The London Borough of Hillingdon

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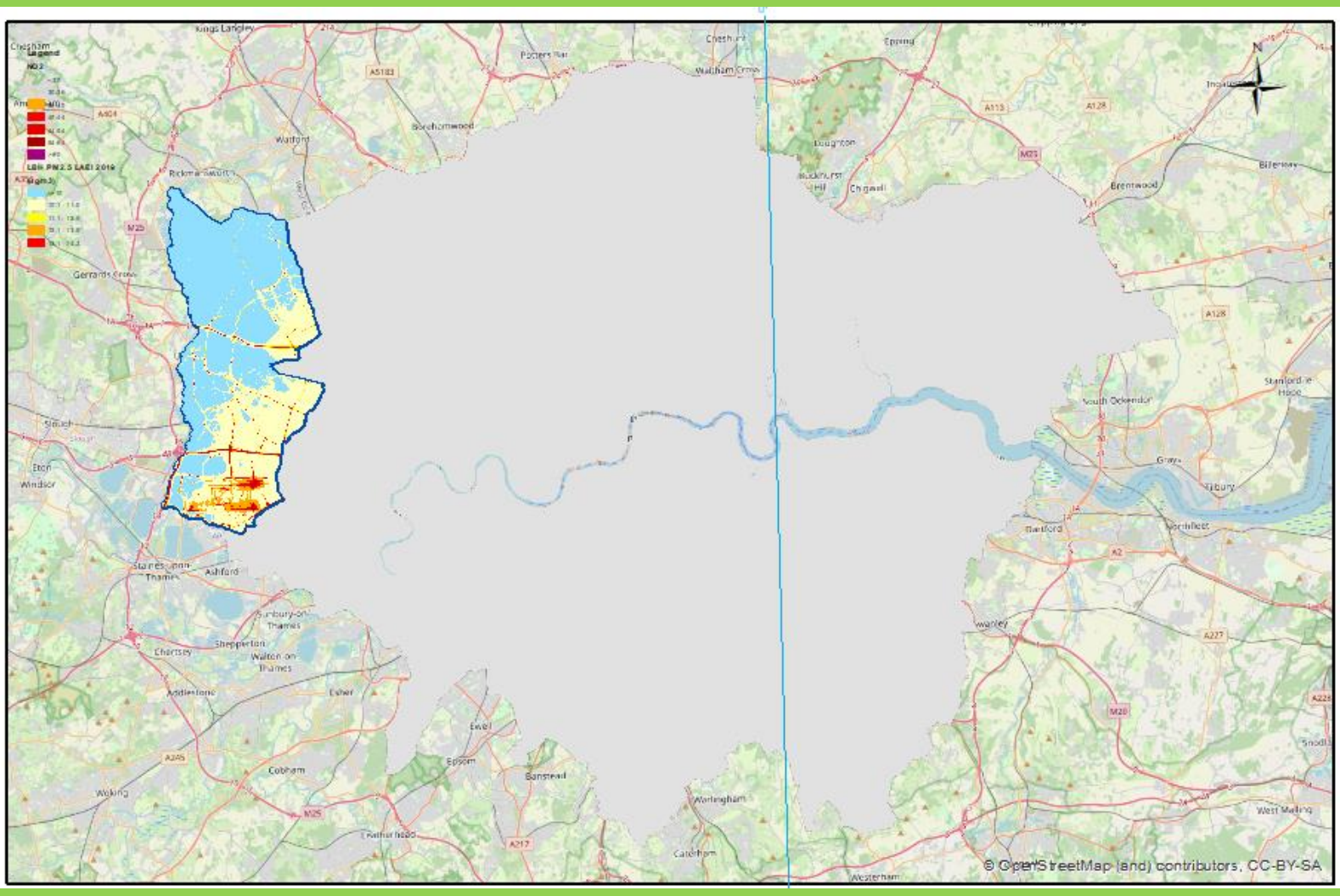

Air Quality Annual Status Report, 2024

London Borough of Hillingdon
Air Quality Annual Status Report for 2023

Date of publication: May 2024

This report provides a detailed overview of air quality in the London Borough of Hillingdon during 2023. It has been produced to meet the requirements of the London Local Air Quality Management statutory (LLAQM) process[1]. It also updates on the Council's AirQuality Action Plan since its adoption in May 2019 to the end of March 2024.

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[1] LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19)). https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs

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Abbreviations

µg m^{-3}	Micro-grammes per cubic metre of air (standard unit for air pollutants)
AQ	Air quality
AQAP	Air Quality Action Plan
AQFA	Air Quality Focus Area
AQG	Air Quality Guidelines (from WHO)
AQMA	Air Quality Management Area
AQN	Air Quality Neutral
AQO	Air Quality Objective
AQSPG	Air Quality Supplementary Planning Guidance
ASR	Annual Status Report
AURN	Automatic Urban and Rural Network
BAM	Beta attenuation monitoring
CAB	Cleaner Air Borough
CHP	Combined Heat and Power
CISHA	Council for the Independent Scrutiny of Heathrow Airport
CO	Carbon monoxide
CO_2	Carbon dioxide
DEFRA	Department for Environment, Food and Rural Affairs
EV	Electric Vehicle
EVCP	Electric Vehicle Charging Point
FDMS	Filter Dynamics Measurement System
FIDAS	Fine Dust Analysis System
FORS	Fleet Operator Recognition System
FPN	Fixed Penalty Notice
GLA	Greater London Authority
HE	Highways England
HS2	High Speed 2 (rail line from London to Birmingham)
LAEI	London Atmospheric Emissions Inventory
LBH	London Borough of Hillingdon
LBH EHO	London Borough of Hillingdon Environmental Health Officer
LEZ	Low Emission Zone
LIP	Local Implementation Plan (for Borough transport)
LLAQM	London Local Air Quality Management
MAQF	Mayor's Air Quality Fund
N/A	Not applicable
NOx	Oxides of nitrogen (NO_2 + NO)
NO_2	Nitrogen dioxide
NPPF	National Planning Policy Framework
NRMM	Non-Road Mobile Machinery
O_3	Ozone
PH	Public Health
PM_1	Particulate matter less than 1 micron in diameter
PM_{10}	Particulate matter less than 10 microns in diameter
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
QA/QC	Quality Assurance / Quality Control
RE:FIT, RE:NEW	GLA programmes for energy efficiency and local generation projects in homes and public bodies
SPG	Sustainable Planning Guidance
STARS	TfL Community Project to reduce car usage
t	Tonnes (=1,000 kg)
TEB	Transport Emissions Benchmark
TEOM	Tapered Element Oscillating Microbalance (for PM measurement)
TfL	Transport for London
TSP	Total Suspended Particulate Matter
ULEZ	Ultra-Low Emission Zone
VCM	Volatile Correction Model
WHO	World Health Organization

Summary

This report provides information on:

- Update on relevant air quality legislation;
- Air quality levels and trends in the London Borough of Hillingdon in 2023 using monitored data;
- Progress with the Borough's Air Quality Action Plan (AQAP) from March 2023 to March 2024;
- Planning Applications that were relevant to air quality in the Borough and the role of the Planning System on Local Air Quality Management March 2023 to March 2024;
- Lessons learnt and opportunities and challenges.

The management of local air quality in the UK is driven by a series of limit values applied to various pollutants. Whereas the Borough's Air Quality Management Area (AQMA) was declared because of non-compliance with the annual limit value for nitrogen dioxide (NO_2) in parts of the Borough, fine particulate matter (expressed as either $PM_{2.5}$ or PM_{10} reflecting different size fractions) together with NO_2 continue to be the focus for pollutant emission reductions in Hillingdon.

With increasing evidence on the health impacts of fine particulate matter, the Mayor of London, in the London Environment Strategy, adopted a figure of 10 $\mu g.m^{-3}$ $PM_{2.5}$ to be met by 2030. The Environment Act 2021 requires at least one long term target to be set for four key priority areas, one of these is air pollution. The Environmental Targets (Fine Particulate Matter) Regulations 2023 has also adopted the 10 $\mu g.m^{-3}$ target but with a less stretching compliance date of 2040, along with a population exposure reduction target designed to ensure that reductions in exposure are not limited to the sites of highest concentration but benefit the wider population.

The Borough has in recent years, in conjunction with GLA, defined Air Quality Focus Areas, which are densely populated zones with elevated levels of pollution. Whilst the Council seeks to improve air quality across the Borough, these areas continue to require stricter measures and actions to reduce emissions to zero and prevent potential hazardous effects on public health, remaining areas of concern to Hillingdon.

Data collected in the reporting year (2023) are compliant with the air quality objectives throughout the borough. 1 of the 11 automatic sites (LHR2) monitoring NO_2 recorded a small increase in concentration, with 7 sites recording a fall and 3 remaining constant. Similarly, 5 of the diffusion tube sites (HILL10) recorded a small increase in concentration, but 39 recorded a fall. For PM, 1 site (HI3) recorded an increase in annual concentration of PM_{10} and 1 site (HIL) saw an increase in annual mean $PM_{2.5}$ (compared to 7 and 5 sites respectively that recorded a fall in concentration). These results compare with observations of a slight increase on annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ at most locations in 2022. For the sites where an increase in concentration was observed further consideration will be given to understand reasons why, especially for HI3 where there was a significant rise in PM_{10} concentration (4 $\mu g.m^{-3}$).

Whilst compliance with national objectives was achieved, there was widespread exceedance of the WHO Air Quality Guidelines. Results for a single year (or a period of only a few years) can be influenced by meteorological conditions. Therefore, continued monitoring and action on air quality in the borough is necessary. The continuation of air quality monitoring across the borough, and especially in areas of accelerated development such as Hayes, and on congested routes as in Focus Areas, is essential to assess whether the air quality improves striving to meet the regional, national and WHO limits and guidelines to safeguard public health.

Hillingdon continues to take action under its AQAP to address problems across the borough to:

- understand and tackle the pollution hot spots in the borough;
- reduce emissions where it has direct influence, for example on Council-controlled roads and from the Council fleet;
- work with other entities such as TfL, Highways England, HS2 and Heathrow to control emissions where Hillingdon does not have direct influence; and
- make efficient use of the planning system to improve air quality and reduce citizens exposure to hazardous levels; this is achieved through:
    a) ensuring that new developments do not introduce unmitigated new sources of emission to the borough and
    b) making sure proposals in Focus Areas demonstrate an air quality positive approach achieving significant/substantial emission reductions, in alignment with the London Plan and LBH Local Action Plan 2019-2024, working towards achieving zero emissions through appropriate mitigation or offsetting.

Highlights of the Council's work on air quality in the reporting year include:

- Continued action on idling vehicles, with fines across the borough given to 2,335 vehicles in 2022, up from 1,253 the year before.
- Continued work to upgrade the Council's vehicle fleet to cleaner vehicles with plans to include 32 electric vehicles in the replacement of 96 vans.
- Continued work with schools:
    - Increased levels of STaRS accreditation
    - Air quality awareness raising, for example through workshops and assemblies provided by PWLC
    - Promotion of sustainable travel to school, including Dragon's Den events that have raised over £8,000 for projects
    - Focus on air quality in the school superzone project.
- Improvements in the North Hyde Road and Long Lane Focus Areas promoting active travel.
- Recruitment of an electric vehicle charging point project engineer.

The council faces a number of other challenges with its air quality work, ranging from new possible sources of pollution such as data centres and increased use of wood-burning for heating, to the need to adopt and implement a new action plan that addresses tightened air quality standards for the period 2024 to 2029. Any increases in concentration (e.g. at site HI3) will continue to be investigated. Some infrastructure issues have been identified as problematic, for example, the power supply to the Harlington Road depot requiring significant investment if further electric vehicles are to be purchased beyond current plans.

There are also opportunities. Since the first AQAP was developed for the borough the planning system has played an increasingly important role in the borough's local air quality management. The potential for improved efficiency in council actions has also been exploited through links between the Council's AQAP and other policy areas including Public Health and Climate Change. The new London Borough of Hillingdon AQAP has been drafted and is currently under internal consultation being expected to be sent to be published towards the end of 2024, after consultation. This will cover the period to 2029 and will allow the Council to help ensure actions are taken to provide evidence that the $PM_{2.5}$ target will be met by 2030.

1 Introduction

1.1 The purpose of this report

This report provides an overview of air quality in the London Borough of Hillingdon during 2023. It has been produced to meet the requirements of the London Local Air Quality Management (LAQM) statutory process[1].

National Air Quality and International Standards, Objectives and Guidelines for the pollutants of relevance to London Borough of Hillingdon are given in Table A. The World Health Organisation (WHO) 2021 air quality guidelines (AQGs) are also included in Table A and will continue to act as guiding targets to improve air quality within the borough and safeguard human health.

Whereas there are no exceedances in the borough either of the NO_2 limit values and national objectives or exceedances for other pollutants for which standards exist, the WHO air quality guidelines are exceeded throughout the borough's area of jurisdiction.

Table A. Summary of National Air Quality and International Standards, Objectives and Guidelines for the pollutants of relevance to London Borough of Hillingdon

Pollutant	Standard / Objective / Guideline	Averaging Period	Date(1)
Nitrogen dioxide (NO_2)	200 µg m^{-3} not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
Nitrogen dioxide (NO_2)	40 µg m^{-3}	Annual mean	31 Dec 2005
Nitrogen dioxide (NO_2)	WHO AQG(2): 10 µg m^{-3}	Annual mean	
Nitrogen dioxide (NO_2)	WHO AQG(2): 25 µg m^{-3}	24-hour mean	
Particles (PM_{10})	50 µg m^{-3} not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
Particles (PM_{10})	WHO AQG(2): 45 µg m^{-3} not to be exceeded more than 3-4 times a year	24-hour mean	
Particles (PM_{10})	40 µg m^{-3}	Annual mean	31 Dec 2004
Particles (PM_{10})	WHO AQG(2): 15 µg m^{-3}	Annual mean	
Particles ($PM_{2.5}$)	20 µg m^{-3}	Annual mean	2020
Particles ($PM_{2.5}$)	London Mayoral Objective(3): 10 µg m^{-3}	Annual mean	2030
Particles ($PM_{2.5}$)	WHO AQG(2): 5 µg m^{-3}	Annual mean	
Particles ($PM_{2.5}$)	Target of 15% reduction in concentration at urban background locations	3-year mean	Between 2010 and 2021
Particles ($PM_{2.5}$)	WHO AQG(2): 15 µg m^{-3}	24-hour mean	

Notes:

(1) 2021 World Health Organisation Air Quality Guidelines
(2) Date by which to be achieved by and maintained thereafter
(3) London Mayoral Objective

[1] LLAQM Policy and Technical Guidance 2019 (LLAQM.TG(19)). https://www.london.gov.uk/what-we- do/environment/pollution-and-air-quality/working-boroughs

1.2 Description of the Local Authority Area

Hillingdon is, geographically, the second largest local authority in London and has approximately 310,680 residents. Parts of the borough to the north of the A40 are semi-rural, with Ruislip as the district centre. The south of the borough is more densely populated, urban in character, and contains the metropolitan centre of Uxbridge and the towns of Hayes and West Drayton. It also contains numerous important transport links. As well as being home to Heathrow Airport the borough is crossed by the M4 and the A40 and bordered to the west by the M25 and to the east by the A312, attracting traffic into the borough and encouraging traffic to pass through it. These roads generate a significant air pollution burden on the people of the borough.

1.3 Hillingdon's Air Quality Management Area (AQMA)

An AQMA was declared in Hillingdon due to exceedance of the annual mean objective of NO2 in 2003 (Figure 1). Air quality problems in the borough continue to be most severe around Heathrow Airport and the major road network that goes through the borough, reflecting the largest sources of nitrogen oxide (NOx) emissions within the AQMA which covers the southern half of the borough. The possible inclusion of areas in the north of the borough has been kept, and will continue to be, under review.

Figure 1. Hillingdon's AQMA

An Action Plan, showing how Hillingdon Borough Council intended to tackle these problems, was first issued in 2004. The plan was updated in June 2019 (Air Quality Action Plan 2019-2024)[2] and its replacement (Air Quality Action Plan 2024-2029) is currently under internal consultation. Both versions of the plan focus on delivering improvements in certain areas of the borough that are most adversely affected by pollutant emissions, namely Focus Areas as well as other sensitive locations where poor air quality is observed with relevant public exposure. The updated Action Plan builds on the successful measures of the previous period and reflects both London policy changes and associated guidance as well as national policy updates.

[2] http://www.hillingdon-air.info/pdf/Hillingdon_AQAP_2019_2024_finalversion.pdf

In addition to providing data on air quality in the borough in 2023, this report also provides:

i) A review of the achievements made to date through the implementation of the 2019-2024 air quality action plan,

ii) A list of planning applications that were relevant to air quality in the borough and the role of the planning system on Local Air Quality Management, and

iii) A summary of opportunities and challenges to Hillingdon's local air quality management for future years.

2 Air Quality Monitoring in Hillingdon

2.1 Automatic monitoring sites

There were 12 operational automatic continuous monitoring sites in the London Borough of Hillingdon in 2023 (Table B). Hillingdon 1 in South Ruislip (HI1), Hillingdon 3 in Oxford Avenue (HI3), Hillingdon Sipson (SIPS), London Harmondsworth (HIL1), Hillingdon Hayes (HIL5), and London Harmondsworth Osiris (HIL4) are all part of the borough's monitoring network. London Hillingdon (HIL) is part of the Defra - owned Automatic Urban and Rural Network (AURN). London Heathrow (LHR2), Heathrow Oaks Road (T54), Heathrow Green Gates (T55), London Harlington (HRL) and London Heathrow Bath Road (LHRBR) are all part of the Heathrow Airport's monitoring network. A map showing the location of the LBH

automatic stations is shown in

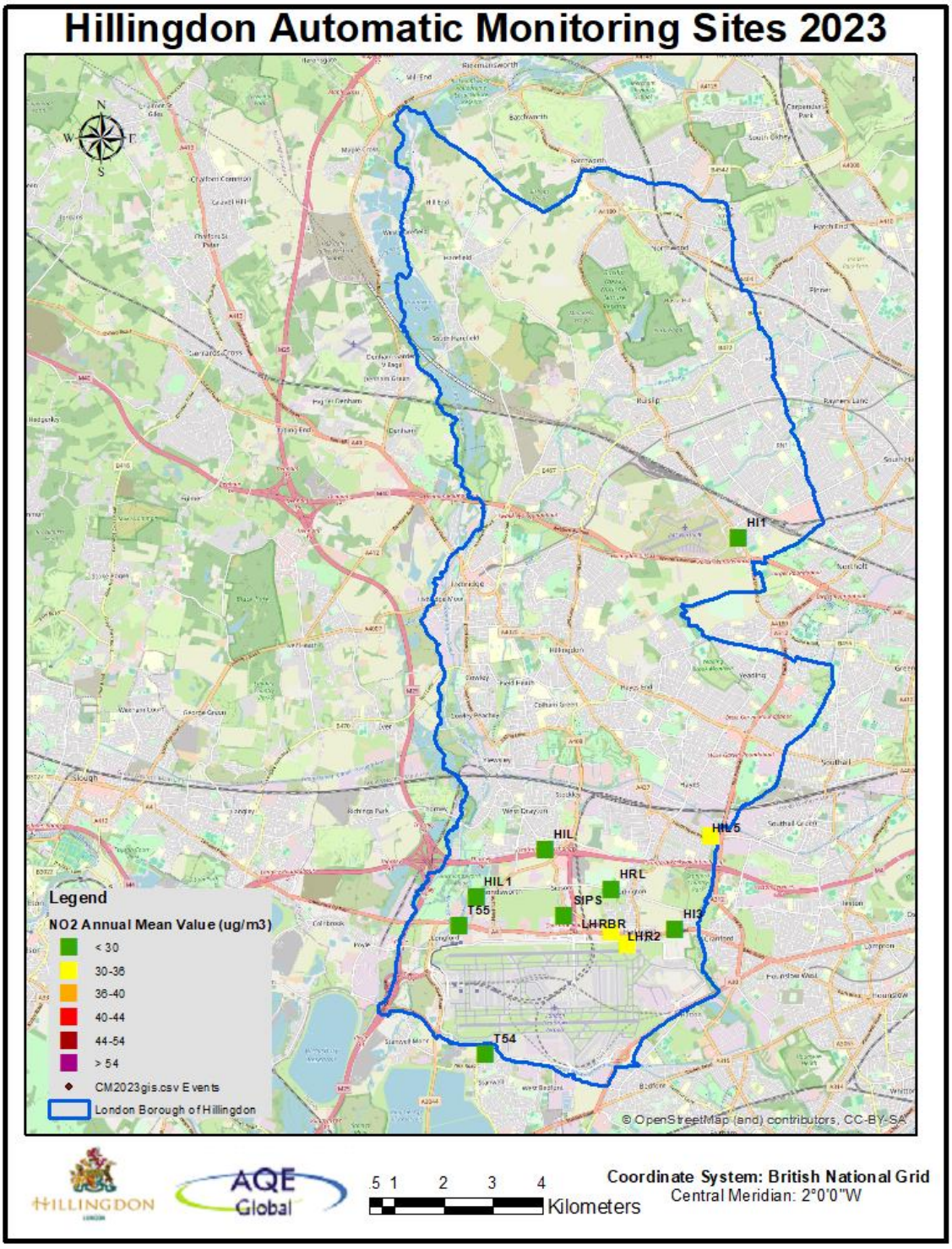


Figure 2.

The method used by the Osiris monitoring system at HIL4 (Hillingdon Harmondsworth) has been validated for the UK monitoring network and results for the site are included in this report.

2.2 Non-automatic monitoring sites

Passive diffusion tube monitoring of NO_2 was carried out at 44 sites in the borough in 2023, covering both background and roadside locations (Table C), supplementing the information generated by the automatic network (Figure 3). Two of the diffusion tube sites are co-located with continuous monitoring sites to derive local bias adjustment factors: HILL01 (using triplicate tubes since August 2023) is co-located with London Hillingdon automatic monitoring site (HIL) and HILL03 (using triplicate tubes) is co-located with Hillingdon 1 in South Ruislip automatic monitoring site (HI1).

A local bias adjustment factor of 0.89 was derived from the colocation exercise in 2023. This has been used to correct the diffusion tube results. The factor was calculated using recommended technical guidance procedures in accordance with the Mayor's London Local Air Quality Management Technical Guidance 2021 (LLAQM.TG(19))[3].

Full details of diffusion tube QA/QC, including justification for the choice of bias adjustment factors are presented in Appendix A. Monthly NO_2 diffusion tube data are provided in Appendix B.

2.3 Low-cost sensor monitoring sites

Two low-cost sensor monitoring sites (Table D) were deployed in 2021 gathering data on both NO_2 and $PM_{2.5}$ and capturing local conditions at Tavistock Road and Harlington Road (Figure 4).

[3] https://www.london.gov.uk/sites/default/files/llaqm_technical_guidance_2019.pdf

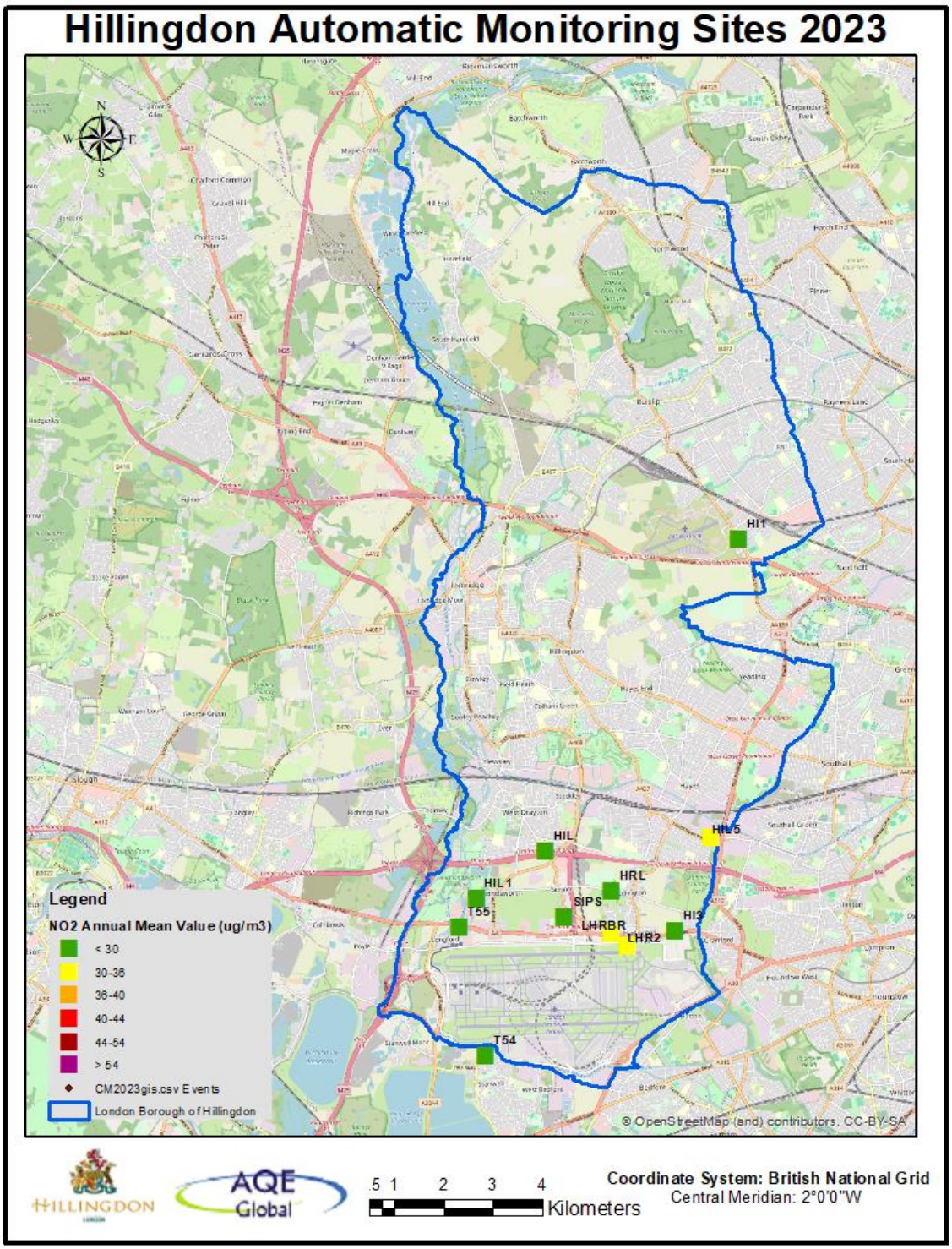


Figure 2. Location of the automatic monitoring sites in Hillingdon, nitrogen dioxide annual mean concentrations, NO_2 (ug/m^3) 2023

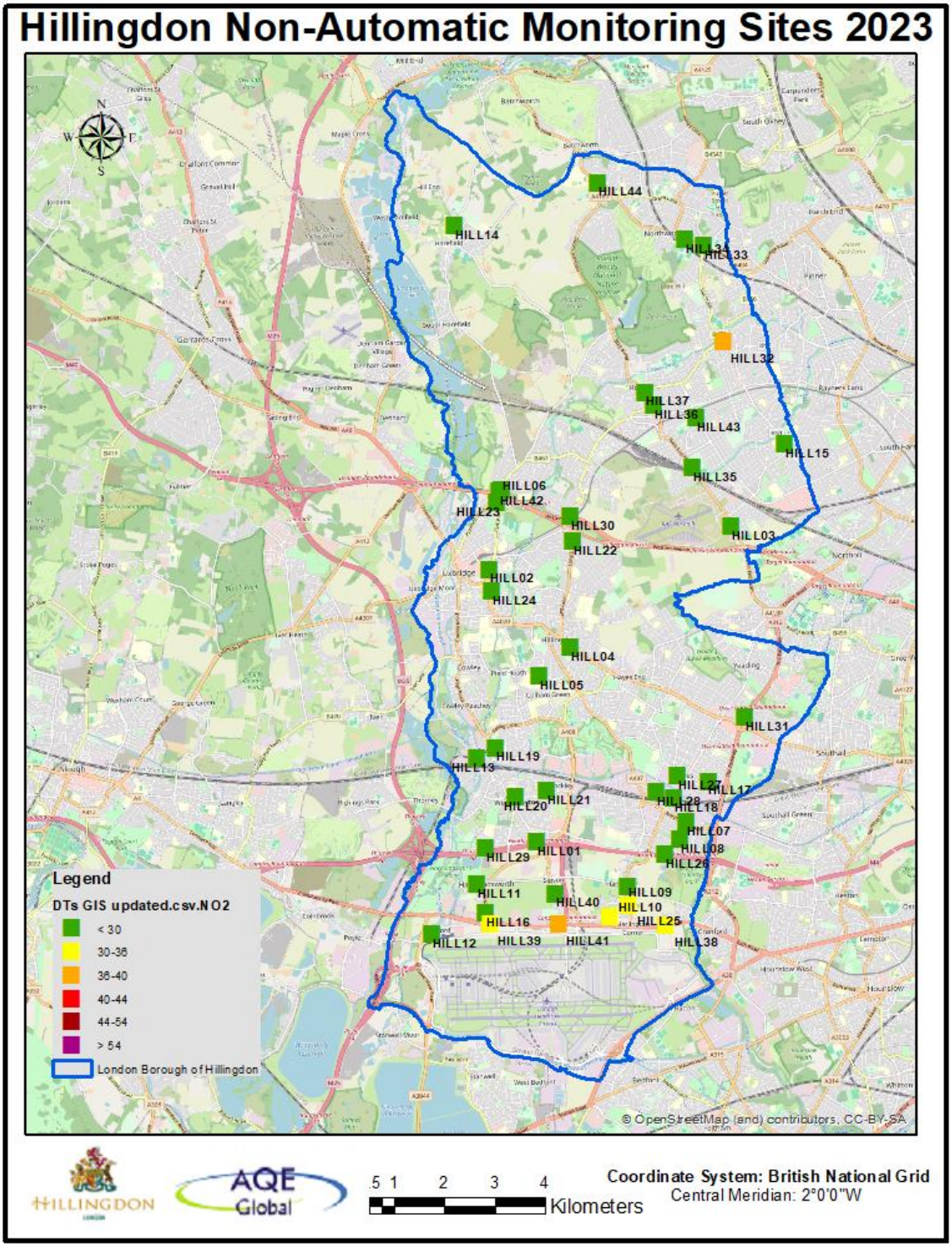


Figure 3. Location of non-automatic monitoring sites in Hillingdon, nitrogen dioxide annual mean concentrations, NO_2 (ug/m^3) 2023.

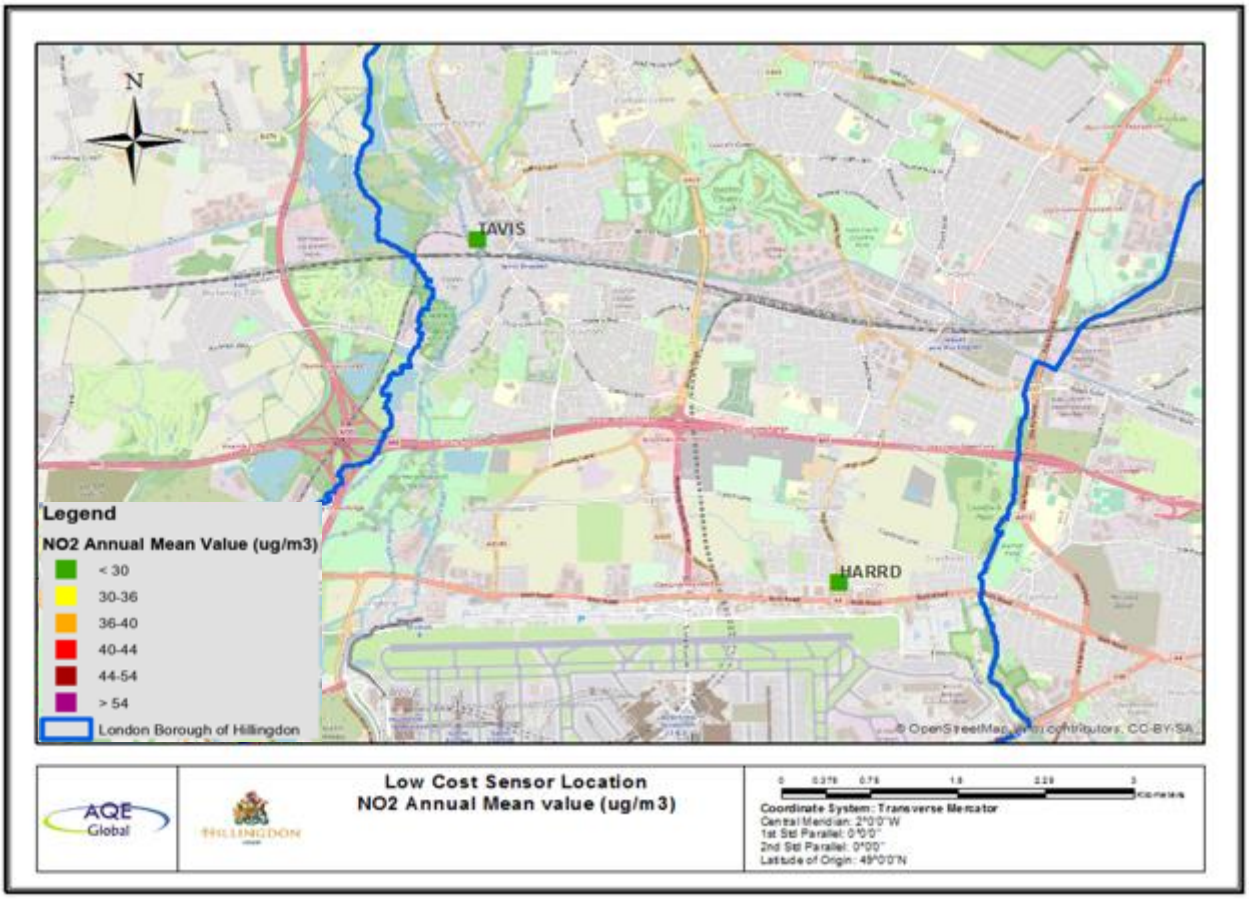


Figure 4. Location of low-cost sensor monitoring sites in Hillingdon covering both $PM_{2.5}$ and NO_2, with 2023 NO_2 concentrations shown (ug/m^3).

Table B. Details of automatic monitoring sites in Hillingdon for 2023.

Site ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Monitoring technique	Distance from monitoring site to relevant exposure (1) (m)	Distance to kerb of nearest road(2) (m)	Inlet height (m)
LHR2	London Heathrow	Airport	508600	176700	NO_2, PM_{10}, $PM_{2.5}$	*YES, LBH*	Chemiluminescence FIDAS	N/A	N/A (inside airport)	1.5
HIL	London Hillingdon	Urban background	506951	178605	NO_2, PM_{10}, $PM_{2.5}$, O_3	*YES, LBH*	Chemiluminescence FIDAS	16m	2.5m (30m to M4)	1.5
HI1	Hillingdon 1 - South Ruislip	Roadside	510857	184917	NO_2, PM_{10}	*YES, LBH*	Chemiluminescence TEOM	11m	2.5m	1.5
HI3	Hillingdon 3 - Oxford Avenue	Roadside	509557	176994	NO_2, PM_{10}	*YES, LBH*	Chemiluminescence TEOM	8m and 17m	33m to A4 Bath Road (2m to Oxford Avenue)	1.5
HRL	London Harlington	Airport	508295	177800	CO, NO_2, O_3, PM_{10}, $PM_{2.5}$	*YES, LBH*	Chemiluminescence TEOM FDMS	N/A	3m	1.5
SIPS	Hillingdon Sipson	Urban background	507325	177282	NO_2	*YES, LBH*	Chemiluminescence	9m	2.5m	1.5
HIL1	London Harmondsworth	Roadside	505561	177661	NO_2, PM_{10}	*YES, LBH*	Chemiluminescence BAM	20m	1m	1.5
HIL4	London Harmondsworth Osiris	Urban background	505671	177605	TSP, PM_{10}, $PM_{2.5}$, PM_1	*YES, LBH*	Optical	1m	13m	1.5
T55	Heathrow Green Gates	Airport	505207	177072	NO_2, PM_{10}, $PM_{2.5}$	*YES, LBH*	Chemiluminescence FIDAS	32m	N/A (background for the airport) (62m to airport boundary)	1.5
T54	Heathrow Oaks	Airport	505729	174496	NO_2, PM_{10}, $PM_{2.5}$	*YES, LBH*	Chemiluminescence FIDAS	N/A	5m	1.5

Site ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Monitoring technique	Distance from monitoring site to relevant exposure (1) (m)	Distance to kerb of nearest road(2) (m)	Inlet height (m)
HIL5	Hillingdon Hayes	Roadside	510303	178882	NO_2, PM_{10}	*YES, LBH*	Chemilumine scence BAM	15m	1m	1.5
LHRBR	Heathrow Bath Road	Roadside	508279	176949	NO_2, PM_{10}, $PM_{2.5}$	*YES, LBH*	Chemilumine scence FIDAS	140m	6m	1.5

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).
(2) N/A if not applicable

Table C. Details of non-automatic monitoring sites in Hillingdon in 2023.

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Tube co-located with an automatic monitor? (Y/N)
HILL01	*AURN Site, Keats Way, West Drayton*	*Roadside*	*506926*	*178614*	*NO_2*	*YES, LBH*	*0*	*30m from M4*	*1.5*	*Y*
HILL02	*Uxbridge Day Nursery Park Road Uxbridge (on wire Fence)*	*Roadside*	*505996*	*184058*	*NO_2*	*YES, LBH*	*0*	*4*	*1.5*	*N*
HILL03	*South Ruislip Monitoring Station West End Road*	*Roadside*	*510821*	*184923*	*NO_2*	*YES, LBH*	*14*	*2.5*	*1.5*	*Y*
HILL04	*Hillingdon Primary School Uxbridge Road Hillingdon (on wire fence)*	*Roadside*	*507617*	*182506*	*NO_2*	*YES, LBH*	*0*	*5*	*1.5*	*N*
HILL05	*Hillingdon Hospital Monitoring Station Colham Road (Near John Rich House on former junction to Pield Heath Road)*	*Roadside*	*506989*	*181920*	*NO_2*	*YES, LBH*	*7*	*2*	*1.5*	*N*
HILL06	*Warren Road Ickenham Uxbridge (1st lamp post on left)*	*Roadside*	*506243*	*185653*	*NO_2*	*YES, LBH*	*1*	*23*	*1.5*	*N*
HILL07	*Harold Avenue (first lamp post on left)*	*Roadside*	*509918*	*179015*	*NO_2*	*YES, LBH*	*4*	*30*	*1.5*	*N*
HILL08	*15 Phelps Way Hayes (lamp post outside of)*	*Roadside*	*509798*	*178654*	*NO_2*	*YES, LBH*	*7*	*1.5*	*1.5*	*N*
HILL09	*25 Cranford Lane Harlington (lamp post on the left after car park)*	*Roadside*	*508758*	*177718*	*NO_2*	*YES, LBH*	*7*	*1*	*1.5*	*N*
HILL10	*Brendan Close Harlington (1st lamp post on the left)*	*Roadside*	*508414*	*177125*	*NO_2*	*YES, LBH*	*0*	*1*	*1.5*	*N*

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Tube co-located with an automatic monitor? (Y/N)
HILL11	*Harmondsworth Green Harmondsworth (lamp post outside nursery)*	*Roadside*	*505736*	*177752*	*NO_2*	*YES, LBH*	*0*	*1*	*1.5*	*N*
HILL12	*Heathrow Close Longford (1st lamp post on the right)*	*Roadside*	*504851*	*176770*	*NO_2*	*YES, LBH*	*0*	*2*	*1.5*	*N*
HILL13	*31 Tavistock Road (on lamp-post outside house)*	*Roadside*	*505731*	*180288*	*NO_2*	*YES, LBH*	*3*	*1*	*1.5*	*N*
HILL14	*Harefield Hospital Hill End Road (lamp-post outside entrance)*	*Background*	*505299*	*190923*	*NO_2*	*NO*	*0*	*5*	*1.5*	*N*
HILL15	*Field End Road/Field End School S.Ruislip 3rd Lamp-post south of school entrance (outside AQMA)*	*Roadside*	*511889*	*186563*	*NO_2*	*NO*	*8*	*1*	*1.5*	*N*
HILL16	*49 Zealand Avenue Lamp Post*	*Roadside*	*505920*	*177188*	*NO_2*	*YES, LBH*	*8*	*13*	*1.5*	*N*
HILL17	*49 Silverdale Gardens, Hayes Lamp Post (8)*	*Background*	*510361*	*179820*	*NO_2*	*YES, LBH*	*9*	*14*	*1.5*	*N*
HILL18	*Blyth Road, Hayes Lamp Post (4)*	*Roadside*	*509683*	*179486*	*NO_2*	*YES, LBH*	*6*	*2*	*1.5*	*N*
HILL19	*Side of 104 Yiewsley High Street (front of 1A Fairfield Road) Lamp Post (2)*	*Background*	*506108*	*180493*	*NO_2*	*YES, LBH*	*9*	*37*	*1.5*	*N*
HILL20	*1 Porters Way (corner with Kingston Lane) Lamp Post (1)*	*Background*	*506503*	*179510*	*NO_2*	*YES, LBH*	*12*	*9*	*1.5*	*N*
HILL21	*5-7 Mulberry Crescent, West Drayton Lamp Post (18)*	*Background*	*507141*	*179628*	*NO_2*	*YES, LBH*	*10*	*2*	*1.5*	*N*

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Tube co-located with an automatic monitor? (Y/N)
HILL22	*340 Long Lane, Uxbridge Lamp Post (71)*	*Roadside*	*507649*	*184611*	*NO_2*	*YES, LBH*	*18*	*2*	*1.5*	*N*
HILL23	*198 Harefield Road, Uxbridge Lamp Post (2)*	*Background*	*506143*	*185395*	*NO_2*	*YES, LBH*	*9*	*33*	*1.5*	*N*
HILL24	*59 Hillingdon Road, Uxbridge Lamp Post (56)*	*Roadside*	*506035*	*183611*	*NO_2*	*YES, LBH*	*12*	*1.5*	*1.5*	*N*
HILL25	*10 West End Lane, Harlington Lamp Post (2)*	*Background*	*508773*	*177352*	*NO_2*	*YES, LBH*	*11*	*33*	*1.5*	*N*
HILL26	*R/O 130 Cleave Avenue, Hayes Lamp Post (33)*	*Roadside*	*509499*	*178370*	*NO_2*	*YES, LBH*	*18*	*27*	*1.5*	*N*
HILL27	*Botwell House RC Primary School (Side-fence)*	*Roadside*	*509755*	*179934*	*NO_2*	*YES, LBH*	*5*	*12*	*1.5*	*N*
HILL28	*Blyth Road 2nd Tube, Hayes Lamp Post (17) (western most lamp post in front of 133 Enterprise House)*	*Roadside*	*509328*	*179603*	*NO_2*	*YES, LBH*	*5*	*2*	*1.5*	*N*
HILL29	*Little Benty, Road name sign corner of The Brambles and Little Benty. UB7 7UJ*	*Background*	*505906*	*178497*	*NO_2*	*YES, LBH*	*5*	*1.5*	*1.9*	*N*
HILL30	*Lamp-post down alley next to No 60a The Chase, Ickenham. Red garage door, set back from road. UB10 8ST*	*Background*	*507612*	*185118*	*NO_2*	*YES, LBH*	*4*	*25*	*2.5*	*N*
HILL31	*On white lamp-post at end of Dorchester Waye that runs parallel with A312, side of houses*	*Background*	*511103*	*181097*	*NO_2*	*YES, LBH*	*18*	*10*	*2.2*	*N*

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Tube co-located with an automatic monitor? (Y/N)
HILL32	*Roadside lamp-post, outside Georgian Lodge flats, Field End Road, Eastcote. HA52QL.*	*Background*	*510664*	*188599*	*NO_2*	*NO*	*8.9*	*0.6*	*2.0*	*N*
HILL33	*Kerbside lamppost outside Roundabout House, 34 Pinner Road. HA6 1BZ*	*Roadside*	*510284*	*190524*	*NO_2*	*NO*	*7.0*	*0.5*	*2.2*	*N*
HILL34	*Roadside lamp-post, pavement outside 177/179 Pinner Road. HA6 1DB.*	*Roadside*	*509900*	*190648*	*NO_2*	*NO*	*4*	*2*	*2.2*	*N*
HILL35	*Grey Lamp-post, West End Road, to the south of Sidmouth Drive, outside Aroma House Chinese. HA4 6LR*	*Roadside*	*510055*	*186080*	*NO_2*	*NO*	*7*	*0.4*	*2.3*	*N*
HILL36	*Lamp-post outside Vodafone, 69 High Street Ruislip. HA4 8JB*	*Roadside*	*509275*	*187340*	*NO_2*	*NO*	*4*	*3*	*2.4*	*N*
HILL37	*2/6 High St. Ruislip Lamp-post with Parking and church sign. HA4 7AW*	*Roadside*	*509097*	*187597*	*NO_2*	*NO*	*3*	*1*	*2.0*	*N*
HILL38	*Blue street light neat speed camera markings to west of Oxford Ave, Near AQMS. UB3 5HU*	*Roadside*	*509525*	*176949*	*NO_2*	*YES, LBH*	*6*	*1.2*	*2.2*	*N*
HILL39	*Pinglestone Close/Bath Road A4. On cycle lane sign post. Park up Pinglestone close. UB7 0DJ.*	*Roadside*	*506000*	*176969*	*NO_2*	*YES, LBH*	*10*	*1.5*	*2.2*	*N*
HILL40	*On zone sign at corner of Sipson Close/Sipson Rd. UB7 0JX.*	*Roadside*	*507316*	*177576*	*NO_2*	*YES, LBH*	*4*	*1.8*	*1.9*	*N*

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref Easting (m)	Y OS Grid Ref Northing (m)	Pollutants monitored	In AQMA? (Y/N) Which AQMA?	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Tube co-located with an automatic monitor? (Y/N)
HILL41	*On the north side of the A4 near the houses by the junction with Sipson Way*	*Roadside*	*507369*	*176966*	*NO_2*	*YES, LBH*	*6*	*0.7*	*2.0*	*N*
HILL42	*Telegraph pole next to big house/field on South corner of The Drive. UB10 8DA*	*Roadside*	*506192*	*185614*	*NO_2*	*YES, LBH*	*5*	*4.5*	*2.3*	*N*
HILL43	*Lamp-post outside tattoo and Five star nail parlours, No 60, Victoria Road. HA4 0AH*	*Roadside*	*510134*	*187086*	*NO_2*	*YES, LBH*	*3.5*	*1.5*	*2.4*	*N*
HILL44	*Hillingdon NorthWood Focus Area On a lamppost on Ducks Hill Road Corner of Rising Hill Close HA6 2NP*	*Roadside*	*508162*	*191784*	*NO_2*	*NO*	*10*	*1.5*	*2.2*	*N*

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).
(2) N/A if not applicable

Table D. Details of Automatic Low-Cost Monitoring Sites in Hillingdon in 2023.

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA? (Y/N)	Distance from monitoring site to relevant exposure (m)	Distance to kerb of nearest road (N/A if not applicable) (m)	Inlet height (m)	Pollutants monitored	Monitoring technique
TAVIS[4] *(a)*	in front of 69 Tavistock Rd, West Drayton UB7 7QT	505739	180258	Roadside	Y	6.5m	0.4m	2.5	NO_2, $PM_{2.5}$	laser scattering ($PM_{2.5}$)
HARRD[5] *b)*	485A High Street, Harlington, UB3 5DL	508824	177081	Roadside	Y	3.3m	1.3	2.5	NO_2, O_3	laser scattering ($PM_{2.5}$)

(a) This Node was located on Tavistock Road because the local community had raised concerns over the impact of traffic associated with nearby industrial uses. Installed: Thursday, June 3rd 2021

(b) Installed: Tuesday, November 23rd 2021

Small low-cost sensors are not as accurate as reference-grade analysers, but by combining their data with the reference networks, acceptable data quality standards may be achieved.

[4] https://www.breathelondon.org/sensor-info?sitecode=CLDP0051&species=both

[5] https://www.breathelondon.org/sensor-info?sitecode=CLDP0207&species=both

2.4 Comparison of Monitoring Results with Air Quality Objectives

Trends in the monitored pollution data for the borough are presented in the following summary Figures:

- Figure 5. Annual mean NO_2 concentrations measured at the automatic monitoring stations, 2016-2023, showing data for each site in the borough. Units: $\mu g.m^{-3}$. No sites exceed the annual mean objective. Units: $\mu g.m^{-3}$.
- Figure 6. Annual mean NO_2 concentrations measured at diffusion tube locations, 2016-2023, showing data for each site in the borough. Units: $\mu g.m^{-3}$. No sites exceed the annual mean objective. Units: $\mu g.m^{-3}$.
- Figure 7. Annual mean PM_{10} concentrations measured at the automatic monitoring stations, 2016-2023 (average across all sites in the borough). No sites exceed the annual mean objective. Units: $\mu g.m^{-3}$.
- Figure 8. Annual mean $PM_{2.5}$ concentrations measured at the automatic monitoring stations, 2016-2023 (average across all sites in the borough). No sites exceed the annual mean objective of 25$\mu g.m^{-3}$, nor the WHO/London annual mean target of 10 $\mu g.m^{-3}$.
- Figures 9. Hourly mean NO_2 concentrations measured at the low-cost sensor at Tavistock Road, 1st January to 31st December 2023. Units: $\mu g.m^{-3}$
- Figures 10. Hourly mean $PM_{2.5}$ concentrations measured at the low-cost sensor at Tavistock Road, 1st January to 31st December 2023. Units: $\mu g.m^{-3}$
- Figures 11. Hourly mean NO_2 concentrations measured at the low-cost sensor at Harlington High Street, 1st January to 31st December 2023. Units: $\mu g.m^{-3}$
- Figures 12. Hourly mean $PM_{2.5}$ concentrations measured at the low-cost sensor at Harlington High Street, 1st January to 31st December 2023. Units: $\mu g.m^{-3}$

For annual reporting, the results presented are after adjustments for 'annualisation' and for distance to a location of relevant public exposure (wherever applicable).

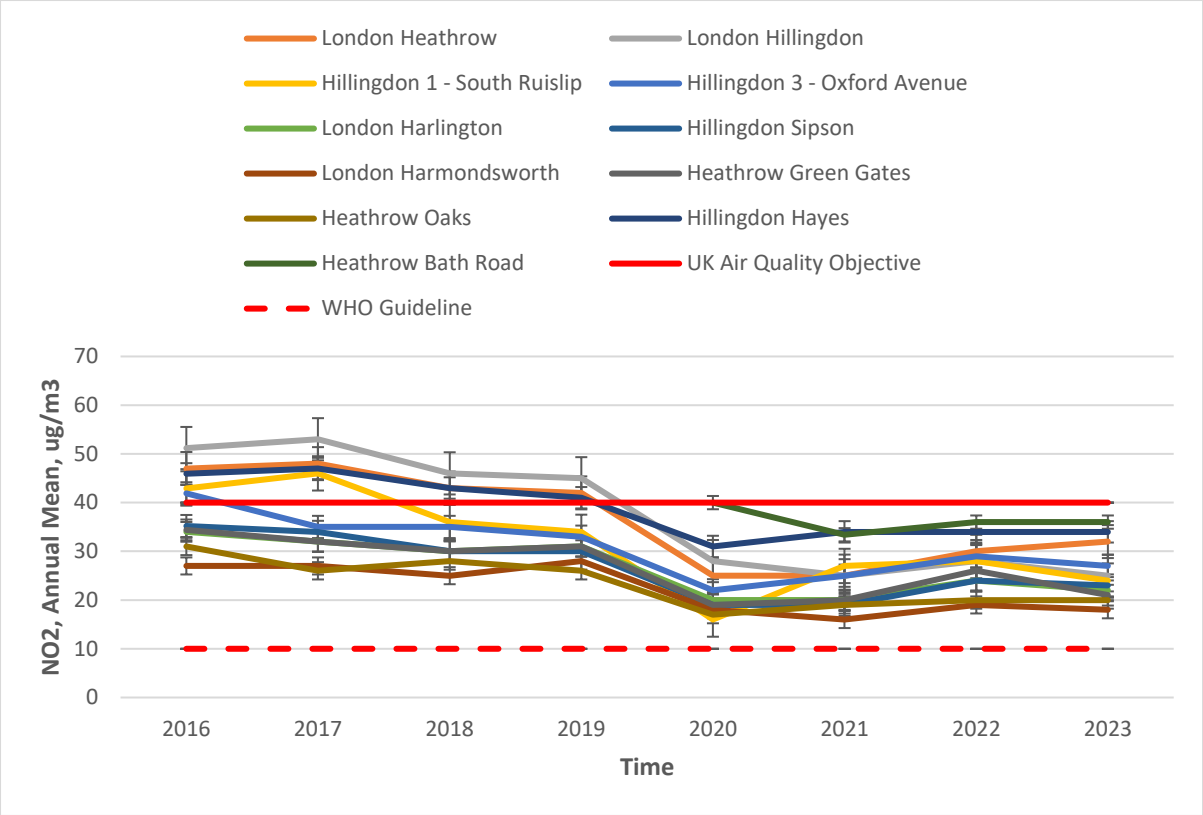


Figure 5. Annual mean NO_2 concentrations measured at the automatic monitoring stations, 2016-2023, showing data for each site in the borough. Units: µg.m^{-3}.

Figures 5 and 6 indicate that NO_2 annual mean concentrations observed in 2023 have decreased at the majority of the monitoring sites (with the exception of five monitoring locations – please see below), with decreases ranging from 1.1 to 8.0 ug/m^3 from 2022 to 2023 across the borough. [Exact values for NO_2, $PM_{2.5}$ and PM_{10} are shown in Tables E to K below, that follow this series of graphs.]

From the continuous monitoring stations, it was observed that the continuous monitoring site London Heathrow (LHR2) registered an increase of 2 µg.m^{-3} from 2022 to 2023. For the diffusion tubes, an increase of 3.2 µg.m^{-3} from 2022 to 2023 was noted at the diffusion tube site HILL10 located at Brendan Close Harlington (1st lamp post on the left), an increase of 1.2 µg.m^{-3} from 2022 to 2023 was registered at the diffusion tube site HILL40 located at corner of Sipson Close/Sipson, an increase of 0.3 µg.m^{-3} from 2022 to 2023 was registered at the diffusion tube site HILL13 located at 31 Tavistock Road, and an increase of 0.1 µg.m^{-3} from 2022 to 2023 was registered at the diffusion tube site HILL27 located at Botwell House RC Primary School. All sites are located within the AQMA.

It is also noted sites HILL41 (on the north side of the A4 near the houses by the junction with Sipson Way) within the AQMA and HILL32 (outside Georgian Lodge flats, Field End Road, Eastcote) outside the AQMA registered an annual mean in 2023 above 36 µg.m^{-3} (38.6 µg.m^{-3} and 36.3 µg.m^{-3} respectively). Annual mean concentrations of 36 µg.m^{-3} and above are of concern due to acknowledged inaccuracies in both monitoring and modelling

approaches to assess air quality, with LBH continuing to focus efforts to improve air quality at such locations.

It is noted that all continuous monitoring sites from the standard LBH network exceed the WHO NO_2 target value of 10 µg.m^{-3} (Figure 5). On the other hand, all sites meet the NO_2 UK air quality annual mean objective.

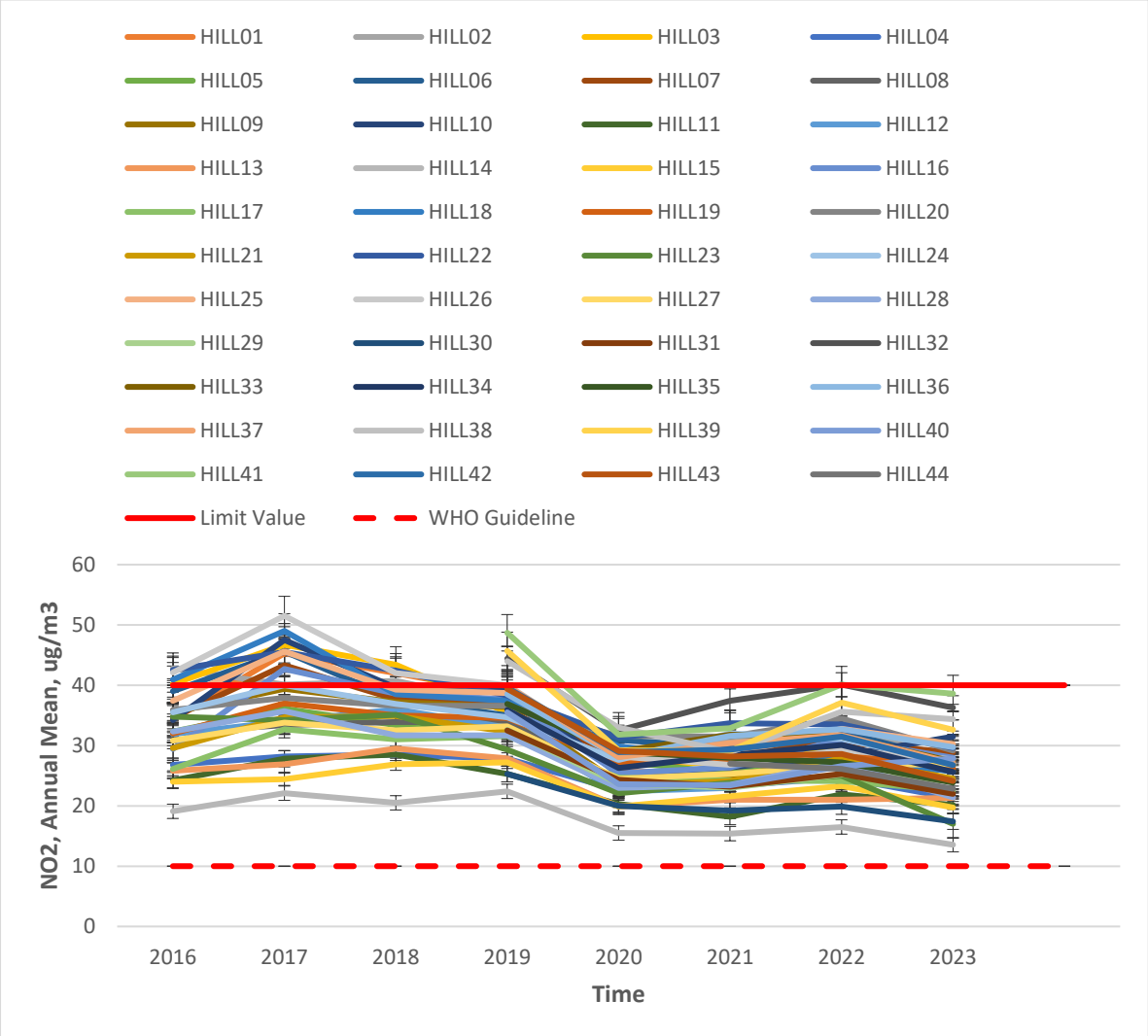


Figure 6. Annual mean NO_2 concentrations measured at the diffusion tube locations, 2016-2023, showing data for each site in the borough. Units: µg.m^{-3}.

Regarding particulate matter concentrations (PM_{10} and $PM_{2.5}$), (with the exception of sites Hillingdon Oxford Avenue for PM_{10} and London Hillingdon for $PM_{2.5}$), no increases were observed for either fraction, with decreases of PM_{10} ranging from 1 to 3 µg.m^{-3} (Figure 7) and decreases of $PM_{2.5}$ of -1 µg.m^{-3} being observed across sites in 2023. Hillingdon Oxford Avenue (HIL) has registered an increase of PM_{10} of 4 µg.m^{-3} and London Hillingdon (HI1) has registered an increase of $PM_{2.5}$ of 1 µg.m^{-3} concentrations in 2023 in relation to 2022 levels.

It is noted that three continuous monitoring sites from the standard LBH network exceed the WHO PM_{10} guideline of 15 µg.m^{-3} and no sites exceed the London Mayoral Objective

$PM_{2.5}$ target value of 10 µg.m^{-3} across the borough (Figures 7 and 8). On the other hand, all sites exceed the $PM_{2.5}$ WHO annual mean guideline of 5 µg m^{-3}.

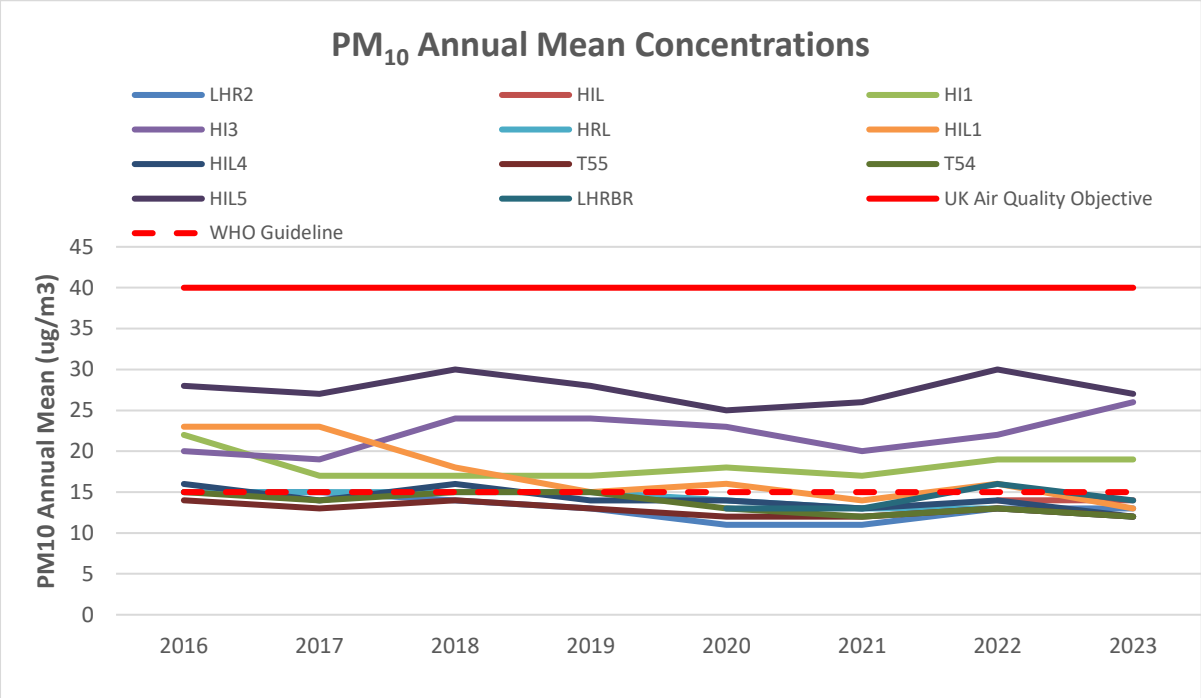


Figure 7. Annual mean PM_{10} concentrations measured at the automatic monitoring stations, 2016-2023, showing data for each site in the borough. Units: µg.m^{-3}.

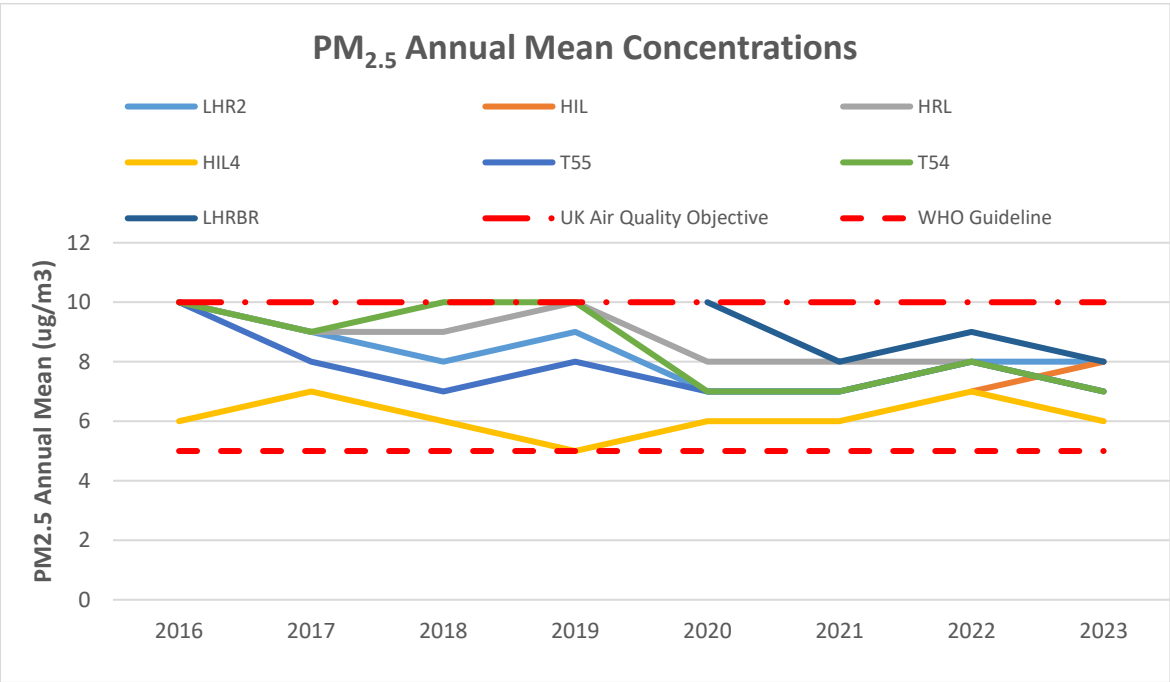


Figure 8. Annual mean $PM_{2.5}$ concentrations measured at the automatic monitoring stations, 2016-2023, showing data for each site in the borough. Units: µg.m^{-3}.

Figures 9 and 11 indicate hourly mean NO_2 concentrations measured at the low-cost sensors at Tavistock Road and Harlington High Street, for the period from the 1st of January to the 31st December 2023. Both Figures indicate that there are peaks of concentrations throughout the year. However, as reported on Table G, the annual mean value is below the national objective of 40 µg.m^{-3} at each location.

Figures 10 and 12 present the hourly mean $PM_{2.5}$ concentrations measured at the low-cost sensors at Tavistock Road and Harlington High Street, for the period from the 1st of January to the 31st December 2023. Both Figures indicate that there are peaks in concentration throughout the year. Results show that the annual mean in relation to the WHO guideline of 10 µg.m^{-3} is being exceeded at each location (See Table L).

It is noted that both sites exceed the WHO NO_2 daily guideline value of 25 µg.m^{-3} and the WHO $PM_{2.5}$ daily guideline value of 15 µg m^{-3}.

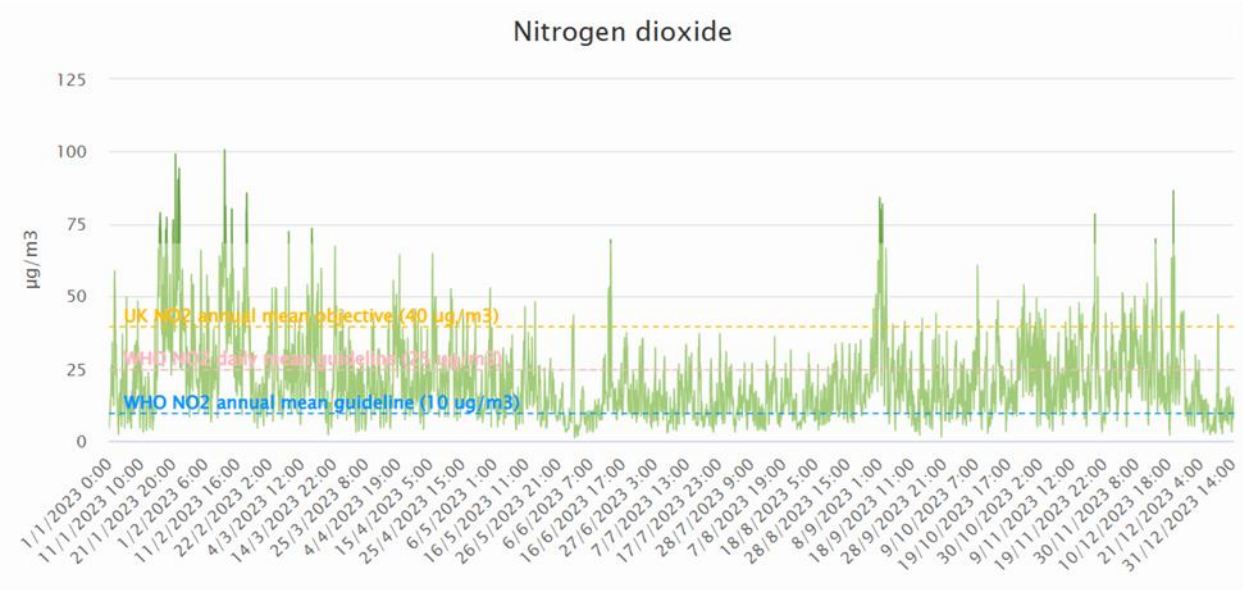


Figure 9. Hourly mean NO_2 concentrations measured at the low-cost sensor at Tavistock Road, 1st January to 31st December 2023. Units: µg.m^{-3}.

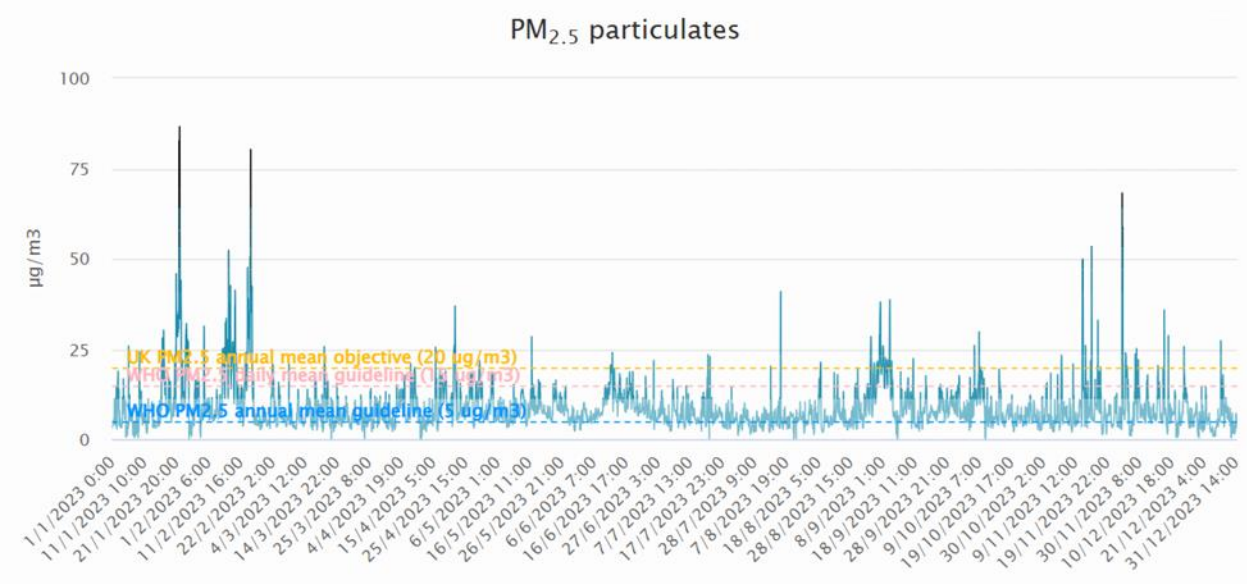


Figure 10. Hourly mean $PM_{2.5}$ concentrations measured at the low-cost sensor at Tavistock Road, 1st January to 31st December 2023. Units: µg.m^{-3}.

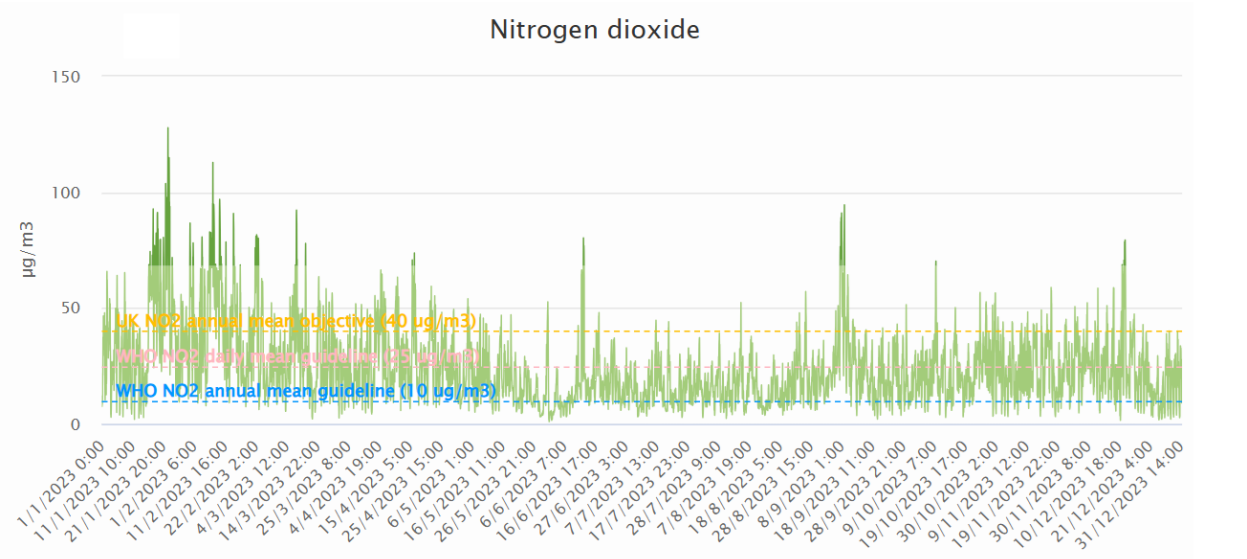


Figure 11. Hourly mean NO_2 concentrations measured at the low-cost sensor at Harlington High Street, 1st January to 31st December 2023. Units: µg.m^{-3}.

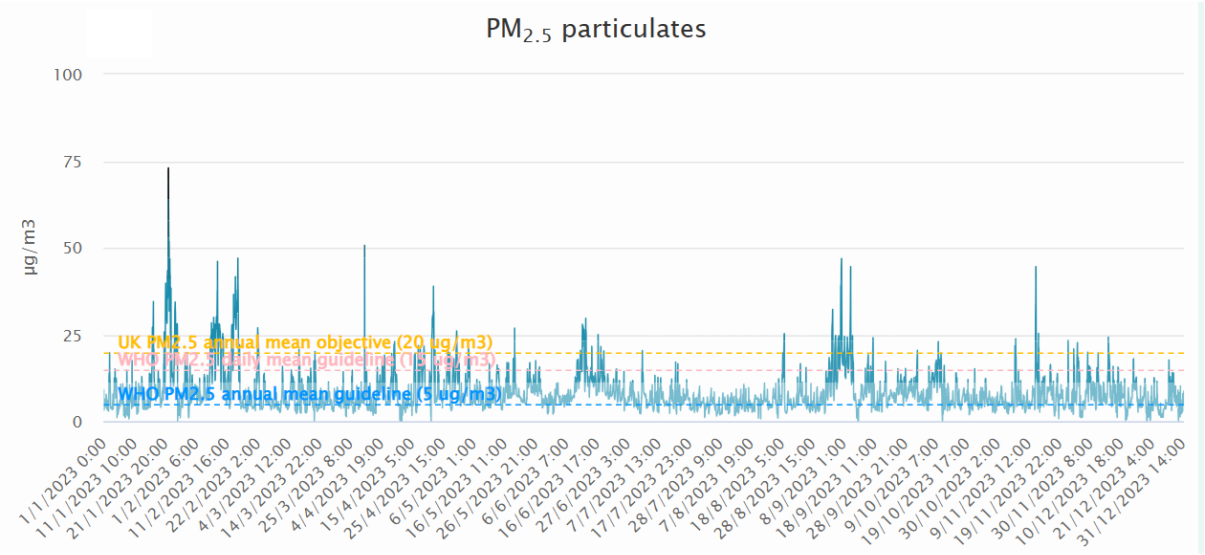


Figure 12. Hourly mean $PM_{2.5}$ concentrations measured at the low-cost sensor at Harlington High Street, 1st January to 31st December 2023. Units: µg.m^{-3}.

The figures above are supplemented by the following tables that provide data for the last seven years for each monitoring site:

- Table E. Annual Mean NO_2 Ratified Monitoring Concentrations (µg.m^{-3}) at automatic monitoring sites.
- Table F. Annual Mean NO_2 Ratified and Bias-adjusted Monitoring Concentrations (µg.m^{-3}) at diffusion tube sites.
- Table H. NO_2 Automatic Monitor Results: Comparison with 1-hour Mean Objective.
- Table I. Annual Mean PM_{10} Automatic Monitoring Results (µg.m^{-3}).
- Table J. PM_{10} Automatic Monitor Results: Comparison with 24-Hour Mean Objective.
- Table K. Annual Mean $PM_{2.5}$ Automatic Monitoring Results (µg.m^{-3}).

In addition, Tables G and L present data for 2023 at the two locations (Tavistock Road and Harlington High Street) where Low-Cost Sensors were deployed:

- Table G. Annual Mean NO_2 Monitoring Concentrations at Low-Cost Sensor sites (µg.m^{-3}).
- Table L. Annual Mean $PM_{2.5}$ Monitoring Concentrations at Low-Cost Sensor sites (µg.m^{-3}).

Analysis of all Tables (E to L) indicates there are no locations in the borough where the limit values and objectives for pollutants NO_2 and PM were exceeded in 2023 according to monitoring data.

Table E. Annual mean NO_2 ratified monitoring results (µg m^{-3}) for the automatic monitoring sites in Hillingdon for the period 2017-2023.

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid dat capture, 2023, % [b]	Annual Mean Concentration (µg.m^{-3})						
				2017	2018	2019	2020	2021	2022	2023
LHR2	London Heathrow	98.01	98.01	***48***	***43***	***42***	25	25	30	32
HIL	London Hillingdon	98.80	98.80	***53***	***46***	***45***	28	25	28	25
HI1	Hillingdon 1 - South Ruislip	99.54	99.54	***46***	36 [d]	34	16	27	28	24
HI3	Hillingdon 3 – Oxford Avenue	90.18	90.18	35	35	33	22	25	29	27
HRL	London Harlington	99.61	99.61	32	30	31	20	20	24	22
SIPS	Hillingdon Sipson	83.37	83.37	34	30	30	19	19	24	23
HIL1	London Harmondsworth	78.14	78.14	27	25	28	18	16	19	18
T55	Heathrow Green Gates	99.79	99.79	32	30	31	19	20	26	21
T54	Heathrow Oaks	95.47	95.47	26	28	26	17	19	20	20
HIL5	Hillingdon Hayes	88.12	88.12	***47***	***43***	***41***	31	34	34	34
LHRBR	London Heathrow Bath Road [c)]	97.53	97.53	-	-	-	***44.5*** (39.5)	34	36	<u>36</u>

Notes:

The annual mean concentrations are presented as µg m^{-3}.

Exceedance of the NO_2 annual mean AQO of 40 µg m^{-3} are shown in **bold**. (no such cases are present in 2023)

Equal and above 36 µg m^{-3} are shown <u>underlined</u>.

NO_2 annual means in excess of 60 µg m^{-3}, indicating a potential exceedance of the NO_2 hourly mean AQS objective are shown in **bold** and <u>underlined</u> (no such cases are present in 2023).

Results have been distance corrected where applicable (no such cases are present in 2023).

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%. No such cases are present in 2023.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

[a] data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table F. Annual mean NO_2 ratified and adjusted monitoring results (µg m^{-3}) diffusion tubes for diffusion tubes in Hillingdon for the period 2017-2023.

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture, 2023, % [b]	Annual Mean Concentration (µg.m^{-3})						
				2017[c]	2018[c]	2019[c]	2020[c]	2021[c]	2022	2023
HILL01 (c)	Co-located with London Hillingdon CM	100.0	100.0	**45.3**	**42**	38.6	25.6	25.7	29.4	27.5
HILL02	Uxbridge Day Nursery, Park Road	83.3	83.3	**40.1**	**40.7**	36.9	28.9	30.9	32.8	27.9
HILL03 (c)	Co-located with South Ruislip CM	100.0	100.0	**46.7**	**43.4**	35.5	26.7 [d]	27.3	30.0	24.2
HILL04	Hillingdon Primary School	100.0	100.0	28.2	28.5	27.8	22.6	23.3	24.7	21.3
HILL05	Colham Rd/Pield Heath Road opposite Hillingdon Hospital	100.0	100.0	36.1	33.4	34.1	27.4	25.4	27.8	26.7
HILL06	Warren Road Ickenham	100.0	100.0	**45.6**	37.6	35.0	30.9	29.7	32.2	27.6
HILL07	Harold Avenue, Hayes	100.0	100.0	**43.3**	37.7	36.9	28.1	28.8	30.5	28.8
HILL08	Phelps Way Hayes	100.0	100.0	33.4	33.9	33.9	24.1	25.3	26.7	25.9
HILL09	Cranford Lane Harlington	100.0	100.0	39.4	37.2	36.4	23.8	24.5	28.8	26.7
HILL10	Brendan Close Harlington	100.0	100.0	**47.5**	39.6	39.7	25.2	26.4	28.3	31.5
HILL11	Harmondsworth Green	83.3	83.3	27.8	28.5	25.3	20.3	18.2	21.9	20.1
HILL12	Heathrow Close Longford	100.0	100.0	34	36	33.0	22.4	23.0	28.2	24.0
HILL13	Tavistock Road	91.7	91.7	26.9	29.5	27.9	19.9	21.0	21.0	21.3
HILL14	Harefield Hospital Hill End Road (Outside AQMA)	100.0	100.0	22.1	20.5	22.4	15.5	15.4	16.5	13.6
HILL15	Field End School (Outside AQMA)	100.0	100.0	24.4	26.9	27.2	19.9	21.6	23.3	19.7
HILL16	Zealand Avenue, Sipson	100.0	100.0	**42.7**	38.6	37.7	25.4	26.4	31.0	28.0
HILL17	Silverdale Gardens, Hayes	100.0	100.0	32.7	31	31.6	24.7	24.2	24.1	22.6
HILL18	Blyth Road, Hayes	91.7	91.7	**49**	38.5	37.4	29.9	27.6	28.3	25.7
HILL19	Yiewsley High Street	100.0	100.0	37	35	34.6	27.1	27.6	28.7	26.2
HILL20	Porters Way, West Drayton	100.0	100.0	37.9	36.6	36.6	31.6	31.5	34.5	29.2
HILL21	Mulberry Crescent, West Drayton	100.0	100.0	34.7	34.9	32.3	23.4	24.1	27.9	24.5
HILL22	Long Lane, Uxbridge	100.0	100.0	**45.5**	**42.4**	38.3	31.3	33.7	33.5	29.6
HILL23	Harefield Road, Uxbridge	91.7	91.7	34.2	35.1	29.3	22.1	23.8	25.0	17.0

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture, 2023, % [b]	Annual Mean Concentration (µg.m^{-3})						
				2017[c]	2018[c]	2019[c]	2020[c]	2021[c]	2022	2023
HILL24	Hillingdon Road, Uxbridge	100.0	100.0	***40***	36.9	34.7	27.6	32.0	31.1	27.0
HILL25	West End Lane, Harlington	100.0	100.0	***45.6***	39.3	38.7	28.3	28.5	32.8	30.2
HILL26	R/O Cleave Avenue, Hayes	100.0	100.0	***51.5***	***42***	***40.0***	28.2	26.8	29.2	27.7
HILL27	Botwell House Primary School	100.0	100.0	33.8	32.5	33.2	24.5	25.3	26.8	26.9
HILL28	Blyth Road, Hayes	83.3	83.3	35.7	31.7	31.7	23.0	23.5	27.1	21.4
HILL29	Little Benty, Road, West Drayton	100.0	100.0	-	-	32.6	23.7	23.0	25.2	24.1
HILL30	The Chase, Ickenham	91.7	91.7	-	-	25.3	20.0	19.2	19.9	17.4
HILL31	Dorchester Waye, Hayes	100.0	100.0	-	-	32.5	24.3	23.2	25.3	22.0
HILL32	Field End Road, Eastcote. (Outside AQMA)	100.0	100.0	-	-	***44.4***	32.5	37.4	40.1	36.3
HILL33	34 Pinner Road	100.0	100.0	-	-	39.5	29.0	31.8	31.5	27.4
HILL34	177/179 Pinner Road	100.0	100.0	-	-	35.9	26.3	28.4	30.1	25.6
HILL35	West End Road, Ruislip (Outside AQMA)	100.0	100.0	-	-	36.9	28.9	28.0	27.2	23.9
HILL36	High Street Ruislip (Outside AQMA)	91.7	91.7	-	-	38.5	28.1	31.6	32.7	29.7
HILL37	2/6 High St. Ruislip (Outside AQMA)	91.7	91.7	-	-	39.9	28.1	30.4	31.7	27.1
HILL38	Oxford Ave, Near Oxford Avenue CM	100.0	100.0	-	-	***44.0***	33.0	28.9	35.6	34.4
HILL39	Pinglestone Close/Bath Road A4	100.0	100.0	-	-	***45.7***	29.2	29.1	37.1	32.6
HILL40	Sipson Close/Sipson Rd.	91.7	91.7	-	-	35.5	23.6	23.4	26.6	27.8
HILL41	A4 by junction with Sipson Way	100.0	100.0	-	-	***48.7***	31.8	32.9	40.1	38.6
HILL42	The Drive, Ickenham	91.7	91.7	-	-	39.6	28.9	29.3	31.5	26.8
HILL43	Victoria Road, Ruislip (Outside AQMA)	100	100	-	-	39.4	29.1	28.2	28.6	24.1
HILL44	Hillingdon NorthWood Focus Area (Outside AQMA)	100	100	-	-	-	-	27.0	26.1	22.8

Notes:

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LLAQM.TG19. (no such cases are present in 2023)

☒ Diffusion tube data has been bias adjusted

☒ Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.

The annual mean concentrations are presented as µg/m3.
Exceedances of the NO_2 annual mean objective of 40µg/m3 are shown in **bold**. (no such cases are present in 2023). Exceedance of 36 µg m^{-3} is shown underlined.
NO_2 annual means in excess of 60 µg m^{-3}, indicating a potential exceedance of the NO_2 hourly mean AQS objective are shown in **bold** and underlined (no such cases are present in 2023)
[a] data capture for the monitoring period, in cases where monitoring was only carried out for part of the year
[b] data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)
[c] This is a triplicate measurement.

Table G. Low-Cost Sensors: Annual mean NO_2 ratified monitoring results (µg.m^{-3}) for the period 2021-2023.

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture, 2023, % [b]	Annual Mean Concentration (µg.m^{-3})		
				2021	2022	2023
TAVIS	in front of 69 Tavistock Rd, West Drayton UB7 7QT	*100*	*100*	*24.1*	*23.1*	*20.7*
HARRD	485A High Street, Harlington, UB3 5DL	*97.0*	*97.0*	-	*26.7*	*24.4*

Notes
(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year
(b) Data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table H. NO_2 automatic monitoring results for Hillingdon for the period 2017-2023: Comparison with 1-hour mean objective, showing the number of 1-hour means where NO_2 > 200 µg.m^{-3}.

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Number of Hourly Means > 200 µg.m^{-3}						
				2017	2018	2019	2020	2021	2022	2023
LHR2	*London Heathrow*	*98.01*	*98.01*	*12*	*0*	*1*	*0*	*0*	*0*	*0*
HIL	*London Hillingdon*	*98.80*	*98.80*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
HI1	*Hillingdon 1 - South Ruislip*	*99.54*	*99.54*	*2*	*0*	*0*	*0*	*0*	*0*	*0*
HI3	*Hillingdon 3 – Oxford Avenue*	*90.18*	*90.18*	*1*	*0*	*0*	*0*	*0*	*0*	*2*
HRL	*London Harlington*	*99.61*	*99.61*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
SIPS	*Hillingdon Sipson*	*83.37*	*83.37*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
HIL1	*London Harmondsworth*	*78.14*	*78.14*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
T55	*Heathrow Green Gates*	*99.79*	*99.79*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Number of Hourly Means > 200 µg.m^{-3}						
				2017	2018	2019	2020	2021	2022	2023
T54	*Heathrow Oaks*	*95.47*	*95.47*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
HIL5	*Hillingdon Hayes*	*88.12*	*88.12*	*1*	*12*	*0*	*0*	*0*	*0*	*0*
LHRBR	*Heathrow Bath Road*	*97.53*	*97.53*	*-*	*-*	*-*	*-*	*0*	*0*	*0*

Notes:
Results are presented as the number of 1-hour periods where concentrations greater than 200 µg m^{-3} have been recorded.
Exceedance of the NO_2 short term AQO of 200 µg m^{-3} over the permitted 18 hours per year are shown in **bold**. (no instances)
Where valid data are available for less than 85% of a full year, the 99.8th percentile of 1-hour means is provided in brackets after the number of exceedances.
a) data capture for the monitoring period, in cases where monitoring was only carried out for part of the year
b) data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table I. Annual Mean PM_{10} Automatic Monitoring Results ($\mu g.m^{-3}$) for the period 2017-2023.

Site ID	Site name	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Annual Mean Concentration (μgm^{-3})						
				2017	2018	2019	2020	2021	2022	2023
LHR2	*Heathrow*	*95.84*	*95.84*	*15*	*14*	*13*	*11*	*11*	*13*	*13*
HIL	*London Hillingdon*	*97.02*	*97.02*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*14*	*14*
HI1	*South Ruislip*	*96.29*	*96.29*	*17*	*17*	*17*	*18*	*17*	*19*	*19*
HI3	*Oxford Avenue*	*84.86*	*84.86*	*19*	*24*	*24*	*23*	*20*	*22*	*26*
HRL	*London Harlington*	*99.87*	*99.87*	*15*	*15*	*15*	*14*	*13*	*13*	*12*
HIL1	*Hillingdon Harmondsworth*	*85.82*	*85.82*	*23*	*18*	*15*	*16*	*14*	*16*	*13*
HIL4	*London Harmondsworth Osiris*	*81.12*	*81.12*	*14*	*16*	*14*	*15*	*13*	*14*	*12*
T55	*Heathrow Green Gates*	*93.47*	*93.47*	*13*	*14*	*13*	*12*	*12*	*13*	*12*
T54	*Heathrow Oaks Road*	*99.89*	*99.89*	*14*	*15*	*15*	*13*	*12*	*13*	*12*
HIL5	*Hillingdon Hayes*	*90.92*	*90.92*	*27*	*30*	*28*	*25*	*26*	*30*	*27*
LHRBR	*Heathrow Bath Road*	*95.81*	*95.81*	*-*	*-*	*-*	*14*	*14*	*16*	*14*

Notes:
The annual mean concentrations are presented as µg m^{-3}.
Exceedance of the PM_{10} annual mean AQO of 40 µg m^{-3} are shown in **bold** (no instances).
All means have been "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.(no instances).
[a] data capture for the monitoring period, in cases where monitoring was only carried out for part of the year
[b] data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table J. PM_{10} Automatic Monitoring Results: Comparison with 24-Hour Mean Objective, Number of PM_{10} 24-Hour Means > 50 µg m^{-3} for the period 2017-2023

Site ID	Site name	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Number of Daily Means > 50 µgm^{-3}						
				2017	2018	2019	2020	2021	2022	2023
LHR2	*Heathrow*	*95.84*	*95.84*	*7*	*1*	*6*	*0*	*0*	*2*	*1*
HIL	*London Hillingdon*	*97.02*	*97.02*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*0*	*3*
HI1	*South Ruislip*	*96.29*	*96.29*	*6*	*1*	*3*	*1*	*0*	*4*	*1*
HI3	*Oxford Avenue*	*84.86*	*84.86*	*4*	*2*	*4*	*6*	*0*	*1*	*4*
HRL	*London Harlington*	*99.87*	*99.87*	*3*	*1*	*6*	*1*	*0*	*2*	*0*
HIL1	*Hillingdon Harmondsworth*	*85.82*	*85.82*	*6*	*1*	*0*	*0*	*0*	*0*	*0*
HIL4	*London Harmondsworth Osiris*	*81.12*	*81.12*	*1*	*0*	*1*	*0*	*0*	*0*	*0*
T55	*Heathrow Green Gates*	*93.47*	*93.47*	*3*	*1*	*4*	*0*	*0*	*2*	*0*
T54	*Heathrow Oaks Road*	*99.89*	*99.89*	*4*	*1*	*4*	*0*	*0*	*2*	*0*
HIL5	*Hillingdon Hayes*	*90.92*	*90.92*	*26*	*22*	*25*	*16*	*25*	*23*	*16*
LHRBR	*Heathrow Bath Road*	*95.81*	*95.81*	*-*	*-*	*-*	*0*	*0*	*4*	*1*

Notes:

Exceedance of the PM_{10} 24-hour mean objective (50 µg m^{-3} over the permitted 35 days per year) are shown in **bold**. Where the period of valid data is less than 85% of a full year, the 90.4th percentile is shown in brackets after the number of exceedances.

[a] data capture for the monitoring period, in cases where monitoring was only carried out for part of the year

[b] data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table K. Annual Mean $PM_{2.5}$ Automatic Monitoring Results ($\mu g.m^{-3}$) for the period 2017-2023

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Annual Mean Concentration (μgm^{-3})						
				2017	2018	2019	2020	2021	2022	2023
LHR2	*Heathrow*	*95.84*	*95.84*	*9*	*8*	*9*	*7*	*7*	*8*	*8*
HIL	*London Hillingdon*	*97.01*	*97.01*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*7*	*8*
HRL	*London Harlington*	*99.87*	*99.87*	*9*	*9*	*10*	*8*	*8*	*8*	*7*
HIL4	*London Harmondsworth Osiris*	*81.12*	*81.12*	*7*	*6*	*5*	*7*	*6*	*7*	*6*
T55	*Heathrow Green Gates*	*93.47*	*93.47*	*8*	*7*	*8*	*7*	*7*	*8*	*7*
T54	*Heathrow Oaks Road*	*99.89*	*99.89*	*9*	*10*	*10*	*7*	*7*	*8*	*7*
LHRBR	*Heathrow Bath Road*	*95.81*	*95.81*	*-*	*-*	*-*	*11*	*8*	*9*	*8*

Notes:
The annual mean concentrations are presented as $\mu g\ m^{-3}$.
Exceedance of the $PM_{2.5}$ annual mean AQO of 25 μgm^{-3} are shown in **bold**.
All means have been "annualised" in accordance with LLAQM Technical Guidance, if valid data capture is less than 75% and more than 25%.
[a] data capture for the monitoring period, in cases where monitoring was only carried out for part of the year
[b] data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

Table L. Low-Cost Sensors: Annual mean $PM_{2.5}$ ratified monitoring results (µg m^{-3}) for the period 2021-2023.

Site ID	Site Name	Valid data capture for monitoring period % [a]	Valid data capture, 2022, % [b]	Annual Mean Concentration (µg.m^{-3})		
				2021	2022	2023
TAVIS	in front of 69 Tavistock Rd, West Drayton UB7 7QT	*100*	*100*	*12.2*	*10.6*	*8.5*
HARRD	485A High Street, Harlington, UB3 5DL	*97.0*	*97.0*	-	*10.5*	*8.3*

Notes:
The annual mean concentrations are presented as µg m^{-3}.
Exceedance of the $PM_{2.5}$ annual mean AQO of 25 µgm^{-3} are shown in **bold**.
Exceedance of the $PM_{2.5}$ annual mean target of 10 µgm^{-3} are shown in *italics underlined*.
[a] data capture for the monitoring period, in cases where monitoring was only carried out for part of the year
[b] data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%)

2.5 HS2 Monitoring Data

Construction work on HS2 has continued in 2023 within Hillingdon. According to the master plan of works, the route starts at London Euston and tunnels for 13 miles to surface into Hillingdon at South Ruislip.

HS2 has established several diffusion tubes for NO_2 in the borough. Six of these are along the lorry routes serving the construction activities, one is a co-location tube with a continuous monitor and four are on roads not impacted by the HS2 construction activities to act as controls. Details for these sites are shown in Table M and bias adjusted (using 2023 national bias adjustment for 20% TEA in water for roadside locations, 0.75, Socotec, Didcot) monitoring results for 2023 are presented in Table N.

Table M. Details of HS2 Diffusion Tubes in Hillingdon in 2023.

Site ID	Site location	Location type	X coordinate	Y coordinate	Height (m)	Site purpose
HS2-000020BNT	Lamp post on Pembroke Road	Background	509678	187214	2.5	Background not affected by scheme
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	Roadside	505492	183926	2.5	Roadside not affected by scheme
HS2-000020BNV	High Street sign post at junction with Pembroke Road	Roadside	509439	187117	2.3	Roadside not affected by scheme
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	Roadside	507365	182687	2.5	Roadside not affected by scheme
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	Roadside	510858	184916	2.5	Colocation roadside
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	Roadside	506542	186037	2.2	Predicted significant effect
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	Roadside	506240	185660	2.3	Predicted significant effect
HS2-000020BPN	Lamp post on B467	Roadside	506767	186224	2.3	Predicted significant effect
HS2-000020BQH	Lamp post on High Road Ickenham	Roadside	508451	186879	2.4	Predicted significant effect
HS2-000020BQN	Lamp post on Park Road	Roadside	506176	185444	2.4	Predicted significant effect
HS2-000020BQP	Sign post on Long Lane	Roadside	507614	184663	2.1	Predicted significant effect

Table N. Diffusion tube results for NO_2 from the HS2 study in 2023, bias adjusted. Units: ug.m^{-3}.

Site ID	Site location	Location type	2018	2019	2020	2021	2022	2023 raw	2023 adjusted
HS2-000020BNT	Lamp post on Pembroke Road	Background	25.3	23.4	20.3	23.4	20.8	18.0	13.5
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	Roadside	**45.8**	**41.1**	33.7	38.7	37.4	37.0	27.8
HS2-000020BNV	High Street sign post at junction with Pembroke Road	Roadside	**43**	37.7	30.5	33.3	32.4	31.3	23.5
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	Roadside	**46.4**	**40.9**	31.9	37.8	35.7	34.8	26.1
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	Roadside	35.8	34.9	27.8	31.5	28.2	28.4	21.3
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	Roadside	**41.3**	37.6	31.4	32.4	30.7	28.7	21.5
HS2-000020BPN	Lamp post on B467	Roadside	31	31	25	29.7	29.1	28.9	21.7
HS2-000020BQH	Lamp post on High Road Ickenham	Roadside	**42**	38	30	35.1	36.5	37.0	27.8
HS2-000020BQN	Lamp post on Park Road	Roadside	**50**	**45**	33	37.8	34.9	32.4	24.3
HS2-000020BQP	Sign post on Long Lane	Roadside	**42**	**41**	31	33.3	34.0	30.3	22.8
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	Roadside	37.8	36.4	27.5	30.6	28.2	29.1	21.8

Note: Values exceeding the NO_2 Annual Mean Objective 40µgm^{-3} are in **bold** and values above 36 µgm^{-3} are underlined.

Analysis of results indicates that after bias adjustment using national 0.75 value, no locations register annual mean values equal or above 36 µg.m^{-3} with site HS2-000020BQH (a location predicted to be impacted by the HS2 scheme) as well as HS2-000020BNU registering the highest concentrations. It is noted that an extremely low national bias adjustment factor has been used. HS2 has reported to LBH that they will be processing the raw data using their local bias adjustment factor (to be released in the following months) and therefore results could be significantly higher than those reported in Table N above.

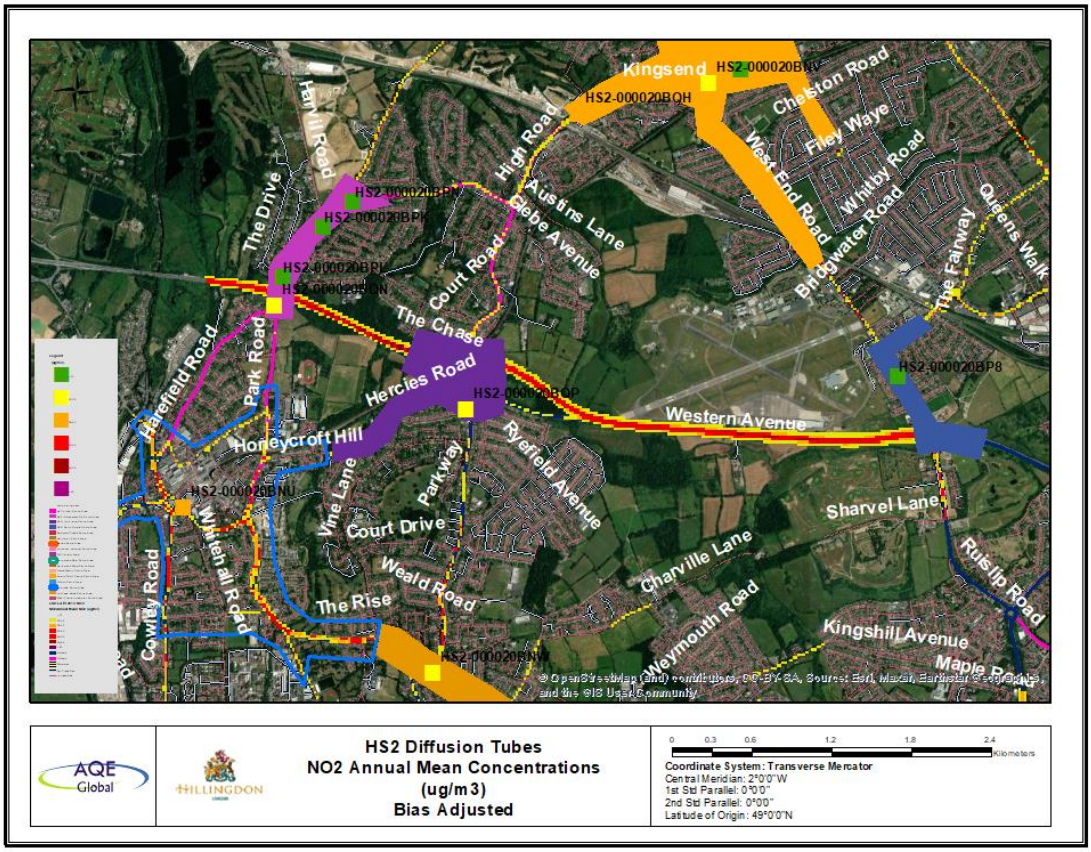


Figure 13. Annual mean NO_2 concentrations measured at HS2 diffusion tube locations, 2023, showing data for each site in the borough. Units: µg.m^{-3}.

3 Actions to Improve Air Quality

3.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

A summary of the AQMA declared by London Borough of Hillingdon can be found in Table O. The table presents a description of the designated AQMA that is currently designated within London Borough of Hillingdon. Section 1.3 above provided a map of the AQMA (Figure 1) and the air quality monitoring locations in relation to the AQMA are presented in Figures 2, 3 and 4 in section 2 of this report. The air quality objectives pertinent to the current AQMA designation is the NO_2 annual mean.

Table O. Declared Air Quality Management Area for LBH

AQMA Name	London Borough of Hillingdon AQMA
Date of Declaration	May 2003
Pollutants and Air Quality Objectives	NO_2 Annual Mean Value
One Line Description	An area encompassing the area to the south of the railway, covering the southern half of the borough – please see Figure 1
Is air quality in the AQMA influenced by roads controlled by Highways England?	YES
Level of Exceedance: Declaration	36μgm^{-3}
Level of Exceedance: Current Year	No exceedances
Number of Years Compliant with Air Quality Objective	1 year
Name and Date of AQAP Publication	London Borough of Hillingdon LAP 2019-2024, May 2019
Web Link to AQAP	Visit the AQAP for LBH AQMA at https://modgov.hillingdon.gov.uk/documents/s45069/Air%20Quality%20Action%20Plan%202019-2024.pdf

☒ London Borough of Hillingdon confirm the information on UK-Air regarding their AQMA(s) is up to date

☒ London Borough of Hillingdon confirm that all current AQAPs have been submitted to GLA.

3.2 ASR Highlights

3.2.1 Idling Vehicles

The Council continues to take an active participation in the issue of idling vehicles. In the calendar year 2023 there were 2,335 fines for idling vehicles were issued across the borough. This is an increase from 1,253 reported last year.

3.2.2 Fleet replacement

The Council has committed in its Climate Change Action Plan to replace all diesel powered vehicles weighing 3.5t or less before 2030. Pool cars and fully electric vans are now part of the fleet. Every fleet replacement tender must provide costs for diesel-powered and electric to support procurement processes. For 2023/24 it is planned to include 32 electric vehicles in a replacement of 96 vans. It is, however, noted that the power supply to Harlington Road Depot will require significant investment to facilitate uptake of a larger number of electric vehicles.

This and other measures demonstrate strong linkage across policy areas, for fleet replacement between air quality and climate, but for other measures also with public health.

3.2.3 Electric vehicle charging

The borough is recruiting an EVCP (Electric Vehicle Charging Point) Project Engineer on a 3-year contract to oversee funding obtained for the upgrade and development of the charging network in Hillingdon.

3.2.4 Schools and play areas

A number of activities continue to be carried out with schools. Projects have focused particularly on active travel to school and links to the TfL STARS programme with an increased number of schools gaining higher levels of accreditation under the scheme, with nticipated status in 2023/24 being 25 Gold (up from 21 in the previous year), 10 Silver (up from 5) and 9 Bronze (same as previous year) awards. Cycle and scooter training in the Borough is continuing.

Work is ongoing for school superzone projects, including work at Minet School in Hayes. Three schools were funded (Minet Junior School, Minet Infant School, and Botwell House Catholic Primary School) with a sum of £9000 in 2023 supporting several awareness raising initiatives. Such activities included active travel (walking and cycling initiatives), cycling training, balance back – all these are also linked to the TfL STARS accreditation programme.

In addition, as part of the Asthma and Lung UK program, six diffusion tubes were deployed around sensitive location around Minet schools for 4 weeks (awaiting final details of the analysis, report to be published soon) to give a snapshot of NO_2 pollution for 1 month before

and after the raising awareness initiatives took place. The intention was to provide an indication of any change behaviour activities by the schoolchildren affected. Preliminary results have indicated that Minet Infant School has registered an increase in walking and cycling activity level after the NO_2 ambient air concentrations readings of the monitoring sites were shared at the School's Assemblies. Lessons learned from this project will be considered for broader application in the borough.

Work on improving air quality awareness has continued with 10 schools received air quality workshops and assemblies provided by PWLC who created the School Walking Zone Maps.

An increased number of schools are requesting air quality monitoring and improvements, and the council is currently discussing internally the specification of future possible projects.

3.2.5 Emissions from buildings

Significant funding has been obtained via the Public Sector Decarbonisation Scheme to provide carbon-free (and hence air pollution free) energy systems, covering the Civic Centre, Highgrove Pool, Hillingdon and Uxbridge Lido and Winston Churchill Hall.

Further to this, a total of 2,006 domestic boilers were replaced. 2 domestic properties were converted from gas to air source heat pumps, and 5 sites had their commercial heating plant upgraded.

3.2.6 Provision of infrastructure to promote walking and cycling

A draft cycle strategy has been developed and will go to consultation in June 2024. A review of existing cycle infrastructure and missing links has been undertaken to form a programme of upgrade works going forward.

A wayfinding strategy for West Drayton canal has been created and S106 monies released to fund the implementation.

Two projects are currently being specified to increase the capacity for cycling lanes as well as walking safe and clean routes.

3.2.7 Local Improvements

A range of local improvements have been introduced including:

- Use of green infrastructure
- Upgrades on North Hyde Road and Long Lane/Sutton Court Road to promote active travel, with plans now in development for westward extension of these works
- A zebra crossing with parallel tiger crossing has been implemented on Pield Heath Road to facilitate works to provide a cycle/walking link up to Brunel University.
- Rain gardens and street trees have been provided on Mulberry Shopping Parade in West Drayton.

The Town Centre team use the Healthy Streets assessment tool as part of the scoping for future projects. The inclusion of screen planting from roadside sources and increasing green infrastructure such as street trees is included wherever it is viable.

3.3 Challenges

LBH is committed to continue improving air quality in its area of jurisdiction to safeguard its citizen's health. The WHO Air Quality Guidelines will play a central role in future years to continue to improve air quality and protect the most vulnerable groups of the population from poor air quality.

Defra's $PM_{2.5}$ target, together with the one set by the Mayor of London (both set the limit at 10 $ug.m^{-3}$, though London has a deadline of 2030 compared to the national deadline of 2040) will continue to drive actions at local level to reduce emissions of this pollutant. New challenges include how to further refine the planning system to significantly reduce emissions of this pollutant.

The Mayor of London has produced bespoke reports for each borough aimed at providing air quality information for Public Health professionals. The report includes information on air pollution levels including the health impacts and the mortality burden of $PM_{2.5}$. Information is provided at a ward level plus at schools and other vulnerable receptors. Whilst there are no schools, or other identified establishments such as care homes and hospitals, in areas exceeding nitrogen dioxide above 40$ug.m^{-3}$ (UK national annual mean objective) there are several sensitive locations (11 out of 15 care homes, 13 out of 17 hospitals and medical centres, and 102 out of 116 schools) identified as exceeding the $PM_{2.5}$ target set for compliance in 2030. This has been accounted for in the revision of the AQAP 2024-2028 currently under internal consultation.

New sources need to be taken into account, a good example being data centres, several of which are operating or have recently been proposed for the borough. It is noted that data centres in some parts of the country have teamed up with swimming pools to harness their waste heat and cut energy bills and emissions for the pool operators[6]. Whilst there is little current CHP use in the borough, these sources are kept under review. Similarly, biomass burning both in industrial and domestic premises is also kept under review.

One specific challenge identified recently has concerned the need for upgrading of power supplies to the Harlington Road Depot to enable a greater expansion of the council's electric vehicle fleet. This will require significant investment.

3.4 Opportunities

The updated version of the LBH AQAP scheduled to run from end of 2024 to end of end of 2029, has provided an opportunity to consider additional measures targeted at the areas of highest concentration in the borough. It will focus not only on measures aiming at reducing significantly the emissions of key pollutants (NO_2, PM_{10} and $PM_{2.5}$) into the atmosphere but

[6] https://sustainabilitymag.com/articles/swimming-pool-heated-by-data-centre-to-reduce-energy-bills

also on measures aimed at changing awareness and behaviour involving schoolchildren and health professionals.

Hillingdon's Climate Action Plan represents an opportunity to reduce emissions from the Council's activities, both in relation to the Council's own operations and actions aimed at businesses and communities. There are strong links between air pollutant and greenhouse gas (GHG) emissions as both share, to a significant extent, similar sources through the combustion of fossil fuels. This represents an opportunity to lock in benefits such as the move to cleaner vehicle technology and transport modes. To maximise these benefits the Council will need to consider the effectiveness of air pollution measures on GHG control and vice-versa.

Using tools such as the Mayor's Air Quality Positive guidance provides opportunity to build clean by design into the start of the process. As an example, the Uxbridge Masterplan opportunity not only for Uxbridge but for the other Focus Areas in the borough.

Attention needs to be given to tools and other systems being developed outside of the borough as they may provide opportunity for the introduction of cost-effective methods for air quality improvement. As an example, the TAPAS network[7] (Tackling Air Pollution At School) is in the process of publishing web-based guidance called ActNow, to assist schools take the first steps in understanding air quality around and within school premises, and introduce them to low cost ways of reducing the exposure of children and staff.

3.5 Air Quality Action Plan Progress

Table P provides a brief summary of London Borough of Hillingdon progress against the Air Quality Action Plan, showing progress made this year. No further School Streets have been delivered, the implementation of these are, currently, still paused.

[7] https://tapasnetwork.co.uk

Table P. Delivery of Air Quality Action Plan Measures

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
1a	Monitoring and other core statutory duties	Maintaining and where possible expanding monitoring network	Ongoing. Current automatic network is well maintained, with the new contract for the next 5 years having been awarded to Ricardo who will continue to provide robust quality of data and good data capture. The Council has supported the Northwood Air Quality group in the application for a community Breathe London sensor which is in the process of being deployed in front of St Helen's School in Northwood. The Council has improved the diffusion tube air quality monitoring by extending the South Ruislip colocation site from single to triplicate sampling. As part of the LAP update and consultation process, the Council is considering further extending its low-cost sensor network to include coverage of sensitive areas within the borough.
1b	Monitoring and other core statutory duties	Fulfilling other statutory duties including regulation of industrial sources	Ongoing, the regulation of industrial processes is undertaken by a contractor, any requirement for enforcement action is referred back to the Council. Regulatory duties are fully up to date.
2	Emissions from buildings and development	Ensuring emissions from construction are minimised	Ongoing via the planning system, 100% of all planning applications in 2022/2023 with construction/demolition activities included the construction dust condition.
3	Emissions from buildings and development	Ensuring enforcement of Non-Road Mobile Machinery (NRMM) air quality policies (addresses emissions from e.g. building sites regarding cranes, generators, etc.)	Ongoing, via the planning system, 100% of all planning applications in 2023/2024 included the NRMM condition; Audits undertaken by Cleaner Construction for London on behalf of the Council (MAQF project). 16 sites audited in 2023/24, of which 2 were self-compliant, 3 were complete and 1 had no NRMM present. Of the other 10, 7 are now compliant post-interaction, but 3 are non-compliant either for registration problems or a lack of evidence of compliance.
4	Emissions from buildings and development	Reducing emissions from CHP	Ongoing and enforced by planning condition where applicable. There is very little CHP in Hillingdon with no applications in the period 2023/2024 including CHP appliances as part of the proposed development.

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
5	Emissions from buildings and development	Enforce Air Quality Neutral (AQN) policy with more stringent application of mitigation required in the Hillingdon Focus Areas	Ongoing action via the planning system. AQN assessments requested on 100% of all planning applications in 2023/2024; Pollution damage cost calculations have been performed where appropriate to determine the level of mitigation required and s106 sought and secured where relevant, above and beyond the Mayor's AQN guidance to make sure total emissions are mitigated in development that affects sensitive areas. S106 ring fenced in the legal documentation as "towards initiatives to improve air quality in the Authority's area and the implementation of the Local Action Plan". Conditions are applied in order to secure the measures for reduction in emissions, pollution damage costs continue to be used as the basis for s106 contributions where mitigation offered is not sufficient. The Council will continue to seek a zero emissions approach towards developments when located in sensitive areas such as AQ Focus Areas, near vulnerable receptors such as schools, care homes, hospitals etc.
6	Emissions from buildings and development	Ensuring adequate, appropriate, and well-located green space and infrastructure is included in new developments.	Ongoing via the planning regime, specific green infrastructure barriers and green buffers are sought in areas where residential and amenity spaces are in proximity to busy roads, this is extended to footpaths and cycle pathways in association with the development in relevant cases. Specific planning condition is being used seeking a green infrastructure scheme designed to protect public exposure. Consideration is given to a 5-10% reduction in the associated pollution damage cost where bespoke pollution green infrastructure schemes are presented. This has been implemented throughout in the 2023/2024 reporting period.
7	Emissions from buildings and development	Raise awareness that Hillingdon is a declared Smoke Control Zone along with Council enforcement powers for non-compliance through an article in	Hillingdon has been a member of the GLA Wood Burning working group and will continue consider the use of comms material to alert businesses and also the training of enforcement officers to raise awareness on the subject.

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
		Hillingdon People magazine and distribution of point of sale posters/leaflets to fuel suppliers	Bonfires are banned on all council allotment sites. Complaints arising from smoke, bonfires and dust emissions continue to be monitored and acted on. Bonfire ban on allotments and other enforcement measures have included in LBH Public Space Protection Order. The T's and C's[8] have been updated by Green Spaces and they include at para. 4.2, a section on the bonfire ban. The 2023 T's and C's have been communicated to all allotment leaseholders in LBH to ensure that everyone is aware of the ban. The following Parks and Open Spaces prohibitions were enacted in July 2023 when the Public Spaces Protection Order[9] was introduced: "A person commits an offence if they light or are in control of or responsible for activity involving a fire, barbecue or fireworks without the express consent of the Council -A person commits an offence if they smoke any substance including cigarettes, cigars, electronic cigarettes (vapes), herbal cigarettes or similar within the boundary of a children's play area -A person commits an offence if they do not extinguish a fire and/or barbecue or firework (if appropriate and safe to do so), removing all waste and/or associated items for safe disposal." Fixed Penalty Notices up to £100 can be issued for breaches of the prohibition.
8	Emissions from buildings and development	Promoting and delivering energy efficiency and energy supply retrofitting projects in workplaces and homes through EFL retrofit programmes such as RE:NEW and RE:FIT and through borough carbon offset funds.	The implementation of the Climate Strategy will continue to ensure reductions in emissions from these sources are prioritised and achieved. Under the Public Sector Decarbonisation Scheme (PSDS) 3b, Hillingdon Council secured a central government grant funding to support the decarbonisation of four sites of which three are grade 2 listed (Civic Centre, Highgrove Pool, Hillingdon

[8] Allotments - Allotment Garden Terms and Conditions 2023 (1).pdf - ttps://www.hillingdon.gov.uk/media/7290/Allotment-garden-w… .pdf
[9] Public Spaces Protection Order Appendix 1 - PSPO Parks and Public Places final 2023 UPDATED.docx - https://www.hillingdon.gov.uk/media/11567/PSPO-Parks-and-P… · PDF

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
			and Uxbridge Lido and leisure centre and Winston Churchill Hall) with the highest energy use across LBH Corporate assets. The total grant awarded for these projects is circa £13.5M to be Co-funded by LBH £6M. The Civic Centre will be further supported with £2.6M S106 funding requested to date. We are also requested S106 funding of Circa £2,.4m to support decarbonation works on Highgrove Pool, Hillingdon & Uxbridge lido and Leisure and Winston Churchill Theatre. Works which are being carried out for these sites are: de-commissioning of fossil fuel boilers replacing with Air source Heat pumps, New lower voltage lighting systems, insulation to roofs and walls, window replacements and in-line PV panels on roofs. Works to all of these projects will be complete by the end of October 2024. A total of 2,006 domestic boilers were replaced, in addition, 2 domestic properties were converted from gas to Air Source Heat Pumps. 5 sites had their commercial heating plant upgraded.
9	Emissions from buildings and development	Master planning and redevelopment areas aligned with Air Quality Positive and Healthy Streets approaches	The Council has applied an air quality positive approach to all relevant developments within sensitive locations such as Air Quality Focus Areas, and close to vulnerable receptors such as schools, care homes, hospitals etc. This is above and beyond GLA's AQ positive guidance and seeks to safeguard sensitive locations and make sure total development emissions are mitigated to the maximum possible extent which is not secured by current guidance.
10	Public health and awareness raising	Public Health department taking shared responsibility for borough air quality issues and implementation of Air Quality Action Plans	The GLA Air Quality for Public Health document has been disseminated to the Public Health Director and to the Corporate Director. A briefing note is under discussion as part of the AQAP update with a proposal to establish a public health and air quality joint project to work with school children and health care professionals in the next 3 to 5 years.
11a	Public health and awareness raising	Development of promotional tool for use at business engagement opportunities to raise awareness of initiatives	Whereas there was no funding available to develop the tool originally envisaged, the council has been using every opportunity to raise awareness of possible ways to

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
		to increase active travel and improve air quality	increase active travel and improve air quality.
11b	Public health and awareness raising	If MAQF bid unsuccessful, seek funding for development of Hillingdon-specific promotional tool and business engagement action plan	Please see above. Whereas there was no funding available to develop the planned tool and business engagement plan, the Council has been delivering a series of events at community hubs utilising supermarkets and community halls to engage with residents and local businesses. Information on air quality such as no idling and Airtext has been included. The envisaged 'health focus' is hoped to be achieved by engaging with medical centres and PH teams via a joint health/air quality teams project (please see measure 10 above).
12	Public health and awareness raising	Supporting a direct alerts service such as AirText and promotion and dissemination of high pollution alert services	The Council continues to support and raise awareness of the Airtext services by providing relevant information including the dissemination of a video and air pollution and respiratory health booklet prepared by air quality and public health officers In North West London. The resources are being sent to all GPs in the North West Area.
13	Public health and awareness raising	Encourage schools to join the TfL STARS accredited travel planning programme	All schools continue to be alerted to No Idling webinars and other resources All schools have been alerted to the London Schools Pollution helpdesk. The Travel team have encouraged the use of the site in linking the activities to the individual school travel plans to help towards STARS accreditation. All schools now have Walking Maps at school entrances and new footpaths are put in place where possible to encourage active travel and interest in air quality matters continues to increase with more schools getting engaged. Anticipated TfL STaRS Accreditation status is 25 Gold, 10 Silver and 9 Bronze for 23/24. Another 17 schools are actively engaged with the STaRS team but not submitting for accreditation this year. 13 schools signed up to be a part of the Active Travel Movement project for 23/24 which consists of various different projects to highlight road safety and active travel within in schools.

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
			Bikeability took place in 46 schools throughout 23/24. Pedestrian Training took place in 62 primary schools throughout 23/24. Our Dragons Den events funded just over £8000 to primary and secondary schools to set up numerous projects and events within their school communities to enhance safety and sustainable travel choices. All schools are encouraged annually to take part in Walk to School Month (October) and Walk to School Week in May. 14 schools took part in the Big Walk and Wheel . 6 schools took part in practical scooter training with plans to offer to more schools in the next academic year. 10 schools received air quality workshops and assemblies provided by PWLC who created the School Walking Zone Maps Increased number of schools requesting Air Quality monitoring and improvements, collaboration between internal teams to discuss future projects.
14	Public health and awareness raising	Air quality in and around schools - the introduction of a prioritised programme for schools in Focus Areas and/or close to busy roads for exposure reduction measures, active travel promotion and raising awareness education programmes	Active travel at all schools is recorded under Action measure 13 Work is ongoing regarding funding received for a school superzone project at Minet School in Hayes. Work is ongoing for school superzone projects, including work at Minet School in Hayes. Three schools were funded (Minet Junior School, Minet Infant School, and Botwell House Catholic Primary School) with a sum of £9000 in 2023 supporting several awareness raising initiatives. Such activities included active travel (walking and cycling initiatives), cycling training, balance back – all these are also linked to the TfL STARS accreditation programme. As part of the Asthma and Lung UK program, six diffusion tubes were deployed around sensitive location around Minet schools for 4 weeks (awaiting final details of the analysis, report to be published soon) to give a snapshot of NO_2

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
			pollution for 1 month before and after the raising awareness initiatives took place. Lessons learned from this project will be considered for broader application in the borough.
15	Delivery servicing and freight	Council procurement policies to promote use of cleaner vehicle technologies via contract tendering process	The Climate Change Action Plan now has an objective to replace all diesel-powered vehicles 3.5t or less before 2030 and procurement has been adjusted to meet its objectives. All fleet vehicle replacement tenders seek two tenders one for diesel - fuelled and one for electric to foster awareness and competitive in the clean technologies market as well as allow the Council to make clear choices in terms of clean technologies. See also measure 17.
16	Delivery servicing and freight	Inclusion of opportunities in new developments and current town centre and transport improvement workstreams to reduce emissions from deliveries to local businesses and residents	See 11b Planning conditions stipulate the requirement for Delivery and Servicing plans to be a minimum of FORS silver award. This includes the requirement to report on fuel usage and emissions of CO_2, NOx and PM emissions plus a policy to actively reduce fuel consumption and minimise their environmental impact. The requirement for delivery and servicing plans to aim for achievement of gold award within an agreed timescale is being considered for developments in Air Quality Focus Areas.
17	Borough fleet	Reducing emissions from council fleets	During the course of the current action plan the Council has been active in replacing vehicles with electric or lower emission options. As of 2023/24 it is the intention to include 32 electric vehicles in a replacement plan of 96 vans. All other purchases will seek two tenders – one for diesel and one for electric powered vehicles. The power supply to Harlington Road depot is restricting the purchase of any further electric vehicles: a large investment is needed to upgrade.
18	Localised solutions	Green Infrastructure	In 2021 the Council has developed a Tree Strategy for the borough including actions to meet the Climate Action Plan objectives

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
			which includes to increase the tree canopy across the borough and in particular increase tree coverage in areas of poor air quality.
19	Localised solutions	Implementation of actions to improve air quality in the Hillingdon Air Quality Focus Areas to identify short, medium, long-term solutions for measures to implement to improve air quality	In 2023/2024, upgrades have been completed on North Hyde Road between Cranford Park Road and North Hyde Gardens with improved facilities for active travel and an increase in the number of street trees. Considerations have begun on the next phase of the works along North Hyde Road moving from Cranford Park Road westwards. Upgrades have also been made at the junction of Long Lane with Sutton Court Road to improve walking conditions. Street trees have been added at the junction.
20	Cleaner transport	Ensuring that Transport and Air Quality policies and projects are integrated via the implementation of the Healthy Streets in LIP projects	In 2023/2024, the upgrade of the local shopping parade at Sutton Court Road has been completed which reduces parking opportunities for cars at the shops and promotes more local trips by walking and cycling. A central reservation was provided as part of the scheme which has been lined with street trees.
21	Cleaner transport	Discouraging unnecessary idling by taxis and other vehicles	In 2023, 2,335 Fixed Penalty Notices were issued, with a further 1,244 from Jan-May 2024. Ongoing Joint operations are planned with TFL and Police for 2024 to tackle ASB (including idling) caused by PHV drivers.
22	Cleaner transport	Regular temporary car free days	No temporary car free days were held. The Council considers that resource is more efficiently used on promoting air quality in the borough in other ways, for example through participation in local events.
23	Cleaner transport	Using parking policy to reduce pollution emissions	No further action has been taken on this measure.
24a	Cleaner transport	Installation of Ultra-low Emissions Vehicle (ULEV) infrastructure (electric vehicle charging points, rapid electric charging points and hydrogen refuelling stations)	For 2023/2024, LBH now have a dedicated email for electric vehicle charging enquires (evcp@hillingdon.gov.uk). The Council was successful in a bid for funding to support the upgrade and development of the electric vehicle charging point network in Hillingdon. The Highways team are currently recruiting an EVCP Project Engineer on a

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
			36 month fixed term contract to oversee the implementation of the funds which have been awarded. Regarding the Council's own fleet, it is noted that the power supply to Harlington Road depot is restricting the purchase of any further electric vehicles: a large investment is needed to upgrade. [See also Measure 17]
25a	Cleaner transport	Provision of infrastructure to support walking and cycling	The draft cycle strategy was created and agreed with the Leader and Cabinet Member, with public consultation to be undertaken in June 2024 to launch the final strategy in summer 2024. A wayfinding strategy for West Drayton canal has been created and S106 monies released to fund the implementation. A review of the existing cycle infrastructure and missing links has been undertaken to form a programme of upgrade works going forward. A zebra crossing with parallel tiger crossing has been implemented on Pield Heath Road to facilitate works to provide a cycle/walking link up to Brunel University.
25b	Cleaner transport	Air Quality Focus Area studies, Healthy Neighbourhoods schemes, Town Centre schemes will all include the identification of opportunities for increased walking and cycling	There are two projects currently being specified to increase the capacity for cycling lanes as well as walking safe and clean routes. In 2023/2024, rain gardens and street trees have been provided on Mulberry Shopping Parade in West Drayton.
26	Hillingdon-specific action: Collaborative working	Continue to work in partnership with TfL to prioritise actions required to improve local air quality in Hillingdon	The Council will continue to work closely with TFL to make sure clean public transport fleets are deployed across sensitive routes of the borough. This is being achieved primarily through the planning system. In 2023/2024, the TfL LIP budget was used to help development and bring forward active travel schemes. Successful bids were made to TfL for LIP funding and also funds from a separate Cycle Network Development fund.

Measure	LLAQM Action Matrix Theme	Action	March 2023/March 2024 Progress
27	Hillingdon-specific action: Collaborative working	Continue to work in partnership with Heathrow Airport Limited (HAL), seeking clear strategy and framework to: Reduce airport related traffic; Mitigate adverse air quality impacts associated with on-airport operations	Ongoing involvement of the Council with the Heathrow AQ Working Group. TORs established and working plan in progress. There is ongoing discussions with HAL in regard to all aspects of surface transport.
28	Hillingdon-specific action: Collaborative working	Continue to work in partnership with Highways England to ensure effective mitigation of arising air quality impacts on the local communities	The Council will continue to work closely with Highways England to ensure effective and appropriate level of mitigation is secured to suitably address arising air quality impacts of motorway schemes on the local communities. In 2023/2024, funds have been received to allow the feasibility design of a route through Harlington. Awaiting details of next steps to secure implementation plan funding.
29	Hillingdon-specific action: Collaborative working	Continue to work in partnership with HS2 Ltd to ensure effective mitigation of any arising air quality impacts on the local communities relating to HS2 construction activities	The Council will continue to work closely with HS2 Ltd to ensure effective and appropriate level of mitigation is deployed relating to HS2 construction activities. There is a Council working group attending HS2 meetings regularly.
30	Hillingdon-specific action: Collaborative working	Continue to work in partnership with neighbouring authorities to ensure collaboration on air quality where it will benefit the local communities	The West London cluster group continues to meet quarterly, and the Council is an active member of the group. Whereas the group was successful in its bid to the Defra Air Quality fund 2024, this was withdrawn by the minister. The group is currently looking at possible ways go ahead with the proposed work via alternative funding and downscaling the proposed program. The group has also attended GLA's 2024 workshop on AQ Neutral and AQ Positive guidance and is preparing a joint note to summarise concerns raised by members of the ground during the seminars with the view to agree effective alternatives and clarification of the guidance to be tailored to each specific LA as opposed to one fits all current approach.

4 Planning Update and Other New Sources of Emissions

4.1 Planning update

4.1.1 Clean by design, Air Quality Neutral, Air Quality Positive and Air Quality Focus Areas

The Council continues with its robust appraisal of planning apps and the continued push for clean by design and zero emission developments specially within LBH Air Quality Focus Areas (AQFAs) catchment regions. The number of planning applications and the improvements requested are in Table Q and Appendix C.

London Plan's Policy SI1 Improving Air Quality continues to give support to the Council's approach to the assessment of planning applications. Whilst the London Plan and Council's Local Plan policies aim for development to be at least air quality neutral it is recognised (paragraph 9.1.9 of the London Plan) that in some cases this is not sufficient, and that further action is needed to mitigate emissions.

This is especially important in the AQFAs where the Council seeks 'better than Air Quality Neutral' and asks for an Air Quality positive approach aiming at total emission mitigation, regardless of the size of the application and the extant use of the site.

London Borough of Hillingdon in agreement with GLA have defined its own AQFAs as reported in its Air Quality Local Action Plan acknowledging that in such sensitive areas there is potential public exposure to pollution levels above the limits set to safeguard human health and where more action is required. The Council applies a pollution damage cost to emissions arising from the potential development and seeks sufficient mitigation from the developer to reduce such emissions being brought into the Focus Area. Where the mitigation measures offered are not sufficient the remaining pollution damage costs form the basis of an s106 negotiation to improve air quality in line with the Council's AQAP Action Plan measures 5.

4.1.2 Damage Cost Calculations

It is extremely important to note that (and in alignment with the London Plan and WHO updated guidelines) that whereas not explicitly stated in the Local Action Plan, the damage cost calculations are to include both NOx and $PM_{2.5}$ emissions which are the pollutants of most concern in terms of public health.

It is also important to mention that an Air Quality Action Plan is a dynamic document being updated as and when necessary. For avoidance of doubt, the borough is taking the required steps to amend the Plan to explicitly mention $PM_{2.5}$ emissions in measure 5. Notwithstanding this, the London Plan is quite clear in regard to the management of this air pollutant and suitable mitigation is required if the proposed development emits this pollutant; this is applicable to all sources.

4.1.3 London Atmospheric Emissions Inventory 2019 (published in 2021)

In 2021 GLA has released an updated version of the LAEI, including annual mean concentrations for NO_2 and $PM_{2.5}$. LBH has processed all the pollution data at postcode level (with centroid of the building being moved to the façade for relevant exposure assessment) to support the review and determination of planning applications for air quality. Please note the borough uses 36ug/m^3 and above to determine areas of poor air quality to account for a root mean square error (RMSE) of 10% in relation to the annual mean limit value for NO_2 (the same principle applies to all other relevant pollutants considered, depending on the sources under scrutiny).

4.2 New or significantly changed industrial or other sources

Of particular relevance were the various planning applications received for data centres of considerable size (both within the borough and within neighbouring boroughs for which LBH was consulted on); with four having been approved.

It is important to mention that LBH considers $PM_{2.5}$ emissions, in addition to NOx emissions, need to be totally mitigated, supporting the Mayor's vision of achieving WHO targets on this pollutant. The data centre applications to date have proposed both Hydrogenated Vegetable Oil (HVO) and diesel as fuels to run the associated emergency backup generators, both emitting significant emissions of $PM_{2.5}$ and NOx into the atmosphere on an annual basis. Given the sheer number of backup generators required in a couple of submitted planning applications, the total NOx and $PM_{2.5}$ emissions per area are significant. To address this issue the borough have created a system to secure a plan of emission reduction and management over the 20 to 30 years lifetime of the proposals. Contrary to vehicle emissions that are expected to reduce over time, backup generators once approved will emit on an annual basis (even if just for 10 or 20 minutes of testing monthly) significant contributions to both local ambient and background levels of these pollutants in the atmosphere, without declining over time (the contrary is usually true due to aging of the gen sets and or malfunctioning in the SRC / retrofitting devices applied). In many instances, given the short time of monthly testing and or backup activities, the SCR does not operate due to the required temperature to operate only being reached after 20 minutes.

Therefore, such new sources of pollution in the borough are posing a few challenges to the planning system and the system devised to secure a sustainable management of emissions over time will continue to be refined and improved by LBH. For new submissions applicants are advised to contact the Council in the first instance so that suitable information can be prepared and discussed at pre-app meetings.

Table Q. Planning requirements met by planning applications in London Borough of Hillingdon in 2023.

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	37
Number of planning applications required to monitor for construction dust	0
Number of CHPs/Biomass boilers refused on air quality grounds	0
Number of CHPs/Biomass boilers subject to GLA emissions limits and/or other restrictions to reduce emissions	0
Number of developments required to install Ultra-Low NO_x boilers	0
Number of developments where an AQ Neutral building and/or transport assessments undertaken	37
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	21
Number of planning applications with S106 agreements including other requirements to improve air quality	34
Number of planning applications with CIL payments that include a contribution to improve air quality	0
NRMM: Greater London (excluding Central Activity Zone and Canary Wharf) Number of conditions related to NRMM included. Number of developments registered and compliant. Please include confirmation that you have checked that the development has been registered at www.nrmm.london and that all NRMM used on-site is compliant with Stage IIIA of the Directive and/or exemptions to the policy.	37 conditions included. 31 registered[10] Total Audits 16 *Self-compliant 2 **Compliant 7 Non-compliant 3 No NRMM 1 Site Complete 3 Pending 0

Notes:

*Compliant – Site was non-compliant before our interaction however met required emission/administration standards by enacting all recommendations made by officers.
**Self-Compliant – Site has met/exceeded emission standards and registered all machinery correctly prior to the audit.
***Cold Engaged – An unregistered site, identified on the ground and subsequently engaged.
'Non-Registration' can include site and/or machinery.

LBH has a peer review process of planning applications in place to ensure that all relevant planning applications are reviewed, and NRMM conditions, are enforced.
NRMM Enforcement is secured via the funded Mayor's scheme run by Cleaner Construction for London.

[10] 16 up and running construction sites were checked for compliance in 2023.

5 Additional Activities to Improve Air Quality

5.1 London Borough of Hillingdon Fleet

There are 296 vehicles in the Council fleet. This includes 3 fully electric pool cars, 5 self-charging hybrid pool cars and 5 fully electric small size vans. As current practice in procurement, there will be two tenders for all purchases of vehicles, one for fully electric options and the other for diesel powered.

The vehicle replacement programme for 2023 consisted of two 3.5t tippers and four 3.5 t Luton Vans, all Euro VI, which replaced vehicles that had been on hire.

The Council has a commitment in the Hillingdon Climate Change Action Plan to replace all diesel-powered vehicles weighing 3.5t or less before 2030.

As of 2023/24 it is the intention to include 32 electric vehicles in a replacement plan of 96 vans. All other purchases will seek two tenders – one for diesel and one for electric powered vehicles. Further expansion of the Council's electric vehicle fleet is dependent in part on resolution of power supply issues at the Harlington Road Depot.

5.2 NRMM Enforcement Project

The Council has been a member of the consortium supporting the NRMM Enforcement project since its inception. At a cost of £4,000 per annum this membership has been value for money for the delivery of the site audits programme and the Council will continue to support the project in 2024-2025.

The Cleaner Construction for London NRMM Report for Hillingdon audited 16 sites, 6 of which were 'cold engaged' (unregistered but identified on the ground and subsequently engaged). Of the 16 sites, 2 were identified as self-compliant (not requiring intervention) compared to 7 that were identified as compliant (compliance achieved after intervention). Three sites were complete and 1 had no NRMM present. However, 3 were identified as non-compliant, either for registration problems or a lack of evidence of compliance. The small number of sites identified as self-compliant highlights the need for monitoring NRMM usage.

All planning applications with construction and demolition activities in 20023/24 included the NRMM condition.

London Borough of Hillingdon has defined a standard wording for the condition applied to all development where constructions and demolition activities take pace. This text is applied by default to all relevant planning applications where construction/demolition activities are permitted in the planning Decision notice and, wherever appropriate, in S106 agreements.

The standard text applied is as follows:

Conditions - Reducing Emissions from Demolition and Construction

A No development shall commence until a Plan has been submitted to, and approved in writing by, the LPA. This must demonstrate compliance (drawn up accordance with) the GLA Control of Dust and Emissions from Construction and Demolition SPG (or any successor document).

Reason: Compliance with London Plan Policy SI 1 and in accordance with Mayor of London "The Non-road mobile machinery (standard condition recommended by Mayor of London, London Local Air Quality Management Policy Guidance 2019)

B All Non-Road Mobile Machinery (NRMM) of net power of 37kW and up to and including 560kW used during the course of the demolition, site preparation and construction phases shall comply with the emission standards set out in chapter 7 of the GLA's supplementary planning guidance "Control of Dust and Emissions During Construction and Demolition" dated July 2014 (SPG), or subsequent guidance. Unless it complies with the standards set out in the SPG, no NRMM shall be on site, at any time, whether in use or not, without the prior written consent of the local planning authority. The developer shall keep an up-to-date list of all NRMM used during the demolition, site preparation and construction phases of the development on the online register at https://nrmm.london/."

Reason: Compliance with the London's Low Emission Zone for non-road mobile machinery as per requirements of the London Environment Strategy

5.3 Air Quality Alerts

Hillingdon has been a member of the airTEXT consortium (https://www.airtext.info/) since its inception and will continue to support the project. The London Borough of Hillingdon cascade the Mayor's air quality alert messaging to all schools and health practices.

Appendix A Details of Monitoring Site QA/QC

A.1 Automatic Monitoring Sites

Automatic monitors within Hillingdon are operated as part of the borough continuous monitoring network, the Heathrow Airport monitoring network and Defra's AURN. Data have been provided and ratified by Ricardo-AEA following the national procedure guidance and standards. There are no issues to be reported, with the network collecting robust data with excellent data capture standards.

All TEOM data have been converted to gravimetric equivalent using the VCM method and BAM data have been corrected by applying a factor of 0.833 following the TG16 method. All data are reported at US standard temperature and pressure (25°C, 1 atmosphere).

A.2 Diffusion Tube Quality Assurance / Quality Control

Hillingdon uses Gradko International for their diffusion tube analysis. These are prepared using the 50% Triethanolamine (TEA) in acetone method. Gradko International follows the procedures set out in the Practical Guidance. All results have been bias adjusted and annualised where required before being presented in Table B1.

Gradko is a UKAS accredited laboratory and participates in the AIR-PT Scheme (a continuation of the Workspace Analysis Scheme for Proficiency (WASP)) for NO_2 tube analysis and the annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre. The lab follows the procedures set out in the Harmonisation Practical Guidance.

For the rolling five round AIR PT window, it is expected that 95 % of laboratory results should be < ± 2. If this percentage is substantially lower than 95 % for a particular laboratory, within a five-round window, then one can conclude that the laboratory in question has significant sources of error within their analytical procedure. The following table lists Gradko recent AIR NO2 PT rounds and the percentage (%) of results submitted which were subsequently determined to be satisfactory based upon a z-score of ≤ ± 2 as defined above. AIR-PT results for Gradko to date are presented in Table A1 below.

Table A1 – Most recent AIR-PT results for Gradko.

AIR PT Round	AIR PT AR046	AIR PT AR049	AIR PT AR050	AIR PT AR052	AIR PT AR053	AIR PT AR055	AIR PT AR056	AIR PT AR058	AIR PT AR059
Round conducted in the period	September – October 2021	January – February 2022	May – June 2022	July – August 2022	September – October 2022	January – February 2023	May – June 2023	July – August 2023	September – October 2023
Gradko International	100 %	100 %	100 % [1]	100 %	100 %	100 %	100 %	100 %	100 %

[1] Participant subscribed to two sets of test results (2 x 4 test samples) in each AIR PT round

Diffusion Tube Local Bias Adjustment Factors

The London Borough of Hillingdon has been using its local bias adjustment factor to adjust their diffusion tube monitoring results for several ASR reporting iterations. This practice is favoured by the borough due to local specific conditions as well as because it has proven to be a more conservative approach which the council is keen to pursue in the treatment of their monitoring data. To derive the borough's local adjustment bias adjustment factor, co-location results at two continuous monitoring locations using reference method (chemiluminescence) were used: London Hillingdon (HIL) AURN continuous monitoring site and Hillingdon 1 - South Ruislip (HI1) continuous monitoring site. Diffusion tube HILL01 is co-located with the London Hillingdon (HIL) AURN continuous monitoring site and diffusion tube HILL03 is co-located with the Hillingdon 1 - South Ruislip (HI1) continuous monitoring site. Until July 2023, only HILL03 had triplicate diffusion tubes. From August 2023 onwards, both sites had triplicate sampling deployed on a monthly basis. Whereas currently there are triplicate diffusion tubes at both co-location sites, given the low data capture (41.7%) for the additional pair of diffusion tubes deployed at HILL01 location in 2023, the local bias adjustment factor was calculated using only the single diffusion tube at HILL01 and the triplicate diffusion tubes at HILL03.

HILL 01 co-located with HIL AURN continuous monitoring site as well as single diffusion tube at HILL03 results were compared with the reference method (chemiluminescence) in a co-location study with continuous monitor HI1 (Hillingdon 1 - South Ruislip, roadside site). of triplicate diffusion tubes co-located with the HI1 (Hillingdon 1 - South Ruislip) automatic monitoring station. Details of the sites are presented in Table A2 below. A local bias adjustment factor of 0.89 has been calculated from the Precision and Bias Adjustment spreadsheet (v04)[11]; the outputs from the spreadsheet are shown in Table A3 below.

AEA_DifTPAB_v04.xls spreadsheet designed by Defra to assist in calculating the Precision and Accuracy (Bias) of the co-location studies mentioned above has been used. A feature of this spreadsheet is the introduction of precision and 95% confidence intervals in Bias Adjustment calculations. Precision can be used as a quality check on the diffusion tube data and confidence intervals give an idea of the uncertainty to both the Bias Adjustment Factor and diffusion tube results. Moreover, as the sites have been co-located against a reference method, it was possible to calculate the accuracy of the co- location study by means of the Bias Adjustment Factor A and Diffusion Tube Bias B. All data are expressed in µgm-3 and includes 95% confidence intervals. Details of the sites and calculations undertaken are presented in Tables A2 and A3 below.

[11] https://laqm.defra.gov.uk/air-quality/air-quality-assessment/local-bias/

Table A2. Details of the co-location sites and annual means (µg m^{-3}) for each site for 2023.

Name and Annual Mean (µg m-3) Continuous Monitor	Type	Reference Method	Name and Annual Mean (µg m-3) Diffusion Tube(s)
HIL, Hillingdon (25.0)	Background	Chemiluminescence	HILL01 (27.5)
HI1, Hillingdon 1 - South Ruislip (24.0)	Roadside	Chemiluminescence	HILL03 (24.2)

Table A3. Local Bias Adjustment Factor Calculation for 2023 - HILL03 & HI1.

Checking Precision and Accuracy of Triplicate Tubes

AEA Energy & Environment
From the AEA group

Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 µgm^{-3}	Tube 2 µgm^{-3}	Tube 3 µgm^{-3}	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data
1	03/01/2023	30/01/2023	35.7	32.9	39.2	36	3.1	9	7.8	32.32	99.69	Good	Good
2	30/01/2023	02/03/2024	34.3	33.4	32.3	33	1.0	3	2.4	34.14	99.60	Good	Good
3	02/03/2024	04/04/2023	28.9	29.6	30.3	30	0.7	2	1.8	23.38	99.87	Good	Good
4	04/04/2023	03/05/2023	29.5	29.9	29.7	30	0.2	1	0.5	26.74	100.00	Good	Good
5	03/05/2023	31/05/2023	24.7	24.6	24.4	25	0.2	1	0.4	20.14	99.11	Good	Good
6	31/05/2023	05/07/2023	23.2	23.4	22.8	23	0.3	1	0.7	19.40	99.52	Good	Good
7	05/07/2023	31/07/2023	19.8	21.4	20.2	20	0.8	4	2.1	15.30	99.20	Good	Good
8	31/07/2023	06/09/2023	21.7	21.4	20.9	21	0.4	2	1.0	17.89	99.89	Good	Good
9	06/09/2023	03/10/2023	28.8	29.3	29.0	29	0.2	1	0.6	26.15	100.00	Good	Good
10	03/10/2023	01/11/2023	30.7	27.7	31.0	30	1.8	6	4.5	26.64	99.71	Good	Good
11	01/11/2023	06/12/2023	28.3	28.2	23.4	27	2.8	10	6.9	27.82	99.88	Good	Good
12	06/12/2023	03/01/2024	22.5	22.4	21.4	22	0.6	3	1.5	18.48	100.00	Good	Good
13													

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

Overall survey --> Good precision | Good Overall DC

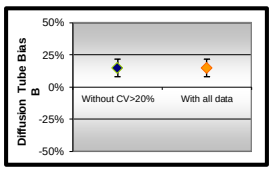
Site Name/ ID:

Precision: 12 out of 12 periods have a CV smaller than 20%

(Check average CV & DC from Accuracy calculations)

Accuracy (with 95% confidence interval) without periods with CV larger than 20%	
Bias calculated using 12 periods of data	
Bias factor A	0.89 (0.83 - 0.94)
Bias B	13% (6% - 20%)
Diffusion Tubes Mean:	27 µgm^{-3}
Mean CV (Precision):	4
Automatic Mean:	24 µgm^{-3}
Data Capture for periods used:	100%
Adjusted Tubes Mean:	24 (23 - 26) µgm^{-3}

Accuracy (with 95% confidence interval) WITH ALL DATA	
Bias calculated using 12 periods of data	
Bias factor A	0.89 (0.83 - 0.94)
Bias B	13% (6% - 20%)
Diffusion Tubes Mean:	27 µgm^{-3}
Mean CV (Precision):	4
Automatic Mean:	24 µgm^{-3}
Data Capture for periods used:	100%
Adjusted Tubes Mean:	24 (23 - 26) µgm^{-3}



Jaume Targa, for AEA
Version 04 - February 2011

Diffusion Tube National Bias Adjustment Factors

The diffusion tubes for the year 2023 were supplied by Gradko International, the tubes were prepared using the 50% Triethanolamine (TEA) in acetone preparation method. The national bias adjustment for Gradko is 0.83 (based on 15 studies, version 03/24) as derived from the national bias adjustment calculator (National Diffusion Tube Bias Adjustment Factor Spreadsheet, version 03/24 published in March 2024)[12]. All local Authority collocation studies were rated as "Good" (tubes are considered to have good precision where the

[12] https://laqm.defra.gov.uk/air-quality/air-quality-assessment/national-bias/

coefficient of variation of duplicate or triplicate diffusion tubes for eight or more periods during the year is less than 20%).

Discussion of choice of Factor to use

The diffusion tube data has been corrected using a bias adjustment factor, which is an estimate of the difference between diffusion tube concentration and continuous monitoring, the later assumed to be a more accurate method of monitoring. LLAQM.TG(19) provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tubes results with data taken from NOx/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location studies provides bias factors for the relevant laboratory and preparation method.

Regarding the application of a bias adjustment factor for diffusion tubes, the Technical Guidance LLAQM.TG(19) and the LAQM Helpdesk recommend the use of a local bias adjustment fact where available and relevant to diffusion tube sites.

The local bias adjustment factor of 0.89 derived from the co-location study at the HI1 automatic monitoring location has been used to adjust the data. The automatic monitor and co-located diffusion tubes recorded a high data capture (12 months of data capture) within 2023 and were deemed of having good precision.

The national bias adjustment factor for Gradko in 2023 (as per March 2024 issue, spreadsheet version number: 03/24), obtained from the overall national bias adjustment spreadsheet[13] (based on 15 studies) is 0.83. However, during 2023, LBH has achieved a good data capture and data precision for its co-located diffusion tubes which allowed a suitable calculation of a local adjustment factor of 0.89. Given that the local adjustment factor is preferred due to a better representation of local conditions, and given it is more conservative than the national bias adjustment, it has been applied to the collected diffusion tube monitoring data in 2023.

The derived local bias adjustment factor is more conservative than the national bias adjustment. A summary of historical bias adjustments applied in previous years is presented in Table A4 below.

[13] https://laqm.defra.gov.uk/air-quality/air-quality-assessment/national-bias/

Table A4. 2023 Bias Adjustment Factor and Historical Comparison.

Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local	-	0.89
2022	Local	-	0.92
2021	Local	-	0.88
2020	National	03/21	0.84
2019	National	03/20	0.89
2018	National	03/19	0.92
2017	National	03/18	1.03
2016	National	03/17	1.03
2015	National	03/16	0.95

A.3 Adjustments to the Ratified Monitoring Data

There were no incidences where data capture was less than 75% of a full calendar year (less than 9 months) and more than 25%, and therefore there was not need to “annualise” any monitoring results using the methodology outlined in LLAQM.TG(19) before being compared to annual mean objectives.

Appendix B Full Monthly Diffusion Tube Results for 2023

Table B1. NO_2 Diffusion Tube Results 2023 – London Borough of Hillingdon.

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Annual Mean NO_2													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual mean – raw data	Annual mean – bias adjusted [c]
HILL01	100	100	36.2	35.7	35.6	30.8	20.2	23.6	27.2	26.0	36.9	37.4	32.5	29.4	31.0	27.5
HILL01	100	100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24.4	40.1	32.0	32.0	33.1	32.3	28.8
HILL01	100	100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.3	39.0	33.9	33.9	32.3	32.9	29.3
HILL02	83.3	83.3	36.1	38.2	31.8	34.6	34.0	32.9	24.7	25.3	32.4	31.6	30.2	24.5	31.4	27.9
HILL03	100	100	35.74	34.29	28.94	29.49	24.67	23.23	19.84	21.71	28.81	30.72	28.26	22.50	27.4	24.3
HILL03	100	100	32.91	33.40	29.55	29.93	24.63	23.36	21.41	21.38	29.30	27.70	28.19	22.38	27.0	24.0
HILL03	100	100	39.20	32.33	30.35	29.65	24.36	22.85	20.15	20.92	29.05	30.96	23.39	21.40	27.1	24.1
HILL04	100	100	32.2	29.8	25.1	26.8	22.3	20.1	16.0	19.1	26.6	23.6	Missing	21.6	23.9	21.3
HILL05	100	100	38.6	36.4	32.7	27.8	19.4	19.2	25.7	25.0	36.0	35.7	32.6	30.3	30.0	26.7
HILL06	100	100	42.6	38.2	33.9	28.3	22.6	23.8	29.6	25.3	35.4	34.0	30.9	26.9	31.0	27.6
HILL07	100	100	41.0	36.8	36.3	32.7	24.9	24.8	27.4	26.0	36.3	39.0	34.2	29.4	32.4	28.8
HILL08	100	100	40.3	35.1	31.6	26.6	21.0	21.3	23.8	22.7	31.6	35.6	32.5	27.4	29.1	25.9
HILL09	100	100	40.6	34.1	33.4	25.9	21.4	22.9	27.6	24.5	Missing	37.3	32.2	29.7	30.0	26.7
HILL10	100	100	47.2	40.2	37.2	30.2	22.5	21.0	37.3	27.6	39.3	43.1	36.9	41.9	35.4	31.5
HILL11	83.3	83.3	28.4	27.4	23.8	22.3	16.6	17.8	18.4	18.0	27.2	27.2	23.5	20.7	22.6	20.1
HILL12	100	100	32.7	30.2	28.9	28.9	20.6	20.4	23.5	22.7	32.2	31.9	28.0	24.0	27.0	24.0
HILL13	91.7	91.7	29.7	28.8	26.8	24.4	20.3	19.0	16.8	19.3	26.4	28.2	27.7	19.9	23.9	21.3
HILL14	100	100	21.4	20.1	16.1	15.1	10.6	10.0	Missing	10.4	15.5	17.8	17.8	12.8	15.2	13.6
HILL15	100	100	29.6	27.6	21.8	24.1	18.8	16.4	14.9	18.3	24.5	27.9	24.8	17.1	22.2	19.7
HILL16	100	100	38.1	30.5	37.1	28.3	23.1	20.8	30.1	28.5	38.8	39.7	34.2	28.3	31.5	28.0
HILL17	100	100	35.3	29.3	27.8	22.6	16.2	17.8	19.5	20.0	29.1	33.1	29.5	24.0	25.4	22.6
HILL18	91.7	91.7	Missing	31.5	33.9	27.9	21.4	22.0	24.1	25.6	36.6	36.3	31.3	26.6	28.8	25.7
HILL19	100	100	32.9	34.1	34.9	27.9	23.6	23.8	22.6	24.3	34.1	33.7	34.7	27.3	29.5	26.2
HILL20	100	100	41.2	35.7	38.4	32.3	24.3	26.0	28.6	27.9	39.1	38.7	30.9	30.3	32.8	29.2
HILL21	100	100	30.7	31.1	30.2	24.5	19.7	18.9	Missing	21.5	32.7	34.1	28.9	30.7	27.5	24.5
HILL22	100	100	43.7	41.5	34.8	37.0	30.9	28.1	25.4	27.2	36.0	34.6	33.7	26.4	33.3	29.6
HILL23	91.7	91.7	28.6	28.6	Missing	Missing	22.6	22.7	15.3	18.9	0.6	23.8	Missing	10.9	19.1	17.0
HILL24	100	100	40.5	39.1	31.6	32.5	28.4	26.3	21.3	23.8	32.3	32.0	33.4	23.4	30.4	27.0

Site ID	Valid data capture for monitoring period % [a]	Valid data capture 2023 % [b]	Annual Mean NO_2													
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual mean – raw data	Annual mean – bias adjusted [c]
HILL25	100	100	**42.4**	38.7	**40.6**	30.1	23.3	25.5	31.1	27.5	39.3	39.5	34.5	35.3	34.0	30.2
HILL26	100	100	**40.6**	37.0	34.0	30.5	20.7	22.9	28.1	26.6	37.4	33.0	32.0	31.0	31.2	27.7
HILL27	100	100	36.0	32.1	30.7	29.0	**Missing**	29.1	21.3	25.8	35.7	36.0	31.4	25.1	30.2	26.9
HILL28	83.3	83.3	32.6	31.5	25.9	22.9	10.3	18.1	18.4	19.8	27.8	31.4	27.2	22.7	24.0	21.4
HILL29	100	100	34.7	30.9	30.1	26.7	18.0	19.3	21.7	21.4	31.8	32.9	30.4	26.9	27.1	24.1
HILL30	91.7	91.7	27.8	26.2	21.0	19.4	12.7	13.1	14.1	15.2	22.0	21.6	22.3	19.5	19.6	17.4
HILL31	100	100	33.0	29.0	28.8	25.4	16.9	17.7	19.4	19.5	28.7	30.6	25.8	21.5	24.7	22.0
HILL32	100	100	**46.5**	**47.2**	**41.9**	**42.0**	**42.7**	**41.7**	33.3	33.6	**45.4**	**44.5**	39.2	31.1	**40.8**	36.3
HILL33	100	100	**41.6**	38.8	32.4	29.2	25.4	25.0	25.3	24.0	34.5	34.2	32.1	26.5	30.7	27.4
HILL34	100	100	37.5	33.5	30.5	31.2	22.3	21.7	22.6	22.4	31.5	34.5	32.3	25.3	28.8	25.6
HILL35	100	100	36.8	34.8	30.4	30.2	20.5	18.4	17.8	19.3	26.4	27.9	34.3	24.9	26.8	23.9
HILL36	91.7	91.7	39.3	38.4	35.2	36.8	32.7	31.5	23.5	28.3	36.7	37.1	33.2	27.9	33.4	29.7
HILL37	91.7	91.7	37.6	35.7	33.6	33.5	26.0	25.8	24.9	25.1	33.3	31.1	31.7	27.1	30.5	27.1
HILL38	100	100	**49.0**	**45.8**	38.4	36.5	27.8	32.3	32.3	33.2	**43.0**	**43.7**	**41.2**	**40.1**	38.6	34.4
HILL39	100	100	**42.5**	39.0	**43.0**	37.3	31.0	30.1	33.1	30.8	**43.0**	**41.2**	35.6	33.5	36.7	32.6
HILL40	91.7	91.7	38.0	33.8	35.1	30.1	24.4	21.8	27.3	24.3	37.9	37.6	33.7	31.1	31.3	27.8
HILL41	100	100	**51.8**	**46.1**	**45.0**	**42.7**	33.8	38.9	39.8	**Missing**	**50.6**	**47.7**	**40.1**	**40.8**	**43.4**	38.6
HILL42	91.7	91.7	37.6	36.5	32.7	31.6	25.4	26.4	25.3	21.8	34.2	33.1	29.4	26.8	30.1	26.8
HILL43	100	100	36.5	35.8	30.1	26.0	19.9	19.7	22.6	21.2	29.9	30.7	29.7	23.1	27.1	24.1
HILL44	100	100	32.7	31.4	24.7	26.4	31.1	29.7	19.5	19.5	25.5	25.2	25.2	17.0	25.7	22.8

Notes

Concentrations are presented as µg m^{-3}.

Exceedances of the NO_2 annual mean AQO of 40 µg m-3 are shown in red and **bold.**

Exceedances of the NO_2 annual mean of 36 µg m-3 are underlined**.**

NO_2 annual means in excess of 60 µg m^{-3}, indicating a potential exceedance of the NO_2 hourly mean AQS objective are shown in **bold** and underlined.

All means have been "annualised" in accordance with LLAQM Technical Guidance if valid data capture for the calendar year is less than 75% and greater than 25%.

(a) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(b) data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%).

N/A = means period outside the monitoring survey

Missing = means diffusion tube deployed but missing = no data

(c) Local bias adjustment of 0.89 was applied to the data

Appendix C Details of major planning applications evaluated for Air Quality for March 2023/2024 by Focus Area

Table C1. Detailed list of planning applications evaluated for air quality in London Borough of Hillingdon.

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
A4 CORRIDOR FOCUS AREA				
Planning Ref	**74423/APP/2023/755**			**NO**
LAND AT STATUS PARK NOBEL DRIVE HARLINGTON Erection of a residential building together with associated landscaping and car parking, and including the reconfiguration of the Vista Court, Atlantico House and Peninsula House residential car parks on Nobel Drive.	The proposed 67-unit residential development is anticipated to generate 110 daily two-way vehicle trips. The proposed variation is not air quality neutral as required by the London Plan and not air quality positive, as required by the LBH Local Action Plan	The proposed development is not air quality neutral. In addition, according to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation	The total level of mitigation required to the proposed development for traffic emissions is £97,513. Once all deductions were applied, the remaining value of mitigation due is £75,085. Flat rate deductions applied are as follow: Travel Plan (18%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £22,428. Therefore, a section 106 agreement with the LAP of £75,085 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
A40 SWAKELEYS ROAD FOCUS AREA				
Planning Ref	**77265/APP/2023/880**			**NO**
R/O 25-31 WARREN ROAD ICKENHAM Details pursuant to the discharge of Conditions 3 (ground and finished floor levels), 4 (Construction Management Plan), 5 (materials and external surfaces), 6 (sustainability and energy statement), 7 (step free access), 11 (landscape	The proposed development is not air quality neutral and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce	The proposed development is located within the LBH Air Quality Management Area and A40 - Swakeleys Rd Focus Area, bringing additional traffic emissions which will add to current likely exceedances and contribute to poor local air quality. As per the London Plan, developments need to be neutral as minimum and LBH requires new	Therefore, £11,030 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
scheme), 17 (access and connection) & 18 (Air Quality Management Assessment) of planning permission ref. 77265/APP/2022/2845, dated 14-12-2022 (Erection of 4 no. two storey, detached houses, with habitable accommodation in roof space, garage and associated landscaping, parking and installation of vehicular crossover.)	emissions can be applied on-site or off-site. Given the proposed development is located on Warren Road in the London Borough of Hillingdon with PTAL of 1b and makes provision for three car parking spaces per dwelling, there is an excess of 4 parking spaces. The proposed development therefore does exceed the LBH maximum parking standard od 2 parking spaces per dwelling and is not air quality neutral in terms transport emissions	developments located in Focus Areas to be air quality positive, contributing to the reduction of emissions in these sensitive areas.		
A40 / LONG LANE FOCUS AREA				
No MAJOR applications DURING March 2023/March 2024 reporting year				
A40/SOUTH RUISLIP FOCUS AREA				
Planning Ref	**2216/APP/2024/562**			**YES**
C&L COUNTRY CLUB WEST END ROAD RUISLIP UB5 6RD Temporary change of use from D1 to Sui Generis to allow the sale or cars.	The proposed development is located within the LBH Air Quality Management Area, it is within the catchment area of A40/ South Ruislip Focus Area.	As per the London Plan, developments need to be neutral as minimum and LBH requires development proposals located in Focus Areas to be air quality positive (LBH Air Quality Local Action Plan 2019-2024), contributing to the reduction of emissions in these sensitive areas.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £1,687. As no deductions were applied, the remaining value of mitigation due for traffic emissions is still £1,687, should the application be approved. Flat rate deductions applied are as follow: Travel Plan (0%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £0. Therefore, a section 106 agreement with the LAP of £1,687 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
EASTCOTE VILLAGE FOCUS AREA				
Planning Ref	**73450/APP/2023/431**			**NO**
LAND AT CORNER OF FORE STREET & HIGH ROAD EASTCOTE HA5 2ET Erection of a building for the use as a day nursery/pre-school, providing childcare and education for children age 0-4 years	The proposed development is not air quality neutral and not air quality positive and no appropriate mitigation was provided by the applicant.	Whereas the proposed development is located outside the LBH Air Quality Management Area, it is within the catchment area of Eastcote Village Focus Area. As per the London Plan, developments need to be neutral as minimum and LBH requires development proposals located in Focus Areas to be air quality positive (LBH Air Quality Local Action Plan 2019-2024), contributing to the reduction of emissions in these sensitive areas.	The applicant does not present appropriate mitigation and is contrary to the London Plan and Local Authority Air Quality Action Plan.	
Planning Ref	**62381/APP/2023/1413**			**NO**
ADDISON INDUSTRIAL ESTATE 702B FIELD END ROAD RUISLIP Redevelopment of the existing commercial buildings and erection of one commercial storage block and one three storey block comprising 9 no. residential apartments (Use Class C3), together with parking and communal landscaping involving the demolition of existing buildings.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) require more stringent air quality neutral procedures and needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated. The proposed development is not air quality neutral and not air quality positive	The proposed development is located within the LBH Air Quality Management Area and within the East Cote Village Focus Area bringing additional traffic emissions which will add to current likely exceedances and contribute to poor local air quality. As per the London Plan, developments need to be neutral as minimum and LBH requires development proposals located in Focus Areas to be air quality positive (LBH Air Quality Local Action Plan 2019-2024), contributing to the reduction of emissions in these sensitive areas.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £129,307. Once all deductions were applied, the remaining value of mitigation due is £122,842. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £6,465. Therefore, a section 106 agreement with the LAP of £122,842 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
HARLIGNTON FOCUS AREA				
No MAJOR applications DURING March 2023/March 2024 reporting year				
HAYES FOCUS AREA				
Planning Ref	**1331/APP/2023/2289**			**NO**
Unit 1, Former Nestle Factory NESTLES AVENUE HAYES UB3 4RF Installation of an additional mezzanine	The proposed development is not air quality neutral and not air quality positive.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) require more stringent air quality neutral procedures and needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £217,778. Once all deductions were applied, the remaining value of mitigation due is £196,000. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £21,778. Therefore, a section 106 agreement with the LAP of £196,000 was paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels	
Planning Ref	**12853/APP/2023/1492**			**NO**
HAYES PARK CENTRAL AND SOUTH, HAYES PARK HAYES END ROAD HAYES Change of use of the existing buildings to provide new homes (Use Class C3), together with internal and external works to the buildings, landscaping, car and cycle parking, and other associated works. Detailed Description: Proposed change of use of the Grade II* Listed Hayes Park Central and Hayes Park South office	The proposed 124 residential flats (Use Class C3 residential development) is anticipated to generate 345 daily residential vehicle trips per day. The proposed de is development is not air quality neutral as required by the London Plan and not air quality positive, as required by the LBH Local Action Plan.	The proposed development is not air quality neutral. In addition, according to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	Once all deductions were applied, the remaining value of mitigation due is £363,583. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (15%), totalling a reduction of £155,821. Therefore, a section 106 agreement with the LAP of £363,583 was paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
buildings (Use Class E) to 124 residential flats (Use Class C3), with access to 124 car parking spaces and 207 cycle stands. Internal and external works to the buildings are proposed, alongside landscaping works to create a communal square, play space and amenity space.		Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is calculated using Defra's Damage Cost Approach.		
Planning Ref	**41186/APP/2022/3491**			**NO**
UNITS 1-4 PETER JAMES BUSINESS CENTRE PUMP LANE HAYES Construction of additional floor on top of Units 1-4 Peter James Business Centre.	The proposed development is located within the LBH Air Quality Management Area and Hays Focus Area, bringing additional traffic emissions which will add to current likely exceedances and contribute to poor local air quality. The proposed development is not air quality positive and therefore total emissions needs to be mitigated	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is calculated using Defra's Damage Cost Approach.	The total level of mitigation required to the proposed development for traffic emissions is £20,606. Once all deductions were applied, the remaining value of mitigation due is £18,546. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £2,061. Therefore, a section 106 agreement with the LAP of £18,546 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**57328/APP/2024/345**			**YES**
3 THE SQUARE FURZEGROUND WAY STOCKLEY PARK Change of use of existing office building (Use Class E) to	The proposed development is located within the LBH Air Quality Management Area, and 322m from Hayes Focus	As per the London Plan, developments need to be neutral as minimum and LBH requires development proposals located in Focus	The undiscounted level of mitigation required to the proposed development for traffic emissions is £467,793. Deductions were applied subject to applicant's confirmation of the level of mitigation assumed of £210,507. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (5%),	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
a post-operative care facility (Use Class C2), including external works to the building, landscaping, parking, and all associated works.	Area. The proposed development is air quality neutral but not air quality positive and therefore further appropriate mitigation is required.	Areas (that impact on Focus Areas) to be air quality positive (LBH Air Quality Local Action Plan 2019-2024), contributing to the reduction of emissions in these sensitive areas.	contribution to long term LBH strategic long-term strategies (e.g. multimodal shift, contribution to local services) (30%), totalling a reduction of £210,507. Therefore, a section 106 agreement with the LAP of £257,286 was paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels	
Planning Ref	**63099/APP/2023/1608**			**NO**
LAND AT AINSCOUGH CRANES, UNIT 84, HAYES INDUSTRIAL PARK SWALLOWFIELD WAY HAYES The demolition of existing structures and redevelopment for Use Classes E(g)(iii), B2 and B8 (applied flexibly) including hard and soft landscaping, servicing and associated works.	The proposed development is located within the LBH Air Quality Management Area and in the immediate vicinity of Hays Focus Area bringing additional traffic emissions which will add to current likely exceedances. The proposed development is not air quality neutral and not air quality positive.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £471,483. Once all deductions were applied, the remaining value of mitigation due is £828,701. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £92,078. Therefore, a section 106 agreement with the LAP of £828,701 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**72360/APP/2023/1501**			**NO**
HPH 3 MILLINGTON ROAD HAYES UB3 4AZ Erection of part one, part two storey vertical extension to provide 9 no. flats (2 no. one-bedroom, 5 no. two-bedroom and 2 no. three-bedroom) at 7th and 8th floors	The proposed development is located within the LBH Air Quality Management Area and within the sensitive Hays Focus Area bringing additional traffic emissions which will add to current likely exceedances. The proposed development is not air quality neutral and not air quality positive.	As per the London Plan, developments need to be neutral as minimum and LBH requires development proposals located in Focus Areas to be air quality positive (LBH Air Quality Local Action Plan 2019-2024), contributing to the reduction of emissions in these sensitive areas. According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with	The undiscounted level of mitigation required to the proposed development for traffic emissions is £10,697.97. As no deductions were applied, the remaining value of mitigation due is £10,697.97. Flat rate deductions that can be applied are as follow: Travel Plan (0-10%), Green Sustainable Measures (0-5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0-15%), which were not applicable in this application. Therefore, a section 106 agreement with the LAP of £10,697.97 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
		these activities need to be mitigated.		
Planning Ref	**77214/APP/2022/3382**			**NO**
THE SQUIRRELS TRADING ESTATE VIVEASH CLOSE HAYES UB3 4RY Redevelopment of the site to erect a part 11 storey, part 10 storey mixed use building comprising 116 residential dwellings (Class C3) and ground level commercial premises (Class E) along with public realm delivery of Green Super Highway with associated landscaping, access, and parking following demolition of existing buildings.	The proposed 116-unit residential development is anticipated to generate 124 daily residential vehicle trips and 34 flexible use E vehicle trips per day, plus 13 servicing vehicles daily. The proposed variation is not air quality neutral as required by the London Plan and not air quality positive, as required by the LBH Local Action Plan.	Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is calculated using Defra's Damage Cost Approach.	Once all deductions were applied, the remaining value of mitigation due is £57,050. Flat rate deductions applied are as follow: Travel Plan (15%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £14,263. Therefore, a section 106 agreement with the LAP of £57,050 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref				**YES**
53-55 STATION ROAD HAYES UB3 4BE Erection of a three-storey building comprising 17 flats and a two storey commercial building (Use Class E), following the demolition of existing commercial building.	The proposed 17 flats (Use Class C) and a two-storey commercial building (Use Class E), and parking and are anticipated to generate 34 daily residential vehicle trips per day. Please note that no vehicle movements were accounted for the commercial traffic associated with the use of the proposed commercial area. Therefore, the air quality contribution is underestimated.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £39,774. Once all deductions were applied, the remaining value of mitigation due is £35,796. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £3,977. Therefore, a section 106 agreement with the LAP of £35,796 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	The proposed development is air quality neutral but not air quality positive.			
HILLINGDON HOSPITAL FOCUS AREA				
Planning Ref	**75221/APP/2022/2968**			**NO**
BEACHES YARD HORTON ROAD YIEWSLEY Redevelopment of the site to provide a flexible warehouse facility (Use Class B2/B8) and ancillary office space, with associated HGV loading and servicing bay, car and cycle parking, access arrangements, landscaping and infrastructure.	The proposed development is located within the LBH Air Quality Management Area and 818m from the Hillingdon Hospital Focus Area, 881m from the West Drayton Focus Area and 1,810m from the Hays Focus Area bringing additional traffic emissions which will add to current likely exceedances. The proposed development is not air quality neutral for B8 use and not air quality positive.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £471,483. Once all deductions were applied, the remaining value of mitigation due is £400,760. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £70,722. Therefore, a section 106 agreement with the LAP of £400,760 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
M4 CORRIDOR FOCUS AREA				
No MAJOR applications DURING March 2023/March 2024 reporting year				
NORTHWOOD EAST FOCUS AREA				
Planning Ref	**8915/APP/2023/2709**			**NO**
NORTHWOOD HILLS LIBRARY POTTER STREET NORTHWOOD Demolition of existing library and construction of a new mixed-use building comprising	The proposed development is located outside the LBH Air Quality Management Area and within Northwood East catchment Focus Area	As per the London Plan, developments need to be neutral as minimum and as per the LBH LAP they will have to be positive in Focus Areas, contributing to the	Therefore, a section 106 agreement with the LAP of £28,017 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
a replacement library and 9 x residential dwellings with car parking, cycle parking, waste storage and associated infrastructure	bringing additional traffic emissions which will add to current likely exceedances. The proposed development is not air quality neutral and not air quality positive and therefore a damage cost value has been calculated in accordance with current guidance.	reduction of emissions in these sensitive areas.		
NORTHWOOD WEST FOCUS AREA				
Planning Ref	**2082/APP/2023/516**			**YES**
NORTHWOOD COLLEGE EDUCATIONAL FOUNDATION MAXWELL ROAD NORTHWOOD HA6 2YE Variation of Conditions 12 (All-Weather Pitch Hours of Use) and 13 (All-Weather Pitch Restriction of Use) of planning permission ref. 2082/APP/2007/1411 dated 11-09-2007 (Removal of existing building and construction of new early years centre and relocation of all-weather sports surface playing field (approved under planning application ref. 2082/APP/2003/1103) including details of design and layout) to change the permitted operating hours and use of the all-weather pitch.	The proposed development is located outside the LBH Air Quality Management Area and approximately 100m from the Northwood West Focus Area, with the potential of increasing pollutant traffic emissions in this sensitive area.	The proposed development is in the catchment area of a LBH Focus Area and therefore an appropriate level of mitigation is calculated using the Damage Cost Approach. The level of mitigation required associated with the operation phase of the proposed development for both pollutants of concern: NOx and PM2.5 amounts to a S106 contribution required of £14,378.	The total level of mitigation required to the proposed variation for traffic emissions is £14,378. Once all deductions were applied, the remaining value of mitigation due is £12,222. Flat rate deductions applied are as follow: Travel Plan (15%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £2,157. Therefore, a section 106 agreement with the LAP of £12,222 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**2382/APP/2023/2906**			**YES**

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
BROADWATER LAKE MOORHALL ROAD HAREFIELD Redevelopment of the site to create the Hillingdon Watersports Facility and Activity Centre including demolition of existing Broadwater Lake Sailing Club (BSC) clubhouse at the north of the lake and erection of a building to be occupied by HOAC and BSC including changing facilities, meeting rooms, storage, Workshop and seasonal worker accommodation (sui generis), activity shelters; installation of pontoons and concrete slipways; boat shed; equipment storage huts (north of lake and at entrance); boat parking and racking areas; camping area; outdoor activity areas; ecological enhancement throughout the site; new pedestrian routes through the peninsula; landscaping including new woodland, dense vegetation screens and boundary treatment; new access and access road; localised dredging and land reclamation; relocation of existing sailing area and creation of floating and fixed islands within the lake; coach drop off and turning area; vehicle parking; cycle parking; and associated works	The proposed development is located outside the London Borough of Hillingdon (LBH) Air Quality Management Area (AQMA) (located 890 m to the northwest of LBH AQMA) declared by for exceedances of the annual mean nitrogen dioxide (NO2) objective, and approximately 3,292 m from Northwood West Focus Area and 3,397m from Ruislip Town Centre Focus Area.	The proposed development is air quality neutral and poses no constrains to local air quality and sensitive receptors.	However, the following Air Quality conditions are required to reduce operational emissions and manage construction emissions as required by the Mayor of London. See text below. Condition Air Quality - Low Emission Strategy No development shall operate until a Low Emission Action Plan (LEAP) has been submitted to and approved in writing by the Local Planning Authority. The LEAP shall specify SMART ways to reduce air pollution emissions to the maximum possible extent to conform with the LBH Local Action Plan. The measures are to include but not be restricted to 1) a clear and effective plan to encourage staff to a) use public transport; b) cycle / walk to work where practicable; c) enter car share schemes; d) purchase and drive to work zero emission vehicles. The plan should have a clear set of actions defined, associated with clear time frames for each action, a person responsible for its delivery and measure the results in a tangible way. 2) Install EV fast charging points to promote the use of zero emission vehicles above and beyond current London Plan requirements. The measures in the agreed scheme shall be maintained throughout the life of the development. Reason - As the application site is within an Air Quality Management Area, and to reduce the impact on air quality in accordance with policy EM8 of the Local Plan: Part 1 (November 2012), policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2), the London Borough of Hillingdon Air Quality Action Plan 2019-2023, London Plan (2021) policy SI1 and T4, and paragraphs 174(e), 186 and 188 of the National Planning Policy Framework (2021). Conditions - Reducing Emissions from Demolition and Construction A No development shall commence until a Plan has been submitted to, and approved in writing by, the LPA. This must demonstrate compliance (drawn up accordance with) the GLA Control of Dust and Emissions from Construction and Demolition SPG (or any successor document).	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
			Reason: Compliance with London Plan Policy SI 1 and in accordance with Mayor of London "The Non-road mobile machinery (standard condition recommended by Mayor of London, London Local Air Quality Management Policy Guidance 2019) B All Non-Road Mobile Machinery (NRMM) of net power of 37kW and up to and including 560kW used during the course of the demolition, site preparation and construction phases shall comply with the emission standards set out in chapter 7 of the GLA's supplementary planning guidance "Control of Dust and Emissions During Construction and Demolition" dated July 2014 (SPG), or subsequent guidance. Unless it complies with the standards set out in the SPG, no NRMM shall be on site, at any time, whether in use or not, without the prior written consent of the local planning authority. The developer shall keep an up-to-date list of all NRMM used during the demolition, site preparation and construction phases of the development on the online register at https://nrmm.london/." Reason: Compliance with the London's Low Emission Zone for non-road mobile machinery as per requirements of the London Environment Strategy	
OSSIE GARVIN FOCUS AREA				
Planning Ref	**51753/APP/2023/2647**			**NO**
UNIT A 1-3 UXBRIDGE ROAD HAYES Installation of ducting to rear and roof of industrial building, new gates and wash bay.	The proposed development is located within the LBH Air Quality Management Area and Ossie Garvin Focus Area, bringing additional pollutant emissions which will add to current likely exceedances and contribute to poor local air quality.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is	Therefore, a section 106 agreement with the LAP of £67,900 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on the affected area by the proposal that reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
		calculated using Defra's Damage Cost Approach.		
Planning Ref	**1911/APP/2022/1853**			**NO**
HAYES BRIDGE RETAIL PARK UXBRIDGE ROAD HAYES Demolition of existing buildings and erection of a single commercial building for employment purposes Class E(g)iii, B2 and B8, along with ancillary offices, gatehouse, associated infrastructure including; service yard, car parking, drainage and hard and soft landscaping. (Re-Consultation for submission of amended plans and further information)	The proposed development is not air quality neutral and not air quality positive.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated	The undiscounted level of mitigation required to the proposed development for traffic emissions is £772,630. Once all deductions were applied, the remaining value of mitigation due for traffic emissions is £695,367. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £77,263. The level of mitigation required to the proposed development for building emissions is £35,862. Therefore, if no further mitigation is offered by the applicant, a section 106 agreement with the LAP of £731,228 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**51753/APP/2023/2647**			**NO**
UNIT A 1-3 UXBRIDGE ROAD HAYES Installation of ducting to rear and roof of industrial building, new gates and wash bay.	The proposed development is located within the LBH Air Quality Management Area and Ossie Garvin Focus Area, bringing additional pollutant emissions which will add to current likely exceedances and contribute to poor local air quality.	As per the London Plan, developments need to be neutral as minimum and LBH requires developments located in Focus Areas to contribute to the reduction of emissions in these sensitive areas.	Therefore, a section 106 agreement with the LAP of £67,900 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on the affected area by the proposal that reduce human exposure to pollution levels.	
Planning Ref	**1911/APP/2022/1853**			**NO**
HAYES BRIDGE RETAIL PARK UXBRIDGE ROAD HAYES Demolition of existing buildings and erection of a single commercial building for employment purposes Class E(g)iii, B2 and B8, along with ancillary offices, gatehouse,	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation.	Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is	The undiscounted level of mitigation required to the proposed development for traffic emissions is £772,630. Once all deductions were applied, the remaining value of mitigation due for traffic emissions is £695,367. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £77,263. The level of mitigation required to the proposed development for building emissions is £35,862.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
associated infrastructure including; service yard, car parking, drainage and hard and soft landscaping. (Re-Consultation for submission of amended plans and further information)	Therefore, the total emissions associated with these activities need to be mitigated. The proposed development is not air quality neutral and not air quality positive.	calculated using Defra's Damage Cost Approach.	Therefore, a section 106 agreement with the LAP of £731,228 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**2621/APP/2022/3293**			**YES**
Elystan Business Centre, Pets At Home SPRINGFIELD ROAD HAYES UB4 0UP Proposal Variation of Condition 7 (Restriction on Sale of Goods) of planning permission ref. 2621/APP/2010/2407, dated 20-12-2010: Application for the variation of condition 7 (to allow for the sale of pets and pet products (including food for non-human consumption)) of planning permission ref: 2621/APP/2010/1283 dated 14/09/2010: Sub-division of existing building to create 4 units, external alterations and associated works (including reconfiguration of car park.) to allow food and convenience goods (for consumption off the premises) to be sold from Unit C1 (formerly known as Unit C3).	The planning application seeks the variation of condition 7 attached to planning permission 2621/APP/2010/0207 which currently does not permit the sale of food and convenience goods from unit C1. There will be no increase in the overall floor area of the unit. The Transport Statement has provided peak time data only for Friday and Saturday, and therefore the damage cost calculations undertaken are likely to be underestimated. The proposed variation is air quality neutral, but not air quality positive, as required by the LBH Local Action Plan.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation.	The total level of mitigation required to the proposed development for traffic emissions is £204,255. Once all deductions were applied, the remaining value of mitigation due is £163,404. Flat rate deductions applied are as follow: Travel Plan (15%), Green Sustainable Measures (5%), contribution to long term LBH strategic long term strategies (e.g. multimodal shift) (0%), totalling a reduction of £40,851. Therefore, a section 106 agreement with the LAP of £163,404 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**26544/APP/2023/2303**			**YES**
CHILDRENS HOME CHARVILLE LANE HAYES	The proposed development is located	The proposed development is air quality neutral and aligned		

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
Redevelopment of an existing Children's Home to provide new build residential institution development (Use Class C2). Erection of 3 no. 2 storey buildings, providing accommodation for 12 young people, with associated staff facilities, plant, access, parking, amenity gardens, soft landscaping and a Multi Uses Games Area	within the LBH Air Quality Management Area but outside any LBH Focus Area. As per the London Plan, developments need to be air quality neutral as minimum. The proposed development is air quality neutral and aligned therefore with the London Plan policies to improve air quality.	therefore with the London Plan policies to improve air quality.		
Planning Ref	**2385/APP/2022/2952**			**NO**
HYATT PLACE 27 UXBRIDGE ROAD HAYES UB4 0JN Partial demolition of the existing building, followed by refurbishment, side extensions and upwards extensions, alongside erection of perimeter blocks around a podium level, to increase hotel capacity (Class C1) whilst introducing industrial uses (Class E(g)(ii) and E(g)(iii)) at ground and first floor level.	The proposed development is located within the LBH Air Quality Management Area and Ossie Garvin Focus Area Focus Area, bringing additional traffic emissions which will add to current likely exceedances and contribute to poor local air quality	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation.	The total level of mitigation required to the proposed development for traffic emissions is £488,542. Once all deductions were applied, the remaining value of mitigation due is £268,698. Flat rate deductions applied are as follow: Travel Plan (15%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (25%), totalling a reduction of £219,844. Therefore, a section 106 agreement with the LAP of £268,698 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
RUISLIP TOWN CENTRE FOCUS AREA				
No MAJOR applications DURING March 2023/March 2024 reporting year				

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
SIPSON FOCUS AREA				
No MAJOR applications DURING March 2023/March 2024 reporting year				
UXBRIDGE FOCUS AREA				
No MAJOR applications DURING March 2023/March 2024 reporting year				
UXBRIDGE ROAD FOCUS AREA				
Planning Ref	**1078/APP/2023/2418**			**NO**
THE ADAM & EVE P.H. 830 UXBRIDGE ROAD HAYES Erection of a terrace of 5 x 3-bedoom houses on land to rear of existing Public House including demolition of existing function room	The proposed 5 x 3-bedoom houses (Use Class C) are anticipated to generate 20 daily residential vehicle trips per day. The proposed development is not air quality neutral and not air quality positive.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £67,890. Once all deductions were applied, the remaining value of mitigation due is £67,890. Flat rate deductions applied are as follow: Travel Plan (0%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £0. Therefore, a section 106 agreement with the LAP of £67,890 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**16034/APP/2023/2796**			**YES**
ROSEDALE COLLEGE WOOD END GREEN ROAD HAYES UB3 2SE Erection of temporary teaching units for a period of 18-24 months, to provide teaching accommodation whilst the wider re-development works are undertaken on the wider site. Including temporary infrastructure works.	The proposed development comprises temporary accommodation being provided within the north-western parcel of the site, with access shared with Parkside Studio College. This will provide a temporary arrangement whilst the remainder of the site is redeveloped. The proposals do not result in an increase in pupil or	The proposed development is air quality neutral and it is recommended that the existing Travel Plan is complemented with the adoption of appropriate measures from the Mayor's Toolkit to make the proposal air quality positive (appended).	N/A	

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	staffing numbers which deems the development air quality neutral.			
Planning Ref	**16034/APP/2023/2812**			**YES**
ROSEDALE COLLEGE WOOD END GREEN ROAD HAYES UB3 2SE Redevelopment of the Rosedale College site to provide improved teaching and sports facilities. Proposed works to include demolition and renovation of existing buildings, the erection of 2 new buildings, a plant room, social and dining canopies, multi-use games areas, sports fields and football pitches, new parking area and provision of associated infrastructure. Pupil number to remain unchanged.	The proposed development is air quality neutral and the proposed Travel Plan and accompanying Action Plan are considered robust and effective and therefore making the proposal air quality positive.	none	N/A	
Planning Ref	**72470/APP/2023/747**			**NO**
579-583 UXBRIDGE ROAD HAYES An application submitted under Section 73 of the Town and Country Planning Act 1990 to vary Condition 2 (Approved Drawings) of planning permission reference 72470/APP/2016/4648, dated 02-10-19, for the demolition of 3 dwellinghouses and redevelopment of the site to provide residential accommodation within 2 new buildings with associated access, parking, landscaping and amenity space. The amendment sought is to	The proposed 23-unit residential development is anticipated to generate 32 daily two-way vehicle trips. The proposed variation is not air quality neutral as required by the London Plan and not air quality positive, as required by the LBH Local Action Plan.	Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is calculated using Defra's Damage Cost Approach.	The total level of mitigation required to the proposed development for traffic emissions is £1,480.92. Therefore, a section 106 agreement with the LAP of £1,480.92 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
increase the number of dwellings by two.				
WEST DRAYTON/YIEWSLEY FOCUS AREA				
Planning Ref	**38058/APP/2023/2220**			**NO**
LAND AT RAINBOW INDUSTRIAL ESTATE TROUT ROAD YIEWSLEY UB7 7XT Retention of entrance gates and change of use for Use Class Sui Generis including container and skip storage; open and closed storage of building, scaffolding and lighting materials; storage of aggregate materials; vehicle storage and sales; and associated installation of portacabins, container stores, transportable silos and other ancillary structures for a period of 3 years (Retrospective application).	The proposed development is located within the LBH Air Quality Management Area and in the vicinity of West Drayton/Yiewsley Focus Area bringing additional traffic emissions which will add to current poor local air quality.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) require more stringent air quality neutral/mitigation procedures and needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £76,215. Once all deductions were applied, the remaining value of mitigation due is £76,215. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £0. Therefore, a section 106 agreement with the LAP of £76,215 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**67666/APP/2023/3721**			**YES**
FORMER SIPSON GARDEN CENTRE SIPSON ROAD SIPSON UB7 OHW The development of a Centre of Excellence for servicing and repair of Airside Support Vehicles (Use Class B2), consisting of a service building with 7no. service bays and 1no. storage bay, an ancillary two-storey office building, with associated hardstanding, parking, a wash bay, plant, solar PVs, landscaping and drainage.	The proposed development is air quality neutral but not air quality positive. According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) require more stringent air quality neutral/mitigation procedures and needs to be Air Quality positive and further action is required to	Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £35,658. Once all deductions were applied, the remaining value of mitigation due is £32,092. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £3,566. Therefore, a section 106 agreement with the LAP of £32,092 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	reduce total emissions produced by its operation.			
Planning Ref	**68663/APP/2023/1933**			**YES**
Former B&M Unit 217 HIGH STREET YIEWSLEY UB7 7GN Refurbishment of existing retail unit for use within Class E(a) including the sale of non-food and food and drink products, installation of new shopfront, reconfiguration of car park, landscaping, external plant and associated works	The proposed development (Use Class E(a) including the sale of non-food and food and drink products) is anticipated to generate a net of 734 daily vehicle trips per day.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £579,162. Once all deductions were applied, the remaining value of mitigation due is £492,287. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £86,874. Therefore, a section 106 agreement with the LAP of £492,287 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	
Planning Ref	**76795/APP/2023/2503**			**YES**
LAND AT YIEWSLEY LIBRARY & FORMER YIEWSLEY POOL FALLING LANE OTTERFIELD ROAD YIEWSLEY UB7 8AB Demolition of existing Yiewsley Library Building and the erection of a new residential building on the Yiewsley Library site (Falling Lane) and the erection of a new mixed use building on the former Yiewsley Swimming Pool site (Otterfield Road), with a replacement library at ground floor level and residential uses above and new pedestrian access off of the High Street. Detailed Description: Demolition of existing Yiewsley Library Building and the erection of a 5-storey residential building, comprising 50 dwellings, with 28 undercroft parking spaces	The proposed development is air quality neutral but not air quality positive.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £132,078. Once all deductions were applied, the remaining value of mitigation due is £39,623. Flat rate deductions applied are as follow: Travel Plan (15%), Green Sustainable Measures (5%), contribution to long term LBH strategic long-term strategies and public service projects (e.g. library) (50%), totalling a reduction of £92,454. Therefore, a section 106 agreement with the LAP of £39,623 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
(13 for residential and 15 for use by Rabbsfarm Primary School). The Otterfield Road site proposes the erection of a 5-storey building, comprising 45 dwellings, with 25 car parking spaces (23 for residential and 2 for library users).				
Planning Ref	**2370/APP/2023/1727**			**YES**
MORRISON SUPERMARKET 41-67 HIGH STREET YIEWSLEY Phased demolition of the existing buildings and the redevelopment of the site for a replacement foodstore (Class E), 158 residential units (Class C3), car parking, servicing and access arrangements and associated works	The proposed 158 residential flats (Use Class C3 residential development) is anticipated to generate 189 daily residential vehicle trips per day . The Morrisons proposal includes a 1,672.1 sqm GIA foodstore with an associated trip generation of 383,250 trips per year. The proposed de is development is air quality neutral as required by the London Plan but is not air quality positive, as required by the LBH Local Action Plan.	The proposed development is not air quality positive. According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is calculated using Defra's Damage Cost Approach.	Once all deductions were applied, the remaining value of mitigation due is £143,867. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies (e.g. multimodal shift) (0%), totalling a reduction of £15,985. Therefore, a section 106 agreement with the LAP of £143,867 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
HEATHROW FOCUS AREA				
Planning Ref	**8425/APP/2023/3454**			**YES**
PARRS YARD BATH ROAD LONGFORD Change of use from HGV parking and storage yard to express park and ride service for Heathrow Airport Terminal 5.	The Proposal makes use of the existing hardstanding and on-site infrastructure, including the access, and so there is minimal earthworks or construction involved. The current site allows for the parking of 200 cars on site in a managed block formation and there is indicated to be 50 car movements to and from the site each day, giving an AADT of 100 LDV. The application proposes to run 24 hours a day and there are 34 bus departures and 34 bus arrivals, giving a total of 68 Heavy Duty Vehicle (HDV) vehicle movements.	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated. Mitigation measures to reduce emissions can be applied on-site or off-site. Where this is not practical or desirable, pollutant off-setting will be applied. The level of mitigation required associated with the operation phase of the proposed development is calculated using Defra's Damage Cost Approach.	Therefore, should this application be approved, a section 106 agreement with the LAP of £157,887 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on relevant affected area(s) by the proposal that reduce human exposure to pollution levels.	
Planning Ref	**57744/APP/2023/2517**			**YES**
N.N.R. AIRCARGO SERVICE(UK)LTD.N.N.R. HOUSE STANWELL ROAD FELTHAM MIDDLESEX TW14 8NG Extension and refurbishment of existing office and warehouse building for B2/B8 and Eg (iii) purposes with ancillary office, including improvements to parking and landscaping	The proposed 17 flats (Use Class C) and a two-storey commercial building (Use Class E), and parking and are anticipated to generate 34 daily residential vehicle trips per day. Please not that no vehicle movements were accounted for the commercial traffic associated with the use of the proposed commercial area. Therefore, the air	According to LBH Local Action Plan, proposed development within Focus Areas (or with impacts on FAs) needs to be Air Quality positive and further action is required to reduce total emissions produced by its operation. Therefore, the total emissions associated with these activities need to be mitigated.	The undiscounted level of mitigation required to the proposed development for traffic emissions is £39,774. Once all deductions were applied, the remaining value of mitigation due is £35,796. Flat rate deductions applied are as follow: Travel Plan (10%), Green Sustainable Measures (0%), contribution to long term LBH strategic long-term strategies and public service projects (0%), totalling a reduction of £3,977. Therefore, a section 106 agreement with the LAP of £35,796 has been paid for Hillingdon to deliver its air quality local action plan and or implement specific measures on/along the road network affected by the proposal that reduce vehicle emissions and or reduce human exposure to pollution levels.	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	quality contribution is underestimated. The proposed development is air quality neutral but not air quality positive.			
OUTSIDE FOCUS AREAS				
Planning Ref	**17709/APP/2023/2673**			**YES**
LORD ADONIS HOUSE HAREFIELD ACADEMY NORTHWOOD WAY HAREFIELD Demolition of former residential school and erection of academic building (Use Class F1) and ancillary structures including heat pump and substation enclosures, construction of a multi-use games area, revised vehicular access, landscaping, car and cycle parking and associated works.	The proposed development is located outside the LBH Air Quality Management Area (AQMA) which is approximately 3.8 km distant from the site, and outside any LBH Focus Area (FA) with the nearest one being 1891m (Northwood West Focus Area) away, with current good air quality being reported in the catchment area of the site. The proposals are for the construction of a new permanent SEND school at the Harefield site for 90 pupils and 45 staff due to demand for pupil places at existing Meadow High School increasing and further development to accommodate this demand at the solely at the Royal Lane site cannot be facilitated.	As per the London Plan and LBH Local Action Plan 2019-2024, developments need to be air quality neutral as minimum. The proposed development is considered Air Quality Neutral and is in conformity with current national, regional and local policy and legislation		

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OUT OF BOROUGH CONSULTATIONS				
				NO
No MAJOR applications DURING March 2023/March 2024 reporting year				