

The London Borough of Hillingdon



Air Quality Annual Status Report, 2017

London Borough of Hillingdon Air Quality Annual Status Report for 2017

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This report provides a detailed overview of air quality in the London Borough of Hillingdon during 2017. It has been produced to meet the requirements of the London Local Air Quality Management statutory process¹.

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¹ LLAQM Policy and Technical Guidance 2016 (LLAQM.TG(16)). <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs>

CONTENTS

1	INTRODUCTION	6
2	HILLINGDON FOCUS AREAS	9
3	AIR QUALITY MONITORING IN HILLINGDON.....	11
4	COMPARISON OF MONITORING RESULTS WITH AIR QUALITY OBJECTIVES	18
5	AQAP HIGHLIGHTS	28
6	PLANNING UPDATE AND OTHER NEW SOURCES OF EMISSIONS	50
7	FUTURE ACTIONS AND CHALLENGES	51
APPENDIX A	DETAILS OF MONITORING SITE QA/QC	53
APPENDIX B	FULL MONTHLY DIFFUSION TUBE RESULTS FOR 2017.....	54
APPENDIX C	DETAILS OF PLANNING APPLICATIONS FOR 2017 – SELECTED SAMPLE PER FOCUS AREA	56

Abbreviations

AQ	Air quality
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQSPG	Air Quality Supplementary Planning Guidance
ATC	Automatic Traffic Counter
ATM	Air Traffic Movement
BAA	(Formerly) British Airports Authority
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
CHP	Combined Heat and Power
CO	Carbon monoxide
COMEAP	Committee on the Medical Effects of Air Pollutants
EV	Electric Vehicle
FDMS	Filter Dynamics Measurement System
FIDAS	Fine Dust Analysis System
FORS	Fleet Operator Recognition System
GLA	Greater London Authority
GSK	GlaxoSmithKline
HAL	Heathrow Airport Limited
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LEZ	Low Emission Zone
LLAQM	London Local Air Quality Management
MAQF	Mayor's Air Quality Fund
NO ₂	Nitrogen dioxide
NPPF	National Planning Policy Framework
NRMM	Non-Road Mobile Machinery
O ₃	Ozone
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
SO ₂	Sulphur dioxide
TEOM	Tapered Element Oscillating Microbalance (for PM measurement)
TfL	Transport for London
ULEZ	Ultra-Low Emission Zone
VCM	Volatile Correction Model
WHO	World Health Organization

Executive Summary

This report provides information on:

- Air quality in the London Borough of Hillingdon in 2017;
- Progress with the Borough's Air Quality Action Plan;
- Planning applications with relevance to air quality in the Borough; and
- Challenges facing the Borough for complying with statutory concentration limits.

Over the last years, Hillingdon has observed an overall trend towards improved air quality in the Borough. However, as many locations within the Greater London Area, exceedances of annual mean limit value for NO₂ still remain at certain locations.

In 2017 data from the automatic monitoring sites have indicated a slight improvement at five out of the ten locations whereas data from the diffusion tube network indicate an overall deterioration, though this is within the variability that can be explained by differences in meteorological conditions, data accuracy and handling procedures.

The hourly limit for NO₂ is complied with, and no exceedance of air quality limits for other pollutants requiring local authority management has been identified.

The Borough has continued to make good progress on implementation of its air quality action plan. Most measures are now either completed, or are defined as 'ongoing' - this relating to actions that are now a part of the Council's way of working and need to be acted on continuously. An example concerns school travel plans: all schools in the Borough have these plans, but continued action is needed to make sure that they are acted on and improved where possible.

There has been delay in revision of the action plan. However, it will be substantially updated in the coming year, recognising the lessons learned since it was first introduced over 10 years ago, and changing conditions in the Borough.

A number of planning applications have been submitted that have implications for air quality in the Borough. Appropriate conditions have been recommended to be considered in the planning process. In addition, and in line with the new London Plan (December 2017), developments within Focus Areas have been subject to more stringent conditions with the aim to encourage developers to introduce clean design and mitigation measures to significantly reduce emissions and their impacts in these air quality sensitive areas. Wherever such measures were not able to achieve the required reductions, contributions to section 106 were sought to improve local air quality in the areas affected by the proposals.

The Council continues to face challenges for air quality improvement, and has lobbied hard to gain recognition of these challenges. It has, for example, been critical of the conclusions of the Airports Commission in recommending expansion at Heathrow (in part because of a flawed interpretation of the law by the Commission) and of the Plans proposed by central government for dealing with air quality that fail to recognise the unique situation of the Heathrow area.

1 Introduction

1.1 Description of Local Authority Area

Hillingdon is, geographically, the second largest local authority in London and has approximately 250,000 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 for the Borough.

1.2 Purpose of this report

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedances are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

The London Local Air Quality Management system was launched in April 2016. This report has therefore been generated to feed into the broader process of air quality improvement for the London area.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM and relevant to this report are set out in the Air Quality (England) Regulations 2000 (SI 928) (Table A). This table shows the objectives in units of micrograms per cubic metre ($\mu\text{g}/\text{m}^3$) (milligrams per cubic metre, (mg/m^3) for carbon monoxide) with the number of exceedances in each year that are permitted (where applicable).

Table A. Summary of National Air Quality Standards and Objectives relevant to this progress report.

Pollutant	Objective (UK)	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
	40 µg m ⁻³	Annual mean	31 Dec 2005
Ozone - O ₃	100 µg m ⁻³ not to be exceeded more than 10 times a year	8-hour mean	31 Dec 2005
Particles - PM ₁₀	50 µg m ⁻³ not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
	40 µg m ⁻³	Annual mean	31 Dec 2004
Particles - PM _{2.5}	25 µg m ⁻³	Annual mean	2020
	Target of 15% reduction in concentration at urban background locations	3 year mean	Between 2010 and 2020

Note: 1) Date by which to be achieved by, and maintained thereafter

1.4 Hillingdon's Air Quality Management Area (AQMA)

An AQMA was declared in Hillingdon against exceedance of objectives for NO₂ in 2003. 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 (NO_x) emissions within the AQMA which covers the southern half of the Borough (Figure 1). The possible inclusion of areas in the north of the Borough has been kept under review.

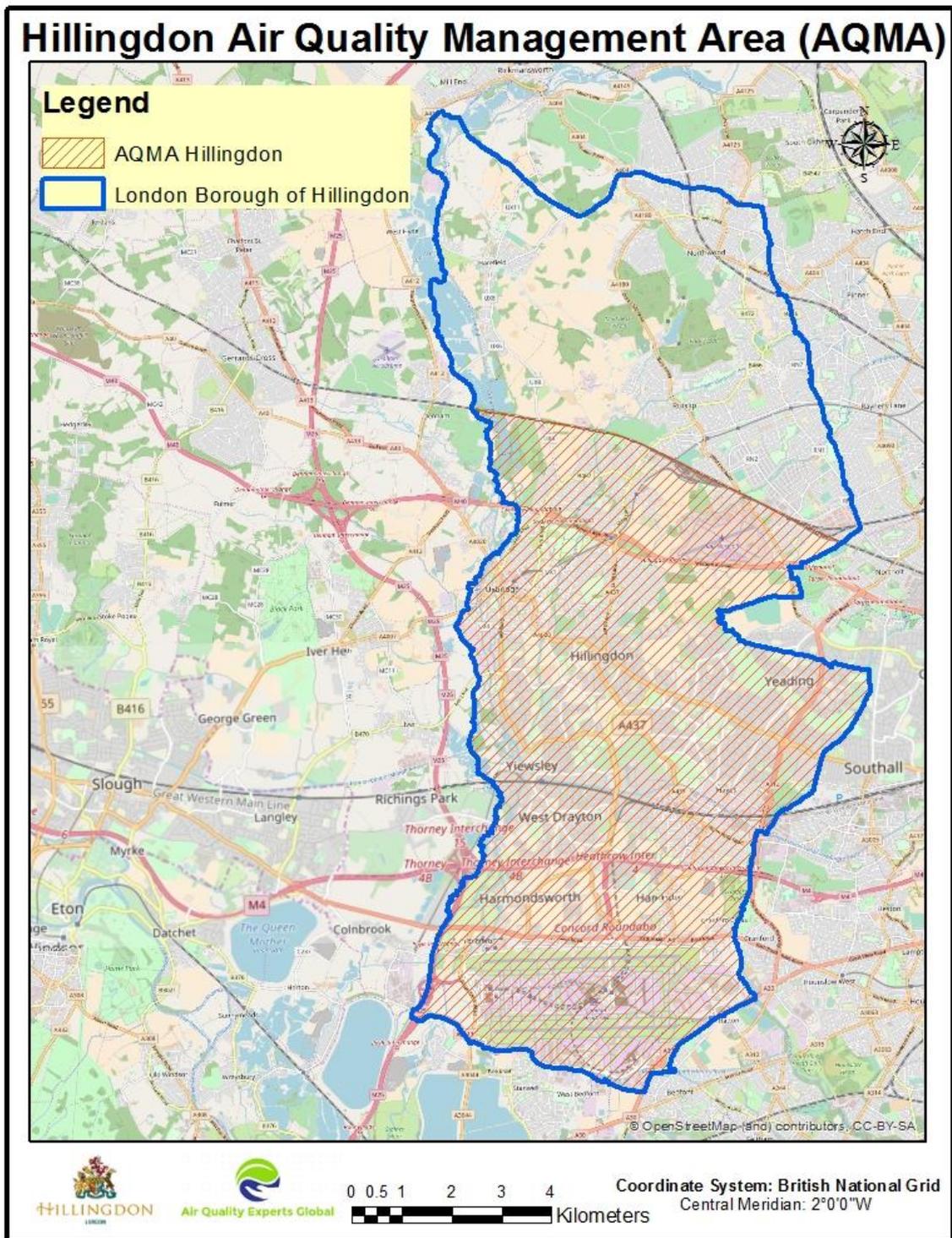


Figure 1. Hillingdon's AQMA.

An Action Plan, showing how Hillingdon Borough Council intended to tackle these problems, was issued in 2004. This contains a series of 8 packages, each containing a number of measures, that address emissions from traffic, Heathrow Airport, industry, existing housing and new developments. The plan is currently undergoing revision.

2 Hillingdon Focus Areas

A number of Focus Areas have been identified across Hillingdon, highlighting specific locations where air quality improvements are key, and a coordinated approach is necessary, involving not only Hillingdon but also regional bodies such as GLA, TfL and Highways England.

These areas have been identified jointly with GLA (dashed areas) and further refined to fully capture the diversity of sites where public exposure has been predicted above the limit values (coloured areas). These are mapped in Figure 2.

Focus Areas have been playing an important role in local air quality management through the planning system. In alignment with the new London Plan², planning applications which are within Focus Areas (or may have impacts on such areas) are required to be at minimum neutral and be positive in terms of air quality outcomes, contributing to the reduction of air quality emissions in these areas. Where design or mitigation measures are not sufficing to attain such reductions, section 106 agreement contributions are being sought by the Borough to improve local air quality.

For further information on Hillingdon Focus Areas, please refer to the Annual Status Report 2017.

² <https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan>

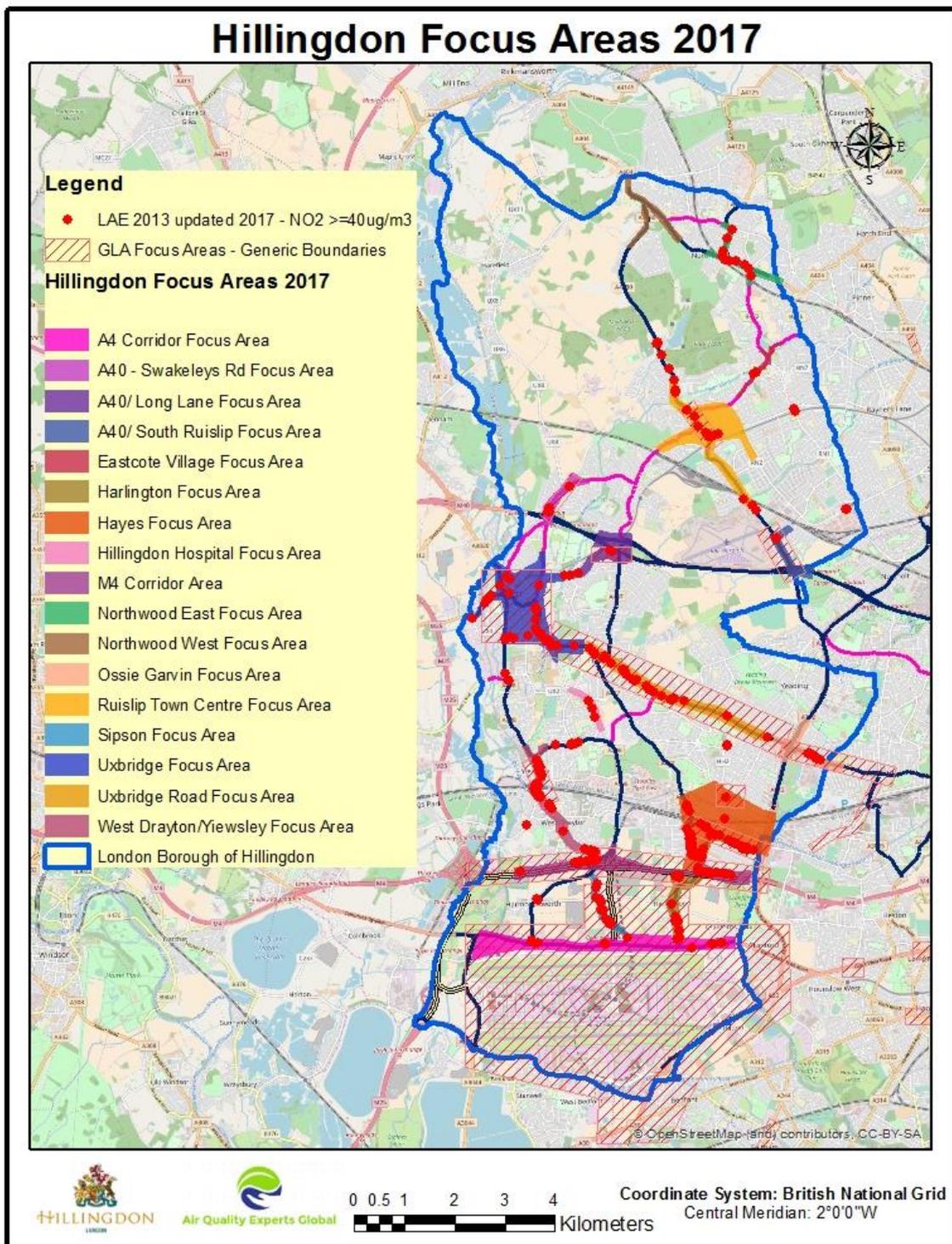


Figure 2. Focus Areas defined in Hillingdon for Local Air Quality Management

3 Air Quality Monitoring in Hillingdon

3.1 Automatic monitoring sites

There were 11 operational automatic continuous monitoring sites in the London Borough of Hillingdon in 2017 (Figure 3). Hillingdon 1 (South Ruislip), Hillingdon 3 (Oxford Avenue), London Sipson, London Harmondsworth, Hillingdon Hayes, and London Harmondsworth Osiris (HIL4) are all part of the Borough monitoring network. London Hillingdon is part of the Defra - owned Automatic Urban and Rural Network (AURN). London Heathrow (LHR2), Heathrow Oaks Road, Heathrow Green Gates, and London Harlington are all part of the Heathrow Airport monitoring network. Site locations are shown in Figure 3. Further details of these sites are shown in Table B.

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

3.2 Non-automatic monitoring sites

Passive diffusion tube monitoring of NO₂ is carried out at several locations across the Borough, supplementing the information generated by the more expensive automatic network. During 2017, NO₂ monitoring was undertaken using diffusion tubes at 39 sites. One of these sites (that has triplicate tubes) is co-located with the London Hillingdon automatic monitoring site. Locations of the passive monitoring sites in 2017 are shown in Figure 4, with additional details presented in Table C.

A bias adjustment factor of 0.99 extracted from the latest version of the national database of co-location studies³ conducted for tubes prepared (50% TEA in acetone) and analysed by Gradko has been used to adjust the diffusion tube results. Only tubes with precision classified as “Good”⁴ were used in the derivation of the bias adjustment factor.

Full details of the diffusion tube QA/QC including justification for the choice of bias adjustment factors are presented in Appendix A. Monthly NO₂ diffusion tube data are also provided in Appendix B.

³ <http://laqm.defra.gov.uk/bias-adjustment-factors/bias-adjustment.html>

⁴ Tube precision is determined as follows: G = Good precision - coefficient of variation (CV) of diffusion tube replicates is considered G when the CV of eight or more periods is less than 20%, and the average CV of all monitoring periods is less than 10%

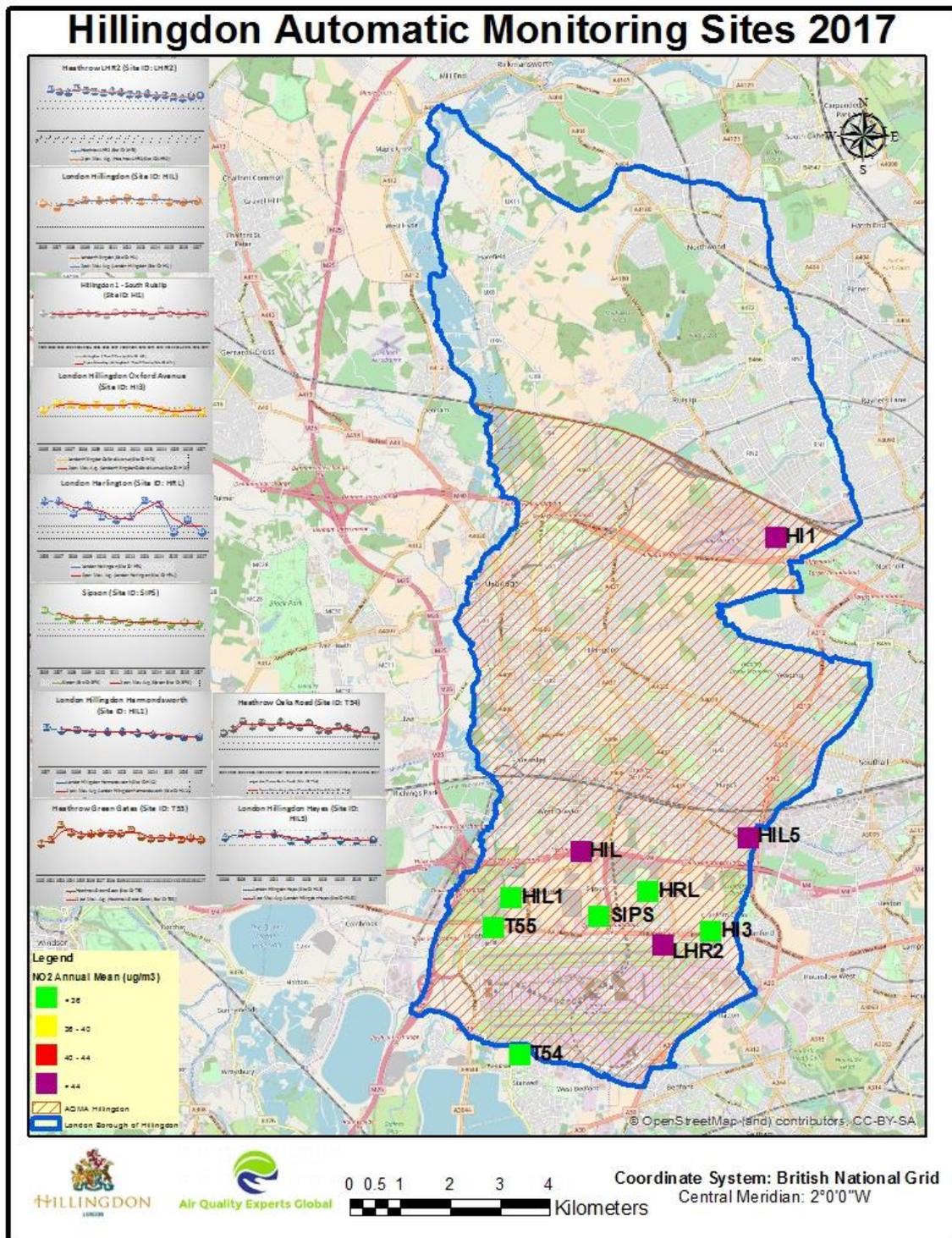


Figure 3. Location of the automatic monitoring sites in Hillingdon, 2017. The graphs on the left hand side of the map show trends at each monitoring site over recent years.

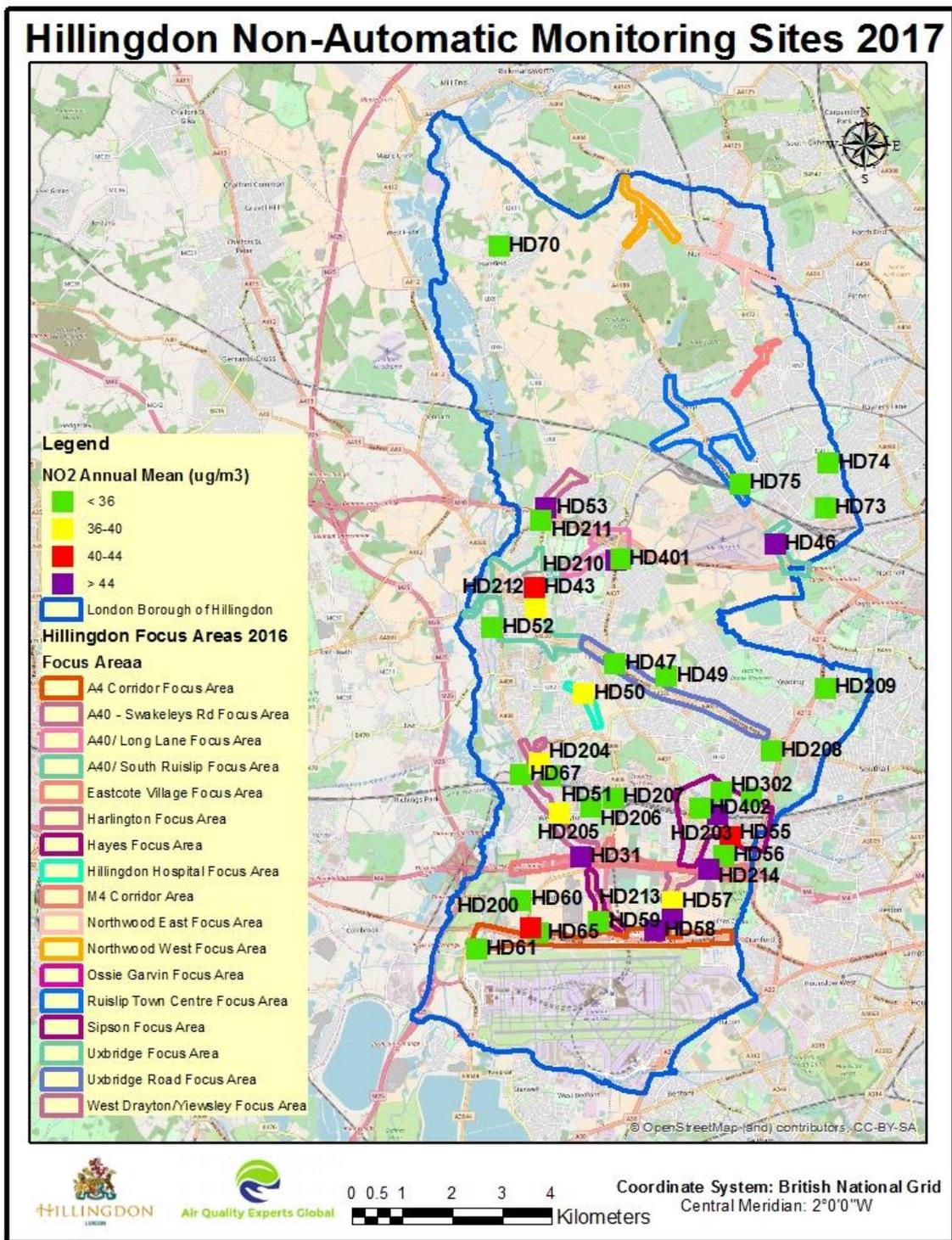


Figure 4. Location of the non-automatic monitoring sites in Hillingdon, 2017. The figure also shows the Focus Areas that are being used for Local Air Quality Management

Table B. Details of Automatic Monitoring Sites for 2017

Site ID	Site Name	X (m)	Y (m)	Site Type	Within AQMA?	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
LHR2	London Heathrow	508600	176700	Airport	Y	N/A	N/A (inside airport)	1.5	NO ₂ , PM ₁₀ , PM _{2.5}	Chemiluminescence FIDAS
HIL	London Hillingdon	506951	178605	Urban background	Y	16m	2.5m (30m to M4)	1.5	NO ₂ , O ₃	Chemiluminescence
HI1	Hillingdon 1 - South Ruislip	510857	184917	Roadside	Y	11m	2.5m	1.5	NO ₂ , PM ₁₀	Chemiluminescence TEOM
HI3	Hillingdon 3 - Oxford Avenue	509557	176994	Roadside	Y	8m and 17m	33m to A4 Bath Road (2m to Oxford Avenue)	1.5	NO ₂ , PM ₁₀	Chemiluminescence TEOM
HRL	London Harlington	508295	177800	Airport	Y	N/A	3m	1.5	CO, NO ₂ , O ₃ , PM ₁₀ , PM _{2.5}	Chemiluminescence TEOM FDMS
SIPS	Hillingdon Sipson	507325	177282	Urban background	Y	9m	2.5m	1.5	NO ₂	Chemiluminescence
HIL1	London Harmondsworth	505561	177661	Roadside	Y	20m	1m	1.5	NO ₂ , PM ₁₀	Chemiluminescence BAM
HIL4	London Harmondsworth Osiris	505671	177605	Urban background	Y	1m	13m	1.5	TSP, PM ₁₀ , PM _{2.5} , PM ₁	Optical
T55	Heathrow Green Gates	505207	177072	Airport	Y	32m	N/A (background for the airport) (62m to airport boundary)	1.5	NO ₂ , PM ₁₀ , PM _{2.5}	Chemiluminescence FIDAS
T54	Heathrow Oaks	505729	174496	Airport	Y	N/A	5m	1.5	NO ₂ , PM ₁₀ , PM _{2.5}	Chemiluminescence FIDAS
HIL5	Hillingdon Hayes	510303	178882	Roadside	Y	15m	1m	1.5	NO ₂ , PM ₁₀	Chemiluminescence BAM

Table C. Details of Non-Automatic Monitoring Sites for 2017

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	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	Tube co-located with an automatic monitor? (Y/N)
HD31	AURN Site, Keats Way, West Drayton	506926	178614	Roadside	Y	0	30m from M4	1.5	NO ₂	Y
HD43	Uxbridge Day Nursery Park Road Uxbridge (on wire Fence)	505996	184058	Roadside	Y	0	4	1.5	NO ₂	N
HD46	South Ruislip Monitoring Station West End Road	510821	184923	Roadside	Y	14	2.5	1.5	NO ₂	Y
HD47	Hillingdon Primary School Uxbridge Road Hillingdon (on wire fence)	507617	182506	Roadside	Y	0	5	1.5	NO ₂	N
HD49	83 Hayes End Drive Hayes End Middlesex (on drain pipe)	508651	182274	Roadside	Y	7	7	1.5	NO ₂	N
HD50	Hillingdon Hospital Monitoring Station Colham Road (Near John Rich House on former junction to Pield Heath Road)	506989	181920	Roadside	Y	7	2	1.5	NO ₂	N
HD51	Top of Colham Avenue (4) Yiewsley (lamp post at end of road)	506335	180263	Roadside	Y	0	4	1.5	NO ₂	N
HD52	Lamp post near 101 Cowley Mill Road Uxbridge	505159	183232	Roadside	Y	95	1	1.5	NO ₂	N
HD53	Warren Road Ickenham Uxbridge (1st lamp post on left)	506243	185653	Roadside	Y	1	23	1.5	NO ₂	N
HD55	Harold Avenue (first lamp post on left)	509918	179015	Roadside	Y	4	30	1.5	NO ₂	N
HD56	15 Phelps Way Hayes (lamp post outside of)	509798	178654	Roadside	Y	7	1.5	1.5	NO ₂	N
HD57	25 Cranford Lane Harlington (lamp post on the left after car park)	508758	177718	Roadside	Y	7	1	1.5	NO ₂	N
HD58	Brendan Close Harlington (1st lamp post on the left)	508414	177125	Roadside	Y	0	1	1.5	NO ₂	N
HD59	Bomber Close (7) Sipson (1st lamp post on left)	507296	177323	Roadside	Y	8	1	1.5	NO ₂	N
HD60	Harmonsworth Green	505736	177752	Roadside	Y	0	1	1.5	NO ₂	N

London Borough of Hillingdon

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	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	Tube co-located with an automatic monitor? (Y/N)
	<i>Harmondsworth (lamp post outside nursery)</i>									
HD61	<i>Heathrow Close Longford (1st lamp post on the right)</i>	504851	176770	Roadside	Y	0	2	1.5	NO ₂	N
HD65	<i>28 Pinglestone Close Sipson Middlsex (on drainpipe)</i>	506079	177081	Roadside	Y	0	4	1.5	NO ₂	N
HD67	<i>31 Tavistock Road (on lamp-post outside house)</i>	505731	180288	Roadside	Y	3	1	1.5	NO ₂	N
HD70	<i>Harefield Hospital Hill End Road (lamp-post outside entrance)</i>	505299	190923	Background	N	0	5	1.5	NO ₂	N
HD73	<i>Queensmead School South Ruislip (lamp-post opposite Jubilee Drive) (outside AQMA)</i>	511825	185655	Roadside	N	0	1	1.5	NO ₂	N
HD74	<i>Field End Road/Field End School S.Ruislip 3rd Lamp-post south of school entrance (outside AQMA)</i>	511889	186563	Roadside	N	8	1	1.5	NO ₂	N
HD75	<i>Sidmouth Drive South Ruislip (2nd lamp-post from West End Road outside Nursery) (outside AQMA)</i>	510125	186144	Roadside	N	4	2	1.5	NO ₂	N
HD200	<i>49 Zealand Avenue Lamp Post</i>	505920	177188	Roadside	Y	8	13	1.5	NO ₂	N
HD202	<i>49 Silverdale Gardens, Hayes Lamp Post (8)</i>	510361	179820	Background	Y	9	14	1.5	NO ₂	N
HD203	<i>Blyth Road, Hayes Lamp Post (4)</i>	509683	179486	Roadside	Y	6	2	1.5	NO ₂	N
HD204	<i>Side of 104 Yiewsley High Street (front of 1A Fairfield Road) Lamp Post (2)</i>	506108	180493	Background	Y	9	37	1.5	NO ₂	N
HD205	<i>1 Porters Way (corner with Kingston Lane) Lamp Post (1)</i>	506503	179510	Background	Y	12	9	1.5	NO ₂	N
HD206	<i>5-7 Mulberry Crescent, West Drayton Lamp Post (18)</i>	507141	179628	Background	Y	10	2	1.5	NO ₂	N
HD207	<i>35 Emden Close, West Drayton Lamp Post (14)</i>	507580	179812	Background	Y	7	60	1.5	NO ₂	N
HD208	<i>Side of 50 St. Christopher's Drive Lamp Post (13)</i>	510761	180766	Background	Y	5	180	1.5	NO ₂	N
HD209	<i>29 Pendula Drive, Hayes Lamp</i>	511828	182023	Background	Y	10	79	1.5	NO ₂	N

London Borough of Hillingdon

Site ID	Site Name	X (m)	Y (m)	Site Type	In AQMA?	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	Tube co-located with an automatic monitor? (Y/N)
	<i>Post (2)</i>									
HD210	<i>340 Long Lane, Uxbridge Lamp Post (71)</i>	<i>507649</i>	<i>184611</i>	<i>Roadside</i>	<i>Y</i>	<i>18</i>	<i>2</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD211	<i>198 Harefield Road, Uxbridge Lamp Post (2)</i>	<i>506143</i>	<i>185395</i>	<i>Background</i>	<i>Y</i>	<i>9</i>	<i>33</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD212	<i>59 Hillingdon Road, Uxbridge Lamp Post (56)</i>	<i>506035</i>	<i>183611</i>	<i>Roadside</i>	<i>Y</i>	<i>12</i>	<i>1.5</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD213	<i>10 West End Lane, Harlington Lamp Post (2)</i>	<i>508773</i>	<i>177352</i>	<i>Background</i>	<i>Y</i>	<i>11</i>	<i>33</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD214	<i>R/O 130 Cleave Avenue, Hayes Lamp Post (33)</i>	<i>509499</i>	<i>178370</i>	<i>Roadside</i>	<i>Y</i>	<i>18</i>	<i>27</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD302	<i>Botwell House RC Primary School (Side-fence)</i>	<i>509755</i>	<i>179934</i>	<i>Roadside</i>	<i>Y</i>	<i>5</i>	<i>12</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD401	<i>15 Victoria Avenue, Hillingdon Lamp Post (2)</i>	<i>507730</i>	<i>184623</i>	<i>Background</i>	<i>Y</i>	<i>5.6</i>	<i>2.7</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>
HD402	<i>Blyth Road 2nd Tube, Hayes Lamp Post (17) (western most lamp post in front of 133 Enterprise House)</i>	<i>509328</i>	<i>179603</i>	<i>Roadside</i>	<i>Y</i>	<i>5</i>	<i>2</i>	<i>1.5</i>	<i>NO₂</i>	<i>N</i>

4 Comparison of Monitoring Results with Air Quality Objectives

The results presented in this section are shown after adjustments for bias (the details of which are described in Appendix A) and relevant exposure. Consideration was given to correcting results ‘for relevant exposure’ for cases where the limit values were exceeded at monitoring sites. These values are presented in brackets. It must be stressed that the air quality objectives, compliance with which provides the key indicator used in this report, do not indicate ‘safe’ levels of air pollution. WHO and the UK’s Committee on the Medical Effects of Air Pollutants (COMEAP) both recognise that some part of the population has significant sensitivity to air pollution and that there is no recognised threshold for effects of these pollutants at the population level.

4.1 Automatic monitoring sites

The results for NO₂ from the automatic sites are shown in Table D1. No exceedances were found for the other pollutants that are monitored in the Borough though results are presented in the following subsections to this chapter.

Table D1. Annual Mean NO₂ from automatic monitoring sites (µg.m⁻³).

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration (µg.m ⁻³)						
				2011	2012	2013	2014	2015	2016	2017 ^c
LHR2	Heathrow	95.65%	95.65%	52.0	47.7	47.9	46.4	44.2	47.0	48
HIL	London Hillingdon	99.32%	99.32%	55.0	57.1	52.8	57.5	51.9	51.2	53 (47.2)
HI1	South Ruislip	83.85%	83.85%	41.7	52.0	45.0	44.4	48.4	42.9	46 (44.2)
HI3	Oxford Avenue	98.37%	98.37%	44.3	44.0	39.2	36.7	34.5	41.9	35 (41.8)
HRL	London Harlington	99.61%	99.61%	34.0	34.5	37.1	36.5	32.0	34.0	32
SIPS	Hillingdon Sipson	79.59%	79.59%	37.0	35.2	36.5	36.6	33.7	35.2	34
HIL1	Hillingdon Harmondsworth	98.73%	98.73%	31.5	31.8	30.4	29.2	28.0	27.0	27
T55	Heathrow Green Gates	99.57%	99.57%	34.8	33.4	33.5	35.1	32.2	34.4	32
T54	Heathrow Oaks Road	99.13%	99.13%	30.5	30.3	34.2	32.6	27.4	31.0	26
HIL5	Hillingdon Hayes	99.79%	99.79%	55.3	45.9	47.0	52.9	46.2	45.9	47 (41.5)

Notes: Exceedance of the NO₂ annual mean air quality objective of 40 µg.m⁻³ are shown in **bold**.

NO₂ annual means in excess of 60 µg m⁻³, indicating a potential exceedance of the NO₂ hourly mean AQS objective are shown in bold and 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%)

^c Means (in brackets) were “corrected for relevant exposure” in accordance with LLAQM Technical Guidance. Results are only presented where applicable. Where either the site type was background or airport, and/or the background values higher than total measured concentrations, no value was calculated.

Figure 5 shows that for five sites, the concentrations in 2017 were lower than in the preceding year, with four of the sites indicating a very slight increase in concentrations, South Ruislip presenting the highest rise ($3\mu\text{g}/\text{m}^3$).

As will be seen below, the results from the diffusion tube network indicate an overall slight increase in concentrations in relation to 2016 data.

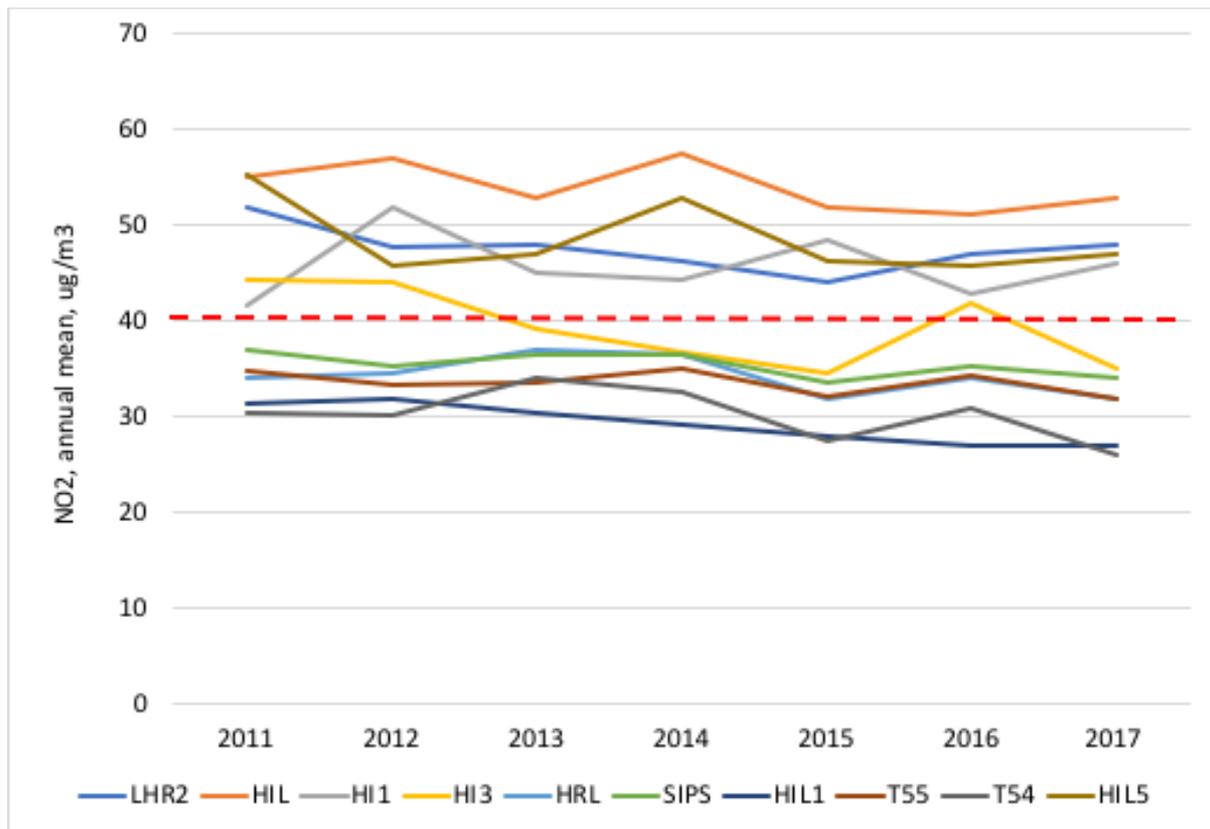


Figure 5. NO₂ concentrations at the automatic monitoring stations, 2011-2017. Dashed red line shows limit value.

4.2 Non-automatic monitoring sites using diffusion tubes

Results for the non-automatic monitoring sites are shown in Table D2.

Table D2. Annual mean NO₂ ratified and bias-adjusted - non automatic monitoring sites using diffusion tubes (DT) ($\mu\text{g m}^{-3}$).

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration ($\mu\text{g.m}^{-3}$) ^c						
				2011	2012	2013	2014	2015	2016	2017 ^d
HD31	DT	100.0	100.0	45.7	46.8	43.4	47.3	41.1	34.3	45.3

Site ID	Site type	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration ($\mu\text{g}\cdot\text{m}^{-3}$) ^c						
				2011	2012	2013	2014	2015	2016	2017 ^d
HD43	DT	100.0	100.0	44.4	45.6	47.6	46.3	42.8	42.8	40.1
HD46	DT	100.0	100.0	43.3	45.4	45.8	46.7	43.2	40.2	46.7
HD47	DT	91.7	91.7	30.6	31.4	33.2	32.4	28.9	26.8	28.2
HD49	DT	83.3	83.3	26.1	26.0	25.4	26.5	22.1	20.9	26.5
HD50	DT	83.3	83.3	44.4	39.7	39.8	42.6	40.6	32.3	36.1
HD51	DT	100.0	100.0	33.9	36.6	34.3	36.7	33.3	29.3	32.9
HD52	DT	100.0	100.0	34.0	37.4	38.5	37.6	32.3	30.0	34.0
HD53	DT	100.0	100.0	41.4	45.1	40.7	46.8	42.3	39.0	45.6 (36.6)
HD55	DT	100.0	100.0	38.6	41.0	38.9	40.0	35.7	34.7	43.3 (39.8)
HD56	DT	100.0	100.0	36.0	37.0	35.5	35.4	31.4	32.1	33.4
HD57	DT	100.0	100.0	37.3	39.7	37.9	39.9	35.6	35.5	39.4
HD58	DT	83.3	83.3	40.2	40.4	38.4	42.1	37.2	34.2	47.5 (45.0)
HD59	DT	91.7	91.7	35.1	36.1	35.5	33.6	29.1	30.3	32.6
HD60	DT	100.0	100.0	30.0	32.5	31.1	31.9	26.8	24.2	27.8
HD61	DT	100.0	100.0	35.6	34.5	37.5	37.3	34.4	31.9	34.0
HD65	DT	100.0	100.0	33.1	33.3	31.5	34.1	29.9	26.7	30.0
HD67	DT	100.0	100.0	30.7	29.5	29.8	30.7	28.7	25.8	26.9
HD70	DT	100.0	100.0	24.4	25.7	24.0	23.8	19.8	19.1	22.1
HD73	DT	91.7	91.7	26.9	28.1	27.1	28.1	21.7	32.8	27.7
HD74	DT	100.0	100.0	29.0	28.7	28.6	29.4	24.6	24.0	24.4
HD75	DT	100.0	100.0	28.3	29.3	28.5	28.7	23.7	22.8	26.9
HD200	DT	100.0	100.0	-	36.7	41.7	40.8	35.2	29.4	42.7 (38.5)
HD202	DT	100.0	100.0	-	32.5	35.9	35.5	26.7	26.1	32.7
HD203	DT	100.0	100.0	-	44.8	43.4	46.8	41.9	40.9	49.0 (44.3)
HD204	DT	100.0	100.0	-	37.5	38.3	39.7	40.9	32.0	37.0
HD205	DT	91.7	91.7	-	41.8	40.0	42.0	41.1	35.9	37.9
HD206	DT	75.0	75.0	-	29.5	29.2	35.0	30.0	29.6	34.7
HD207	DT	100.0	100.0	-	30.9	35.2	38.1	31.2	24.9	33.3
HD208	DT	100.0	100.0	-	28.5	29.6	30.5	27.3	28.9	27.3
HD209	DT	91.7	91.7	-	33.7	32.0	33.7	30.5	30.9	32.1
HD210	DT	75.0	75.0	-	48.7	48.3	51.0	43.3	42.5	45.5 (34.6)
HD211	DT	91.7	91.7	-	33.4	35.9	38.8	34.0	34.8	34.2
HD212	DT	75.0	75.0	-	33.1	42.3	45.4	38.5	35.5	40.0
HD213	DT	91.7	91.7	-	37.5	40.5	39.8	37.0	37.4	45.6 (57.6)
HD214	DT	100.0	100.0	-	48.3	44.5	50.5	43.7	42.1	51.5 (49.5)
HD302	DT	91.7	91.7	-	-	-	38.9	30.7	30.8	33.8
HD401	DT	100.0	100.0	-	-	-	-	30.0	27.6	29.4
HD402	DT	100.0	100.0	-	-	-	-	32.1	32.3	35.7

Notes: Exceedance of the NO₂ annual mean AQO of 40 $\mu\text{g}\cdot\text{m}^{-3}$ are shown in **bold**.

NO₂ annual means in excess of 60 $\mu\text{g}\cdot\text{m}^{-3}$, indicating a potential exceedance of the NO₂ hourly mean AQS objective are shown in bold and 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%)

^c Means were “annualised” in accordance with LLAQM Technical Guidance, where valid data capture was less than 75% and bias adjusted (National Factor applied 0.99)

^d Means (in brackets) were “corrected for relevant exposure” in accordance with LLAQM Technical Guidance. Results are only presented where applicable. Where either the site type was background or airport, and/or the background values higher than total measured concentrations, no value was calculated.

Whereas the diffusion tube data suggest a slight downward trend in the last seven years (and Figure 7), 2017 data indicate an overall slight increase in relation to the preceding year. This can be associated to the fact that 2016 diffusion tube data had poor data capture and therefore values could be underestimating ambient air concentrations in that year.

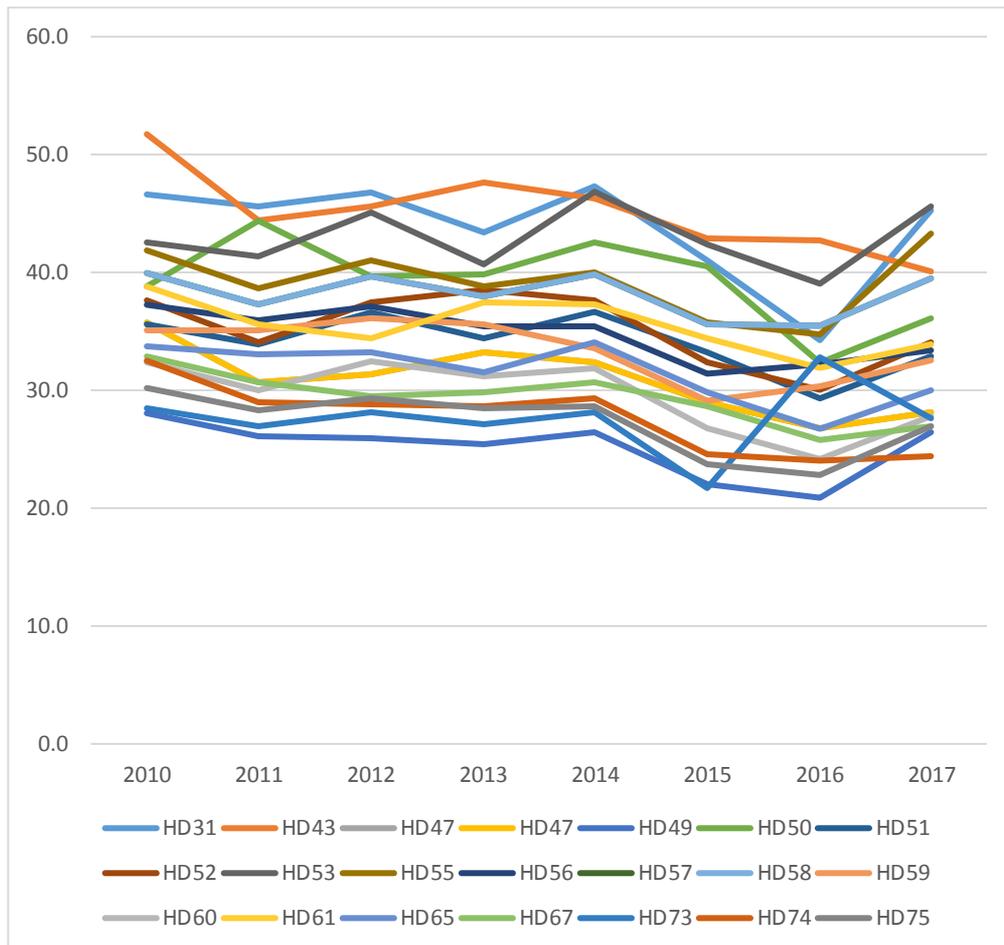


Figure 6. Diffusion tube data showing annual mean NO₂ µg.m⁻³. In Hillingdon, 2010-2017 – roadside locations.

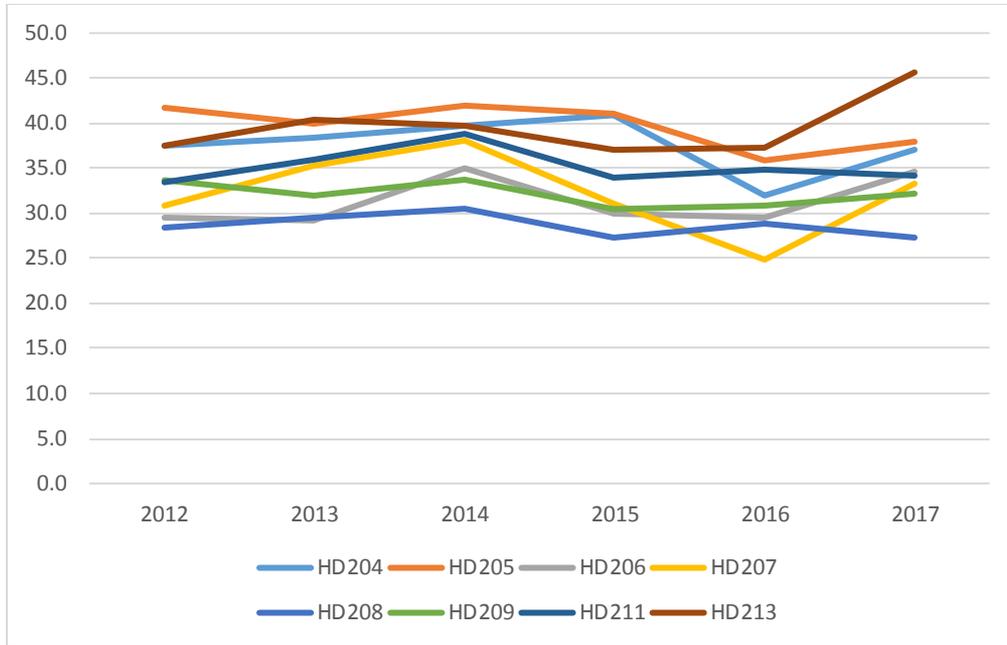


Figure 7. Diffusion tube data showing annual mean NO₂ µg.m⁻³. In Hillingdon, 2012-2017 – background locations.

Results for other pollutants and/or averaging times are shown in Tables E to H, as follows:

Table E: NO₂ automatic monitoring results: comparison with 1-hour mean objective.

There are rather few exceedances observed at each station across the 2011-2017 period. At each station in any year, the number of observed exceedances is within the permitted number of 18, with the maximum number of exceedances observed at HIL5 (Hillingdon Hayes) in 2011 (15 exceedances). LHR2 site (Heathrow) seems to indicate a steady increase in the period 2015-2017.

Table F: Annual mean PM₁₀ automatic monitoring results.

There is no clear trend in PM₁₀ levels over the 7-year period across the 9 monitoring stations, with all values well below the annual limit value for this pollutant. However, it is noted that HIL5 (Hillingdon Hayes) presents the highest values across all sites with the highest value of 2017 (27µg.m⁻³).

Table G: PM₁₀ automatic monitor results: Comparison with 24-Hour mean objective

Again, no clear trend in data is evident. Overall, values were lower in 2009 and 2010 than in 2011, 2012 and 2013, falling back again in 2014 and 2015. However, patterns differ between stations, with HIL5 recording the highest number of exceedances since 2013 with the highest value of 2017 (26µg.m⁻³).

Table H: Annual mean PM_{2.5} automatic monitoring results (µg.m⁻³).

Over the 7-year period there is an indication of a decline in concentrations for LHR2 and HRL. However, concentrations at T55 and T54 are unchanging.

Further to this, there were 4 exceedances of the 8-hour mean ozone limit value at monitoring station HIL and 44 at monitoring station HRL in 2017. These figures compare with a permitted number of exceedances annually of 10. The exceedance of the limit is noted, although ozone is not a pollutant under local authority control.

Table E. NO₂ automatic monitoring results: comparison with 1-hour mean objective

Site ID	Site name	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Number of Hourly Means > 200 µg.m ⁻³ ^c						
				2011	2012	2013	2014	2015	2016	2017
LHR2	Heathrow	89.3	89.3	0	0	3	0	2	8	12
HIL	London Hillingdon	99.1	99.1	0	0	0	0	1	2	0
HI1	South Ruislip	99.2	99.2	0	14	0	0	0	2	2
HI3	Oxford Avenue	98.1	98.1	0	0 (124)	1 (132)	0 (124)	2	0	1
HRL	London Harlington	96.6	96.6	0	0	5 (172)	0	0	0	0
SIPS	Hillingdon Sipson	90.7	90.7	0	0	0	0	3	0	0
HIL1	Hillingdon Harmonds worth	97.5	97.5	0	0 (123)	0	0	1	0	0
T55	Heathrow Green Gates	96.9	96.9	0	0	0	0	0	0	0
T54	Heathrow Oaks Road	98.1	98.1	0	0	0	0	0	0	0
HIL5	Hillingdon Hayes	99.1	99.1	15	2	4	2	2	1	12

Notes: Exceedance of the NO₂ short term AQO of 200 µg.m⁻³ over the permitted 18 days per year are shown in **bold**.

^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 Means are “annualised” in accordance with LLAQM Technical Guidance where valid data capture is less than 75%

Table F. Annual mean PM₁₀ automatic monitoring results (µg.m⁻³)

Site ID	Site name	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration (µg.m ⁻³) ^c						
				2011	2012	2013	2014	2015	2016	2017
LHR2	Heathrow	99.77%	99.77%	25	24.8	24.6	18.6	13	15	15
HI1	South Ruislip	78.96%	78.96%	24	24.1	22.6	23.2	24	22	17
HI3	Oxford Avenue	97.68%	97.68%	23	22.4	21	21.5	21	20	19
HRL	London Harlington	99.76%	99.76%	22	17.7	20	19.6	16	15	15
HIL1	Hillingdon Harmondsworth	96.93%	96.93%	21	19.7	21.9	21	22	23	23
HIL4	London Harmondsworth Osiris	99.02%	99.02%	- ^d	- ^d	17.4	12.1	17	16	14
T55	Heathrow Green Gates	99.61%	99.61%	21	20.8	20.4	17	14	14	13
T54	Heathrow Oaks Road	97.90%	97.90%	24	21.3	21	18.2	14	15	14
HIL5	Hillingdon Hayes	97.96%	97.96%	25	25.4	29.4	34.5	28	28	27

Notes: Exceedance of the PM₁₀ annual mean AQO of 40 µg.m⁻³ are shown in **bold**.

^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 Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

^d Data capture below required level so values not reported

Table G. PM₁₀ automatic monitor results: Comparison with 24-Hour mean objective

Site ID	Site name	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Number of Daily Means > 50 µg m ⁻³ ^c						
				2011	2012	2013	2014	2015	2016	2017
LHR2	Heathrow	99.77%	99.77%	19	18	12	6	3	3	7
HII	South Ruislip	78.96%	78.96%	21	16	10	18	3	9	6
HI3	Oxford Avenue	97.68%	97.68%	16	10	6 (34)	6	3	11	4
HRL	London Harlington	99.76%	99.76%	1	8 (37)	9	6 (36)	3	5	3
HIL1	Hillingdon Harmondsworth	96.93%	96.93%	10	5 (37)	7	7	4	4	6
HIL4	London Harmondsworth Osiris	99.03%	99.03%	- ^d	- ^d	2 (34)	0	17	0	1
T55	Heathrow Green Gates	99.61%	99.61%	16	8	8	2	3	3	3
T54	Heathrow Oaks Road	97.90%	97.90%	16	11	8	2	5	2	4
HIL5	Hillingdon Hayes	97.96%	97.96%	18	15 (47)	17 (46)	45 (60)	14	32	26

Notes: Exceedance of the PM₁₀ short term AQO of 50 µg m⁻³ over the permitted 35 days per year or where the 90.4th percentile exceeds 50 µg m⁻³ are shown in **bold**. Where the period of valid data is less than 90% 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%)

^c Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

^d Data capture below required level so values not reported

Table H. Annual mean PM_{2.5} automatic monitoring results (µg.m⁻³)

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean Concentration (µgm ⁻³) ^c						
			2011	2012	2013	2014	2015	2016	2017
LHR2	99.77%	99.77%	11.0	11.0	11.0	9.9	9.0	10	9
HRL	99.76%	99.76%	16 ^d	13.0	14.0	14.0	10.0	10	9
HIL4	99.03%	99.03%	<i>e</i>	<i>e</i>	<i>e</i>	6.9	7.0	6	7
T55	99.61%	99.61%	10.0	10.0	10.0	10.0	9.0	10	8
T54	97.90%	97.90%	10.0	10.0	10.0	10.0	10.0	10	9

Notes: Exceedance of the PM_{2.5} annual mean AQO of 25 µgm⁻³ are shown in **bold**.

^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 Means should be “annualised” in accordance with LLAQM Technical Guidance, if valid data capture is less than 75%

^d Data capture 84.1%

^e Data capture below required level so values not reported

5 AQAP Highlights

This section starts with a review of highlights in the progress on the Borough's air quality action plan in the year from April 2017 to March 2018. It is followed by Table K which provides information against each measure since the AQAP was adopted by the Council in 2004.

5.1 Actions within Air Quality Focus Areas

The GLA has identified 17 Air Quality Focus Areas in the Borough which represent the key hotspots where air quality is poor and public exposure is the highest. In each case the Council has extended the area of focus to encompass these hotspot areas and allow actions to be taken over a slightly wider area, to account for locations where public exposure has been predicted above the limit values. These are illustrated in Figure 2. These wider Focus Areas can be re-defined as actions are taken to improve the local air quality.

To ensure improvements can be quantified the Council will undertake a review of its monitoring across the Borough to ensure the Focus Areas are sufficiently monitored.

5.1.1 Hillingdon led improvements

Air quality and planning

The planning system has a key role in protecting people from unacceptable risks to their health and in providing adequate protection to the amenity value of land. Whereas these considerations must be balanced against other aims of the planning system, protecting human health is one of the priority aspects of Local Authorities' policy.

In this context, national, regional, and local policies converge in supporting the use of the planning system in contributing to significant improvements in air quality, especially within Focus Areas.

The 2016 London Plan requires development proposals to be at least 'air quality neutral' and not lead to further deterioration of existing poor air quality. In turn, the emerging London Plan, currently under consultation, requires the use of design solutions to prevent increased exposure to existing air pollution and the need to make provision for actions to address local problems of air quality, with particular care to be taken with developments that are in Air Quality Focus Areas. In addition, large-scale developments are required to propose methods of achieving an air quality positive approach.

To support this, the Council are requesting a more stringent approach for the assessment of new development within the Hillingdon Focus Areas. Where increased emissions from the proposed development have not been appropriately addressed either at the design stage or through the application of quantified mitigation, compensation for air quality impacts will be addressed through a section 106 agreement. The contribution required is calculated by use of the damage cost approach for NO_x emissions, as set out in Defra's Air Quality Damage Cost

Guidance⁵. The results of this work will then be used to implement measures to ensure air quality improvements are made in the areas of concern.

In March 2017-April 2018 the Council reviewed 38 planning applications in regard to air quality requesting appropriate mitigation and ensuring the setting of relevant conditions. A sample of these are presented in Appendix C.

Specific Focus Area actions in 2017/2018

To enable the Council to demonstrate that targeted improvements are being taken, examples of actions per different Focus Areas are detailed below:

Northwood/Ruislip/Eastcote Hillingdon Focus Areas

- The GLA modelling (2013 baseline updated April 2017) indicated areas of exceedance in these areas along with potential public exposure. These areas are all currently outside the declared AQMA. The Council has undertaken a diffusion tube monitoring study across these three areas, complemented with a traffic count study. This is due to report by the end of 2018. The results of this work will help inform the review of the AQAP and help identify any necessary improvement actions.

A40/West End Road Focus Area

- In anticipation of the works by TfL to improve access at the Polish War Memorial roundabout, the Council has provided a new cycle track from the roundabout northwards along West End Road.

Yiewsley and West Drayton Focus Area

- Provision of a new off-road cycle way;
- Improving further on the legacy from the MAQF Round 1 project which improved access to the Grand Union Canal, two further portions of the towpath are currently being upgraded. This will then complete the section between Stockley Park to West Drayton station and beyond. This will be finished ahead of the arrival of Crossrail at West Drayton Rail station.

Hillingdon Circus/Long Lane Focus Area

- Introduction of double decker cycle parking at Hillingdon tube station;
- Implementation of local shopping parade improvements to encourage more local walking and cycling
- Air quality presentation and planning for real workshop to local resident group to identify resident concerns in regard to public realm, traffic congestion and poor air quality.

Uxbridge Focus Area

- Installation of Brunel Bikes at Uxbridge station with docking stations on the Brunel University campus, Brunel student residential areas, Brunel Sports Centre and at Hillingdon Hospital;

⁵ <https://www.gov.uk/government/uploads/.../air-quality-econanalysis-damagecost.pdf>
<https://www.gov.uk/guidance/air-quality-economic-analysis>

- Installation of Rapid EV charger with public access in the Town Centre;
- Green infrastructure project at the Early Years Centre, within the Uxbridge AQ Focus Area. More detail on this is provided below.

Early Years Centre - Green infrastructure project

The nursery is situated on a busy roundabout with the play area in close proximity to a major and heavily congested road. Monitoring close to the outer facade has demonstrated levels above 40ug/m³. With money secured via the LIP a green boundary has now been planted as a dense barrier round the entire play area.



Figure 8 - Start of project (outside view)



Figure 9 - Start of project (view of playground)



Figure 10 - Post project with double barrier of willow fence and hedge

Heathrow Air Quality Focus Area

- The Borough has continued with its tree planting scheme targeting areas of poor air quality with further 24 locations identified within the Heathrow Air Quality Focus Area for new trees. The choice of tree species has been considered in regard to the Urban Tree Air Quality Score (UTAQ) (Urban Air Quality, Woodland Trust) with the majority of trees chosen in the high UTAQ range with one species from the medium UTAQ range.

Hayes Air Quality Focus Area

- The Hayes Town regeneration scheme, with the arrival of the Elizabeth Line (Crossrail) in 2019, has an aim of allowing traffic to flow freely and improving access to public transport. It has delivered the planting of 63 new trees and over 851metres of cycle lanes.

Uxbridge Road Focus Area

- Although the TfL low emission bus zone route stops at the Borough boundary, buses using this route, which continues through to Uxbridge, will have a beneficial impact;
- The implementation of the Belmore Shopping Parade improvement project has re-configured the outside space to provide a wide separation between the road and pedestrians and the road and cyclists. This separation has been enhanced by the introduction of a green barrier strip.

Promotion of sustainable transport modes

The Council continues with a Borough-wide programme on improving access to public transport and supporting the promotion of alternative modes of transport with cycling improvement programmes, provision of support for the development and enhancement of school travel plans, council led bike rides, parking management schemes, improvements for pedestrians and enhancements to access to public transport.

New north-south bus route

Public transport in the Borough in terms of north-south connection has proved an obstacle in terms of achieving a higher modal shift to public transport from road vehicle. The introduction of a new service 278 is a welcome addition to help address this issue. The proposed route is currently being tested and it is proposed to link Heathrow Airport in the south with Ruislip station in the north. It is anticipated that the new service will be introduced in December 2019 to coincide with the start of the Elizabeth Line (Crossrail) services.

Promotion of electric vehicle trial across Hillingdon

This was taken forward as a Hillingdon specific project following a successful MAQF regional project. The aim of the project was to enable businesses to experience and understand how electric vehicles can be integrated into their business operations.

Ten businesses participated in the trial ranging from small and medium size enterprises (SME) to global scale businesses. The project allowed a free trial of electric vehicles for businesses to understand how they operate and to experience how these vehicles could benefit their business. The business case for going electric for participants was also developed to help businesses understand the costs and benefits of operating these Ultra Low Emission Vehicles (ULEVs).

A key recommendation from the trial was for the development of a wider electric vehicle charging infrastructure across the Borough with public access to charging points.

No idling vehicles

The council continues to implement the no idling vehicles legislation via the use of a Public Spaces Protection Order. Started as a pilot on the Heathrow Villages ward this has now been widened to the whole Borough. A total of 343 fixed penalty notices in regard to idling vehicles were issued April 2018-March 2018, Whilst the majority of these have been in the Heathrow Villages ward in response to private hire vehicles using residential roads to wait for airport pick-ups, a further 6 wards within the Borough have had notices served within them,

Travel Plans

Hillingdon continues to monitor the implementation of travel plans in the Borough via the West Trans group which funds an officer to work across all the Boroughs.

5.1.2 Regional working

The WestTrans partnership is formed of six west London boroughs, including Hillingdon, with an aim to identify, develop and implement sustainable transport projects across the sub region. Examples of current projects will help bring benefit to Hillingdon include:

Strategic bus corridors project

This is looking at key strategic corridors across the West London area which could benefit from bus prioritisation measures. This includes:

- Heathrow to Uxbridge
- Heathrow to Kingston
- Heathrow to Harrow
- Heathrow to Hounslow

Electric vehicle promotion

The provision of a comprehensive leaflet aimed at car dealers to help inform prospective customers on aspects such as how EV charging works, the charger types and speeds available, the different networks and subscriptions, and where charge points are located. It will also explain how each borough approaches EV charging and who to contact to request a charge point.

5.1.3 Heathrow Airport

This is situated in the Heathrow Air Quality Focus Area. In 2017, the existing Heathrow Air Quality Strategy was incorporated into the over-arching "Heathrow Strategy 2.0 - a plan for sustainable growth".

Highlights of actions from 2017 include:

- Installation of new electric charging infrastructure including 25 charging points associated with the use of electric Mototok pushback tugs which are used by British Airways for their short-haul programme in Terminal 5, 7 additional charging points installed at the taxi feeder park, additional 12 for passengers and 10 in colleague car parks and 22 for operational vehicles;
- Launched a salary sacrifice scheme for Heathrow colleagues to facilitate purchase of low emission and electric vehicles;
- The total of electric vehicles and plug-in hybrid electric vehicles is now 58 with a further 6 on order. This means 55% of the Heathrow fleet is now Ultra-Low Emissions Zone (ULEZ) compliant;
- 42.3% of passengers used public transport in 2017 which increased from 39.1% in 2016;
- The proportion of flights made by newer, cleaner aircraft (CAEP 6 or better) increased from 57.58% in 2016 to 59.29% at the end of 2017;
- The establishment of a Sustainable Freight Group with a remit to take measures to reduce emissions from freight vehicles at the airport contributing to improved air quality, reduced carbon emissions and more efficiency in freight and logistics activity.

5.1.4 M4 motorway managed by Highways England (HE)

This is now an identified Air Quality Focus Area under the control of Highways England in terms of an environmental management plan to secure reductions in air pollution. This is defined by the GLA as:

M4 Focus Area (Highways England responsible for AQ monitoring and management scheme as required under The M4 Motorway (Junction 3 to 12) (Smart Motorway) Development Consent Order 2016, SI 2016/863 Schedule 2 Part 1 Section 26)

The Council has received a questionnaire from Highways England in regard to the challenges faced by the Council in terms of meeting compliance and where Highways England may be able to help, the Council has responded as below:

The Council, in conjunction with the GLA, is seeking an action plan from HE which will ensure compliance is achieved as soon as possible for the residential areas in close proximity to the M4. This should incorporate the implications of the Smart Motorway Scheme. The action plan should include a monitoring regime starting as soon as possible so that the benefits of mitigation actions can be quantified.

5.2 Progress against each measure

Table K summarises progress against each measure. The column headed ‘Progress’ provides an indication of the status of each measure, as follows:

- **Complete:** Measures for which objectives have been met and further action is not required.
- **Ongoing:** Measures which are fully in place, but require continuing action. Examples include providing access to information on public transport, the implementation of school travel plans and annual reporting on progress with the action plan.
- **In progress:** A small number of measures that are not fully implemented but for which the council believes that additional resource or interest from external organisations would be of benefit.
- **Stopped:** A small number of measures that featured in the original AQAP, but which were concluded on more detailed assessment to not warrant implementation, with resource better spent elsewhere.

Specific progress in the reporting year is also documented in this column. Revision of the action plan will provide further information (for example on key performance indicators) that is not presented here. As noted elsewhere, revision of the plan has been delayed by uncertainty around developments at Heathrow, though plans are now firmly in place for undertaking the revision this year.

The column headed ‘Further information’ provided additional details on the overall implementation of each measure.

Table J. Delivery of Air Quality Action Plan Measures

	Action	Progress	Further information
1. Switching to Cleaner Transport Modes			
1.01	Establish a Green Travel Plan for Hillingdon.	In progress.	The Borough has undertaken a number of activities to promote cycling and modal shift more generally amongst council staff.
1.02	Improve access to, and quality of, public transport travel information for people living and working in the Borough.	Ongoing.	Info available from TfL at https://www.tfl.gov.uk/plan-a-journey/ . The provision of public transport information will be part of planning obligations in relevant qualifying developments.
1.03	Encourage the development of more dedicated cycle (priority) lanes and signalling.	Ongoing. Action in reporting year includes development of cycle ways in several of the Focus Areas.	Earlier activities include improving 17 cycling routes across the AQMA and funding for cycle training Actions also include improvements to Hillingdon Canal Cycle Path and Hanworth Cycle Way improvements.
1.04	Extend provision of more parking for motorcycles, mopeds and bicycles at public sites and new developments.	Ongoing. Double decker cycle parking has been introduced at Hillingdon Station.	Past work has improved parking opportunities at various locations in the Borough, e.g. Hayes and Harlington Station. Also, funding of the Brunel University Student Cycling Champion whose responsibilities include identifying the need for cycle parking. See also 1.07.
1.05	Improve provision for pedestrians.	See 2.01. Also, actions have been taken to improve footpaths in several of the Focus Areas, including the Grand Union Canal, completing the link between Stockley park and West Drayton Station, ahead of the arrival of Crossrail. Improvements have also been made at Hillingdon Circus shopping parade to encourage more walking and cycling.	Various actions to improve pedestrian access and safety have been implemented in the course of the AQAP.

	Action	Progress	Further information
1.06	Introduce more Safe Routes to School throughout the Borough with special regard to the schools within the highest exceedance areas.	Ongoing. Green infrastructure scheme introduced at Early Years Centre in Uxbridge /A40 Focus Area.	All schools in the Borough have travel plans. The use of green infrastructure is also being trialled at Bitwell School. 72 schools have been working with the Council on their school travel plan to try and achieve a level of accreditation for their plans. 39 schools achieved engaged recognition. Of the 38 schools that were able to provide detailed modal shift data - 27 schools showed a positive move away from car use. In July 2015 15 Bronze, 12 Silver and 6 Gold awards were presented. The six schools which have received Gold Accreditation include 4 within the AQMA.
1.07	Ensure Green Travel Plans are a requirement for all businesses (new and existing) employing more than a specified number of people in the Borough.	Ongoing. Brunel Bike scheme introduced. Implementation of the Travel Plans continues to be monitored.	Monitoring of the implementation of development control travel plans across the region is undertaken via WestTrans on behalf of the boroughs. For Hillingdon there are 65 sites with travel plans invoked as planning conditions, 34 of these are currently being implemented as the sites become operational. Brunel University was identified as a major source of Borough traffic. Brunel University Student Cycling Champion funded via WestTrans group. To include route planning, cycle parking and security, bike loans and training. Other highlights for 2015/2016 include: <ul style="list-style-type: none"> • Increase in cycling for a large factory from 3 cyclists in 2012 to 31 in 2015; • Reductions in driving a car alone for employees at an industrial unit from 72% (2014) to 66.7% (2015) accompanied by a 3% increase in cycling and 4% increase in walking and bus use.
1.08	Improve access to, and quality of, public transport travel information on a regional basis both inside and outside the GLA boundary.	Complete	Actions led by TfL. See 1.02.

	Action	Progress	Further information
1.09	Seek to ensure improvements in overall public transport service (facilities, cleanliness, safety, frequency, reliability) across the Borough and West London, and particularly in declared AQ Management Areas AQMAs.	Ongoing.	In 2015, improvements made to bus stop accessibility. Work on all bus stops on 10 routes now completed, including key routes within AQMA. Includes links from Uxbridge to Hayes and Harlington rail station which will increase in importance with CrossRail. Objective to complete all bus stops in the Borough by end 2016.
1.10	Improve the north-south public transport provision in the Borough.	Ongoing. Plans are now in place for a North-South link to be introduced in 2019 (Service 278)	
1.11	Support multi modal travel by further development of public transport interchanges for rail/cycle/bus/walking both within Hillingdon and the West London area.	Ongoing. Brunel Bikes introduced serving the University, student accommodation, and the Hospital.	Various actions have been undertaken in the life of the AQAP, including station access improvements.
1.12	Encourage development of efficient and high quality bus corridors.	Ongoing, see 1.09.	
1.13	Investigate potential for more night buses.	Complete.	Actions led by TfL, with an increase in the number of night buses operating in the Borough over the course of the AQAP.
1.14	Investigate the feasibility of working with relevant stakeholders to subsidise bus, train and underground fares in order to achieve significant modal shift.	Complete.	Recognised that in the current economic climate there is no potential for further subsidies to public transport.

2. Tackling Through Traffic

2.01	Introduce Home Zones/20 mph in residential areas subject to significant amounts of through traffic that should use alternative routes.	Ongoing.	In the course of the AQAP, Home Zones have been introduced in the Borough, informed by data from traffic counters. A freight study was conducted on Cowley Mill Road in response to HGV use, and mitigatory measures introduced.
2.02	Support the West London Transit Scheme project if appropriate.	Complete.	Scheme withdrawn by GLA.
2.03	Ensure the provision of sufficient signage and details of spaces for public car parks.	Ongoing.	New electronic signage in place directing traffic to spaces. Electric charging points also introduced.

	Action	Progress	Further information
2.04	Investigate the creation of Clear Zones.	Ongoing.	Initial feasibility study indicated that this would not be significant benefit in Hillingdon. However, use of parking regulations to control congestion is being revisited, and benefits for air quality will be considered.
2.05	Develop best practice advice to ensure air quality assessments are made for proposals for new transport infrastructure and changes to traffic management.	Complete.	This is now an integral part of the planning process.
2.06	Work in partnership with TfL to implement schemes along the high exceedance corridors designed to smooth traffic flows.	Ongoing.	TfL have identified Focus Areas for improvements in air quality which includes high exceedance corridors such as the A40.
2.07	Improve coordination of road works and provide more effective signing around them.	Ongoing.	
2.08	Investigate use of high occupancy vehicle lanes and freight priority schemes along the major exceedance corridors such as the M4, A4, A40 and A312.	Ongoing.	Actions on the major roads are being taken forward by the Highways England.
2.09	Investigate the use of light rail/tram schemes along other high exceedance corridors such as the A4 and A40.	Complete.	Concluded that in the current economic climate it is very unlikely that funding would be made available for such a significant infrastructure project. However, the potential to expand any similar initiatives led by Heathrow Airport is being monitored.
2.10	Investigate measures such as variable message signing to smooth traffic flows on the HA/TfL routes M4 and surrounding link roads.	Ongoing. Hillingdon has responded to HE consultation, reminding them of the proximity of housing to the M4 and the need to provide an action plan to mitigate problems arising from the Motorway.	Smart motorway proposal being led by Highways England. Hillingdon has considered and responded to initiatives led by Highways England, including raising objection to over-optimistic projections used in modelling.
2.11	Investigate use of speed limits on major roads at the optimal level for NOx and PM10 emissions for the current traffic profile.	Ongoing.	Subject to continuing research by Highways England.
2.12	Identify air quality congestion-related hotspots throughout West London and the appropriate measures for delivering improvement in both congestion and air quality e.g. new access road from the A40 to Ruislip industrial areas.	Ongoing.	Hotspots in Hillingdon have been identified using the new GLA data. Led by TfL. Initial findings of the Hillingdon hotspot project have been incorporated into a proposal being led by TfL.

	Action	Progress	Further information
2.13	Support rail projects that have the potential effect to cut through traffic e.g. CrossRail and extending the Underground system (e.g. Central Line to Uxbridge).	Ongoing.	Hillingdon has responded to all consultations on rail developments affecting the Borough, providing consideration of impacts on air quality.
2.14	Work in partnership to investigate use of fiscal measures, such as road pricing, for reducing traffic on major road networks.	In progress. Hillingdon continues to monitor opportunities.	Limitations on various consultations in connection with Heathrow have meant that this has not been debated in detail. 2014 press release from HAL to say that congestion charging could be considered in the Heathrow area once public transport upgrades are in place.
2.15	Consider establishment of cross-agency regional group to address air quality issues with regards to roads.	Completed.	Heathrow Area Transport Forum rejected measure, but most relevant stakeholders working together on Smart Motorways Management.

3. Promotion of cleaner vehicle technology.

3.01	Develop and implement an Action Plan via the BAA Heathrow Clean Vehicle Programme to make improvements in the Council vehicle fleet with regard to reducing emissions.	Ongoing. See Package 4.	Driver training has been implemented across all council drivers. Vehicle procurement now specifies cleaner vehicles.
3.02	Encourage local businesses and freight operators in Hillingdon to sign up to the Clean Vehicle Programme and develop and implement action plans for reducing emissions.	Ongoing.	Freight audits undertaken.
3.03	Provide training for local authority drivers to minimise emissions, and consider opening training opportunities to other drivers working for businesses in Hillingdon.	Ongoing.	All council drivers were trained. Needs to be considered for future action.
3.04.01	Ensure the implementation of the Idling Vehicles Regulations.	Ongoing. The use of a Public Spaces Protection Order has been widened from the Heathrow Villages to the whole Borough.	Regulations enforced, signage erected as need be. Public Spaces Protection Order has been invoked on the Heathrow Villages to address problems associated with minicab drivers idling whilst waiting to collect passengers from Heathrow
3.04.02	Actively promote the use of the Dirty Diesel Hotline for reporting smoky vehicles spotted in Hillingdon.	Ongoing.	Incorporated into the London No Idling Campaign by TfL.
3.05	Consider the recommendations of the London Low Emission Zone Feasibility Study jointly with the GLA, ALG and TfL.	Completed.	The Council has collaborated with TfL during the set up and operation of the LEZ, for example through consultation process. Hillingdon has also cooperated in planning for the new LEZ.

	Action	Progress	Further information
3.06	Install signs in waiting areas of Council premises, bus garages, coach stations and major leisure venues, etc. advising drivers to switch off engines when stationary.	Stopped. See 3.04.01.	After initial consideration, it was concluded that resource would be better spent on mobile traffic counters.
3.07	Lead the way in trialling new technology, where appropriate, and act as a point of information for businesses and other stakeholders in Hillingdon for cleaner vehicle technologies, national schemes and grant systems for the use of alternative fuels.	Ongoing. Rapid EV charger installed in Uxbridge Town Centre, with public access.	Council has been active in investigation of electric and hybrid vehicles since 2010, including trialling Electric Vehicle audit concluded that charging provision for taxis at Heathrow was insufficient, and T5 chargers should be upgraded to fast charging..
3.08	Participate in the London-wide Vehicle Emissions Testing programme.	Completed.	The Council is interested to participate in any future programme of this type, but measure will not be taken forward until future funding is agreed.
3.09	Investigate the provision of low or zero emission buses for schools within the high exceedance areas.	Completed.	Now linked to Measure 1.06, and specifically the Schools Cleaner Air Zone Project.
3.10	Focusing on areas and corridors of high exceedance within residential areas, investigation into the banning or restricting of traffic, or particular types of traffic, from identified roads.	Ongoing.	Implemented via LEZ on strategic routes, but Borough looking at actions on residential roads (as in the South Ruislip case). Camera monitoring of vehicles in South Ruislip has enforced ban on HGVs in a residential area.
3.11	Investigate the potential for discounts for residents with low emission vehicles in Parking Management Areas.	Completed, but to be revisited under the review of the AQAP.	Concluded that this was not possible under the current economic climate.
3.12	Develop sub-regional Bus Quality Partnerships focussed on addressing the contribution of buses and coaches to emissions.	Completed.	This measure was superseded by the LEZ.
3.13	Work in partnership for the provision of low emission buses in the West London/Heathrow region.	Ongoing,	Council requested that this be a specific mitigation measures in the event that the Cranford Agreement is ended.
3.14	Ensure freight developments in the West London area are subjected to an air quality assessment before implementation.	Completed.	Developments are now subject to detailed consideration of air quality impact as a matter of routine.
3.15	Work with the West London Freight Quality Partnership to develop a Freight Strategy to include reducing the air quality impact of freight maximising opportunities to move freight from road to other modes e.g. canals.	In progress. Hillingdon continues to monitor opportunities.	Baseline freight map of West London produced. Major signage and HGV routing project undertaken. Hillingdon has also looked at HGV routing around Cowley Mill industrial estate.

	Action	Progress	Further information
3.16	Facilitate the uptake and use of alternative fuels, including water-diesel emulsion. This should include development of appropriate alternative refuelling infrastructure where necessary e.g. charging points for electric vehicles.	Ongoing. Hillingdon electric vehicle project introduced following a successful MAQF regional project. 10 businesses, large and small, involved, providing experience of electric vehicles, and associated costs and benefits. Key recommendation from the trial was for the development of a wider electric vehicle charging infrastructure across the Borough with public access. Information on electric vehicles and charging networks has been provided to car dealers in the Borough.	Earlier work includes best practice review of emissions technologies for cab companies, installation of EV charging points and trialling vehicles operating with alternative fuels. The council has funded maintenance of EV charging points. The council is also signed up to FORS (Fleet Operator Recognition Scheme).
3.17	Lobby national government to provide incentives through the fuel duty system for cleaner fuels, including further vehicle excise duty reductions for retrofitting to smaller vehicles and increased retrofitting grants.	Ongoing.	Taken forward by the West London Alliance, recognising the need for a more holistic approach.
3.18	Work to ensure fiscal encouragement of the adoption of low and zero emissions vehicles through the provision of discounts when entering any proposed LEZ or Congestion charging zone.	Completed.	Taken forward by TfL.
3.19	Promote best practice in terms of emissions management with the train operators, the Strategic Rail Authority and Network Rail.	Completed.	Electrification of the Great Western line will lead to a significant reduction in emissions from the railway in the next decade. No further action required.

4. Measures specific to Heathrow Airport

4.01	Continue to oppose any further expansion at Heathrow that leads to negative air quality impacts.	Ongoing. The council continues to liaise with Heathrow Airport, and continues to lobby government, etc. against any expansion of Heathrow that would lead to worsened air quality.	Analysis and lobbying activities have been carried out continually through the life of the AQAP.
4.02	Develop system for auditing the ATM limit and parking provisions for operational T5.	Ongoing.	The Council continues to keep developments in this area under review. Annual report supplied as part of T5 planning conditions with regard to ATM limit.
4.03	Audit all air quality conditions for the construction phase of Terminal 5.	Completed.	PM levels continue to be monitored around T5, NO2 also monitored at these sites..

	Action	Progress	Further information
4.04	Pursue the retaining of the T5 related air quality monitoring network post T5 construction.	Completed.	2011-2020 Heathrow AQ Strategy commits to continuation of funding for LHR2, Oaks Road, Harlington sites for NO2, particles and (Harlington only) ozone. Monitoring results to be made available with 24 hours on Heathrow AirWatch website. Highways England monitoring traffic levels linked to Heathrow operation. ATCs in place on Borough roads to monitor Heathrow traffic.
4.05	Quantify and pursue emission reductions for all new on-airport development.	Ongoing.	Enforced through the planning process, which also covers off-airport development including some linked to Heathrow (e.g. developments of hotels and B&Bs).
4.06	Evaluate best practice from European and International airports with regard to the minimisation of air quality impacts and assess feasibility of application at Heathrow.	Ongoing.	Hillingdon part of a European group (Frankfurt, London, Amsterdam, Paris, FLAP group) exchanging information on best practice.
4.07	Work with National Government to ensure the use of all relevant fiscal measures to reduce emissions from Heathrow in order to achieve the 2010 EU limit.	Ongoing.	Hillingdon continues to lobby government. Potential for congestion charging came out of the Airports Commission discussion on Heathrow.
4.08	Assess the potential to set an emissions cap for Heathrow.	Completed.	Concluded that there is no willingness by Heathrow Airport or central government to pursue this option. Such a cap is in place at Zurich.
4.09.1	Assess the potential to use landing emissions charges scheme to create revenue stream for public transport improvements.	Ongoing.	Council continue to lobby for this option, though levies from car parking do go to public transport improvements.
4.09.2	Introduce differentiated landing charges at a level that would force cleaner engine technology.	Ongoing.	Differentiated landing charges are in place, though it is unclear whether this is at a level that encourages change.
4.10	Audit progress on the BAA Heathrow Air Quality Action Plan (2001-2006).	Ongoing.	Hillingdon continues to monitor progress on Heathrow Airport's air quality action plans (including developments since the 2001-6 plan).
4.11	Review air quality monitoring regime at Heathrow and identify potential gaps.	Completed.	The monitoring system at Heathrow has been kept under review by Hillingdon, and additional monitors have been installed and maintained as necessary.
4.12	Maintain production of externally audited Emissions Inventory on bi-annual basis.	Ongoing.	Heathrow Airport has continued to produce the emissions inventory. It continues to be externally

	Action	Progress	Further information
			audited.
4.13	Identify the areas where the existing BAA 5 year Action plan can be strengthened.	Ongoing.	Hillingdon has maintained contact with Heathrow Airport throughout and provided comment on plans as appropriate. Heathrow has published its 'Blueprint for reducing emissions' and 'Reducing traffic: a new plan for public transport'.
4.14	Pursue quantification of measures in the BAA Air Quality Action Plan and Surface Access Strategy in terms of air quality impacts.	Ongoing.	Hillingdon continue to comment on plans from Heathrow and have pushed where necessary for quantification of targets and their effects (for example on modal shift).
4.15	Assess feasibility of Congestion/Access Charging at Heathrow to reduce overall travel movements to the airport.	Ongoing. The revised draft Airports National Policy Statement released in 2017 also states that charging may be necessary.	Hillingdon continue to lobby on this issue. The Airports Commission has stated that any expansion of Heathrow may require congestion charging to be put in place.
4.16	Assess feasibility of a Heathrow specific LEZ to reduce emissions and accelerate take up of cleaner vehicle technology.	Ongoing. Several schemes have led to an increase in electric vehicle uptake at the airport.	Heathrow is considering implementation of ULEZ on the airport.
4.17	Assess appropriate target for modal shift to maximise air quality improvements.	Ongoing. 43.3% of passengers using public transport in 2017, compared to 39.1% in 2016.	Heathrow has kept the target for staff public transport access at 40%. This is supported by additional actions (see left). It is hoped that the introduction of CrossRail will increase these figures, though more needs to be done. A bespoke app (the Heathrow commuter travel app) has been developed to monitor and incentivise cycling to the airport.
4.18	Define programme for the establishment of code of practice for airlines best operating practice to maximise reduction of emissions.	Completed.	Programme is defined under Actions 2.1 to 2.7 of the Heathrow Air Quality Strategy 2011-2020.
4.19	Develop best practice guidelines to ensure air quality impact assessments are integral part of relevant transport and transport infrastructure proposals, and that appropriate mitigation measures are inclusive part of any scheme.	Completed.	AQ impact assessments are part of all relevant transport related developments.
4.20	Assess feasibility of specifying emissions criteria for Heathrow taxis, buses and coaches using the Central Bus Terminal, and car hire shuttles, hopperbuses etc.	Completed.	Completed via the LEZ. Heathrow is also considering implementation of ULEZ on the airport.

	Action	Progress	Further information
4.21	Ensure the minimisation of the air quality impact of freight deliveries to and from Heathrow is a key objective of the West London Freight Quality Partnership (WLFQP).	Ongoing. Sustainable Freight Group establishws.	Freight deliveries are addressed via the BAA Clean Vehicle Programme and the Freight Consolidation Centre on-airport. Expansion of the airport would increase movements and so this issue must be kept under consideration.
4.22	Assess the use of bus priority, guided buses and high occupancy vehicle lanes in the Heathrow area.	Ongoing. Hard shoulder running has been approved for Junctions 3 to 12 and will be implemented.	Hillingdon continues to lobby for similar opportunities to be adopted. It is notable that the priority bus lane on the M4 has been discontinued over the course of the AQAP. Hard shoulder running proposed by Highways England, which will bring traffic closer to residential properties, as well as increasing traffic volumes.
4.23	Assess the feasibility of a Park and Ride scheme specifically for Heathrow.	Ongoing. See 4.17.	The Council has lobbied on this issue, but it has not been taken up by the airport operator.
4.24	Assess the health impact of Heathrow Airport and associated activities.	In progress. This issue has been recognised by the Hillingdon Health and Wellbeing Board.	Hillingdon has sought to engage with the Airports Commission for a thorough health impact assessment to be undertaken in the context of the 3rd Runway proposal. This request has not been taken up.
4.25	Lobby Central Government to pursue more stringent emission standards for plant, aircraft and airside vehicles.	Ongoing. 59% of aircraft now CAEP6 compliant in 2017, up from 57.6% in 2016.	
4.26	Explore feasibility of reducing fares on the Heathrow Express.	Ongoing.	Initially concluded that this is not a possibility under the current economic climate. To be led by the airport but may be considered if expansion is given the go-ahead.
4.27	Pursue relevant organisations to prioritise public transport provision to Heathrow, particularly rail links to the west, east and south.	Ongoing. See 4.17.	Hillingdon continues to lobby for improved public transport access to Heathrow, with some success.
4.28	Explore feasibility of an airport passenger tax, ring-fenced for increased public transport.	Completed.	Not adopted, but Hillingdon will continue to lobby if opportunity arises.

5. Measures Concerning Local Industries and Other Businesses

	Action	Progress	Further information
5.01	Support opportunities for Combined Heat and Power where appropriate within the Borough.	Ongoing.	Biomass use is discouraged because of its AQ impact, though Hillingdon now has a framework in place whereby schemes can be assessed for air quality impact, providing developers with the certainty that they need with respect to planning requirements when making applications.
5.02	Introduce (within reason) progressively stricter conditions on Part A processes, including incineration processes, especially when located within high exceedance areas or where the impact is predicted to be within high exceedance areas.	Ongoing.	Additional monitoring in place near specific sites. Heathrow Air Quality Strategy 2011-2010 Action 2.20 commits to conducting a best available techniques analysis for all major boiler plant, and then to seek funding for application, as appropriate, on a 'suitable timescale'.
5.03	Work with the Environment Agency to improve public dissemination of industrial pollutant emissions data and other relevant information, for example on performance against permit conditions.	Completed.	
5.04	Discourage the use of bonfires on all industrial sites.	Completed.	Use of Best Practice Guidance advised on all relevant planning applications
5.05	Adopt best practice strategy for all proposed demolition and development projects. This will include the use of low emission vehicles and equipment and the use of dust minimisation techniques.	Completed.	Use of Best Practice Guidance advised on all relevant planning applications
5.06	Ensure continued regulation of part B processes and maintenance of part B register. Ensure register is available on-line.	Ongoing.	All inspections carried out by external contractors, reports given to LA and all information available via specialised website including online application.
5.07	Investigate introduction of Air Quality Action Plans for local industries, including those currently un-regulated under EA.	Completed.	Current resources do not permit this to extend beyond statutory actions.
5.08	Consider introduction of Environmental Award system for local industries and businesses.	Stopped.	Concluded that benefits of this measure would not be justified by resource demanded.

	Action	Progress	Further information
5.09	Encourage businesses to participate in environmental management schemes and to continue to improve environmental performance.	In progress.	Original idea for this measure has been adapted over time to make better use of the planning system, e.g. via S106 agreements. Improvements to Northwood Hills Town Centre and Hayes Town Centre have included extensive tree planting schemes along the road corridors. There is a current consideration for the inclusion of the use of green infrastructure for improving air quality and protect sensitive receptors from sources of emissions to be included as an objective within landscaping planning conditions.

6. Improving Eco-efficiency of current and future developments, including Council properties

6.01	Provide a consolidated platform for advising businesses and the public of the risks of air pollution, ways of reducing pollution, and campaigns such as Bike to Work Week, combining information from various Council departments and other bodies.	Ongoing. <i>The planning system is being used, particularly around the Focus Areas, to ensure that new developments meet the required criteria in line with the current London Plan, in particular that development does not lead to deterioration of current poor air quality.</i>	Over the life course of the AQAP, advice has been provided by various means, including via AirText, Green Roadshow, Go Green event. Public Health teams are integrated into the Council's actions.
6.02	Work with existing buildings and housing stock to secure improvements in emissions.	Ongoing.	Ongoing campaign to promote energy efficiency via several events throughout the year Energy efficiency awareness campaigns are underway for local residents. Establishment of the Green Doctor scheme in Hillingdon
6.03	Ensure continued use of existing mechanisms such as Section 106 agreements for improvements in air quality.	Ongoing. <i>S106 Agreements continue to be used. They are now calculated using Defra's damage cost data.</i>	
6.04	Review and update Air Quality Supplementary Planning Guidance when appropriate.	Ongoing.	Materials revised as and when appropriate. Hillingdon will use the new Mayor's template to update the current Hillingdon AQSPG.
6.05	Quantify cumulative effects of new developments within AQMA.	Ongoing.	Local Plan 2 is considering cumulative impact for Hayes Town Centre of transport.
6.06	Develop supplementary planning guidance for sustainable design and construction.	Completed. <i>24 locations in the AQ Focus Areas have been planted with trees, most in the high UTAQ range.</i>	
6.07	Raise awareness of sustainable waste management practices.	Completed.	

	Action	Progress	Further information
6.08	Development of West London Air Quality SPD to ensure consistency across Borough boundaries, explore opportunities for joint Section 106 agreements.	Stopped.	Detailed analysis once the AQAP was in place concluded that the benefits of this measure were too limited for the measure to be taken forward.

7. Actions to be Taken Corporately, Regionally and in Liaison with the Mayor

7.01	Ensure that the London Development Framework, Borough Transport Strategy the Community Plan and future corporate strategies incorporate the Borough air quality action plan and local air quality strategy measures where appropriate.	Ongoing. Via West Trans, Strategic Bus Corridors project is considering corridors that would benefit from bus prioritisation.	Policies are regularly checked, as they are published for consultation or in final form, for consistency with the Borough's AQAP. The Local Plan Part 2 has been through the process of public consultation and is now awaiting examination in public. Account is taken of the need to improve air quality.
7.02	Develop an environmental management system for Hillingdon Borough Council.	Not started	
7.03	Establish an Environment Coordination Office for more effective integration of actions to improve environmental performance within and outside the Council.	Complete.	Alternative approach being followed for this measure, with good coordination between (e.g.) air quality, climate and transport, planning officers.
7.04	Implement an integrated procurement strategy so that purchase of goods and services is evaluated against London sustainability targets. This to include support to environmental industries in London, where appropriate.	Ongoing.	Procurement policy for fleet vehicles in place. Requirement for relevant Green Spaces contractors to use electric vehicles. Electric vehicle purchased for project and events team.
7.05	Provide air quality information to interested parties and link with other health initiatives.	Ongoing.	AirText regularly promoted at events around the Borough, residents and businesses kept informed of developments on air quality.
7.06	Work with the London Sustainable Distribution Partnership to implement infrastructure for effective and integrated distribution of goods in London.	Stopped.	Initial assessment revealed this to be low priority for Hillingdon.
7.07	Work in partnership to ensure consistency of Action Plan measures and explore all opportunities for regional measures for reducing emissions.	Ongoing.	Collaborated with GSK and Heathrow Airport on MAQF-funded study focussing on integration of employment opportunities with key transport hubs. 10 publicly available charging points installed and maintained in the Borough during the reporting period.

	Action	Progress	Further information
7.08	Development of regional Air Quality Strategy to tackle cross-boundary issues and include all National Air Quality Strategy pollutants, climate change etc.	Completed.	Hillingdon has liaised with GLA and with neighbouring local authorities in and outside London through the course of the Action Plan. However, the measure is superseded by TfL now looking at transport and air quality strategy in West London.
7.09	UK Government to actively support air quality improvement in Hillingdon.	Ongoing.	Hillingdon has continued to respond to all national and subnational consultations relevant to air quality in the Borough, and has also engaged with the European Commission to highlight issues faced by local authorities with airports. Responded to consultation on the Draft UK Air Quality Plan in September 2015.

8. Action Plan Management

8.01	Develop and maintain management system for implementation of the plan.	<p>All actions in this package are ongoing, with systems fully in place to implement the AQAP.</p> <p>Update of the AQAP is currently underway. Recommendations have been made by the Residents and Environmental Services Policy Overview Committee (RESPOC) via a series of witness and evidence sessions. Draft recommendations for inclusion of specific measures have been made. This forms an important part of the consultation on the revised plan.</p> <p>A study has been commissioned to assess the need to extend the AQMA to areas that are currently outside it. This includes pollution modelling and traffic studies.</p>	<p>Evidence regarding all measures listed here is provided through the data presented in this progress report, and the reports issued in previous years. Plans are in place for the revision of the AQAP in 2016/17.</p>
8.02	Identify and secure all potential funding for Action Plan initiatives.		
8.03	Maintain, and where necessary expand, the existing air quality monitoring network.		
8.04	Review and assessment of air quality in line with Defra guidance.		
8.05	Prioritise measures, providing a schedule for implementation.		
8.06	Provide progress report to Defra on annual basis.		
8.07	Review and adapt the action plan according to opportunity and circumstance.		
8.08	Maintain consultation process to disseminate information on progress against defined targets to other stakeholders.		
8.09	Examine potential for the development of regional action plan on cross boundary issues.		

6 Planning Update and Other New Sources of Emissions

6.1 Planning applications

Table L provides a summary of planning applications examined in the reporting year, as required by the GLA. More detailed information on applications is given in Appendix C.

Table L. Summary of air quality status of planning applications in the reporting year.

Condition	Number
Number of planning applications where an air quality impact assessment was reviewed for air quality impacts	38
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	8
Number of developments required to install Ultra-Low NO _x boilers	6
Number of developments where an AQ Neutral building and/or transport assessments undertaken	17
Number of developments where the AQ Neutral building and/or transport assessments not meeting the benchmark and so required to include additional mitigation	10
Number of planning applications with S106 agreements including other requirements to improve air quality	36
Number of planning applications with CIL payments that include a contribution to improve air quality	0
NRMM: 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 IIIB of the Directive and/or exemptions to the policy.	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.	5

6.2 New or significantly changed industrial or other sources

No new sources identified.

7 Future actions and challenges

7.1 Update on revision of the AQAP

In line with the GLA guidance, the review of AQ Action Plan is currently underway. The Resident's and Environmental Services Policy Overview Committee (RESPOC) has, via a series of witness and evidence sessions, undertaken a review of actions that could be taken to improve the air quality. Draft recommendations for inclusion in the revised Air Quality Action Plan have been made and the Final Scrutiny Report is awaiting consideration and approval by the Cabinet. Relevant recommendations will then be incorporated within the updated Air Quality Action Plan. This forms an important part of the scrutiny and consultation on the emerging Air Quality Action Plan. It is anticipated that the Air Quality Action plan will undergo public consultation over the next few months and be returned to Cabinet for final approval and adoption by the end of 2018.

7.2 Future challenges

7.2.1 Construction of HS2

The construction phase within Hillingdon is due to start in 2019. Whilst conditions have been sought in regard to the use of the best available technology for construction vehicles, there will still be significant increases in HGV traffic in one of the heavily congested Air Quality hotspots, the A40/Swakeleys Road Focus Area. Monitoring locations have been agreed with HS2 and the monitoring programme is in its early stage of data collection. This will enable a baseline to be established prior to construction starting.

7.2.2 Expansion of Heathrow North-west runway

The Government's support for expansion of Heathrow Airport by means of a north-west runway has been subject to consultation via an Airports National Policy Statement (NPS). The original draft NPS was published for consultation in February 2017, due to the lack of important information a revised consultation was published in October 2017.

It is the Council's firm opinion that the Government has not demonstrated that the expansion of Heathrow Airport can be undertaken without affecting the UK Government's ability to achieve compliance with the Air Quality Directive. Details below from the Council's response to the revised draft NPS demonstrate the enormity of the problem;

The area outlined for expansion with the Heathrow Northwest Runway, as presented in the revised draft Airports NPS⁶ is one where air pollution levels are worsening not improving. This is described in the baseline conditions where it is shown that emissions from both aircraft movements and from road vehicles have increased in the last two years. At roadside locations in the vicinity of the airport this shows increases in the contribution to NOx concentrations from aircraft movements from 14.3% (2013) to 17% (2015) and from road transport from 50.8% (2013) to 64% (2015).

⁶ See revised Draft Airports NPS, Annexes A and B

The Air Quality Report details the accelerated early demand in capacity with the runway opening year of 2026 predicted with 723,990 air transport movements (ATMs) per year, an increase from the original Airports Commission (AC) estimate of 567, 832 ATMs per year.⁷ This brings accelerated highways trips generation – i.e. more polluting road traffic - with an overall growth in total highways daily trips in 2026 of 43,306, from the previous AC estimate of 11,881 daily trips.

The revised AoS Air Quality chapter demonstrates that the risk of Heathrow Northwest runway scheme affecting compliance increases the earlier the opening year, with the risk high in 2026 and medium in 2030. The construction phase will result in the greatest number of properties potentially affected by elevated dust and particulate matter,⁸ the operational phase will impact on over 121,000 people⁹. The Heathrow Northwest Runway option has the potential to bring about significant negative air quality impacts.¹⁰

The Council has raised its concern in regards to the local air quality impacts at every opportunity including submitting evidence and being a witness at the Transport Select Committee Inquiry, submitting evidence to the 4 Parliamentary Committee Inquiry on Air Quality.

⁷ 2017 Plan Update To Air Quality Re -Analysis, para 8.9.35

⁸ 2017 Plan Update To Air Quality Re -Analysis, para 8.9.58

⁹ 2017 Plan Update To Air Quality Re -Analysis, para 8.9.46

¹⁰ 2017 Plan Update To Air Quality Re -Analysis, para 8.9.64

Appendix A Details of Monitoring Site QA/QC

A.1 Automatic Monitoring Sites

Automatic monitors within Hillingdon are operated as part of the Borough 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.

All TEOM data from measurement of particulate matter have been converted to gravimetric equivalent using the VCM method and BAM data have been corrected by applying a factor of 0.8333. All data are reported at ambient temperature and pressure.

A.2 Diffusion Tube Quality Assurance / Quality Control

Hillingdon uses Gradko International for their diffusion tube analysis. These are prepared using the 50% TEA in acetone method. The bias adjustment factor for Gradko in 2017, obtained from the national bias adjustment spreadsheet (based on 20 studies) is 0.99. Only studies which provided good precision were used in the determination of the adjustment factor. Coefficient of variation (CV) of diffusion tube replicates is considered Good when the CV of eight or more periods is less than 20%, and the average CV of all monitoring periods is less than 10%.

Whilst co-location studies have been carried out within Hillingdon, the use of a national bias adjustment factor is in line with the approach taken in recent progress reports published by Hillingdon, ensuring a consistency in reported results.

A.3 Adjustments to the Ratified Monitoring Data

Data capture was higher than 75% of the full calendar year (more than 9 months), and hence no annualisation calculations were required for 2017 data.

A.4 Distance Adjustment

Where an exceedance is measured at a monitoring site which is not representative of public exposure, the procedure specified in LLAQM.TG(16) to estimate the concentration at the nearest receptor was used, wherever relevant.

Appendix B Full Monthly Diffusion Tube Results for 2017

Table N. NO₂ Diffusion Tube Results

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean NO ₂												Annual mean – raw data ^c	Annual mean – bias adjusted ^d
			Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec		
HD31	76.2	41.5	44.5	33.7	39.2	42.8	45.8	37.7	38.2	73.7	45.0	46.3	76.2	41.5	47.0	46.6
HD31	66.3	40.9	47.3	32.5	37.1	42.3	47.8	25.0	45.1	71.7	45.1	45.9	66.3	40.9	45.6	45.1
HD31	50.0	41.8	44.5	33.9	38.4	43.1	45.2	41.5	43.6	62.8	45.3	43.9	50.0	41.8	44.5	44.1
HD43	44.9	34.5	41.7	missing	41.3	44.4	46.2	28.6	9.4	63.9	44.9	45.5	44.9	34.5	40.5	40.1
HD46	74.3	38.2	38.4	36.7	37.3	36.5	missing	missing	46.3	63.7	47.5	51.5	74.3	38.2	47.0	46.6
HD46	68.1	37.8	46.5	39.8	38.3	37.7	missing	missing	41.5	63.8	47.3	52.4	68.1	37.8	47.3	46.8
HD47	42.5	20.1	25.4	29.7	25.8	24.6	24.6	19.4	29.4	36.5	33.7	29.7	42.5	20.1	28.5	28.2
HD49	37.7	24.9	25.6	18.7	17.5	18.5	14.3	16.4	23.9	62.6	30.9	30.0	37.7	24.9	26.7	26.5
HD50B	50.3	30.6	33.3	28.8	28.8	35.6	35.1	23.9	42.2	46.6	41.5	40.4	50.3	30.6	36.4	36.1
HD51	46.0	31.1	33.7	26.4	24.4	28.3	30.5	26.9	33.5	45.0	40.0	33.3	46.0	31.1	33.3	32.9
HD52	42.3	30.1	37.9	30.3	26.6	29.8	28.5	29.4	36.5	46.4	42.6	31.9	42.3	30.1	34.4	34.0
HD53	60.9	42.3	19.9	40.3	34.4	44.9	44.0	30.3	53.7	63.8	64.3	53.5	60.9	42.3	46.0	45.6
HD55	74.3	34.5	36.9	33.1	missing	missing	34.7	27.0	44.1	63.2	47.2	42.3	74.3	34.5	43.7	43.3
HD56	41.4	31.1	34.0	27.5	24.5	28.1	missing	21.9	34.5	44.8	45.7	37.4	41.4	31.1	33.7	33.4
HD57	46.1	33.1	36.5	34.3	29.6	36.0	36.8	26.2	39.4	63.1	65.2	31.7	46.1	33.1	39.8	39.4
HD58	80.9	43.7	43.9	34.5	19.2	38.6	40.8	30.2	51.1	72.2	72.1	49.0	80.9	43.7	48.0	47.5
HD59	48.7	28.6	33.0	27.5	28.0	25.8	28.8	26.9	32.7	44.5	35.7	35.0	48.7	28.6	32.9	32.6
HD60	37.1	25.2	27.9	25.2	21.5	22.4	24.7	24.2	29.5	38.3	32.4	missing	37.1	25.2	28.0	27.8
HD61	47.7	30.6	37.0	32.4	30.1	29.8	31.7	16.9	32.2	47.6	41.4	34.1	47.7	30.6	34.3	34.0
HD65	missing	28.0	33.9	25.5	24.8	24.6	30.1	26.7	27.0	44.3	36.1	32.0	missing	28.0	30.3	30.0
HD67	39.8	22.0	28.4	24.8	19.1	22.0	24.5	25.7	27.6	35.6	31.7	25.4	39.8	22.0	27.2	26.9
HD70	33.2	18.3	27.7	17.8	17.2	15.3	24.7	12.9	23.2	27.5	23.4	26.4	33.2	18.3	22.3	22.1
HD73	42.4	26.9	24.5	20.5	22.4	20.6	22.7	15.8	30.8	38.9	34.7	35.6	42.4	26.9	28.0	27.7

Site ID	Valid data capture for monitoring period % ^a	Valid data capture 2017 % ^b	Annual Mean NO ₂													
			Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Annual mean – raw data ^c	Annual mean – bias adjusted ^d
HD74	34.7	20.6	35.1	26.3	22.5	20.6	23.6	15.9	29.5	34.9	3.3	28.8	34.7	20.6	24.6	24.4
HD75	36.9	23.7	28.1	23.2	22.9	22.8	16.3	17.4	35.2	35.6	32.5	31.8	36.9	23.7	27.2	26.9
HD200	85.8	35.9	34.8	34.0	33.1	34.4	35.5	32.7	40.0	62.9	43.2	44.8	85.8	35.9	43.1	42.7
HD202	45.7	missing	30.5	22.8	26.8	26.7	30.0	22.7	39.3	41.8	42.0	35.6	45.7	missing	33.1	32.7
HD203	84.8	42.6	52.5	missing	39.0	46.2	46.4	36.8	52.6	44.3	missing	missing	84.8	42.6	49.5	49.0
HD204	39.7	31.7	39.0	34.6	30.8	31.1	33.7	32.3	37.6	63.1	41.4	32.9	39.7	31.7	37.3	37.0
HD205	51.0	35.6	39.3	33.5	33.4	36.6	37.2	32.9	35.5	47.7	37.5	39.0	51.0	35.6	38.3	37.9
HD206	47.1	29.4	33.6	26.1	27.0	26.1	29.7	missing	31.8	63.1	38.0	34.2	47.1	29.4	35.1	34.7
HD207	missing	27.3	33.0	28.9	29.2	27.4	missing	missing	38.1	47.7	39.7	31.3	missing	27.3	33.6	33.3
HD208	missing	26.4	27.6	25.0	22.9	21.8	25.3	19.0	32.8	32.3	38.1	32.4	missing	26.4	27.6	27.3
HD209	42.6	missing	36.4	27.9	24.1	27.0	27.7	24.8	missing	missing	42.2	39.0	42.6	missing	32.4	32.1
HD210	67.8	34.8	44.3	missing	37.3	40.1	43.1	29.3	48.8	63.5	48.0	48.1	67.8	34.8	45.9	45.5
HD211	44.1	25.5	47.5	31.0	33.4	30.6	31.8	21.7	36.2	40.7	34.4	37.7	44.1	25.5	34.5	34.2
HD212	66.0	31.4	38.7	36.7	32.9	34.5	33.5	missing	41.9	46.1	41.0	41.8	66.0	31.4	40.4	40.0
HD213	73.9	36.7	44.1	34.3	43.9	34.3	39.7	28.1	48.9	63.1	64.7	41.5	73.9	36.7	46.1	45.6
HD214	93.6	47.8	54.4	38.7	21.0	45.9	47.7	34.0	44.2	72.9	70.6	53.1	93.6	47.8	52.0	51.5
HD302	48.5	28.4	32.2	25.5	29.2	27.3	31.1	22.5	39.6	47.0	42.1	36.8	48.5	28.4	34.2	33.8
HD401	43.9	25.8	27.7	28.2	24.1	22.0	21.5	20.0	31.4	40.7	34.7	36.4	43.9	25.8	29.7	29.4
HD402	51.1	31.1	39.1	30.4	33.7	30.5	31.6	25.6	40.2	46.1	40.3	32.4	51.1	31.1	36.0	35.7

Exceedance of the NO₂ annual mean AQO of 40 µg m⁻³ are shown in **bold**.

^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 Means were “annualised” in accordance with LLAQM Technical Guidance, where valid data capture was less than 75%.

^d National bias adjustment of 0.96 was applied to the data

missing=no data

Appendix C Details of planning applications for 2017 – selected sample per Focus Area

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
HAYES FOCUS AREA				
Planning Ref	1331/APP/2017/1883			NO
FORMER NESTLE FACTORY NESTLES AVENUE HAYES Part demolition of existing factory buildings and associated structures, and redevelopment to provide 1,386 dwellings (Use Class C3), office, retail, community and leisure uses (Use Class A1/A3/A4/B1/B8/D1/D2), 22,663sq.m (GEA) of commercial floorspace (Use Classes B1c/B2/B8 and Data Centre (sui generis)), amenity and playspace, landscaping, allotments, access, service yards,	The development is in an identified GLA Air Quality Focus Area where pollution levels are above safe limits and population exposure is high. The Mayor of London expects boroughs to prioritise actions to improve air quality in these areas. The air quality monitoring station at the junction of North Hyde Gardens/North Hyde Road has registered levels of pollution above limit values since installation over 5 years ago. The demolition and construction phases will occur in close proximity to existing receptors over a prolonged time period. A quantified assessment of the impacts has not been	More detail is required in relation to the major and moderate adverse impacts on existing residential roads such as Harold Avenue and the schemes that will be applied to reduce these impacts. Mitigation measures are described as could include green planting/walls or exposure reduction methods with a suitable mitigation strategy to be agreed with local authority. However, the provision of a quantified mitigation strategy which demonstrates how the harm caused will be mitigated should form a part of the air quality assessment provided to support the planning application; in addition, before any mitigation	Extensive work was undertaken to evaluate the potential reductions achieved by a list of measures offered by the developer to reduce NOx emissions within the area of influence of the proposal. The list of offered mitigations offered by the developer included: a) proposed highways mitigation works to be undertaken to improve the junction capacity and reduce congestion: North Hyde Road / Station Road – changes to signal staging. North Hyde Road / Harold Avenue – introduction of a right turn refuge in the centre of North Hyde Road. Dawley Road / Blyth Road roundabout – localised widening improvements. Dawley Road / Botwell Common Road – localised widening improvements. b) In addition, the following monetary contributions are proposed: £475,000 contribution to increase bus capacity; £345,000 contribution to the delivery of a multi-modal spine along Nestles Avenue, allowing buses to run immediately adjacent to the site; A contribution of £1 M towards capacity improvements at the Bulls Bridge Roundabout; A contribution towards further pedestrian and cycle improvements. c) A Residential Travel Plan with the following 5 year interim targets: To reduce the modal split proportion of car trips by 10% To increase the modal split proportion of pedestrian trips by 3% and cycle trips by 2%. To increase the modal split proportion of public transport trips by 5%. d) Industrial Travel Plan - A Framework Workplace Travel Plan (WTP) with the following 5 year interim targets: To reduce the modal split proportion of car trips by 10%	Transport

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>associated car parking and other engineering works.</p>	<p>provided for the pollutants of concern (NOx and PM). The local authority would expect a full monitoring strategy and action plan to protect existing residents to accompany this stage of the development; A precautionary approach has not been taken, the emission factors used for the road traffic emissions are over-optimistic, including the projection for future years, the assessment has not presented a worse-case scenario; The assessment states it is not air quality neutral for transport emissions, it is 66% above the benchmark requirement of the Mayor's SPG. The impact assessment has been undertaken in relation to the existing use of the application site. This is considered unsuitable in this instance given the fact that a) the application</p>	<p>strategy is discussed with the Local Authority, demonstration of a clean by design approach should be presented to the LA as part of the planning application. It is felt that the design is not good enough to reduce harmful emissions to the atmosphere. Both traffic and energy emissions can be considerably reduced.</p>	<p>To increase the modal split proportion of pedestrian trips by 4% and cycle trips by 4%.</p> <p>To increase the modal split proportion of public transport trips by 2%.</p> <p>e) Industrial Development Vehicle Emissions - As a minimum, the strategy will demonstrate that the HGV fleet composition associated with the operation of the site will have Euro VI emission standards. The strategy would also propose how future Euro emission standards will be taken into account. In the instance that the proposed Euro VI fleet composition is not viable in the opening year of the development, the strategy will present a clear plan for the fleet update over the subsequent 24 months. Where staff travel by car, encouragement will be provided for staff to use Euro 4 petrol cars or Euro 6 diesel cars or cleaner vehicles.</p> <p>The development as submitted does not comply with London planning Policy 7.14 Improving air quality, which requires proposals to be at least 'air quality neutral' and not lead to further deterioration of existing poor air quality. Therefore, it was required that a financial contribution to enable the Local Authority to ensure provisions are made to reduce emissions from the development, of the amount of £1,305,394.</p> <p><i>Calculation of final S106 Contribution – Air Quality</i> The total NOx Emissions associated with the residential section of the scheme amounts to 2.7 tonnes per year. This value is calculated based on the residential usage of 800 parking spaces and residential traffic in the area, calculated using Defra's Emission Factor Toolkit v8. Contributions are calculated in accordance with the Interdepartmental Group on Costs and Benefits (IGCB), guidance, which sets out the following: Change in emission (tons per year) (2.7) x 5 (years) x £ £77,526, (cost per tNOx), with for each subsequent year, an uplift of the damage cost values by 2% per annum. Which equates to £1,305,394.</p> <p>From the list offered above, measures which benefit was quantifiable in terms of predicted NOx emission reduction were considered for further analysis. Estimated NOx reductions were calculated for</p> <ol style="list-style-type: none"> 1) An achievement of a 10% reduction in vehicular movements as a result of a successful implementation of the travel plan 2) The removal of an old bus from the road network with the inclusion of a 	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	<p>site is within and Focus Area which has more stringent criteria for impact assessment b) there is the need to safeguard the existing population health; c) the assessment is not neutral. There are concerns in regards to the specification of the energy centre. The energetic output of two smaller CHP units (maximum size 230kwe) is considered not sufficient for the supply required; the applicant is asked to consider a single larger turbo charged unit fitted with a selective catalytic reduction converter. The energy assessment suggests the use of two smaller units instead of one larger more efficient unit due to this mitigation technology being too expensive. The local authority would expect a development within an air quality focus area to be demonstrating a best</p>		<p>clean bus in the 278 bus route</p> <p>3) Reduction of congestion in the local road network as a result of Bulls Bridge offered improvements</p> <p>Calculations were based on proposed 2021 opening year and proposed 2023 Bulls Bridge expected emission reduction from full implementation of the scheme. Whereas the consultees cannot offer at this point a full evaluation of the benefits of the scheme on local air quality (this can only be ascertained after the modelling work is concluded), it is reasonable to accept the assumptions made in the EFT set up proposed given the time scales planned and the design of the scheme. To note that the full cost of the Bulls Bridge improvement works is higher than the financial contribution of the applicant to the scheme, and hence the emission reduction calculations were based on the contribution to one of the business scenarios under scrutiny.</p> <p>The following emission reductions and associated damage cost abatement were considered:</p> <ol style="list-style-type: none"> 1 - Nestle contribution to total Bulls Bridge emission reduction 2 - 10% Car reduction due to Travel Plan 3 - Reduction due to New Bus (assumed the replacing of an existing bus by a hybrid) <p>The remaining NOx emissions to be mitigated amounted to a value of £804,540.9 which was agreed with the developer and will be used to develop a Low Emission Neighbourhoods (LEN) in Hays, and include green walls along schools exposed to NO2 concentrations above legislated limit values in the affected area.</p> <p>In addition, the following condition was imposed</p> <p>CONDITION - LOW EMISSION STRATEGY <i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address all traffic generated during the operational phase and shall specify the fleet composition to be Euro 5 or above or have implemented retrofitting devices that will enable compliance with such Euro standards.</i></p> <p><i>The strategy shall detail the steps that have been/ will be followed in addressing the</i></p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	<p>practice approach. Cumulative assessment – the applicant lists a variety of granted planning permissions in the vicinity of the application site for which emission data is available. However, no explicit quantitative assessment of cumulative impacts from the respective energy centres and traffic flows was undertaken. This modelling exercise is expected from a development of this size and location so that the impact on local environment is suitably assessed as per current legislation. The use of generic tempo growth factors which are not localised to determine cumulative impacts is not suitable in this instance. Use of warehouses/data centres – there is a growing concern in regards to the use of diesel power generators associated with</p>		<p><i>lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority. The Low Emission Strategy shall have targets for emission reduction and time-scales, with pollution savings quantified. At the end of each calendar year an implementation plan shall be submitted for approval in writing by the local planning authority, which on approval shall be fully implemented in accordance with the details and measures so approved. The measures in the agreed scheme shall be maintained throughout the life of the development. The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	warehouse/data centres. No mention of the use (or no use) or the assessment of the impacts on local air quality of these appliances was provided.			
Planning Ref	11563/APP/2017/2071			NO
40A - 50 STATION ROAD HAYES UB3 4DD Part conversion and part redevelopment of site to provide a part one to four storey building with roof top plant comprising 5 retail units and a 64-bedroom hotel, with restaurant, and associated servicing facilities and car park	<p>The proposed development falls within a Focus Area and hence need to be neutral as minimum and air quality positive as per new London Plan</p> <p>The assessment dates from July 2013 using data from 2012 which is 5 years old and does not reflect current conditions. It also uses outdated emission factor data, background data, and outdated IAQM significance criteria which was updated in 2015.</p> <p>In addition, and most importantly it uses DMRB which is unacceptable for an area already above limit</p>	<p>a) The LA will require section 106 contribution to offset emissions – the proposed development is not neutral as per the London Plan requirement</p> <p>b) A low emission strategy beyond the usual travel plan – there is a school in the vicinity of the proposed hotel – the LA will require a traffic management plan to prove no increase in traffic flows or reduction of speed is incurred in the local network</p>	<p>A section 106 contribution is sought of the value of £147,250</p> <p>In addition, we will require a low emission strategy is received, in consultation with the EHO officer. This can be secured via a condition.</p> <p>CONDITION AIR QUALITY - LOW EMISSION STRATEGY</p> <p><i>No development shall commence until a low emission strategy (LES) has been submitted to and approved in writing by the Local Planning Authority. Prior to the undertaking of the drafting of the LES, the applicant shall consult with the EHO what measures are acceptable to deliver the emission reduction required. The LES shall address</i></p> <p><i>1) the fleet composition serving the Hotel to be Euro 5/VI or above or have implemented retrofitting devices that will enable compliance with such Euro standards.</i></p> <p><i>2) the supply of energy to the Hotel. Any CHP or gas boiler will have to conform with the London Low NOx requirements;</i></p> <p><i>The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority.</i></p> <p><i>3) an electric vehicle charging bay. This is to be implemented as part of the proposal with a minimum of three charging points (fast charging units).</i></p>	Transport

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	<p>value, within bot AQMA and Focus Area. Therefore, the conclusions of the study are not valid.</p>		<p>4) a clear and effective strategy to encourage staff to</p> <ul style="list-style-type: none"> 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. <p>The measures in the agreed scheme shall be maintained throughout the life of the development.</p> <p>The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</p> <p>Furthermore, during the construction phase of the proposed development, the London's Low Emission Zone for non-road mobile machinery shall be complied with as per requirements as of 1st September 2015.</p> <p>Reason - As the application site is within an Air Quality Management Area and in particular within a Focus Area, and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p><i>Note to the applicants</i></p> <p>The LES shall encompass a package of measures, which help to reduce emissions over and above design features and other aspects of mitigation already incorporated into the scheme proposal. The package will set out to encourage and incentivise the use of low emission fuels and transport technology. The package may tackle one or a combination of the following site sub-fleets:</p> <ul style="list-style-type: none"> - Private cars (staff and/or visiting the site) - Captive fleet(s) (site based – light and/or heavy) - Service vehicles (goods) (visiting site: light/heavy for collection/delivery of goods) - Service Vehicles (people) (visiting site: light/heavy for personal transport, e.g. taxi) <p>Non exhaustive examples of possible measures:</p>	

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			<ul style="list-style-type: none"> - measures discouraging high emission vehicles - measures encouraging low and ultra-low emission vehicles - Designation of parking spaces for low emissions vehicles - Differential parking charges depending on vehicle emissions - Commercial Vehicles Euro based standard - On-site fleet low emission operations plan - Use of ultra-low emission service vehicles <p>The developer should consider the full raft of possible measures and select an appropriate mix, which delivers mitigation commensurate to the scale and impact of the development as a minimum and aim at encouraging the reduction of emissions overall.</p>	
Planning Ref	1699/APP/2017/2201			YES
<p>1 NESTLES AVENUE HAYES UB3 4UZ</p> <p>Demolition of existing building and redevelopment of the site to provide three basement levels for Class B8 (self-storage) and car parking, ground floor podium and five buildings above arranged over six, seven and ten floors for 7081sq.m of Class B8 (self-storage), 1349sq.m of Class B1 (office), 115sq.m of Class A3 (cafe) and 164 Class C3 residential units;</p>	<p>The proposed development falls within a Focus Area</p>	<p>Given the size and location of the proposed development the LPA will require a Low Emission Strategy and a S106 contribution to account for the impacts on local air quality within the Focus Area</p>	<p>CONDITION AIR QUALITY - LOW EMISSION STRATEGY</p> <p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address all traffic generated during the operational phase and shall specify the fleet composition to be Euro 5 or above or have implemented retrofitting devices that will enable compliance with such Euro standards. It will also include details of the energy centre to be a ultra-low NOx facility. The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority. The Low Emission Strategy shall have targets for emission reduction and time-scales, with pollution savings quantified. At the end of each calendar year an implementation plan shall be submitted for approval in writing by the local planning authority, which on approval shall be fully implemented in accordance with the details and measures so approved. The measures in the agreed scheme shall be maintained throughout the life of the development. The strategy will achieve a reduction of 3 tonnes of NOx per year over a period of five years after 12 months of the start of the development which equates roughly to a reduction of 1ug/m3 per year on the network affected by the proposal. To monitor such progress an air quality monitoring survey will be designed and implemented by the applicant at locations and methods to be agreed by the local authority. Should the reduction required in the levels of nitrogen dioxide not be</i></p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>creation of a pedestrian walkway adjacent to the railway station; creation of a vehicular access and route from Nestles Avenue; provision of associated plant and landscaping.</p>			<p><i>obtained, an amount of £478,346 shall be paid to the LPA for the purpose of reducing emissions namely promoting choice of zero emission modes by developing alternatives to the car, maximising accessibility, reducing congestion levels, improving air quality through sustainable travel initiatives, promoting good quality public transport and routes for walking and cycling to broaden the choice of modes of travel; making best use of existing road capacity through the use of variable-message signing and Intelligent Transport Systems; implementing Travel Plans for the developments to maximise the use of sustainable forms of travel and mitigate the negative impacts of transport, particularly congestion and vehicle emissions; active promotion of more efficient and sustainable use of vehicles through car clubs, car sharing to increase vehicle occupancy and incentives for using alternatively fuelled vehicles, managing public car parking to reduce long-stay commuter parking in favour of short-stay and providing long-stay park-and-ride facilities near the edge of the main problematic areas. The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	
<p>Planning Ref</p>	<p>10884/APP/2017/2351</p>			<p>Not provided</p>
<p>THE LOUNGE BAR AND RESTAURANT DAWLEY ROAD HAYES UB3 1EN Change of use of former public house premises (Class A4) into a community centre (Class D1).</p>	<p>This is a change of use of former public house premises (Class A4) into a community centre (Class D1). The application does not change the number of parking spaces with a predicted maximum 50 visitors to the site on Friday.</p>	<p>Therefore, there are no objections in terms of air quality, the LPA would only recommend that mechanical ventilation with suitable NOx - NO2 systems is installed at the ground floor to remove polluted air from outdoor environment.</p>	<p>CONDITION AIR QUALITY - MECHANICAL VENTILATION USING NOx/NO₂ REMOVAL SYSTEMS</p> <p><i>No development shall commence until a scheme detailing mechanical ventilation to be installed at the premises with the systems/ filters required to extract NOx/NO₂ from outdoor ambient air and secure indoor NO₂ levels below 40ug/m³ has been submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be carried out before the use/operation commences, and be thereafter maintained.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
Planning Ref	21432/APP/2017/1334			NO
<p>PEABERRY COURT 32 NORTH HYDE ROAD HAYES UB3 4NE Demolition of existing building and erection of a four storey residential building with basement car park level to provide 21 flats with parking space and amenity space.</p>	<p>The additional traffic generated by the proposed development will affect air quality at existing properties along the local road network. Concentrations at some of these receptors will, be above the air quality objectives. considered. Without declining background concentrations and vehicle emissions, pollutant concentrations are predicted to be above the air quality objectives at the worst-case locations assessed on the proposed development site, namely the ground-floor properties fronting North Hyde Road. The proposed development has also been shown not to meet the London Plan's requirement for transport emissions.</p>	<p>Mitigation measures to offset the excess in air quality neutral emissions to be agreed with the Council. A S106 contribution is to be sought if suitable mitigation measures are not offered by the proponent to reduce pollutant emissions (NOx).</p>	<p>The Council is in the process of agreeing with the developer possible mitigation measures to reduce exceeding emissions. In addition, a S106 contribution of £18,714 was sought by Air Quality. This value is calculated on the basis of NOx operation emissions only.</p>	Transport
Planning Ref	1942/APP/2017/612			NO
FORMER HAYES SWIMMING POOL	Lidl - The report fails to address the requirement	Whereas the air quality study of the impact of the	Until the condition is discharged as required (through the presentation of a suitable and quantified Low Emission Strategy) it remains.	Transport

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>BOTWELL LANE HAYES Details pursuant to Conditions 10 (Low Emissions Strategy) of planning permission ref. 1942/APP/2015/4127 dated 10/02/2017: Construction of an A1 discount food store with associated car parking and landscaping, reconfiguration and resurfacing of Council car park with new site access/exit.</p>	<p>of reduction in NOx emissions through suitable traffic interventions. In addition, the LPA is aiming for the traffic and air quality work to be undertaken together to reduce emissions in a targeted fashion in this instance and no indication of such work has been provided to date. No referral to any traffic mitigation work was provided as required</p>	<p>Lidl Store development on existing receptors in the local area was predicted to range from 'negligible' to 'slight' taking into account the changes in pollutant concentrations and absolute levels, the proposed development is not neutral as per the London Plan which indicates inconsistency in the assessment results.</p> <p>The Air Quality Neutral Assessment which quantified the emissions of atmospheric pollutants from the development at source (i.e. from vehicles and building plant) demonstrated that the development emissions exceeded the benchmarks. Therefore, a suitable quantification of effective emission reduction scenarios is required and selected effective measures embedded in a Low Emission Strategy is required to discharge the condition.</p>		

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
Planning Ref	2734/APP/2016/4592			YES
<p>SITE OF FORMER BLUE ANCHOR PH PRINTING HOUSE LANE HAYES</p> <p>Redevelopment of vacant site to provide a part 2, part 3 and part 4 storey building comprising 1,444 sq.m Class B1 office floorspace, associated parking together with hard and soft landscaping.</p>	<p>Information provided is suitable and has been accepted</p> <p>The additional traffic generated by the proposed development will affect air quality at existing properties along the local road network. Increases in pollutant concentrations at sensitive locations resulting from emissions from these additional traffic movements will have negligible impacts for nitrogen dioxide. Concentrations will remain below the air quality objectives at the nearest receptors. The proposed development has also been shown to meet the London Plan's requirement that new developments are at least 'air quality neutral'.</p>	<p>Conditions for control of construction emissions are required</p>	<p>CONSTRUCTION DUST CONDITION</p> <p><i>Development shall not begin until a scheme for protecting adjoining premises from dust emitted from the construction works, has been submitted to, and approved by the Local Planning Authority. The scheme shall include such combination of dust control measures and other measures as may be approved by the Local Planning Authority.</i></p> <p>REASON: It is known that dust from construction works can cause nuisance by soiling surfaces and other articles in and about buildings. Dust can also cause irritation such as irritation to the eyes, noise, and throat. There is growing evidence and concern that dust, especially the very small and fine dust particles, can cause or exacerbate respiratory ill-health.</p> <p>To ensure the development reduces and manages its air quality impacts in an area that currently exceeds minimum EU limit values for health and in line with Policy EM8 of the Local Plan and 7.14 of the London Plan</p> <p>CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN CONDITION</p> <p><i>Before the development hereby approved commences, a Construction Environmental Management Plan (CEMP) shall be submitted to, and approved in writing by, the Local Planning Authority. The CEMP shall comprise such combination of measures for controlling the effects of demolition, construction and enabling works associated with the development as may be approved by the Local Planning Authority. The CEMP shall address issues including the phasing of the works, hours of work, noise and vibration, air quality, waste management, site remediation, plant and equipment, site transportation and traffic management including routing, signage, permitted hours for construction traffic and construction materials deliveries. It will ensure appropriate communication with, the distribution of information to, the local community and the Local Planning Authority relating to relevant aspects of construction. Appropriate arrangement should be made for monitoring and responding to complaints relating to demolition and construction. All demolition, construction and enabling work at the development shall be carried out in accordance with the approved CEMP unless</i></p>	

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			<p><i>otherwise agreed in writing by the LPA.</i></p> <p>REASON: To safeguard the amenity of surrounding areas in accordance with Policy OE5 of the Hillingdon Unitary Development Plan.</p>	
Planning Ref	36678/APP/2017/1774			YES
<p>3 VIVEASH CLOSE HAYES UB3 4RY Demolition of the existing buildings and redevelopment of site with part 3, 8 and 13 storey building providing 88 residential units on upper floors and 977m2 commercial floorspace at ground, mezzanine and first floor levels; 50 car parking spaces, 140 cycle parking spaces and associated landscaping</p>	<p>The predicted concentrations of PM10 and NO2 in all modelled years are below the relevant objectives. Predicted concentrations at all the modelled receptors fall within APEC Category A, which states that there are “no air quality grounds for refusal, however, mitigation of any emissions should be considered”. The air quality neutral assessment has concluded that the proposed development will meet both building and transport emissions benchmarks.</p>	<p>The results of the report were accepted subject to traffic assessment being approved by transport colleagues.</p>	<p>CONDITION - AIR QUALITY MITIGATION</p> <p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address 1) the specification of the CHP as low NOx emissions; 2) show what benefits are given to development purchasers that own a Euro 5 or above or have implemented retrofitting devices that will enable compliance with such Euro standards; 3) a travel plan for residents; and 4) an electric vehicle bay charging with a minimum of three charging points.</i></p> <p><i>The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above. The measures in the agreed scheme shall be maintained throughout the life of the development.</i></p> <p><i>The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	
WEST DRAYTON/YIEWSLEY FOCUS AREA				
Planning Ref	692/APP/2017/749			Not provided

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>LC CAR SALES FALLING LANE YIEWSLEY UB7 8AA Erection of a 2-4 storey building comprising 30 no. studio, 1, 2 and 3-bedroom apartments (Use Class C3) with associated access, car parking and refuse/recycling store, involving demolition of the used car sales garage (Outline application with some matters reserved).</p>	<p>The proposed development falls within a Focus Area. No air quality assessment was provided to support the planning application</p>	<p>In order to account for the increase of emissions predicted to occur within the Focus Area due to the proposed development a Section 106 financial contribution has been sought</p>	<p>The LPA have estimated a likely impact of 0.105 tonnes of NOx per year. Therefore, there is a need to mitigate the health impact by applying mitigation measures of these value in the area affected by the proposal. Examples of mitigation include:</p> <ul style="list-style-type: none"> • The design and layout of development to increase separation distances from sources of air pollution (this is to be implemented by the applicant - facade of residential areas to be 15m away from kerbside of main roads) • Using green infrastructure, in particular trees, to absorb dust and other pollutants; • NOx/NO2 ventilation (which according to the sustainability statement is not going to be implemented); • Promoting infrastructure to promote modes of transport with low impact on air quality - (already offered by the applicant with the provision of bicycle parking spaces); • Controlling dust and emissions from construction, operation and demolition - LAP would have required this; and • Contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development. <p>The proposed development is within an Air Quality Management Area and a Focus Area where nitrogen dioxide annual mean values are above legislated limit values (40ug/m3). In addition to the provided 41 bicycle parking spaces, the applicant is required to</p> <p>a) make sure the design and layout of development has a separation distance from sources of air pollution, namely Uxbridge road, with the facade of residential areas to be 15m away from kerbside;</p> <p>b) make a financial contribution of £16,819, towards the deployment of a green wall alongside the nursery school along Uxbridge road and local air quality monitoring.</p>	
<p>Planning Ref</p>	<p>71582/APP/2016/4582</p>			<p>YES</p>
<p>LAND REAR OF 2-24 HORTON ROAD YIEWSLEY</p>	<p>Information provided is suitable and has been accepted</p>	<p>Proposal acceptable for approval on Air Quality grounds subject to S106</p>	<p>A S106 contribution of £32,062 was sought by Air Quality. This value is calculated on the basis of NOx operation emissions only and has not taken into account contributions from construction emissions in this instance.</p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
Demolition of existing buildings and redevelopment to provide 86 residential units in three buildings of 4-6 storeys with private balconies together with one three-bed dwelling, Class A1/A2 or A3 unit, associated car parking at basement and surface level, cycle parking, communal amenity areas, landscaping, improved access and relocated sub-station.		<p>agreement</p> <p>The applicant has only assessed the impact at receptors within 200m of the proposed development and the LA needed to account for the pressures from the operation traffic in the nearby Focus Area (Yiesley).</p>		
Planning Ref	12768/APP/2017/1746			NO
FORMER WEST DRAYTON POLICE STATION ROAD WEST DRAYTON Details of compliance with energy assessment, arboricultural impact assessment, air quality report, ecological mitigation and pedestrian access control in compliance with	A condition requiring the provision of an air quality assessment was to be discharged. Whereas the provision of an air quality assessment is not normally subject to a planning condition as this is something provided at the time of the planning application, due to the failing to request this at the early	The Transport Emissions are greater than the benchmarks for both NOx and PM10, by 108.4 and 18.6 kg/yr respectively. The proposed development is thus not considered air quality neutral in terms of transport emissions. For the development to be considered air quality neutral the trip	<p>Air Quality Neutral The assessment has demonstrated that the scheme will not be meet the benchmarks and therefore will not be air quality neutral. The proposed development would need mitigation in place, to reduce the traffic emissions associated with the development and to ensure that it will be air quality neutral.</p> <p>The proposed development provides 53 car parking spaces for 43 dwellings; of these, five spaces are designated disabled spaces and a number will include electric car charging points. Provision of designated electric-car-only parking spaces would reduce the trip rate of ICE vehicles and therefore the development would be likely to be nearer to being air quality neutral. To be air quality neutral there would need to be a reduction of ICE vehicle trips of 62%. In other words, parking for ICE vehicles would be limited to 20 spaces, rather than 53 (62% less spaces for ICE vehicles), with all other spaces designated for electric-only vehicles.</p> <p>An average national shadow price for NOx abatement has been derived within a study</p>	Transport

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>condition 19 of planning permission ref: 12768/APP/2016/1580 dated 11/05/2017 (Residential development of 53 units, comprising 13 houses and 40 flats, together with associated parking, access road and landscaping, involving the part retention of the listed walls and demolition of the existing Police Station, outbuildings and concrete hard standings).</p>	<p>application stages, it was made a requirement as a condition, for local air quality management and information purposes.</p> <p>The assessment has demonstrated that the scheme will introduce new exposure to areas of exceedances of the nitrogen dioxide annual mean objective. This new exposure is limited to the block nearest to the road. Mitigation measures to reduce pollutant emissions from road traffic are principally being delivered in the longer term by the introduction of more stringent emissions standards, largely via European legislation. However, it would be considered appropriate to propose further mitigation measures for the block nearest to the road. For this block it is considered that mechanical ventilation</p>	<p>generation would need to be reduced to 16,599 trips per year. This is a 62% reduction of internal combustion engine (ICE) vehicle trips.</p> <p>This was a condition to be discharged upon provision of an air quality assessment. It clearly illustrated the need to have an air quality assessment undertaken as part of the planning application as, at this stage, the impacts identified by the report cannot be actioned through the planning system.</p>	<p>published by Defra (Defra, 2011b), and has been incorporated into a consultation document related to the Transport Advisory Guidance (TAG), published by DfT (DfT, 2014). This consultation document suggests that a hybrid approach be adopted with air quality impacts valued using the marginal abatement cost methodology for NOx emissions, while the damage cost approach is used for PM10 concentrations. In areas where the EU limit value for nitrogen Former West Drayton Police Station, London Borough of Hillingdon Air Quality Assessment J2023 23 of 45 June 2014 dioxide is exceeded, a MAC value of £29,000 per tonne of NOx is recommended. The range for PM10 from transport in Outer London is £125,711 - £182,453 per tonne of PM10. A central estimate of £160,558 per tonne would be assumed. The cost of abatement to account for the excess in transport NOx would thus be: 108.4 kg/yr x £29,000 per tonne = £3,144 per annum. The cost of abatement to account for the excess in transport PM10 would be: 18.6 kg/yr x £160,558 per tonne = £2,986 per annum. The total cost of offsetting the excess in emissions due to traffic can therefore be considered to be £6,130 per annum. It has become standard practice in guidance developed by a number of local authorities across the UK to assume this cost should cover a 5-year period and therefore the cost of abatement required to off-set the emissions for this development would be £30,650.</p> <p>The potential to introduce additional mitigation measures to reduce or offset transport emissions, will be discussed with the Council. This is consistent with the advice in the GLA's Sustainable Design and Construction SPD (GLA, 2014), which states the following: "Developers of schemes which do not meet the 'air quality neutral' benchmark for buildings or transport (considered separately) after appropriate onsite mitigation measures have been incorporated will be required to off-set any excess in emissions. The developer should investigate options for providing NOx and PM abatement measures offsite in the vicinity of the development. This will involve working with the relevant planning authority or nearby property owners to identify suitable mitigation measures."</p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
	drawing air from a source as near to the background concentrations as possible would benefit the future residents of that block. The location of the inlet should be on the rear of the block and as high as possible, as this will be the location where the concentration will be closet to background conditions.			
Planning Ref	24843/APP/2018/269			NO
<p>COMAG TAVISTOCK ROAD YIEWSLEY UB7 7QE</p> <p>Demolition of existing buildings (Use Class B8) and erection of 104 self-contained (20 x 1-bedroom, 75 x 2-bedroom and 9 x 3-bedroom) units (Use Class C3), Community Space (Use Class D1), and the provision of car parking, associated landscaping, drainage and other</p>	<p>A quantitative assessment of operational stage impacts has been carried out by modelling road traffic and onsite boilers emission sources. The impacts of the operational phase on ambient air quality indicated that the proposal is not air quality neutral for transport emissions, therefore additional mitigation and/or off-setting is required. The impact of these emissions will be felt on the surrounding road</p>	<p>Therefore, the proposal is required to contribute towards the reducing of emissions within the area, supporting the implementation of Hillingdon's Local Action Plan in that area.</p> <p>Prior to mitigation, the proposal generates 1.762 tonnes/year of NOx resulting from the traffic generated by the proposal. After mitigation offered by the proponent, namely - Highways Works S278/S38 as required by the highways engineer</p>	<p>Therefore, and to enable the Local Authority to perform its statutory air quality management role, the air quality S106 contribution / tie with the proponent is sought to secure the required air quality improvements in the area and also prevent any actions that may render such improvement actions ineffective.</p> <p>The above is requested by the LPA based on requirements of:</p> <p>1 - The National Planning Policy Framework (NPPF) - in England, the NPPF requires local authorities to grant planning permission in conformity with its text and the local plan, and that planning policies should sustain compliance with, and contribute towards, meeting EU limit values or national objectives for air pollutants, taking into account the presence of Air Quality Management Areas (AQMA) and the cumulative impacts on air quality from individual sites in local areas.</p> <p>2 - Planning decisions should ensure that any new development in an Air Quality Management Area is consistent with the local air quality action plan. An important part of the local air quality management within Hillingdon is the air quality improvement in Focus Areas within the AQMA. This is achieved primarily through the planning system, requiring applicants to not only remove the impacts associated with their proposals but also contribute to the improvement of air quality within these zones. This is also in line</p>	Transport

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
ancillarywork.	network which is an AQ Focus Area and where there are exceedances of the AQ objectives and there is relevant exposure.	<p>and to be completed prior to occupation; and</p> <ul style="list-style-type: none"> - A full and formal Travel Plan with associated £20,000.00 bond to include Sustainable Transport Measures reductions of 0.0388 tonnes NOx/year and of 0.1671 tonnes NOx/year are achieved respectively. <p>With the above mentioned reductions, the value of emissions equals 1.5564 tonnes NOx/year which equates to a mitigation value £630,021. This value needs to be reduced by the amount spend in the Highways Works S278/S38 by the proponent.</p> <p>The remaining value is to be included in the Air Quality S106 contribution.</p>	<p>with the new London Plan.</p> <p>3 - The IAQM recommends that impacts be assessed for the new permission sought against the current baseline for the site, disregarding the extant permission; this will reflect the 'real world' increase experienced by receptors. This is in line with points 1 and 2 above, where action is required to make sure significant reductions in emissions is observed in Focus Areas;</p> <p>4 - The current application is not neutral in terms of air quality for the transport sector. This is a requirement of the London Plan, regardless of extant permissions. In addition, the new Plan requires that proposals in Focus areas are at least neutral, with the additional requirement that they are air quality positive, i.e. they contribute to an improvement in local air quality within Focus Areas.</p>	
Planning Ref	73420/APP/2017/4617			Not Provided

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>LINK PARK HEATHROW THORNEY MILL ROAD WEST DRAYTON</p> <p>Use of site for Class B8 open storage use and erection of security fence, ancillary buildings and structures.</p>	<p>No air quality assessment was provided to support the planning application</p>	<p>A Low Emission Strategy is required prior to the operation of the site</p>	<p>Condition - Low Emission Strategy</p> <p>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address the fleet composition serving site to be Euro 6 or have implemented retrofitting devices that will enable compliance with such Euro standards.</p> <p>The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority. The measures in the agreed scheme shall be maintained throughout the life of the development.</p> <p>The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	
UXBRIDGE ROAD FOCUS AREA				
Planning Ref	8057/APP/2017/2041			Not provided
<p>The former Star PH, corner of Star Road and UXBRIDGE ROAD HILLINGDON</p> <p>Erection of part 2, part 3 and part 4 storey building containing 14 residential units, a commercial unit at ground floor level with associated</p>	<p>The application Site falls within the Uxbridge Road Focus Area therefore mitigation of emissions to the atmosphere associated with the proposed development is required.</p> <p>The air quality report did not undertake an air quality assessment,</p>	<p>The LPA will require</p> <p>a) The submission of a neutral assessment: Proper assessment of emissions for both traffic and buildings through the Mayors neutral assessment methodology</p> <p>b) A low emission strategy beyond the usual travel plan</p>	<p>Before the application is granted we will need to receive the neutral assessment report to be able to calculate the air quality contribution value for the AQ S106 contribution</p> <p>In addition, the LPA will require a low emission strategy is received, in consultation with the EHO officer. Also compliance with the Mayors NRMM is required. These to be secured via conditions.</p> <p>CONDITION - AIR QUALITY LEZ – OPERATION PHASE</p> <p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address 1) the specification of the CHP as low NOx emissions; 2) show what benefits are given to development purchasers that own a Euro 5 or above or have implemented</i></p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>ground floor parking, access and landscaping.</p>	<p>using inadequate criteria to determine the need to undertake an assessment e.g. DMRB criteria which is suitable to motorway schemes a only and not acceptable within Focus Areas where ambient air concentrations are well above the annual limit value for NO2.</p> <p>In addition, no neutral assessment was undertaken as required by the Mayor of London.</p> <p>Furthermore, no construction assessment was undertaken.</p>		<p><i>retrofitting devices that will enable compliance with such Euro standards; 3) a travel plan for residents; and 4) an electric vehicle bay charging with a minimum of two charging points.</i></p> <p><i>The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above. The measures in the agreed scheme shall be maintained throughout the life of the development.</i></p> <p><i>The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p>CONDITION AIR QUALITY - NRMM - CONSTRUCTION PHASE</p> <p><i>No development shall commence until proof of the registration in GLA's database (nrmr.london/nrmr/about/what-nrmr-register) and compliance with the London's Low Emission Zone for non-road mobile machinery requirements is submitted to and approved in writing by the Local Planning Authority.</i></p> <p><i>The London's Low Emission Zone for non-road mobile machinery shall be complied with as per requirements as of 1st September 2015. From 1 September 2015 NRMM of net power between 37kW and 560kW used in London will be required to meet the standards set out at Supplementary Planning Guidance 'The Control of Dust and Emissions from Construction and Demolition'.</i></p> <p><i>This will apply to both variable and constant speed engines for both NOx and PM. These standards will be based upon engine emissions standards set in EU Directive 97/68/EC and its subsequent amendments. NRMM used on the site of any major development within Greater London will be required to meet Stage IIIA of the Directive as a minimum. From 1 September 2020 the following will apply: NRMM used on any site within Greater London will be required to meet Stage IIIB of the Directive as a minimum.</i></p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
			Reason: Compliance with the London's Low Emission Zone for non-road mobile machinery as per requirements as of 1st September 2015, and Supplementary Planning Guidance 'The Control of Dust and Emissions from Construction and Demolition'.	
Planning Ref	1144/APP/2017/2073			Not provided
<p>LAND ADJACENT TO 404 UXBRIDGE ROAD HAYES UB4 0SE Erection of part 3, part 4 storey building comprising of 2 retail units on the ground floor with 10 residential units above, with associated access, car parking and 12156/APP/2017/44 21 associated works.</p>	<p>The proposed development falls within the Uxbridge Road Focus Area</p> <p>No AQ assessment was provided to support the planning application. However, observation of the levels of NO2 predicted by GLA modelling for the area (LAEI, 2013 updated 2017) indicates areas of exceedance at the location of the proposed development.</p>	<p>Therefore, two conditions are required: Low Emission Strategy and Mechanical Ventilation with use of NOx/NO2 filters</p> <p>complemented by a S106 contribution towards improvement of local air quality.</p>	<p>CONDITION - LOW EMISSION STRATEGY</p> <p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The Low emissions strategy shall be aligned with The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p>CONDITION - MECHANICAL VENTILATION USING NOX/NO2 REMOVAL SYSTEMS</p> <p><i>No development shall commence until a scheme detailing mechanical ventilation to be installed at the premises with the systems/ filters required to extract NOx/NO2 from outdoor ambient air and secure indoor NO2 levels below 40ug/m3 has been submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be carried out before the use/operation commences, and be thereafter maintained.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	
Planning Ref	72470/APP/2016/4648			Not provided

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>579-583 UXBRIDGE ROAD HAYES Demolition of 3 dwelling houses and redevelopment of site to provide 21 (4 x studio, 2 x 1 bed, 11 x 2 bed and 4 x 3 bed) units within 2 new buildings with associated access, parking, landscaping and amenity space (revised plans)</p>	<p>The report submitted to support the proposed development is significantly underestimating nitrogen concentrations on the application site. GLA predictions (updated April 2017) indicate 36ug/m3 whereas the report indicates values below 30. In addition, no neutral assessment or change in terms of NO2 concentrations were estimated.</p>	<p>Therefore, in order to allow the development to proceed, the LPA will require that the applicant either</p> <p>i) installs mechanical ventilation with NOx/NO2 filters with a removal efficiency of 95% or above or</p> <p>ii) makes sure the residential facades are at least 15m away from the main road Uxbridge road).</p>	<p>CONDITION AIR QUALITY - MECHANICAL VENTILATION USING NOX/NO2 REMOVAL SYSTEMS</p> <p><i>No development shall commence until a scheme detailing mechanical ventilation to be installed at the premises with the systems/ filters required to extract NOx/NO2 from outdoor ambient air and secure indoor NO2 levels below 40ug/m3 has been submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be carried out before the use/operation commences, and be thereafter maintained.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p>In addition, the LPA will require a S106 financial contribution to the delivery of mitigation measures in the area of the proposal including those identified in the air quality action plan and low emission strategies, designed to offset the impact on air quality arising from new development in the area.</p> <p>Mitigation options are location specific, and need to be proportionate to the likely impact. The LPA have estimated a likely impact of 0.047 tonnes of NOx per year. Therefore, the LPA will need to mitigate the health impact by applying mitigation measures of these value in the area affected by the proposal. The proposed development is within an Air Quality Management Area and a Focus Area where nitrogen dioxide annual mean values are likely to be above legislated limit values (40ug/m3).</p> <p>Therefore, the applicant is required to make a financial contribution of £22,859, towards the improvement of air quality in the area.</p>	
<p>Planning Ref</p>	<p>23799/APP/2017/4648</p>			<p>NO</p>
<p>401 UXBRIDGE ROAD HAYES Demolition of existing day care centre and erection of a new primary healthcare facility for</p>	<p>a) The proposed development does not meet the air quality neutral requirements for transport. However, it is noted the</p>	<p>Therefore, it is recommended the proposal develops and applies a Low Emission Strategy including appropriate mitigation (for instance,</p>	<p>CONDITION - LOW EMISSION STRATEGY</p> <p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The Low emissions strategy shall be aligned with The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning</i></p>	<p>Transport</p>

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
two GP surgeries plus 2 storey residential scheme above comprising a total of 20 flats, new car parking and all associated external works and landscaping.	methodology applied by the consultant undertaking the air quality modelling is excessive (used the retail benchmark as a proxy for the proposed uses) and therefore had the correct methodology been applied it would have met policy requirements. b) the location is within Uxbridge Road Focus Area, in a range between 36 and 40 ug/m3 which classifies the application within APEC B (Air Pollution Exposure Criteria (APEC) - London Councils methodology).	maximise distance from pollutant source, proven ventilation systems extracting clean air from rear side of the building, away from main road, parking considerations, winter gardens/green wall, internal layout considered and internal pollutant emissions minimised. Please see condition text as below.	<p><i>System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	
A40/ LONG LANE FOCUS AREA				
Planning Ref	4266/APP/2017/3183			NO
FORMER MASTER BREWER SITE FREEZELAND WAY HILLINGDON Erection of a residential-led, mixed-use	The proposed development falls within the A40/Long Lane Focus Area for air quality and contributes significantly to the high levels of pollution in the	The proposal increases emissions from associated transport by 1.93 tonnes NOx per year with an equivalent damage cost of £307,098.	LPA to make sure receptors in proximity to the A40 have mechanical ventilation with NOx/NO2 filters with a removal efficiency of 95% or higher (97% can be reached with available technology). CONDITION AIR QUALITY - MECHANICAL VENTILATION USING NOX/NO2 REMOVAL SYSTEMS	transport

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>development comprising buildings between 4 and 9 storeys to provide 377 residential units (Use Class C3); employment floor space (Use Classes B1(a-c)); flexible commercial floor space (Use Classes A1/A3); associated car and cycle parking, highway improvements, hard and soft landscaping, plant and other associated ancillary development.</p>	<p>area. In addition, the air quality neutral assessment as per Mayor requirements is not neutral which requires additional mitigation measures that are quantifiable and contribute substantially to the reduction of the levels of pollution in the area.</p>	<p>It is therefore incumbent on the developer to identify and implement mitigation to reduce emissions by at least this value. This is to be achieved through the development and implementation of a Low Emission Strategy secured via a condition with text required below.</p>	<p><i>No development shall commence until a scheme detailing mechanical ventilation to be installed at the premises with the systems/ filters required to extract NOx/NO2 from outdoor ambient air has been submitted to and approved in writing by the Local Planning Authority. The approved scheme shall secure indoor NO2 levels below 40ug/m³, shall be carried out before the use/operation commences, and be thereafter maintained.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p>CONDITION AIR QUALITY - LOW EMISSION STRATEGY</p> <p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address 1) the specification of the CHP as ultra-low NOx emissions; 2) show what benefits are given to development purchasers that own a Euro 5 or above or have implemented retrofitting devices that will enable compliance with such Euro standards; 3) a travel plan for residents; and 4) an electric vehicle bay charging with a minimum of three charging points (fast charging). The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority. The Low Emission Strategy shall have targets for emission reduction and time-scales, with pollution savings quantified, aiming at reducing 1.93 tonnes NOx per year. At the end of each calendar year an implementation plan shall be submitted for approval in writing by the local planning authority, which on approval shall be fully implemented in accordance with the details and measures so approved. The measures in the agreed scheme shall be maintained throughout the life of the development.</i></p> <p><i>The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</i></p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
			<p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p>In the instance the developer chooses to enter a section 106 agreement with the LAP, £307,098 is to be 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 reduces human exposure to nitrogen dioxide levels.</p>	
Planning Ref	4860/APP/2017/2394			Not provided
<p>297 LONG LANE HILLINGDON UB10 9JY Redevelopment to provide a 4 storey residential building containing 33 residential flats comprising 3 x studios, 17 x 1-bedroom and 13 x 2-bedroom units with associated access, car parking and landscaping.</p>	<p>The proposed redevelopment produces additional 110 vehicles per year onto the network. The proposed site is adjacent to the Long Lane Air Quality Focus Area.</p> <p>The proposal increases emissions from associated transport by 0.242 tonnes per year at an equivalent damage cost of £38,658.</p>	<p>section 106 contribution to Air Quality</p>	<p>The LPA will therefore require a section 106 contribution £38,658 is 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 reduces human exposure to nitrogen dioxide levels.</p>	
A4 CORRIDOR FOCUS AREA				
Planning Ref	41331/APP/2017/2491			YES
HEATHROW POINT	The proposed	It is therefore incumbent	In the instance the developer chooses to enter a section 106 agreement with the LAP,	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>WEST 234 BATH ROAD HEATHROW UB3 5AP Erection of a new 5 storey hotel extension building to the west of the site to accommodate 101 rooms with a covered link bridge connecting the existing building, with associated ancillary works.</p>	<p>development falls within the A4 Corridor Focus Area. Therefore, there will be an additional burden on the existing pollution levels, with an estimated increase in emissions from associated transport of 0.139 tonnes per year at an equivalent damage cost of £42, 813.</p>	<p>on the developer to identify and implement mitigation to reduce emissions by at least this value via a Low Emission Strategy</p>	<p>£42, 813 is to be 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 reduces human exposure to nitrogen dioxide levels.</p> <p>CONDITION AIR QUALITY - LOW EMISSION STRATEGY</p> <p><i>No development shall commence until a low emission strategy (LES) has been submitted to and approved in writing by the Local Planning Authority. Prior to the undertaking of the drafting of the LES, the applicant shall consult with the EHO what measures are acceptable to deliver the emission reduction required. The LES shall address:</i></p> <ol style="list-style-type: none"> 1) the fleet composition serving the Hotel to be Euro 5/VI or above or have implemented retrofitting devices that will enable compliance with such Euro standards. 2) the supply of energy to the Hotel. Any CHP or gas boiler will have to conform with the London Low NOx requirements; <p><i>The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority. The strategy will present a clear time table of delivery and results to be achieved on a yearly basis.</i></p> <p><i>In addition, the strategy will commit to deliver:</i></p> <ol style="list-style-type: none"> 3) an electric vehicle charging bay. This is to be implemented as part of the proposal with a minimum of three charging points (fast charging units). 4) a clear and effective plan to encourage hotel staff to <ol style="list-style-type: none"> 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. <p><i>The LES shall encompass a package of measures, which help to reduce emissions over and above design features and other aspects of mitigation already incorporated into the scheme proposal. The package will set out to encourage and incentivise the use of low emission fuels and transport technology. The package may tackle one or a combination of the following site sub-fleets:</i></p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
			<ul style="list-style-type: none"> - Private cars (staff and/or visiting the site) - Captive fleet(s) (site based – light and/or heavy) - Service vehicles (goods) (visiting site: light/heavy for collection/delivery of goods) - Service Vehicles (people) (visiting site: light/heavy for personal transport, e.g. taxi) <p>Non exhaustive examples of possible measures:</p> <ul style="list-style-type: none"> - measures discouraging high emission vehicles - measures encouraging low and ultra-low emission vehicles - Designation of parking spaces for low emissions vehicles - Differential parking charges depending on vehicle emissions - Commercial Vehicles Euro based standard - On-site fleet low emission operations plan <p>The measures in the agreed scheme shall be maintained throughout the life of the development and be quantified to show the reduction of emissions required as the neutral assessment undertaken to support the planning application.</p> <p>The Low emissions strategy shall make reference to The London Councils 'Air Quality and Planning Guidance'; DEFRA Practice Guidance 3: Practice guidance on Measures to Encourage the Uptake of Low Emission Vehicles, February 2009; and Low Emission Strategies: Using the Planning System to Reduce Transport Emissions, Good Practice Guidance prepared by the Beacons Low Emission Strategies, June 2008.</p> <p>Furthermore, during the construction phase of the proposed development, the non-road mobile machinery emission standards shall be complied with as per requirements as of 1st September 2015.</p> <p>Reason - As the application site is within an Air Quality Management Area and in particular within a Focus Area, and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DMEI 14 of the London Borough of Hillingdon Local Plan (part 2).</p>	
A40/ SOUTH RUISLIP FOCUS AREA				
Planning Ref	18124/APP/2017/3890			Not provided
LAND AT SUEZ	Near A40/ South Ruislip	Conditions requiring a	CONDITION AIR QUALITY - LOW EMISSION STRATEGY	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
<p>RECYCLING AND RECOVERY UK LTD VICTORIA ROAD RUISLIP HA4 0YS</p> <p>Installation of a Waste Bulking Facility for bulking and sorting food, green and waste wood.</p>	<p>Focus Area</p> <p>No air quality or neutral assessment was provided to support the planning application</p>	<p>Low Emission Strategy for the site and an Odour Management Plan are required.</p>	<p><i>No development shall commence until a low emission strategy has been submitted to and approved in writing by the Local Planning Authority. The low emission strategy shall address the fleet composition serving the recycling facility to be Euro 6/VI or have implemented retrofitting devices that will enable compliance with such Euro standards. The strategy shall detail the steps that will be followed in addressing the lower emissions requirements stated above and what measures will be taken to take into account future changing standards and available technologies and be updated accordingly in agreement with the local planning authority. The measures in the agreed scheme shall be maintained throughout the life of the development.</i></p> <p>Reason - As the application site is within an Air Quality Management Area and to comply with paragraph 124 of the NPPF, policy 7.14 of the London Plan, and policy DME1 14 of the London Borough of Hillingdon Local Plan (part 2).</p> <p>CONDITION - ODOUR MANAGEMENT PLAN</p> <p><i>No development shall commence until an Odour Management Plan has been submitted to and approved in writing by the Local Planning Authority. The Odour Management Plan shall include the following:</i></p> <ul style="list-style-type: none"> <i>(1) Identification of the main sources of fugitive dust and/or odorous emissions;</i> <i>(2) Potential causes for high emissions resulting from these sources;</i> <i>(3) Preventative and control measures in place or under development to minimize the likelihood of high emissions from the sources;</i> <i>(4) An implementation schedule for Plan, including training of facility personnel;</i> <i>(5) Inspection and maintenance procedures and verification initiatives to ensure effective implementation of the preventative and control measures; and</i> <i>(6) Documentation and record keeping protocols.</i> <p><i>The proponent shall prepare and submit annually to the Planning Authority Odour Management and Mitigation Monitoring Reports beginning six months following the commencement of operation of the undertaking. The proponent shall include in each of the Odour Management and Mitigation Monitoring Reports a report on the performance of the technology used for odour control at the proposed facility.</i></p> <p>Reason - To comply with the NPPF, the London Plan, and the London Borough of Hillingdon Local Plan (part 2).</p>	

Name, Location & Proposal description	Air Quality Issues in AQ Assessment	LA Requirements	Planning Conditions Text/S106 Agreements/ Status/Outcome	Neutral
Planning Ref	67607/APP/2017/4627			YES
<p>ACOL CRESCENT EARLY LEARNING CENTRE ACOL CRESCENT RUISLIP Demolition of all existing buildings and replacement with new part two, part three-storey building accommodating 33 total (14 x 1 bedroom and 19 x 2 bedroom) social housing flats with associated access, parking and landscaping.</p>	<p>Whereas it falls within a Focus Area, the new residents will not be exposed to above limit values of NO₂ so no mechanical ventilation with NOx filters is required in this instance. In addition, the proposal reduces NOx emissions in relation to the extant use - therefore no S106 agreement for AQ is required in this case.</p>	<p>No further requirements for Air Quality</p>	<p>Approval</p>	

