough: One event was held at William Hogarth & St Mary's schools combined on Clean Air Day; Second event is waiting to be finalised, but may held at a local hospital or other suitable venue.</p>	Transport /Env. Strategy	In-house	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period (subject to review of effectiveness)	Interventions being implemented by Idling Action and materials also distributed via parking CEOs and through schools.
Cleaner transport	28	The council will implement speed control measures in all residential roads and areas of high footfall.	Transport	In-house/LIP	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	In implementation the Council has taken a decision to implement 20mph limits on all residential roads, and those with high footfall, in the borough by 2020 to reduce casualties. However, any improvement in local air quality should be seen as a bonus as this is largely a road safety measure.
Cleaner transport	29	The council will look to increase the proportion of electric, hydrogen and ultra-low emission vehicles in Car Clubs. The council aims to have 2 EV car clubs in place by end 2019 and will continue to promote the 'Blue City' EV car club associated with Source	Transport	In-house/LIP	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	Being done - We have a commitment from Zipcar to have two EV's introduced into the borough in 2019. We will seek to expand this proportion during the life of this plan.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		London with a view to having a minimum of 10 vehicles active in the borough by 2019.					
Cleaner transport	30	The council will continue to support street parties and play streets. Where there is significant community backing for closing larger strategic roads for such events this will be considered on a case by case basis involving local ward members.	Transport	In-house	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	
Cleaner transport	31	The council will complete a feasibility study for implementing free or discounted parking charges for on street parking for zero emission cars by end 2019.	Transport	In-house	?	Report due 2019/20	The Council will explore the opportunity to reduce charges for on-street & off-street parking controlled by it and will report back at AQAP steering group in 2019
Cleaner transport	32	The council will implement free or discounted residential parking permits for zero emission and ≤50g CO ₂ /km cars.	Transport	In-house	?	Completed	This has been implemented.
Cleaner transport	33	The council will implement a surcharge on diesel vehicles below Euro 6	Transport	In-house	?	Completed	LBH has introduced annual sur-charge of £50 for parking permits for diesel cars on borough roads.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		standards for Resident Parking Zone permits.					
Cleaner transport	34	<p>The Council will continue to support installation of residential electric charge points to cater for EV charging solution for those without off-street parking.</p> <p>The council aims to double the number of public EV charging points by end 2020 (from 27 to 54) and double the number of lamp column charging (from 47 to 100) by end 2020.</p>	Transport	In-house	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	Being implemented - Hounslow is one of the leading UK local authority looking at providing EV CP's for people without off-street charge points. We were the first to retrofit CP's in lamp columns. Installed to date (June 2018): 47 – residential charge points; 27 – Source London charge points (additional 16 pending consultation, in F/year 2018/19; Rapid chargers also planned in partnership with TfL (see below)
Cleaner transport	35	The council will help facilitate the installation of 10 rapid chargers in the borough to help enable the take up of electric taxis etc by 2020.	Transport	In-house/TfL	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period (subject to review of use)	Being implemented - Hounslow are working with TfL & Source London to identify sites for rapid chargers. Henley's roundabout is due to be first site in the borough. Opportunity for residents to survey, suggest and consult on potential locations. Council aims to have 10 rapid chargers in place by end 2021
Cleaner transport	36	The Council, in line with GLA strategies, will continue to explore ways to reduce dominance of vehicular traffic on residential streets through road closures & banned entries, where such measures are supported by residents;	Transport	In-house	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period	

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		<p>Town Centre development will continue to provide low or no level of car parking, and in many cases this will take place where existing parking stock will not be renewed;</p> <p>The council will work in partnership with TfL to improve bus journey times through active or passive bus priority measures, work will be monitored as part of new LIP</p> <p>Report to Air Quality Action Plan Steering Group Q2 2021/22</p>					
Cleaner transport	37	<p>As part of the new LIP, the Council will continue to improve provision of its infrastructure to support walking & cycling. Emerging proposals would be consulted upon in Oct. 2018, including:</p> <ul style="list-style-type: none"> • Provision of legible wayfinding at all town centres by 2020; • Improved accessibility for pedestrians (junction entry treatment, dropped 	Transport	In-house	?	Throughout Transport Local Implementation Plan (LIP)/ AQAP period Also see various completion dates (under 'Action/Measures column)	

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		<p>curbs, tactile paving etc.), particularly for those with mobility impairments, through our 'better streets' programme;</p> <ul style="list-style-type: none"> • Pedestrian countdown at all town centre located controlled crossings by 2020 (subject to relevant controller upgrades being progressed by TfL); • Improvements to cycling facilities, Priority projects include, (i) Partnership working with TfL to deliver a substantially segregated facility between Chiswick, Brentford and Hounslow Town Centre (CS9) in place by 2022; (ii) Substantially segregated cycle facility between Hounslow and Feltham town centre via Staines, expected to be in place by 2022/23; (iii) Completion of west area greenways network, including appropriate wayfinding to promote the network, by 2019/20; (iv) Completion of a quietway between Brentford & Twickenham, 					

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		via Church St, by 2020/21; (v) Further specifications for priority cycle routes linking borough town centres with neighbouring metropolitan town centres and Heathrow, by 2020/21; (vi) Continue roll out of 20MPH limit on residential roads and other busy roads with high footfall, by 2020 (see action 28 also); AQAP would be reviewed & updated to reflect approved LIP.					
Additional Measures ¹	38	The council will continue to work in partnership with TfL to improve environmental performance of their bus fleet that serves 'air quality focus areas'. Work to secure all buses that serve 'air quality focus areas' to be Euro IV, or better compliant, by 2022. Seek and agree a clear strategy and framework to: (i) Identify and mitigate adverse effects, including health impacts, resulting from emissions from	Env. Strategy/TfL	TfL	(benefit: potentially significant but unquantifiable)	Timeline to be discussed & agreed with stakeholder	Action not within GLA framework, however this action/measure, including establishing correct baseline, is hugely significant and the overall strategy needs to be discussed, agreed & implemented, to mitigate adverse impacts and to achieve AQO in areas of exceedances.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		roads/routes within their jurisdiction; (ii) Seek contributions for implementing mitigation measures locally, aimed at reducing exposure to harmful emissions NO ₂ /PM (particularly in schools), resulting from their routes, and improving air quality in nearby areas.					
	38.1	The council will commission a study to model & quantify likely emission reductions from ULEZ/LEZ and other scenarios	Env. Strategy /Transport	In-house	(benefit: potentially significant but unquantifiable)	Timeline to be discussed & agreed with stakeholder	Action not within GLA framework but undertaken as part of LA AQAP to assess what measures are required to meet AQO
	39	The council will continue to work in partnership with Heathrow Airport Limited (HAL), seeking clear strategy and framework to: (i) Delivering better surface access strategy (passenger & freight); (ii) Seek contributions for identifying & implementing mitigation measures locally, aimed at reducing exposure to harmful emissions NO ₂ /PM (particularly in schools & community buildings), mitigate adverse effects, including health impacts of harmful emissions	Env. Strategy /HAL	HAL	(benefit: potentially significant but unquantifiable)	Timeline to be discussed & agreed with stakeholder	Action not within GLA framework, however this action/measure, including establishing correct baseline, is hugely significant and the overall strategy needs to be discussed, agreed & implemented, to mitigate adverse impacts and to achieve AQO in areas of exceedances.

Theme	Action No.	Action Description	Responsibility	Cost	Magnitude of Air Quality Benefits	Timescale	Further information/Comment
		associated with their business and operations and implement measures to improve local air quality within Hounslow.					
	40	The council will continue to work in partnership with Highways England (HE), seeking clear strategy and framework to: (i) reducing current (and future – Smart Motorway) exceedances of NO ₂ /PM AQO and mitigate adverse effects, including health impacts of harmful emissions associated with road/routes within their jurisdiction; (ii) Seek contributions for implementing mitigation measures locally, aimed at reducing exposure to harmful emissions NO ₂ /PM (all sensitive receptors), resulting from their roads/routes; and improving air quality in nearby areas.	Env. Strategy /HE	HE	(benefit: potentially significant but unquantifiable)	Timeline to be discussed & agreed with stakeholder	Action not within GLA framework, however this action/measure, including establishing correct baseline (particularly in respect of impacts due Smart Motorway), is hugely significant and the overall strategy needs to be discussed, agreed & implemented, to mitigate adverse impacts and to achieve AQO in areas of exceedances.

Appendix A: Response to Consultation

A total of 52 local residents provided written feedback to the consultation, together with 3 government bodies, one political group and 2 residents groups. Five questions were asked:

1. How might we improve the draft AQAP?
2. What other actions/measures, if any, would you suggest that should be included, which have not been included already within the draft Air Quality Action Plan?
3. How important is Air Quality to you and the associated potential actions/measures proposed within the draft AQAP, or those actions/measures suggested by you, and why?
4. What is your personal experience of the impacts associated with exposure to poor air quality?
5. What action(s) would you be willing and able to take to improve poor air quality in your area, in order to improve your and others health and quality of life in the borough?

Responses to each question are summarised below.

A1: How might we improve the draft AQAP?

Note: Many of the responses to this question are reported under Question 2.

Views of local residents and businesses, including community groups

- A number of respondents were critical of the draft plan, with several querying whether it actually constituted a draft plan. Some called for more detail, others for simplification and a more readable summary: It is recognised that these views are not contradictory.
- One respondent stated that the plan makes no reference to what has been proven to work elsewhere in the world, “that this is a global problem, yet from reading the document, you'd think it only existed in London. Innovative, lo-cost solutions will have been implemented elsewhere in the world already”. Another, that the context for the actions was hard to assess given a lack of information on actions elsewhere (e.g. by the Mayor and by National Government).
- One respondent, referring to the UK plan for tackling roadside NO₂ concentrations, stated that timelines for action should be clearly identified, recognising the December 2018 deadline set in that report. Another specified this in relation to improvement of the Council’s fleet.
- Another stated that nothing in the report addresses congestion hotspots such as Feltham High Street.
- Several respondents considered that there should be a greater focus on schools.
- Several stressed the importance of Heathrow and believe that further pressure is needed on the airport operator. One considered that the proposed role of Hounslow with Heathrow was far too passive.
- Several respondents were keen that local residents should be encouraged to take local actions.

- One respondent considered that there are too few air quality monitoring points.
- One respondent expressly stated a need to “make everything happen sooner: Things have to change today”.
- There was a call to provide sufficient funding to ensure the success of the plan, recognising that a lack of funding has been a factor in a failure to comply with the limit values to date. The statement in the report that the earlier AQAP contained too many measures was queried, particularly with respect to whether fewer measures would lead to the desired effect.
- One respondent questioned the assumptions on which the draft was based, particularly with respect to vehicle emissions given the gap between test and real world data.

Views of National Agencies

Responses to this question were also provided by 3 national agencies, Highways England, Natural England and the Environment Agency, as follows:

Highways England:

Promotion of cycling through new cycleways, pollution barriers along highways, the impact on the local environment in terms of severance and sense of place should be given full consideration.

Natural England:

We encourage the Council to consider providing more detailed measures regarding the use of green infrastructure (GI) to reduce air pollution impacts. Strategically located GI has the capacity to fulfil multiple functions, including reducing air pollution impacts and improving urban biodiversity. In particular, large street trees can be effective at absorbing air pollutants and other forms of planting can restrict the dispersal of pollutants within ‘street canyons’ (Pugh et al, 2012). Please ensure that any development resulting from the actions outlined in the AQAP results in a net gain in biodiversity in the Borough. Therefore we recommend the inclusion of an additional Action in Package 4: ‘Planning and Development’ relating to the creation of new GI in areas which may benefit from its capacity to reduce air pollution impacts. This would be in addition to Action 4.6 relating to the provision of green space within new development.

Environment Agency:

Assurance that impacts from development/construction are limited, impacts from waste management sites are implemented, and a regional approach is used.

A2: What other actions/measures, if any, would you suggest that should be included, which have not been included already within the draft Air Quality Action Plan?

Most common responses

The most common responses concerned:

1. No expansion of Heathrow to a 3rd runway.
2. Ban idling of vehicles, with many respondents calling for heavy fines.

3. Expanded use of green infrastructure.
4. Measures to be taken at, or by, schools.

Heathrow

1. No expansion at Heathrow (including a variant of no expansion of Heathrow until effective public transport links to the airport are provided)
2. Charging for dropping off at Heathrow
3. Prioritisation of clean vehicles on all Heathrow routes
4. Reduce Heathrow parking
5. Make the Heathrow Express free
6. Heathrow to pay more for clean up
7. Vary approach paths to Heathrow
8. Make plane stacking illegal except under exceptional circumstances
9. Take action against fuel dumping by aircraft
10. LBH should appoint a senior officer within its own organisation to liaise directly with Heathrow to ensure the airport operator undertakes necessary actions to reduce airport emissions

Modal switch

11. Improve bus and train provision across the Borough
12. Shift freight to rail and canal
13. Improve rail infrastructure
14. Car free days
15. Introduce more pedestrian streets, with increased public transport provision
16. Encourage cycling, specifically CS9 which has not been supported by Hounslow Council. Another respondent held the view that CS9 should be opposed as it could add to congestion and rat running.
17. Charge households for having more than 1 car registered to a location
18. Provide refuse collection specifically to reduce need for residents to make trips to Council sites
19. Limit car access to main roads
20. More car clubs
21. National publicity campaign to promote walking

Cleaner vehicles

22. Extend ULEZ to include all of Hounslow
23. Ban idling, impose heavy fines for idling
24. Campaign against idling for cars in traffic queues
25. Purchasing policies to go beyond Euro 6
26. Include environmental performance as a criterion in bidding processes for outsourced work
27. Seek opportunities to improve the environmental performance of the existing fleet
28. All Council vehicles to be low emission
29. TfL and public services generally to adopt cleaner vehicles
30. Encourage purchase of smaller cars
31. Require zero emission vehicles at freight depots
32. Tighten LEZ criteria for freight

33. Ban diesel engines in the Borough
34. Strict enforcement against all poor quality vehicles
35. Scrappage scheme for most polluting vehicles
36. Emission monitoring of vehicles on roads
37. Ensure proper functioning of electric charging points
38. More electric cars
39. Encourage purchase of smaller cars
40. Widen the London Mayor's ban on petrol and diesel to Hounslow
41. More emphasis in the plan on HGV and delivery vehicles
42. Council to lobby TfL for clean bus corridors through Brentford
43. Brentford to become a Clean Air Zone
44. Inform fleet drivers and staff of health implications of exposure to diesel fumes

Traffic routing

45. Close roads to traffic
46. Charge tolls for private car use
47. Block rat runs
48. 20 mph zones to be introduced, with stricter enforcement. One respondent considered that these should be restricted to term time and school hours.
49. Rethink of use of 20 mph zones, recognising potential for higher emissions than at 30 mph
50. Reduce speed limit on the A4 through Brentford from 40 mph to 30 mph

Schools

51. Awareness raising, providing information to students and parents via schools
52. Introduce compulsory and effective school travel plans
53. Improve safe routes to schools
54. Base school catchment on distance
55. All new schools to commit to STARS
56. Encourage walking and cycling to school

Green infrastructure

57. Stop the removal of trees
58. Protect Green Belt
59. More green planting, with several respondents specifically referring to hedging

Planning

60. Robust enforcement of national policies dealing with air pollution from development
61. Require consideration of the cumulative impact of development
62. Introduce design guidelines to avoid street canyon formation
63. Introduce low emission neighbourhoods
64. Prevent development in areas with bad air quality
65. Stop further building as Hounslow is already densely populated (one respondent added 'until air quality limits are reached')
66. Penalise developers for non-compliance (respondent noted specifically that Hounslow allowed Chiswick Business Park to open despite a planning requirement for a bridge to Chiswick Park Station)

Focus areas

67. Use of sound barriers along M4 near OsterleyPark, as these also help disperse air pollutants
68. The whole Hogarth roundabout zone, a part of the M4-A4 "corridor", should be a focus area

Other

69. Audit energy use in all public buildings
70. Make information on air quality more visible to the public including road users
71. Enforce measures already in place
72. Ban domestic burning
73. No smoking in public places
74. Issue Hounslow card, similar to Richmond for cheaper parking in council car parks
75. Brentford needs to be looked at as a single Focus Area
76. More to be done to raise awareness, including through work with local doctors
77. Continued engagement with local groups such as Air Quality Brentford as more detailed plans on specific actions are developed
78. Link Air Quality and Climate action plans (example given of Kensington and Chelsea's AQAP).

A3: How important is Air Quality to you and the associated potential actions/measures proposed within the draft AQAP, or those actions/measures suggested by you, and why?

39 out of 52 local resident or business respondents identified air quality as important to varying degrees, described as:

- "Huge importance"
- "Very important", with evidence of asthma exacerbation. "Very important" was the most frequent description, used in 16/39 cases where respondents stated that the issue was important.
- "Extremely important"
- "Critical to the future health of people"
- "Huge issue"
- "Totally"
- "Important"

Several cited worsening of health of themselves or relatives or friends when in the Borough.

A4: What is your personal experience of the impacts associated with exposure to poor air quality?

Impacts identified

- Breathing difficulties
- Asthma
- Persistent cough
- Pneumonia
- Itchy scalp
- Stinging eyes

- Lingering colds
- General malaise
- Sleepless nights
- Notes of improved breathing when in the countryside outside the Borough

Groups affected

- Young, old, those with existing illness

A5: What action(s) would you be willing and able to take to improve poor air quality in your area, in order to improve your and others health and quality of life in the borough?

Transport actions

1. Reduce or stop car use
2. Increased walking and cycling, though with concern over road safety given priority given to rapid access to (e.g.) Heathrow
3. Increase use of public transport
4. Willingness to act as anti-idling volunteers

Purchasing decisions

5. Make informed purchasing decisions to reduce emissions (e.g. on cars and other energy using products)
6. Hire EVs in preference to other vehicles
7. Campaign to phase out diesel vehicles

Awareness raising and lobbying

8. Present information on air quality to schools
9. Opposing further development, particularly on the Green Belt
10. Oppose expansion of Heathrow

Local environment

11. Support for a Liveable Neighbourhoods bid
12. Plant more trees

Other

13. Pay higher Council Tax
14. Work with the local authority and supporting agencies for a cleaner, greener environment