

London Borough of Haringey

London Borough Of Haringey



Air Quality Progress Report 2010

Part IV of the Environment Act 1995

Local Air Quality Management

June 2011

London Borough of Haringey

Local Authority Officer	Alison Bell
--------------------------------	-------------

Department	Commercial Environmental Health
Address	Units 271-272 Lea Valley Technopark, Ashley Road, Tottenham, London, N17 9LN
Telephone	0208 489 5246
e-mail	Alison.Bell@Haringey.gov.uk

Executive Summary

This Air Quality Progress Report is a reporting requirement under the Environment Act 1995, Part IV, for local authorities to periodically review and assess current and future air quality. This report also serves to maximise the usefulness and interpretation of the monitoring carried out by the local authority as the report provides a readily available up-to-date source of information and provides a source of information for developers carrying out air quality assessments for new schemes.

The review of monitoring data has shown that there has been a slight increase in annual NO₂ levels across the borough and so the conclusions and predictions from the first round of review and assessment are still valid and that the Council was correct in its decision to declare an Air Quality Management Area for the pollutants of nitrogen dioxide and PM₁₀. There have been no exceedences of the hourly NO₂ objective.

No air quality exceedances have been reported in respect of Particulate Matter as PM₁₀, or sulphur dioxide.

There are no new local developments, no new or newly identified road traffic or other transport sources identified that may have a relevant impact on air quality within the borough.

The Council continues to screen planning applications in terms of air quality impacts, and of the three that have been subject to appraisal during 2010, none has given rise to concern.

The Council's Air Quality Action Plan was revised in October 2010 and adopted by the Council in February 2011. In January 2010 FDMS monitoring of PM_{2.5} began at the HGY1 site.

Table of contents

- 1 Introduction**
 - 1.1 Description of Local Authority Area**
 - 1.2 Purpose of Report**
 - 1.3 Air Quality Objectives**
 - 1.4 Summary of Previous Review & Assessments**

- 2 New Monitoring data**
 - 2.1 Summary of Monitoring Undertaken**
 - 2.2 Comparison of Monitoring Results with AQ Objectives**

- 3 New Local Developments**
 - 3.1 Road Traffic Sources**
 - 3.2 Other Transport Sources**
 - 3.3 Industrial Sources.**
 - 3.4 Commercial and Domestic Sources**
 - 3.5 New Developments with Fugitive or Uncontrolled Sources**

- 4 Local Air Quality Plan**

- 5 Planning Applications**

- 6 Local Transport Plans and Strategies**

- 7 Climate Change Strategies**

- 8 Conclusions and Proposed Actions**
 - 8.1 Conclusion from New Monitoring Data**
 - 8.2 Conclusions Relating to New Local Developments**
 - 8.3 Proposed Actions**

- 9 References**

Appendices:

Appendix 1 - Monitoring Station Locations

Appendix 2 – QA/QC Data.

1 Introduction

1.1 Description of Haringey Area

The London Borough of Haringey is one of the 33 London boroughs and made up of the town centres of Wood Green, Tottenham, Muswell Hill and Highgate. Geographically located to the North of London, Haringey is classified as an outer London Borough is more than 11 square miles in area. It shares borders with six other London boroughs. Clockwise from the north, they are: Enfield, Waltham Forest, Hackney, Islington, Camden and Barnet. Along the Eastern side of Haringey is the Lea Valley, historically the home to heavy industry.

Today the borough of Haringey is predominantly residential with some light industry, mostly located along the eastern edge of the borough. According to the Office for National Statistics (ONS) estimates, Haringey's population in 2006 was 225,700. The GLA projections estimate Haringey's population to grow by 10.6% that is 23,800 residents over the next 25 years.

Haringey is a combination of shopping areas, housing, main through roads, rail and tube transport networks. In common with many other outer London boroughs, Haringey suffers the effects of large amounts of through road traffic. The transport networks that connect the borough to the rest of London, also serve as borders within the borough, especially the north / south road, the A105 (Green Lanes) which divides the East and the West in the middle of the borough. The eastern part of the borough is urban residential with the western side of the A105 being more affluent and having more green open spaces. Major roads that traverse the borough include the A1, A10, A105, A406, A503, A1010 & A1055. Tottenham is also home to Tottenham Hotspurs Football Club; other well known landmarks include Alexandra Palace and Alexandra Park, Bruce Castle and Finsbury Park. The river Lee (Lea) follows the eastern boundary from North to South.

25% of Haringey's total area consists of parks, recreation grounds and open spaces. There are also 5 distinct ancient woodlands which are Highgate Wood, Queens Wood,

London borough of Haringey

Coldfall Wood, Bluebell Wood and North Wood. Highgate Woods is one of the eight Green Heritage sites in London.

Whilst there are no Part A and A2 processes in the borough there are a limited number of Part B processes. The main source of air pollution in Greater London, according to the Mayor of London's Clearing the Air Strategy 2010, is from road vehicles and domestic gas, the pollutants of concern being nitrogen dioxide and PM10. Although many sources of emissions contribute to London's air quality, in the immediate vicinity of roads, particularly within 20m or so, road traffic emissions sources dominate the pollution profile.

1.2 Purpose of Report

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the Local Air Quality Management process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
Particles (PM₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

The London Borough of Haringey completed the first round of Review and Assessment (Stages 1 – 4) in January 2003. This first round concluded that of the seven key pollutants, the objective levels for both nitrogen dioxide (NO₂) and fine particulates (PM₁₀) are likely to exceed national objectives. The whole of the borough of Haringey

London borough of Haringey

is designated an Air Quality Management Area (AQMA) for NO₂ and PM10. The Council has produced the following documents to fulfil the requirements of Part IV of the Environment Act 2005:

- Following on from the declaration of the AQMA, an Air Quality Action Plan;
- an Updating and Screening Assessment (2003)
- an Action Plan Progress Report (2004),
- an Air Quality progress report and review and assessment report (2005)
- an Updating and screening assessment (2006) & Air Quality Progress Report (2006),
- an Air Quality Progress Report and Review and Assessment Report (2007)
- and a Review and Assessment Report and Air Quality Action Plan Progress Report (2008).
- an Updating and Screening Assessment (2009) and;
- a revised and updated Air Quality Action Plan (2010),

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

Haringey Council has been automatically monitoring air pollution since 1994. To date there are two automatic monitoring sites in operation within the borough; one roadside and one urban background. There have been no new sites or sites that have closed down since the previous report. Appendix 1 shows a map of the locations of all monitoring sites, automatic and non-automatic, in the borough as at December 2010. Table 2.1 gives details of the automatic monitoring sites within the borough.

Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road	Worst-case Location?
HGY1	Roadside	X 533890 Y 190710	NO ₂ , PM ₁₀ (FDMS) & PM _{2.5} (FDMS) & SO ₂	Yes	Yes (0m – residential).	4m	Yes
HGY2	Urban Background	X 529895 Y 189125	NO ₂ , PM ₁₀ (BAM) & O ₃	Yes	No	N/A	No

Data

Monitoring data is imperative to the requirement under the Environment Act 1995 for local authorities to periodically review and assess the air quality in their area.

Monitoring data provides:

- A measure of actual concentrations and exceedences of objectives
- Information on trends in air pollution
- Provides the basis for verifying the results of air quality models used to predict future air pollution.

For this reason, data from both sites are included in the London Air Quality Network (LAQN), which is managed by the Environmental Research Group (ERG), Kings College London. ERG manages the data collected, validates and ratifies it in order for it to be

London borough of Haringey

'fit for purpose'. In addition, both sites are 'split LAQN/AURN' sites. AURN (Automatic Urban & Rural Network) sites are funded by defra and the data has traceability to national standards. Split sites are partly funded by defra and partly funded by the local authority.

Routine calibrations for each analyser type are undertaken fortnightly. Each site is audited bi-annually following a full service. The calibrations support the quality assurance and quality control (QA/QC) checks that are carried out on the raw data to the LAQN/AURN network standard. This is to ensure that:

- Data is representative of ambient concentrations in the area
- Measurements are accurate and precise in order to meet monitoring requirements
- Data can be consistently compared with data from national and international standard sites
- Measurements are consistent over time

At HGY 1, PM10 is measured by FDMS and at HGY 2, PM10 is measured by a BAM (Beta Attenuation Method); the 'raw' data needs to be corrected by dividing it with a factor of 1.2. In January 2010, a Filter Dynamics Measurement System (FDMS monitor) was installed at the HGY1 to measure PM2.5.

Further information on data validation and ratification is available on the ERG website:

www.londonair.org.uk

2.1.2 Non-Automatic Monitoring

For monitoring locations of diffusion tubes throughout the borough see Appendix 1.

The non-automatic sites are diffusion tube sites and all monitor for nitrogen dioxide. Diffusion tubes provide an indicative measure of the pollutant being monitored. The advantage of using diffusion tubes is that they are inexpensive and provide useful information on pollutant variations across the borough, to identify pollution hotspots and long-term trends.

The diffusion tubes are prepared and analysed by Lambeth Scientific Services who are a UKAS accredited laboratory. This laboratory participates in the WASP scheme

London Borough of Haringey

(Workplace Analysis Scheme for Proficiency) to meet European standards and is involved in the network field inter-comparison exercise operated by NETCEN, which assesses the sampling and analytical performance of the tubes.

The Council monitors for nitrogen dioxide by diffusion tube at ten locations throughout the borough since 2004. Nitrogen dioxide diffusion tubes are prepared using the 50% triethanolamine (TEA) in acetone method. The results of four sites are fed into the UK Nitrogen Dioxide Diffusion Tube Network. The locations are a mixture of roadside and background sites. Table 2.2 bestows individual site details. Whilst no co-location study has taken place, diffusion tube ref: HR14 is co-located with HGY1 automatic monitoring site.

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref	Pollutants Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road	Worst-case Location?
HR06	Roadside	528940 187660	NO2	Y	Y (2m)	0m	N
HR07	Urban Background	534400 190160	NO2	Y	N	N/A	N
HR08	Urban Background	530440 189450	NO2	Y	Y	0m	Y
HR10	Roadside	530860 190690	NO2	Y	N	8m	N
HR13	Roadside	531460 189670	NO2	Y	N (6m)	3m	Y
HR14	Roadside	533890 190710	NO2	Y	Y (0m – residential)	4m	Y
HR15	Roadside	528810 189690	NO2	Y	Y (3m)	0m	Y
HR16	Roadside	534370 189460	NO2	Y	N	2m	Y
HR17	Roadside	531060 190270	NO2	Y	Y	3m	Y
HR18	Roadside	530990 190420	NO2	Y	N (8m)	3m	Y

London borough of Haringey

2.2 Comparison of Monitoring Results with AQ Objectives

2.2.1 Nitrogen Dioxide

The borough of Haringey has been designated a whole borough Air Quality Management Area (AQMA) for NO₂, as have neighbouring boroughs. The principal source of nitrogen dioxide (NO₂) in Haringey is from road transport; increases in which are attributed to the increase of diesel fuelled vehicles. Other releases are from combustion processes such as boiler plant and industrial emissions. It is nitrogen dioxide that is associated with adverse effects on human health and is one of the pollutants of concern within the London area. Road traffic emissions are currently the dominant source of NO_x in Haringey.

Automatic Monitoring Data

Tables 2.3a and b illustrate the annual mean and 1-hour mean monitored data from the two automatic monitoring sites operating within the borough for the year 2010.. Exceedences of the objectives are in red.

Both automatic monitoring locations are representative of public exposure. As can be seen from the table, the roadside site, HGY 1 again measured exceedences of the annual objective for NO₂. For this site, the nearest relevant exposure are residential properties <4m from the kerb; the sample inlet is in line with the building façades. This demonstrates relevant exposure and that the Council was correct in its decision to declare an AQMA for the whole borough for NO₂.

HGY2 is located in a local park and is classified as an urban background site. At this location the annual objective of 40µg/m³ has been achieved. The overall NO₂ trend remains steady with levels parallel to those measured at the roadside site. This site is not representative of relevant exposure with the London area, as it is located in an open park.

The hourly NO₂ objective was achieved at all monitoring locations, except in 2007 at the HGY 1 site. However this uncharacteristic exceedence could have been as a result of local building or road works taking place.

London Borough of Haringey

Table 2.3a Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective

Site ID	Location	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)										
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*
HGY1	High Road, N17	51	48	46	52	46	42	43	42	37 (99%)	42 (91%)	44 (97%)
HGY2	Priory Park N8	37	38	35	37	34	34	33	32	32 (98%)	34 (98%)	34 (99%)

*Data fully ratified.
(%) valid data capture rate for NO₂ for that year.

Table 2.3b Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective

Site ID	Location	Number of exceedences of hourly mean ($200 \mu\text{g}/\text{m}^3$)										
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*
HGY1	High Road, N17	0	0	0	0	0	1	0	21	0 (99%)	0(91%)	0(97%)
HGY2	Priory Park N8	0	0	0	0	0	0	0	3	0 (98%)	4 (98%)	0 (99%)

*Data fully ratified.
(%) valid data capture rate for NO₂ for that year.

Diffusion Tube Monitoring Data

The results have been appropriately bias adjusted, using the analytical laboratory adjustment factors. These are highlighted in bold, in red. Data is for a 12 month period, with tubes exposure in accordance with the UK Nitrogen Dioxide diffusion tube network. As diffusion tubes are considered to have limitations and have poor accuracy; in 2000, the government recommended that tubes should be co-located with an automatic analyser to determine a bias adjustment factor, which is then applied to the raw data for the particular year. Haringey co-locates a tube at HGY1 (High Road monitoring station) and submits the data annually. The average adjustment factor for the correct laboratory and analytical method is then applied to the raw annual average concentrations for the

London borough of Haringey

correct year to obtain bias adjusted results. The bias adjustment factor used for 2010 is 1.08. The bias adjustment factors are on the website;

[http://laqm.defra.gov.uk/documents/Diffusion Tube Bias Factors v04_11_v6.xls](http://laqm.defra.gov.uk/documents/Diffusion_Tube_Bias_Factors_v04_11_v6.xls)

Tables 2.4a and b illustrate the annual mean measured data from the non-automatic monitoring sites, diffusion tube sites within the borough.

Table 2.4a Results of Nitrogen Dioxide Diffusion Tubes

Location	Annual mean concentrations	
	2010($\mu\text{g}/\text{m}^3$) Adjusted for bias (1.08)	Data Capture Rate
HR06	66.5 (71.82)	100%
HR07	35.3 (38.07)	100%
HR08	33.1 (35.73)	100%
HR10	36.3 (39.20)	83%
HR13	65.9 (71.17)	83%
HR14	43.2 (46.62)	100%
HR15	53 (57.24)	83%
HR16	22.2 (23.98)	25%
HR17	64.2 (69.3)	67%
HR18	63.9 (68.69)	83%

The sites which have measured an exceedence of the NO₂ annual objective are highlighted in red. All of these are roadside sites and all represent relevant exposure indicating the NO₂ levels at residential façades.

Sites HR16 and HR17 had low data capture rates due to local site issues. Sites HR10, 13, 15, 16, 17 and 18 were closed down at the end of the October monitoring period hence the data capture rates below 83%. Six new sites were opened in November 2010. The locations and data for these sites will be reported in the next report as initial monitoring from these new locations was spoiled for the months of November and December.

Table 2.4b Historical Results of Nitrogen Dioxide Diffusion Tubes Monitoring

Annual Mean Concentrations ($\mu\text{g}/\text{m}^3$) – adjusted for bias.						
	2004	2005	2006	2007	2008	2009
Bias adjustment Factor	1.19	1.24	1.28	1.07	0.98	1.03
HR06	74	70	69	67	72	72
HR07	37	35	34	36	33	34
HR08	36	36	38	27	34	35
HR10	56	34	30	27	39	33
HR13	77	77	85	75	74	75
HR14	39	47	55	36	46	48
HR15	60	52	62	50	44	60
HR16	57	60	62	49	60	69
HR17	70	85	96	69	73	94
HR18	70	57	65	59	69	66

2.2.2 PM₁₀

The London Borough of Haringey has designated a whole borough AQMA for PM₁₀, as have neighbouring boroughs. The principal source of PM₁₀ in Haringey is attributed to diesel fuelled vehicles, in particular HGVs, LGVs and buses. This was illustrated at the Stage IV Review and Assessment. These small particles (<10 μm diameter) can be breathed into the deepest parts of the lung, carrying with them a range of both natural and man made substances and are associated with both respiratory and cardio-vascular health problems.

The principal sources of fine particulates (PM₁₀) can be divided into three main categories; *Primary Sources* - from combustion sources including road traffic, power generation and industrial combustion, *Secondary sources* - formed from chemical reactions in the atmosphere and *Coarse Sources* – all other sources including resuspended dusts, construction work dust, mineral extraction works, wind-blown dusts and soils, including sea salt and biological particles.

London borough of Haringey

See section 2.1.1 for an explanation of data management and validation. Tables 2.5a and b illustrates the annual mean and 24hour means monitored data from the automatic monitoring sites operating within the borough. All results from TEOM PM₁₀ analysers from 2004 onward have been converted to reference equivalence using the volatile correction method from the ERG website.

As can be seen from the tables, there has been no exceedences of either the annual mean PM10 or the 24 hour mean objective at either site in Haringey. With regards to HGY1 the nearest relevant exposure are residential properties which are within 4m from the kerbside. HGY2 is located in a park and is classified as an urban background site. This site is unrepresentative of relevant exposure with the London area.

Table 2.5a Results of PM₁₀ Automatic Monitoring: Comparison with Annual Mean Objective

Site ID	Location	Within AQMA?	Annual mean concentrations (µg/m ³)										
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HGY1	High Road, N17	Y	26	27	27	29	23	24	24	26 (72%)	21 (66%)	21	23
HGY2	Priory Park N8	Y	22	25	26	29	30	23	26	26 (68%)	20	18*	17

(%) Data capture rate – where below 75%
Data for year is not fully ratified.

Table 2.5b Results of PM₁₀ Automatic Monitoring: Comparison with 24-hour Mean Objective

Site ID	Location	Within AQMA?	Number of Exceedences of daily mean objective (50 µg/m ³)										
			<i>If data capture < 90%, include the 90th %ile of daily means in brackets.</i>										
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HGY1	High Road, N17	Y	12	14	15	34	7	16	11	22 (72%)	6 (66%)	5	9
HGY2	Priory Park N8	Y	11	12	11	34	17	13	10	13 (68%)	8	1*	1

(%) Data capture rate – where below 75%
Data for year is not fully ratified.

2.2.3 Sulphur Dioxide

The principal source of sulphur dioxide (SO₂) is from power stations and industrial combustion sources. Other sources include domestic and commercial heating.

Concentrations of sulphur dioxide have seen to be continually declining as a result of industries switching from oil or coal-fired heating to gas-fired heating and reductions in the sulphur content of vehicle fuel.

See section 2.1.1 for an explanation of data management and validation. Tables 2.6a and 2.6b illustrate the measured exceedences of the 15 minute, hourly and 24 hour means. Sulphur dioxide is monitored for at HGY1 (High Road, N17) only and is representative of public exposure. As can be seen from the table, there were no exceedences of any of the averaging means for SO₂. Sulphur Dioxide is no longer a pollutant of concern in Haringey and monitoring was ended in March 2011.

Table 2.6a: Sulphur dioxide (µg/m³) concentrations measured at HGY1

Year	Exceedences of 15 Minute Means	Exceedences of hourly Mean	Exceedences of 24 hour Mean	Data Capture rate
2000	None	None	None	91%
2001	None	None	None	94%
2002	None	None	None	95%
2003	None	None	None	91%
2004	None	None	None	98%
2005	None	None	None	99%
2006	None	None	None	97%
2007	None	None	None	98%
2008	None	None	None	97%
2009	None	None	None	98%
2010	1	None	None	94%

London borough of Haringey

2.2.4 Benzene

Monitoring Data

The first round of review and assessment identified no exceedences of the benzene objective in the borough of Haringey. This pollutant is not monitored

2.2.5 Other pollutants monitored

Ozone is monitored at HGY 2 site and is funded by defra. Ozone is not a pollutant of concern for Local Authorities and so is not reported on in this assessment.

2.2.5 Summary of Compliance with AQS Objectives

The London Borough of Haringey has examined the results from monitoring. PM10 measured concentrations during 2010 are below the objectives; therefore there is no need to proceed to a Detailed Assessment.

Nitrogen dioxide measured concentrations continue to remain above the annual mean objective at relevant locations as detailed in Table 2.3a and 2.4a. As the whole borough is declared an Air Quality Management Area for the nitrogen dioxide there is no requirement to proceed to a detailed assessment.

Sulphur dioxide measured concentrations continued to remain well below the objectives, therefore there is no need to proceed to a detailed assessment.

3 New Local Developments

The London Borough of Haringey has identified the following new local developments which may impact on air quality in the Local Authority area.

- Northumberland Park redevelopment (Tottenham Hotspur Football Club)
- Coronation Sidings, N8.
- Hornsey Town Hall
- GLS Supplies Depot, Ferry Lane, N17

Planning applications that are imminent include:

- Pinkham Way – 300,000T MBT waste plant
- Haringey Heartlands redevelopment area.

All of these developments will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

3.1 Road Traffic Sources

The London Borough of Haringey confirms that in 2010 there were no new road traffic sources that have may have an impact on air quality in the Local Authority area including:

- Narrow congested streets with residential properties close to the kerb.
- Busy streets where people may spend one hour or more close to traffic.
- Roads with a high flow of buses and/or HGVs.
- Junctions.
- New roads constructed or proposed since the last Updating and Screening Assessment.
- Roads with significantly changed traffic flows.
- Bus or coach stations.

3.2 Other Transport Sources

The London Borough of Haringey confirms that in 2010 there were no new other transport sources that may have an impact on air quality in the Local Authority area including:

London borough of Haringey

- Airports.
- Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.
- Locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.
- Ports for shipping

3.3 Industrial Sources

The London Borough of Haringey confirms that there are no new industrial sources identified since the last Updating and Screening Assessment that may have an impact on air quality within the Local Authority are, including:

- **Industrial installations:** new or proposed installations for which an air quality assessment has been carried out.
- **Industrial installations:** existing installations where emissions have increased substantially or new relevant exposure has been introduced.
- **Industrial installations:** new or significantly changed installations with no previous air quality assessment.
- Major fuel storage depots storing petrol.
- Petrol stations.
- Poultry farms.

3.4 Commercial and Domestic Sources

The London Borough of Haringey confirms that there are no new commercial and/or domestic sources identified since the last Updating and Screening Assessment that may have an impact on air quality in the borough, including:

- Biomass combustion plant – individual installations.
- Areas where the combined impact of several biomass combustion sources may be relevant.
- Areas where domestic solid fuel burning may be relevant.

3.5 New Developments with Fugitive or Uncontrolled Sources

The London Borough of Haringey confirms that there are no new developments with potential sources of fugitive or uncontrolled emissions since the last Updating and Screening assessment, including:

- Landfill sites.
- Quarries.
- Unmade haulage roads on industrial sites.
- Waste transfer stations etc.
- Other potential sources of fugitive particulate emissions

4 Local Air Quality Plan

Following the revision of the Mayor of London's Air Quality Strategy; Clearing the Up London's Air, Haringey Council revised its Air Quality Action Plan (AQAP) in September 2010. The first AQAP was published in 2003.

Tackling poor air quality remains a challenging task given that Haringey, like other London boroughs continues to breach the air quality objectives for NO₂ and PM₁₀. The dominant source of NO₂ and PM₁₀ emissions in Haringey is road transport with a variety of other sources contributing emissions. According to the Mayors Air Quality Strategy 2010, contributions of NO_x emissions in Greater London comprise of 46 percent from road transport and 22 percent from domestic gas.

An integrated approach to improving local air quality at priority locations has been adopted in the revised Air Quality Action Plan. This will help to ensure that policies and initiatives related to air quality, transport and planning are balanced and coordinated across the Council. In the long term, tackling air quality issues together achieves greater cost savings and health benefits.

The main objectives of the Action Plan are to:

- demonstrate the Council's commitment to improving air quality and lead by example
- provide an overview of local key policies with respect to air quality
- improve air quality whilst maintaining economic stability and to explore wider economic opportunities.
- involve all relevant council departments and external agencies where appropriate, to ensure a balanced and integrated approach Haringey
- to improve the quality of life and health of the residents and workforce in Haringey.

A copy of the Council's revised Air Quality Action Plan can be downloaded from the council website at:

http://www.haringey.gov.uk/airquality.htm#air_quality_action_plan

It was submitted to defra and the GLA as part of fulfilment of the LAQM requirements in January 2011.

5 Planning Applications

Planning applications with potential air quality impacts are screened on an individual basis. A summary of planning applications received by Haringey Council during 2010 together with a brief outcome of the air quality assessment is included in Table 5.1

Table 5.1 New Developments with Potential Air Quality Impacts

Application	Planning Reference	Date of Air Quality Assessment	Outcome of Assessment
Demolition of existing buildings, (excluding No. 596 High Road), and erection of 3 storey buildings to provide 175 sqm of A1 / A2 / A3 floorspace and 39 residential units together with formation of vehicular access.	HGY/2010/0201	None carried out – Environmental Health not consulted.	
Proposed residential development at playground Site, Stainby Road London, N15 4EA.	HGY/2010/2025	November 2010	Modelling Assessment determined that PM10 and NO2 will have no impact on proposed development.
Redevelopment of site to create a new municipal depot for the London Borough of Haringey, including vehicle workshops with associated storage, security office, dog kennel, salt store, staff changing and muster facilities, offices and recycling centre, as well as operational, staff and public vehicle parking.	HGY/2010/0048	To date – no air quality assessment has been submitted.	

6 Local Transport Plans and Strategies

Haringey Council's revised Air Quality Action Plan was compiled in parallel with the Council's Transport Plan / LIP 2.

The LIP2 recognises that traffic is a major source of pollution in Haringey and contributes significantly to poor air quality. Whilst the LIP 2 has been compiled with respect to the policies and direction of TfL, where possible, the LIP 2 and Air Quality Action Plan is based upon actions which aim reduce car use and promote walking and cycling; thus working towards improving air quality.

Measures included are those already described in Haringey Council's Air Quality Action Plan and include:

- encourage behaviour change,
- uptake of electric vehicles and
- eco-driving training,
- modal shift to increase walking and cycling,
- the use of cleaner fleet vehicles

Objective 6 of Haringey's LIP2 specifically addresses air quality:

"Improve air quality within the borough through initiatives to reduce and mitigate the effects of pollutant emissions from road and diesel operated rail transport".

Section 3.3.16 of Haringey's LIP2 supports Haringey's Air quality action plan and states:

"The dominant source of emissions of NOx and PM10 in Haringey arises from road transport. Proposals contained within this LIP aimed at lowering traffic volumes, easing congestion and encouraging a modal shift to sustainable transport will significantly contribute to improving Haringey's air quality, and specifically lowering NOx and PM10 levels. These measures will be implemented where practicable at the priority air quality hotspots with the priority corridors and neighbourhoods.

London borough of Haringey

The following interventions and proposals contained within this LIP's delivery plan directly support the delivery proposals within Haringey's Air Quality Action Plan, and will make a positive contribution to improving Haringey's air quality.

Urban realm and corridor improvements which encourage a modal shift from car usage, to sustainable modes of transport, including walking, cycling and improved access to public transport. The introduction of CPZ's are an important tool for discouraging car usage for short journeys. School and work place travel plans encourage modal shift from car usage to cleaner and zero emission modes of transport and the more sustainable car usage, share as car sharing.

Haringey Council's travel plan promotes several initiatives to reduce vehicle emissions including the introduce electric vehicles for use for Council related activities, modal shift measures to reduce car usage and smarter working practices aimed at reducing the need to travel for work related journeys and commuting.

Haringey Council's fleet is LEZ compliant, i.e. Euro III standard or higher. Contracted out services using LGVs and HGVs such as street cleansing and waste collection vehicles, are also compliant with the requirements of the LEZ.

Promoting behavioural change is an effective and relatively quick method for reducing vehicle emissions by providing the necessary information to make smarter travel choices. This includes travel awareness initiatives to educate on sustainable car usage and efficient driving techniques to reduce fuel consumption and vehicle emissions. Expansion of car club scheme, which encourages membership to sell their own vehicles and drive less, in often clean and more efficient car club vehicles. Expanding the network of electric vehicle charging facilities provides the practical infrastructure required to support the uptake in electric vehicle ownership. Traffic calming and traffic smoothing measures, including rephasing of traffic signals, to reduce traffic speeds and congestion from stop-start queuing traffic, especially in the poor air quality hotspots."

The corridors and neighborhoods programme identifies transport corridors based on the A road network in the borough excluding TLRN routes. Other roads such as B roads are addressed through the neighbourhood programme. The 2009 Air Quality modeling

London Borough of Haringey

update carried out by Bureau Veritas for the North London Cluster group, including Haringey, identified 14 air quality 'hotspots' across the borough. Many of these hotspot locations are also identified as priority neighbourhood areas. The neighbourhoods programme consists of schemes which will deliver local area improvements, including CPZs, 20mph zones, accessibility and the reduction of street clutter, the expansion of Haringey's car club network and increasing the number of electric charging points and environmental schemes including air quality improvements.

7 Climate Change Strategies

The Sustainable Community Strategy, 'A Sustainable Way Forward', is the council's overarching plan for Haringey. It provides a ten year vision from 2007 to 2016 for Haringey and was adopted by the council following extensive consultation. The main aim of the strategy is to improve the quality of life for everyone and it sets out the council's ambitions for the borough and how the council wants Haringey to be like in 2016. The Community Strategy also addresses issues that are key challenges and opportunities for Haringey. Predominantly focussed towards climate change and carbon emissions, the environmentally sustainable future vision gives a nod towards air pollution; ...“Poor air quality, road congestion and homes and buildings that are poorly built and costly to heat, diminish both our quality of life and our well-being.”

The Greenest Borough Strategy was adopted by the council in 2008 and sets out how the Council will take forward actions to tackle climate change and embed environmental sustainability into all the council does. This sets out an overarching strategy for improving quality of life, wellbeing and to create a cleaner, greener and safer Haringey. The Council will lead by example to reduce its carbon footprint by reducing energy consumption across its buildings and services, and adapt and prepare the borough for climate change through appropriate planning, investment and delivery of its services. Within the strategy Priority 3, 'Managing Environmental Resources Efficiently' makes reference to improving local air quality and reducing the borough's indirect greenhouse gas emissions as one of the six objectives. Priority 6, 'Promoting Sustainable Travel' lists the two objectives to 'Reduce Car and Lorry Travel' and, 'Improve Public and Community Transport'.

Haringey Council has an ambitious target to reduce carbon emissions in the borough by 40 percent by 2020. This target was adopted by the Council in November 2009, as part of the Friends of the Earth 'Get Serious' campaign, together with a commitment to develop an action plan to achieve this target.

Haringey has furthered this commitment and is the first London borough to illustrate its responsibility for the local environment by signing up to the Aalborg Commitments in 2009- a set of shared commitments for European local councils. The Aalborg

London Borough of Haringey

Commitments were created in June 2004 and have been signed by more than 600 councils across Europe. By signing up, cities and towns commit themselves to developing long-term action plans toward sustainability. The ten commitments cover a wide range of themes from protecting and promoting the health and wellbeing of Haringey residents to responsible consumption of resources.

Whilst the Greenest Borough Strategy is not directly related to the air quality review and assessment regime and its attendant air quality objectives, it will aid the Council in considering how all of its services and actions contribute to, and are affected by climate change, and how the effects can be reduced.

8 Conclusions and Proposed Actions

8.1 Conclusions from New Monitoring Data

New monitoring data shows that there have been no exceedences of the PM10 annual mean and 24 hour objective but that the NO₂ annual mean objective has been exceeded adjacent busy roads and is close to the annual mean objective at background locations. There have been no exceedences of the hourly NO₂ objective monitored. Diffusion tube data confirms that there are likely to be exceedences of the hourly objective at roadside locations, such as HR13 and HR18 where the annual measurement is above the 60mg/m³.

These results continue to demonstrate that the London Borough of Haringey was correct in its decision to declare an Air Quality Management Area for the pollutants of PM10 and NO₂. Although the monitoring results for PM10 show no exceedences, monitoring for this pollutant will continue for the foreseeable future. The high levels of NO₂ are likely to be as a result of the increase in diesel fuelled vehicles and also as a direct result of the diesel particulate filters fitted to London buses and HGV's. These filters produce NO₂ to help oxidise particles.

The London Borough of Haringey has no intention at this stage to revoke the AQMA declared for PM10. This will be reviewed at the next evaluation of data.

The sulphur dioxide objectives have been achieved.

8.2 Conclusions relating to New Local Developments

The London Borough of Haringey has identified the following new local developments which may impact on air quality in the Local Authority area.

- Northumberland Park redevelopment (Tottenham Hotspur Football Club)
- Coronation Sidings, N8.
- Hornsey Town Hall
- GLS Supplies Depot, Ferry Lane, N17

Planning applications that are imminent include:

- Pinkham Way – 300,000T MBT waste plant
- Haringey Heartlands redevelopment area.

All of these developments will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

There are no landfills, quarries or Part A/A1 industrial processes in Haringey. With respect to 'Part B' permitted installations, at December 2010 there were a total of 4 industrial premises, 16 service stations and 48 dry cleaner premises permitted.

The majority of new or planned developments over the last year have been residential or mixed-use developments, but few are large enough to have a significant impact on local traffic flows. Haringey uses the planning process to minimise the impact on local traffic to prevent increases in congestion and worsening air quality. There have been car-free residential dwellings and the council's UDP has parking standards to limit residential parking. Most major developments are required to implement measures such as travel plans and local improvements to reduce traffic as part of Section 106 agreements. Although not all planning applications submit a detailed air quality assessment, each major application is considered with a regard to air quality through an Environmental Impact Assessment.

Notwithstanding the above, biomass boilers have a detrimental impact on urban air quality, particularly for NO₂ and PM10 emissions.

8.3 Proposed Actions

Monitoring data to-date has not identified the further need proceed to a Detailed Assessment for any pollutant or modify the current Air Quality Management Area.

Identification of 'hotspot' areas in the North London Cluster Group Air Quality Modeling Report 2009 which are likely to exceed the Government's NO₂ hourly and so annual objective, has resulted in the review of diffusion tube monitoring locations. The need for additional monitoring locations has resulted in re-location of some sites and the addition

London borough of Haringey

of 4 extra sites to the monitoring programme. These will be reported on in the next report, the Updating and Screening Assessment Report 2011.

The Council has been monitoring air pollutants of concern in the borough for a number of years. Air pollution is worse adjacent main roads and our monitoring determines that the Government's annual objective for nitrogen dioxide has not been achieved in Haringey. Nitrogen dioxide is predominantly from vehicle exhausts. However it is recognised that this is the same across the whole of London.

9 References

- **Local Air Quality Management Technical Guidance**
LAQM.TG(09)
- **ERG London Air website & Air Quality Reports**
www.londonair.org
- **Haringey's Greenest Borough Strategy 2009 – 2018**
- **Haringey's LIP 2 / Transport Plan 2010 – 2018**
- **Haringey's Air Quality Action Plan 2010-2018**

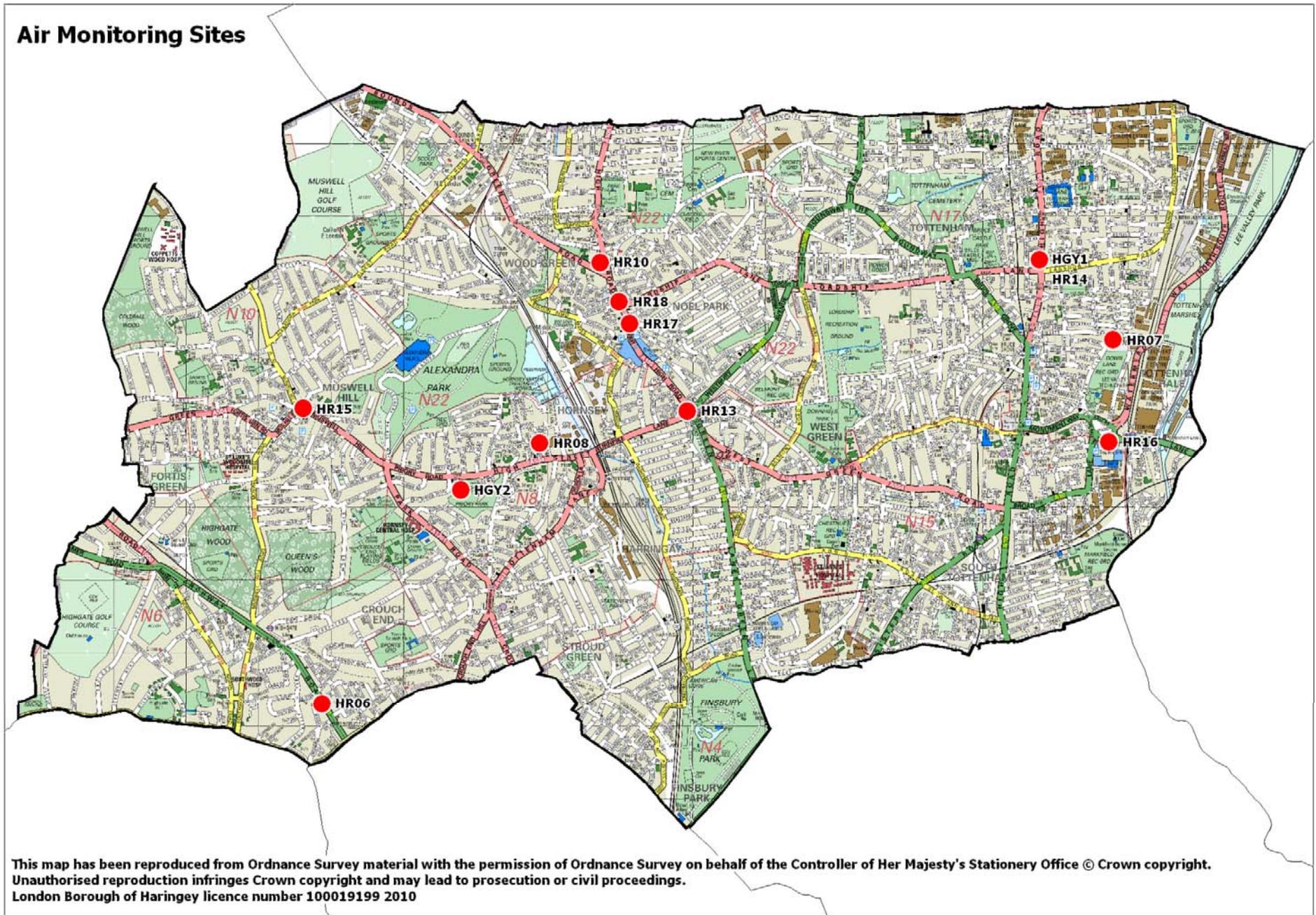
London borough of Haringey

Appendices

Appendix 1: Monitoring Station locations.

London borough of Haringey

Air Monitoring Sites



London borough of Haringey

Appendix 2: QA:QC Data

Diffusion Tube Bias Adjustment Factors

The diffusion tubes are prepared and analysed by Lambeth Scientific Services who are a UKAS accredited laboratory. This laboratory participates in the WASP scheme (Workplace Analysis Scheme for Proficiency) to meet European standards and is involved in the network field inter-comparison exercise operated by NETCEN, which assesses the sampling and analytical performance of the tubes.

Nitrogen dioxide diffusion tubes are prepared using a 50% triethanolamine (TEA) in acetone. Results of 4 of the 10 sites are fed into the UK Nitrogen Dioxide Diffusion Tube Network.

Factor from Local Co-location Studies (if available)

One diffusion tube is co-located with an automatic analyser for NO₂. This is at the High Road monitoring site (HGY1). All diffusion tube results have been appropriately bias adjusted, using the analytical laboratory adjustment factors; as only one diffusion tube is co-located.

For all diffusion tube results, both raw and bias adjusted measured data, see Tables 2.4a and 2.4b

PM Monitoring Adjustment

All TEOM data reported in this report is ratified and validated by (Environmental Research Group) ERG, Kings College, London and included in the London Air Quality Monitoring Network. ERG ratifies TEOM data using the 1.3 conversion factor.

Results taken from the londonair.org.uk website are supplied already modified.

Short-term to Long-term Data adjustment

Not applicable as none carried out.

QA/QC of automatic monitoring

As mentioned previously, all automatic monitoring data is validated and ratified by the Environmental Research Group (ERG). Fortnightly calibrations are carried out by the LSO.

QA/QC of diffusion tube monitoring

Co-ordination of a quality assurance/quality control (QA/QC) framework, aimed at the analytical laboratories that supply and analyse the diffusion tubes currently comprises

- Promotion of the independent Workplace Analysis Scheme for Proficiency (WASP), operated by the Health and Safety Laboratory, with yearly assessment against agreed performance criteria.
- Operation of a field intercomparison exercise, in which diffusion tubes are co-located with an automatic analyser: from January 2006 this is at a roadside site.
- Operation of a QC solution testing scheme. Participation is recommended for any laboratory that prepares or analyses NO₂ diffusion tubes used by Local Authorities for LAQM purposes.

Quarterly summaries of participating laboratories' performance in the WASP scheme over the preceding 12 months, prepared by AEA, are available by clicking on the links below:

<http://www.laqmsupport.org.uk/no2qaqc.php>