

# The London Borough of Hillingdon



Progress Report, 2008

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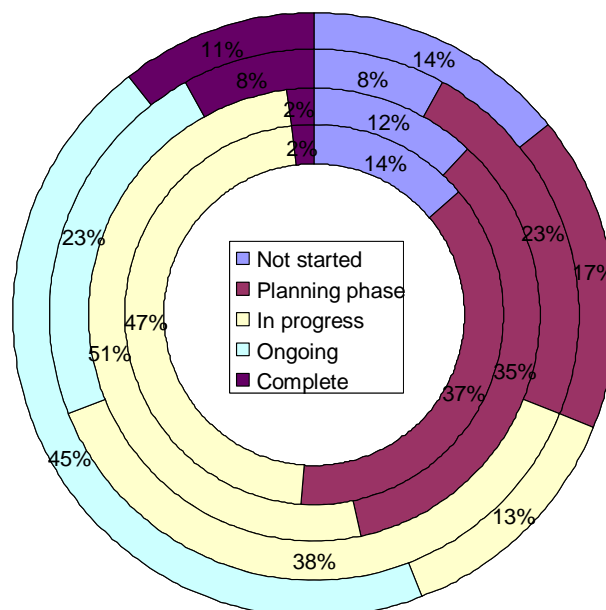
## Executive Summary

This report provides an update on the results of air quality monitoring and on progress with the air quality action plan (AQAP) by the London Borough of Hillingdon, covering the period 2007-2008. It has been produced in accordance with guidance laid down by DEFRA.

From the monitoring data presented in this report it is concluded that:

- During 2007, the annual mean objective for NO<sub>2</sub> was exceeded at both roadside and background sites within the Borough and its neighbouring local authorities. These include sites monitored continuously in the National and London networks as well as those within the Hillingdon diffusion tube survey.
- Despite successful implementation of many action plan measures there is no evidence of progress towards achieving the standard from the 2007 data when taken with other data showing results and trends over several years, going back to the mid 1990s.
- These results support the earlier decision to declare an AQMA (Air Quality Management Area) across the southern half of the Borough, and to adopt the AQAP based on exposure of people in some parts of Hillingdon to these levels of NO<sub>2</sub>.
- Monitoring results also indicate that objectives for other air quality strategy pollutants were achieved during 2004, and support the decision not to declare an AQMA on the basis of exposure to these other pollutants. The Council will, however, continue to pay attention to them, especially fine particles.

The following figure shows that good progress has been made with the action plan from April 2007 to April 2008.



**% of actions listed in the various packages of the action plan in each stage of implementation. Rings from inside to out represent progress for 2004/5; 2005/6; 2006/7; 2007/8.**

56% of measures are either complete or now part of ongoing systems (e.g. the implementation of school travel plans across all schools in the Borough). The fact that so many measures have reached this stage demonstrates commitment across the Council for environmental improvement.

Highlights of Action Plan implementation in 2006/7 include:

- Through a School Travel Plan, Field End Junior School has been successful in reducing the number of trips to and from school by car. In 2005, 53% of trips were by car but this declined in 2006 to 42% and in 2007 to 37%, overall a 31% reduction in car use. The school has continued to develop and adapt their School Travel Plan since its introduction in 2005 and has made it central to their school ethos.
- The BSP environment allocation for 07/08 funded further work on freight in the borough. Three additional industrial business areas (IBAs) were audited in the south of the borough.
- An emission inventory has been developed for the Council's vehicle fleet.
- The West London AQ cluster group have commissioned a report to be used as a basis for a best practice guide for cab firms.
- Hillingdon signing the Nottingham Declaration on Climate Change on World Environment Day 5<sup>th</sup> June 2007. This commits the borough to writing a Climate Change Strategy and developing an action plan aimed at reducing carbon emissions.
- Hillingdon commissioned a senior expert review of PSDH - Adding Capacity at Heathrow. They concluded that there was no basis for the conclusion that air quality objectives would be achieved, not least because forecast trends in air quality fly against observed trends since 1997;

Despite these highlights it is also observed that a number of measures have yet to be commenced, several concerning the airport and hence outside the control of the Hillingdon Borough Council. A small number of these measures are, however, under the control of the Borough Council.

Priorities for the coming year are as follows:

1. Hillingdon must continue to show leadership in air quality improvement. Without this it will be very hard to encourage other stakeholders to participate.
2. Completion of an audit of the action plan, with a view to an overhaul of the action plan to ensure that lessons learned over the last 4 years are better reflected by it. Production of the audit has been carried over from 2007 in the hope that the position with respect to future developments at Heathrow would become clearer.
3. There needs to be continued review and appraisal of reports to be published in connection with Heathrow Airport.
4. Integration of the Council's air quality action plan with development of a climate action plan.
5. Maintenance of the stakeholder dialogue established during development of the action plan and since.

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## List of Abbreviations

$\mu\text{g}/\text{m}^3$	Micrograms ( $10^{-6}$ , 0.000001, grams) of pollutant per cubic metre of air.
ALG	Association of London Government
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
APPLE	Air Pollution Planning and the Environment group
ARC	Airport Regions Conference
ATM	Air Traffic Movements
AURN	Automatic Urban Network (of pollution monitors)
BAA	Operating company for Heathrow and several other UK airports
BSP	Borough Spending Plan
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CVP	Clean Vehicle Programme
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
EA	Environment Agency
EPU	Environmental Protection Unit
EU	European Union
GLA	Greater London Authority
HA	Highways Agency
HATF	Heathrow Area Transport Forum
HEX	Heathrow Express
HGVs	Heavy Goods Vehicles
HSAS	Heathrow Surface Access Strategy
IBA	Industrial Business Area
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LDF	Local Development Framework
LDVs	Light Duty Vehicles (cars and small vans)
LEZ	Low Emission Zone
LIP	Local Implementation Plan (=LTP)
LSP	Local Strategic Partnership
LTP	Local Transport Plan
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Oxides of nitrogen (the mixture of NO and NO <sub>2</sub> in the atmosphere)
O <sub>3</sub>	Ozone
PAH	Polycyclic aromatic hydrocarbons
PCT	Primary Care Trust
PM <sub>x</sub>	Particulate matter with a diameter of x micrometres (typically 10, as in PM <sub>10</sub> ) or less
PSDH	Project for the Sustainable Development of Heathrow
QA/QC	Quality assurance, quality control
SO <sub>2</sub>	Sulphur dioxide
SPD	Supplementary Planning Document
T5	Heathrow Terminal 5
TfL	Transport for London
TVMMS	Thames Valley Multi-Modal Study
USA	Updated Screening and Assessment
UWE	University of the West of England
WL	West London, as in WLA (West London Alliance), WLFQP (West London Freight Quality Partnership), etc.

## Chapter 1 Introduction

### 1.1 Objectives of this report

This progress report is the third to be issued by the London Borough of Hillingdon following finalisation of its Air Quality Action Plan in 2004. It follows the reporting guidelines issued by DEFRA, stipulating that reports should contain the following information:

- Data on monitoring
  - Summarise monitored air pollution data
  - Report on performance against air quality objectives
  - Assess trends in air pollution
  - Forecast potential for compliance with air quality objectives
- Implementation of Action Plans
  - Summarise information on Action Plan measures
  - Review progress with measures
- Planning and air quality
  - Identify local plans that may influence air quality
  - Identify planning applications that will affect air quality
- Potential effects of local transport plans on air quality
  - Identify measures that will have an affect on air quality
  - Review progress of these measures.

A checklist of the requirements for progress reports and associated commentary of the compliance of this report against it is provided in Appendix 1.

### 1.2 Air quality in Hillingdon

The London Borough of Hillingdon, like all Local Authorities in the UK, is required to assess air quality in the area under its control. In cases where the concentration of one or more pollutants exceeds the objectives laid down in the Air Quality Strategy for England and Wales it is necessary for the Local Authority to declare an Air Quality Management Area (AQMA) and then to develop an Action Plan, defining actions that the Council can take or influence others to take to improve air quality.

Hillingdon requires an Air Quality Action Plan because annual average concentrations of nitrogen dioxide (NO<sub>2</sub>) in several parts of the Borough exceed the national objective of an annual mean concentration of 40 µg.m<sup>-3</sup> for 2005 (see Figure 1), a level beyond which experts consider risks to human health to be significant. An AQMA has been declared, in accordance with regulations, covering the southern half of the Borough. This has not been adjusted in the last reporting year.

Concentrations of other pollutants generally comply with the objectives, though the Borough continues to monitor some others, particularly fine particles (PM<sub>10</sub>). The Updating and Screening Assessment (USA) carried out by the Borough in 2006 confirmed the earlier assessment with respect to the pollutants of concern and the extent of the AQMA.

In order to develop an action plan that is cost-effective and deals with different sources of pollution in a cost-efficient and proportionate manner, it was essential to



understand how these sources contribute to concentrations in the AQMA. Table 1 presents the estimated sector breakdown of NO<sub>x</sub> emissions in 2005 within the Borough.

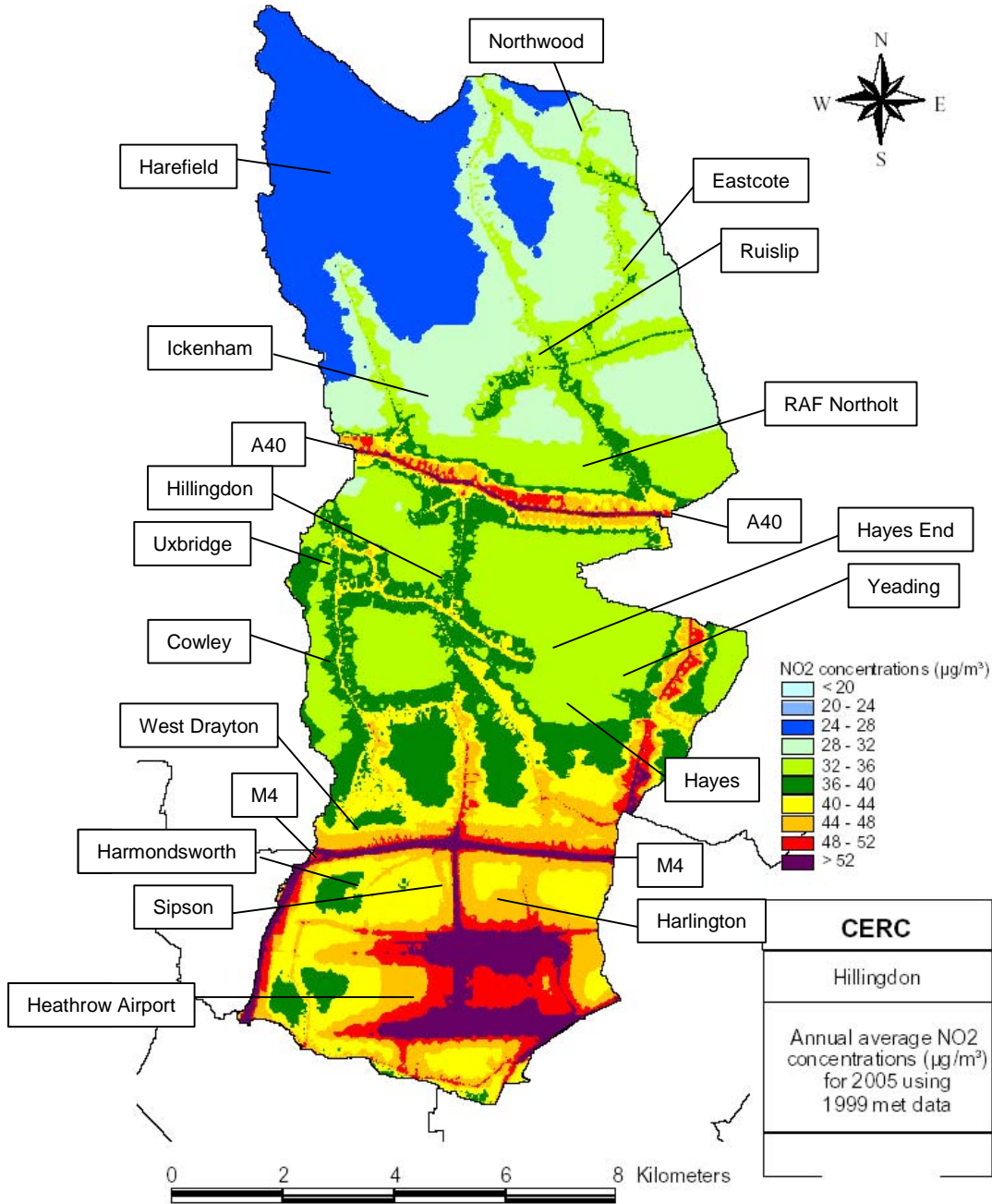


Figure 1. Annual mean NO<sub>2</sub> concentrations in the London Borough of Hillingdon in 2005 (from CERC 2003a).



**Table 1. Forecast sectoral breakdown of annual NOx emissions in 2005 within the London Borough of Hillingdon**

Sector	Emission (tonnes /year)	% of total
Domestic combustion	320	5.0%
Commercial & small industrial combustion	165	2.6%
Council heating	15	0.2%
Non-council public heating	15	0.2%
Regulated Industry	215	3.3%
Airport on-site activities	3750	58.2%
Public transport	515	8.0%
Road transport – Heavy Goods Vehicles (HGVs)	605	9.4%
Road transport – Light Duty Vehicles (LDVs) other than cars	145	2.3%
Road transport - Cars	645	10.0%
Road transport - Council fleet	30	0.5%
Road transport sub-total	1690	26.20%
Other	20	0.3%
<b>Total</b>	<b>6440</b>	

This table will be updated in the coming months using information from the LAEI for 2004.

It is clear from Table 1 and Figure 1 that the main sources of oxides of nitrogen in the Borough at the time that the action plan was developed were road traffic and activities associated with Heathrow airport. However, other sectors also make important contributions to the overall pollutant load in the Borough, including emissions from domestic and commercial premises. Although most emphasis in the Action Plan is placed on improvements at the airport and from road traffic, all of these sources are considered in the Plan, in the interests of a proportionate and cost-effective response to air quality problems in the Borough.

Information is provided in Chapter 2 on the latest results of air quality monitoring within the Borough, with additional detail provided in Appendix 2. Chapter 3 reports on major new planning applications within the Borough and policy developments from the Council that are expected to affect air quality.

### 1.3 Types of measure in the Action Plan

The Action Plan contains a large number of measures, grouped into a series of packages, as follows.

First, a series of packages designed at reducing emissions from road transport;

1. Switching to cleaner technologies – promoting use of public transport, cycling, etc., shifting freight from road to rail, etc.
2. Tackling through traffic;
3. Promotion of cleaner vehicle technology;

Next, two packages that deal with emissions from specific sources within the Borough;

4. Measures specific to Heathrow Airport;
5. Measures concerning local industries and other businesses

Then a package that deals with actions that need to be undertaken by the Council to promote more effective use of resources in the Borough;

6. Improving eco-efficiency of current and future developments, including properties owned or run by the Council;

The next package covers actions of a more general nature, for example, implementation of the Mayor's Air Quality Strategy in the Borough;

7. Actions to be taken corporately, regionally and in liaison with the Mayor.

The last package, Package 8, contains a series of measures relating to the management of the action plan and to air quality monitoring in the Borough.

A number of specific measures are described under each package. For each measure an appraisal has been made of the following, more complete information on which is given in an accompanying database, the Hillingdon Action Plan Tracker, developed by EMRC:

- a) Costs;
- b) Effects on NO<sub>2</sub> concentrations;
- c) Effects of these measures on other issues:
  - i. Emissions of other pollutants;
  - ii. Noise;
  - iii. Congestion;
  - iv. Attractiveness of public transport;
  - v. Social inclusion;
  - vi. Local economic vitality;
  - vii. Other effects;
- d) Which (if any) other plans already include consideration of the measures;
- e) Who should take responsibility for implementation of each measure.

Progress with the plan is reported in Chapter 4, with detailed information on each measure contained within the plan given in Appendix 3.

## Chapter 2 Monitoring

This chapter provides an overview of air pollution monitoring in Hillingdon in 2007. More complete details are given in Appendix 2 to this report.

### 2.1 The monitoring network in and around Hillingdon

The London Borough of Hillingdon undertakes monitoring of atmospheric concentrations of the following pollutants:

- NO<sub>2</sub>
- PM<sub>10</sub>
- Benzene

This is performed using a network of automatic monitoring stations and diffusion tubes, as follows:

**Table 2. List of monitoring stations and diffusion tubes in Hillingdon. Additional sites outside the borough that are used for comparison in this report are also listed.**

Station	Type	In Hillingdon AQMA	In Hillingdon, outside AQMA	Outside Hillingdon
LHR2	Automatic	✓		
London Hillingdon	Automatic	✓		
Hillingdon1	Automatic	✓		
Hillingdon2	Automatic	✓		
Hillingdon3	Automatic	✓		
London Harlington	Automatic	✓		
Hounslow2	Automatic			✓
Colnbrook	Automatic			✓
Ealing7	Automatic			✓
Hillingdon Sipson	Automatic	✓		
London Harmondsworth	Automatic	✓		
Heathrow Green Gates	Automatic	✓		
HD31-72	Diffusion tube	✓		
HD73-78	Diffusion tube		✓	
HD79-80	Diffusion tube	✓		

None of the other pollutants covered by the National Air Quality Strategy are monitored by the Council as they are not likely to be present at concentrations high enough to exceed objectives. However, CO, O<sub>3</sub> and SO<sub>2</sub> are monitored in the Borough at sites run under the Automatic Urban and Rural Network (AURN). The management and collection of data from both diffusion tubes and automatic monitors are subject to quality assurance and quality control.

The analysis presented here includes some results from locations outside Hillingdon. These are included to provide a more complete picture of conditions in and around the Borough. The use of additional sites also has the advantage of providing a broader data base for consideration of possible trends in pollutant concentrations. In total, this report draws on information for 12 automatic sites and 38 diffusion tube

sites for NO<sub>2</sub>, 11 automatic sites for PM<sub>10</sub>, 3 automatic sites for CO, 3 automatic sites for SO<sub>2</sub> and 5 diffusion tube sites for benzene.

## 2.2 Results for NO<sub>2</sub>

Data from the automatic monitoring sites illustrate that achievement of the annual mean NO<sub>2</sub> objective of 40µgm<sup>-3</sup> in the Borough and surrounding region has been a problem for several years. During 2007 it was not achieved at six monitoring stations: LHR2 (54.0µgm<sup>-3</sup>), London Hillingdon (45.0µgm<sup>-3</sup>), Hillingdon 1 (48.7µgm<sup>-3</sup>), Hillingdon 2 (43.4µgm<sup>-3</sup>), Hillingdon 3 (43.4µgm<sup>-3</sup>) and Sipson (40.3µgm<sup>-3</sup>). Hillingdon 1, 2 and 3 are roadside sites and LHR2 is located at the airport where heightened concentrations may be expected. However, London Hillingdon and Sipson are suburban and urban background sites respectively and representative of residential areas of the Borough close to the airport and major roads. It should be noted that, due to low data capture rates, the results from Hillingdon 2 cannot be used in assessment against compliance with the air quality objective.

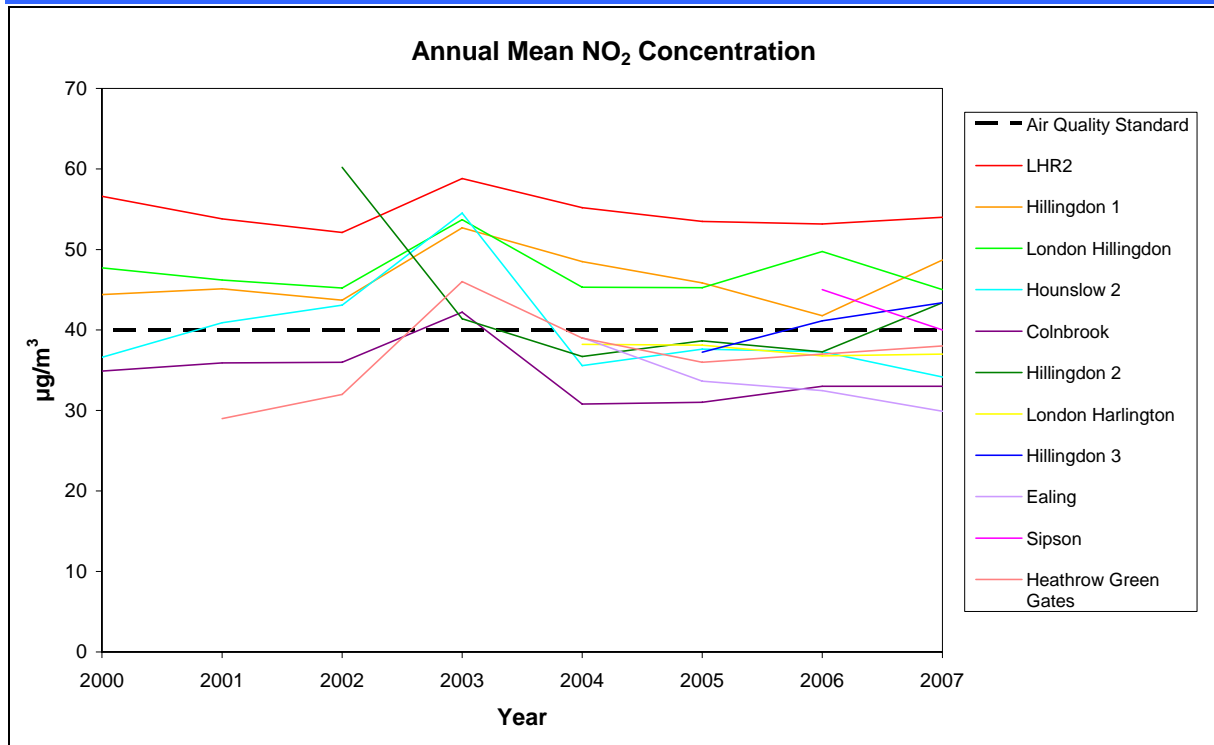
Figure 2 demonstrates the trends observed in the monitored data. It shows that concentrations have been well above the standard at Hillingdon 1, Hillingdon 2 and LHR2 since monitoring commenced (see Appendix 2 for earlier years). Year to year variations in the weather affect the annual mean concentrations so that interpreting trends can be difficult: The very hot weather in 2003 is likely responsible for the peak observed in that year, and the poor weather of 2002 for the dip in levels then. Although there had been some evidence of reduction in concentrations during the second part of the 1990s, there is no evidence of improvement since that time.

There was a small reduction in annual mean concentrations in 2007 at some sites (London Hillingdon, Sipson, Hounslow 2, and Ealing) however; this could have been due to the poor weather during the summer of 2007. These trend data suggest that it is unlikely that the annual mean NO<sub>2</sub> objective will be reached at LHR2, London Hillingdon or Hillingdon 1 in the coming years as judged from these local monitoring data alone.

The hourly NO<sub>2</sub> mean has also been observed during 2007 (see Table 5, Appendix 2). Only one site – Hillingdon 1 – did not meet the objective of not exceeding the 1 hour mean of 200 µgm<sup>-3</sup> more than 18 times a year. Hillingdon 1 is a roadside site where heightened NO<sub>2</sub> levels may be expected. However, the hourly concentrations will continue to be monitored.

Mapped data from the diffusion tube network show a similar pattern, with exceedances at a number of locations in 2005, 2006 and 2007, including background sites (Figure 3). There is no evidence of an overall improvement in NO<sub>2</sub> concentrations from the diffusion tube data.

Diffusion tubes placed at background sites and heavily trafficked road sides outside the AQMA were all below the objective level, in a range from 27.3 - 34.9 µg/m<sup>3</sup>. They demonstrate that the AQMA boundary is still valid, and will remain in place for trend analysis over time, resources allowing.



**Figure 2. Long-term annual mean NO<sub>2</sub> concentration in and around Hillingdon: Results from Automatic Monitoring Stations**

LB Hillingdon is also taking part in the national survey organised on behalf of the Highways Agency. Two Hillingdon sites are included in this survey, one roadside site and one residential.

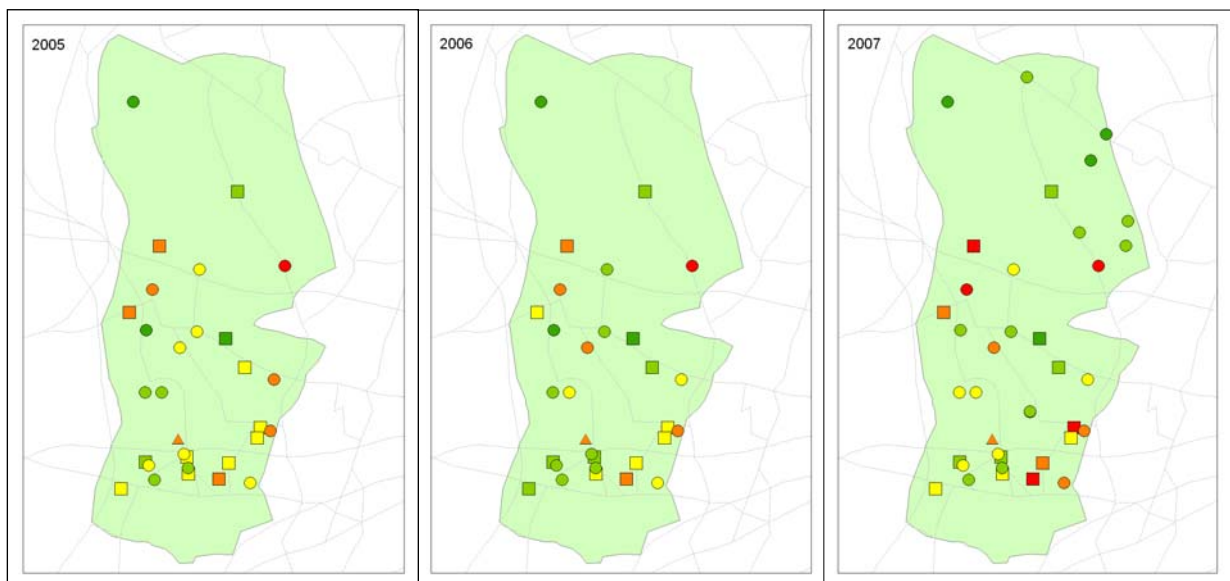
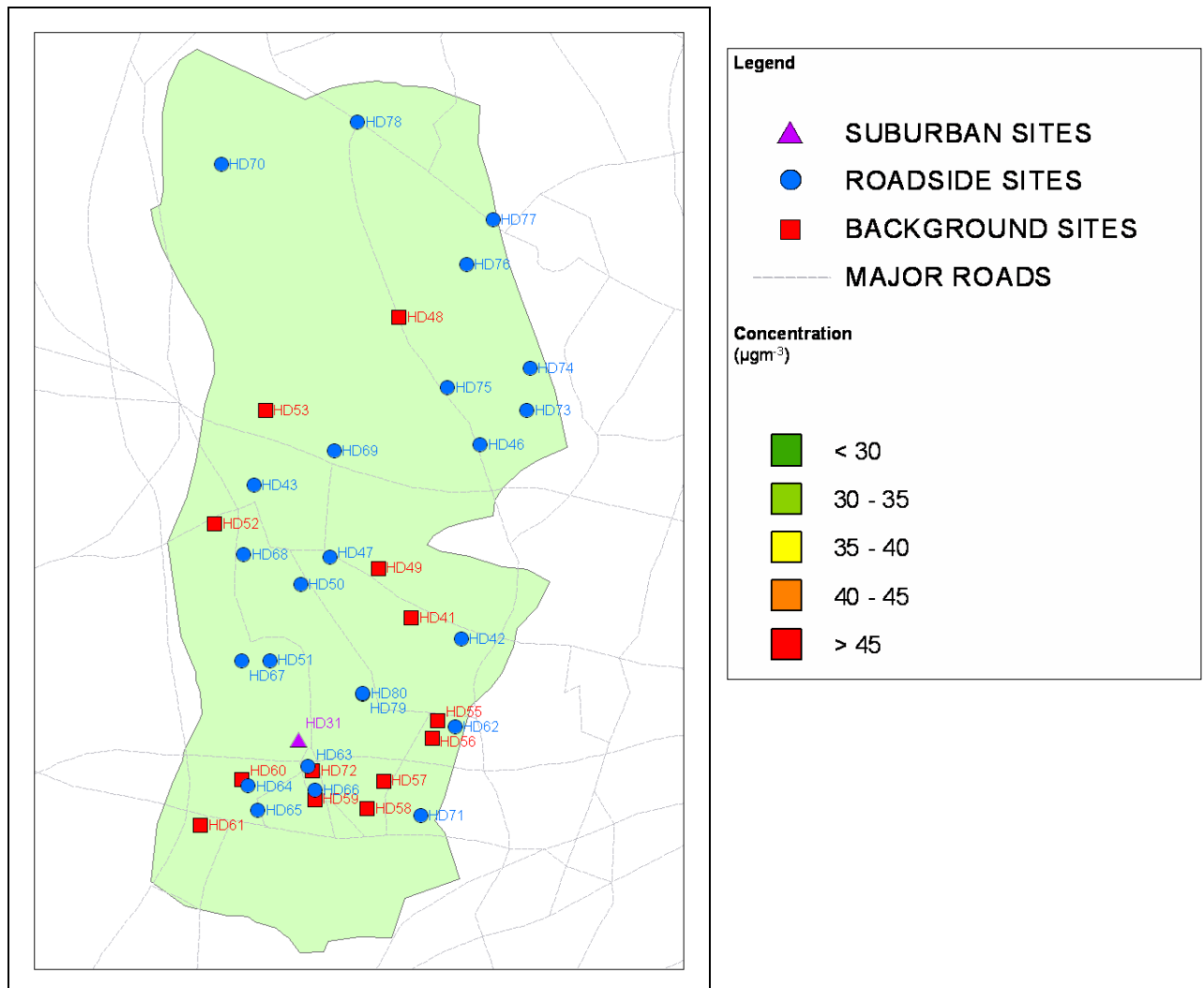
These findings are entirely in agreement with the conclusions of previous air quality reports from which it was concluded that the southern half of the Borough should be declared an AQMA. Sites outside the AQMA have not been shown as likely to exceed the Air Quality Strategy objectives.

### 2.3 Results for other pollutants

Data from monitoring stations clearly indicate that there are no problems in achieving the objectives for CO, SO<sub>2</sub> and benzene in Hillingdon (see Appendix 2, Table 7, Table 8 and Table 10).

Similarly, for PM<sub>10</sub> there is no problem in meeting the annual mean objective of 40 µg m<sup>-3</sup>, (see Appendix 2, Table 6). Data show that measured concentrations have been static at around 10-15 µg m<sup>-3</sup> below this objective for several years. Attainment of the 24 hour mean objective of 50 µg m<sup>-3</sup> has improved in recent years. Compliance has been recorded in all sites since 2003, only LHR2, Hillingdon 1 and Heathrow Green Gates did not achieve this objective in 2003. 2003 was a very warm year with particularly high PM<sub>10</sub> concentrations recorded more generally.

**Figure 3. Maps of the London Borough of Hillingdon illustrating locations of diffusion tube monitoring sites and the annual mean NO<sub>2</sub> concentration (µgm<sup>-3</sup>) at those locations. The annual mean NO<sub>2</sub> objective = 40µgm<sup>-3</sup>.**





## 2.4 Conclusions on monitored data

From the monitoring data presented in this report it has been concluded that:

- During 2007, the annual mean standard for NO<sub>2</sub> was exceeded at roadside, suburban and background sites within the Borough and its neighbouring local authorities. These include sites monitored continuously in the National and London networks as well as those within the Hillingdon diffusion tube survey.
- Results for NO<sub>2</sub> have generally shown no clear upward or downward trend since 2004 and there is no progress towards achieving the standard discernible in the 2007 data when taken as a whole with other data showing the results and trends over several years, going back to the mid 1990s.
- These results support the decision to declare and continued need for the AQMA and to adopt the AQAP based on exposure of the Hillingdon population to NO<sub>2</sub>.
- Other monitoring results indicate that the standards for other air quality strategy pollutants were achieved during 2007, supporting the decision not to declare the AQMA on the basis of exposure to these other pollutants, though continued monitoring, especially of fine particles, remains desirable.

## Chapter 3 Policies and planning applications

### 3.1 Developments in progress

Heathrow Terminal 5 opened to the public on 27<sup>th</sup> March 2008. The construction of the terminal was monitored via several air quality stations deployed around the site over a number of years. Although there are planning conditions set for T5 operation with regards to the total number of aircraft movements, the arrival in the Heathrow fleet of bigger planes such as the A380 will potentially increase the number of passengers and put added pressure on the surrounding road network.

Agreement has been reached with BAA for two of the air quality stations used to monitor the construction process to be retained i.e. Green Gates, Longford to the north-west of the airport and Oaks Road to the south-west. These will monitor the operation of the 5 Terminal airport. In addition, automatic traffic counters have been put in place on the three local residential roads leading to the airport prior to the opening of T5. This will give an indication of any additional traffic on local roads following the re-configuration of the airport.

Two other future and possible developments were identified in the 2007 progress report. The current situation for each is as follows:

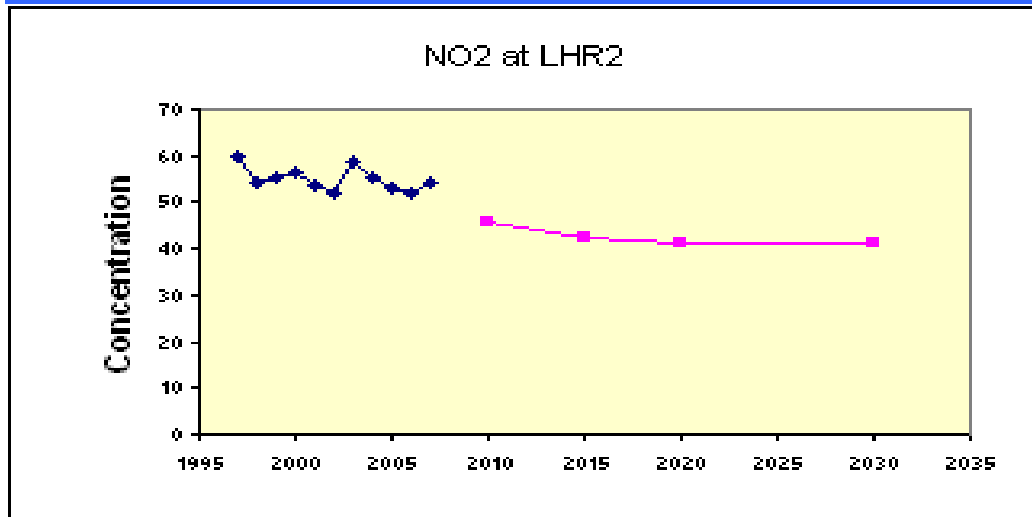
- Within Slough BC, close to the Hillingdon boundary at Colnbrook, a new “energy from waste” incinerator had been granted planning permission, to become fully operational in 2008. The area of plume grounding extends within the AQMA, but not to a current exceedance area.
- Planning permission had been granted for an increase of 54,000m<sup>2</sup> of floor space for accommodation, sports facilities and offices at RAF Northolt, just within the northern boundary of AQMA although not in an exceedance area.

### 3.2 Adding capacity at Heathrow (Third Runway proposal)

The consultation on the above was published in November 2007 with a closing date of mid-February 2008. Hillingdon engaged consultants to help examine over 1,000 pages of technical documentation. The Government’s air quality conclusions in the consultation stated that proposals for expansion of Heathrow via Mixed Mode (a change in existing runway operation to gain more capacity) and by addition of a 3<sup>rd</sup> runway could go ahead as relevant locations would be within the EU air quality limits for annual mean NO<sub>2</sub> levels.

Hillingdon has raised many concerns with regards to the air quality conclusions. The full response is available at <http://www.hillingdon.gov.uk/index.jsp?articleid=14328>. One point of concern is illustrated below:

The air quality modelling in the consultation shows an assumption of a steep decline in concentrations of NO<sub>2</sub> at the monitoring station on-airport (LHR2) (Figure 4).



**Figure 4. Plotted NO<sub>2</sub> concentrations. Blue line = measured data; red line = modelled information reported in support of Heathrow expansion**

The 2007 concentration at this site was  $54\mu\text{g}/\text{m}^3$ , the same concentration experienced 10 years previously in 1997. However, the modelled 2010 concentration in the consultation documentation suggests a drop to  $45.7\mu\text{g}/\text{m}^3$ . The level of reduction predicted is totally inconsistent with the empirical evidence to date and suggests an error in either the modelling parameters used and/or the data inputs to the modelling process.

### 3.3 Other possible future developments that may affect air quality

Potential developments at the RAF Uxbridge site may need future consideration on air quality grounds, but plans are yet to be finalised.

## Chapter 4 Progress with the Action Plan

### 4.1 Situation

This is the fourth progress report on air quality from Hillingdon following the approval of its Air Quality Action Plan (AQAP). As noted already, the plan contains a large number of measures, arranged into a series of packages, as follows:

- Package 1: Switching to cleaner transport options, for example, shifting freight from road to rail and promoting cycling and walking
- Package 2: Tackling through traffic
- Package 3: Promotion of cleaner vehicle technology
- Package 4: Measures specific to Heathrow Airport
- Package 5: Measures concerning local industries and other businesses
- Package 6: Improving the eco-efficiency of current and future developments, including those owned or operated by the Council
- Package 7: Actions to be taken corporately, regionally, and in liaison with the Mayor
- Package 8: Plan management

Summary information on all measures in the action plan is provided in Appendix 3.

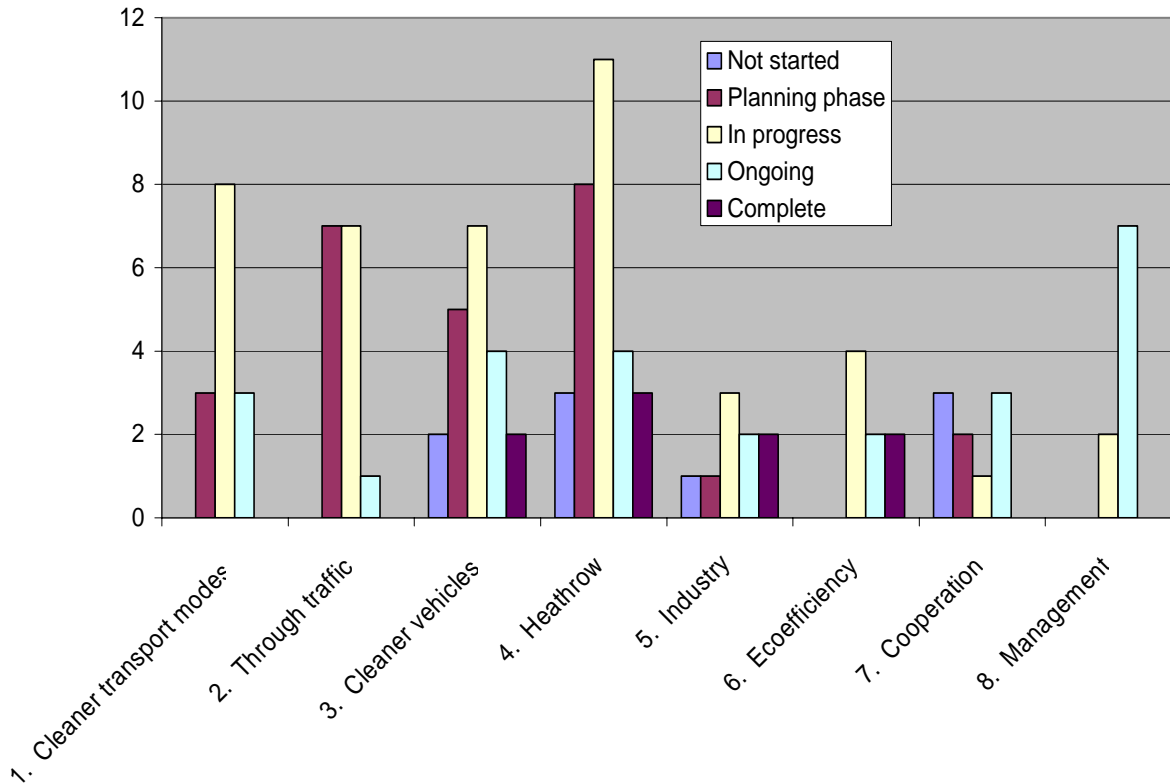
Progress within each package is summarised in the figures below. These show the number of measures in package at each of the following stages of development:

- Not started
- In the planning phase
- In progress
- Ongoing
- Completed

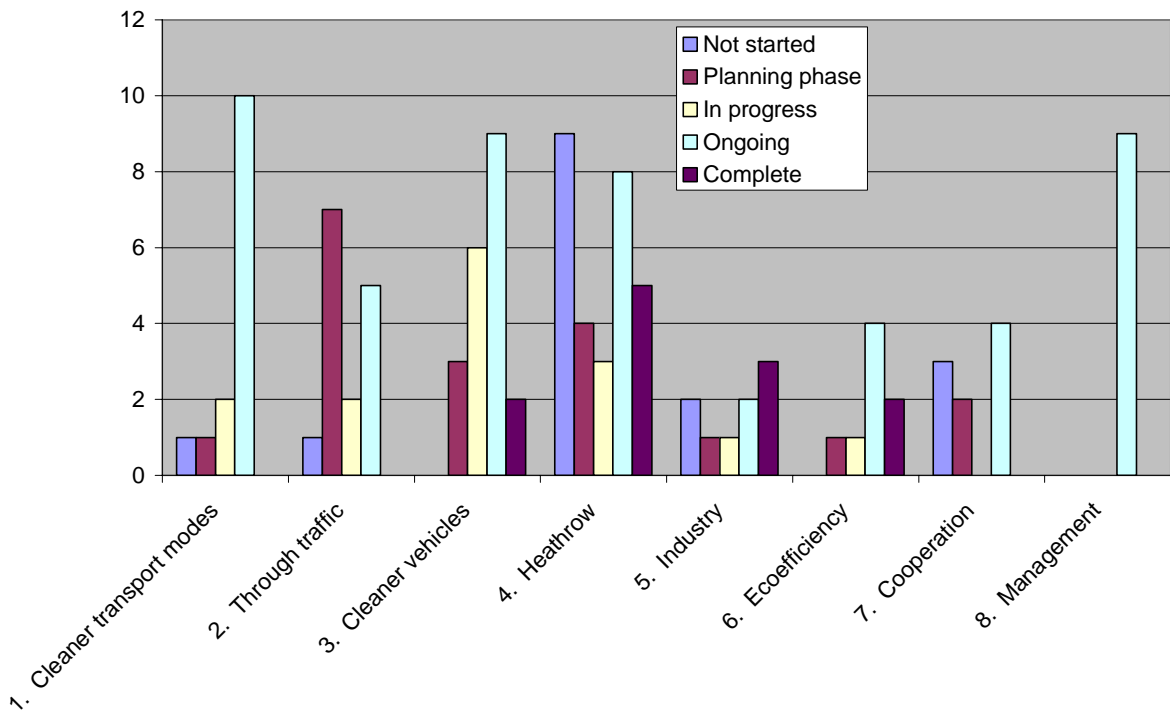
The category 'Ongoing' recognises that some measures that are 'in progress' will never be 'complete'. A good example concerns Measure 8.06 (annual reporting on air quality in the Borough) which is already being done, and for which necessary systems and finance are agreed and in place. In contrast, measures that are 'in progress' need additional action to be seen through to either the 'ongoing' or 'completed' categories.

Progress within each package of measures at the end of the previous reporting period (April 2007) is shown in Figure 5, and for the end of the current reporting period (April 2008) in Figure 6. Comparison of the two figures provides evidence of progress in all of the 8 packages of the plan. 57% of measures are now in the categories 'ongoing' or 'complete'. 11% of measures are 'in progress', 14% of measures are still in the 'planning phase' and 11% of measures are 'not started'.

Measures yet to be started are listed in Table 3. These are being considered in an audit of Hillingdon's Action Plan (see Section 4.2). In previous years we have also listed measures that have been completed. However, with more than half of the measures in the 'ongoing' and 'completed' categories readers are instead referred to Appendix 3.



**Figure 5. Progress of actions in each package in the action plan, showing the number of measures at each of the four stages listed (at end April 2007).**



**Figure 6. Progress of actions in each package in the action plan, showing the number of measures at each of the four stages listed (at end April 2008).**

Table 3. Action Plan Measures yet to be started.

Ref.	Action Plan Measure	Original Timescale	Outcome to date	LA role	Responsible party
<b>1. Switching to Cleaner Transport Modes</b>					
1. 14.	Investigate the feasibility of working with relevant stakeholders to subsidise bus, train and underground fares in order to achieve significant modal shift.	2007	No progress to date, however this was highlighted in the consultation on the LIP as a measure to take forward. 7% increase in Heathrow express fares	Lobbying	West London Authorities
<b>4. Measures Specific to Heathrow Airport</b>					
4. 08.	Assess the potential to set an emissions cap for Heathrow.	2008	Not an option reviewed as part of Adding Capacity documentation	Partnership	Heathrow Air Quality Working Group
4. 09.1.	Assess the potential to use landing emissions charges scheme to create revenue stream for public transport improvements.	2008	Not an option reviewed as part of Adding Capacity. Heathrow already has emissions charges in place although the Heathrow AQ Action plan 2007-2011 notes this has low emissions benefit for NOx reduction	Partnership	Heathrow Air Quality Working Group
4. 09.2.	Introduce differentiated landing charges at a level that would force cleaner engine technology.	2010	Not an option reviewed as part of Adding Capacity – no recommendations on control of this source was made in the consultation material	Partnership	BAA
4. 15.	Assess feasibility of Congestion/Access Charging at Heathrow to reduce overall travel movements to the airport.	2006	Not reviewed in depth as part of Adding Capacity consultation. Decision. To be left to planning application stage if Govt approve capacity increases.	Partnership	DfT
4. 22.	Assess the use of bus priority, guided buses and high occupancy vehicle lanes in the Heathrow area.	2010	Adding Capacity documentation did not review this option	Partnership	Heathrow Air Quality Working Group
4. 23.	Assess the feasibility of a Park and Ride scheme specifically for Heathrow.	2006	Not considered by Adding Capacity documentation	Partnership	Heathrow Air Quality Working Group
4. 24.	Assess the health impact of Heathrow Airport and associated activities.	2007	Not considered by Adding Capacity documentation	Partnership	Heathrow Air Quality Working Group
4. 26.	Explore feasibility of reducing fares on the Heathrow Express.	2010	Not considered by Adding Capacity documentation. January 2007 - Fares on HEX increased by 7%. May be addressed by PSDH to promote modal shift.	Lobbying	Local Authorities
4. 28.	Explore feasibility of an airport passenger tax, ring-fenced for increased public transport.	2010	Not considered by Adding Capacity documentation.	Lobbying	Local Authorities
<b>5. Measures Concerning Local Industries and Other Businesses</b>					
5. 07.	Investigate introduction of Air Quality Action Plans for local industries, including those currently un-regulated under EA.	2008	Current resources do not permit this to extend beyond statutory actions.	Local Authority Led	Environmental Protection Unit (EPU)
5. 08.	Consider introduction of Environmental Award system for local industries and businesses.	2008	No progress to date.	Local Authority Led	Sustainability Steering Group
<b>7. Actions to be Taken Corporately, Regionally and in Liaison with the Mayor</b>					
7. 02.	Develop an environmental management system for Hillingdon Borough Council.	2008	No progress.	Local Authority Led	LSP
7. 03.	Establish an Environment Coordination Office for more effective integration of actions to improve environmental performance within and outside the Council.	2008	No progress.	Local Authority Led	LSP



Ref.	Action Plan Measure	Original Timescale	Outcome to date	LA role	Responsible party
7. 06.	Work with the London Sustainable Distribution Partnership to implement infrastructure for effective and integrated distribution of goods in London.	2008	No progress.	Partnership	LSP

There has, counter-intuitively, been an increase in the number of measures included now as not started, compared to last year. This arises because a number of measures were thought to be under consideration as part of the plans for expansion of Heathrow Airport. However, the final documentation provided makes no mention of them. Further discussion is needed to find out whether such measures are still under consideration or not.

Although the list of options yet to start appears long, it should be remembered that the list of options that are fully in place is much longer. Also, that the original intention of the Hillingdon plan was to investigate a large number of measures, rather than trust in an unrealistically small number of options. Whilst there are still a few things that Hillingdon could do as a Borough (e.g. measures 7.02, 7.03) most of the other measures are dependent on third parties, such as DfT and BAA.

## 4.2 Audit of the Air Quality Action Plan

An audit of the AQAP commenced in Spring 2007. It has been necessary to put it on hold given developments concerning the future of Heathrow Airport, and it will now report in June 2008. It has the following objectives:

- To review progress made on the action plan
- To compare Hillingdon's plan, and progress with it, against those of other Local Authorities (particularly those awarded Beacon Status)
- To consider whether further measures should be added to the plan
- To consider whether any existing measures should be removed from the plan, or merged with others
- To consider the AQAP in relation to other areas of environmental policy, concerning noise and climate change in particular.

Preliminary conclusions are as follows:

1. Progress is being made in all 8 packages (as demonstrated here).
2. Links have been made between the AQAP and climate change policy. These will need to be strengthened in the future.
3. Of the actions yet to be started, a number are not the direct responsibility of the Borough Council.
4. Of the measures not yet started that are the clear responsibility of the local authority particular attention in the audit is being given to the establishment of an Environmental Management System for the Council.
5. Recommendations are to be made concerning the possible removal of some measures and merger of others.

### 4.3 Opportunities

A large number of measures identified in the action plan have been included in the LIP. This has the potential to provide a major source of funding for the action plan.

Section 106 Agreements continue to provide further funding for measures included in or relevant to the action plan.

The Environmental Protection Unit still enjoys enthusiastic support for the action plan from other departments in the Council, from procurement to transport planning.

Good collaboration with other local stakeholders continues, particularly with neighbouring local authorities. This provides the scope for effective regional working. This, in turn, provides the opportunity to improve the effectiveness of delivery of the action plan.

There should be opportunity also for Hillingdon to share experience with other Local Authorities. The potential for this needs to be considered through discussion with the Beacon Authorities for air quality (Greenwich, Croydon, Sheffield and Sefton), and possibly with the action planning help desk.

### 4.4 Threats

Air quality problems in Hillingdon will not be solved without serious action to deal with emissions from traffic and from Heathrow airport. Whilst some funding is available for traffic related measures through the LIP it is clear that Hillingdon's problems need national and regional action also to address emissions from traffic using Heathrow and the major road network. The static trends in annual mean NO<sub>2</sub> levels in the Borough strongly suggest that local action, whilst improving the situation, will not be sufficient to enable air quality objectives to be met.

It is, unfortunately, still unclear how projected air quality was forecast to meet EU limit values in information generated with respect to possible future expansion of Heathrow. The assumption of a near 10 µg.m<sup>-3</sup> fall in NO<sub>2</sub> concentrations in the next few years is quite unsupported by trend data since 1997 that demonstrate very little improvement in NO<sub>2</sub>, despite the introduction of improved standards for vehicles and fuels. A lack of clarity on this issue completely undermines the case made for expansion in the Heathrow consultation.

It is also disappointing that numerous options identified in Hillingdon's Air Quality Action Plan that concern the airport do not appear to have been considered in the expansion plans. This may of course be a function of the assumption that the air quality limit values will be met.

Uncertainty over Heathrow is a major problem for this action plan generally. Expansion could mean that some projects undertaken now do not need to be done, and hence that associated funds would be better spent elsewhere. However, with people living in the affected areas the council has a clear duty to do what it can to protect their health.

## 4.5 Progress with the action plan: Selected highlights

### **Package 1: School Travel Plan for Field End School**

Through a School Travel Plan, Field End Junior School has been successful in reducing the number of trips to and from school by car. In 2005, 53.29% of trips were by car but this declined in 2006 to 42.4% and in 2007 to 36.76%, overall a 16.53% reduction in car use.

The school has continued to develop and adapt their School Travel Plan since its introduction in 2005 and have made it central to their school ethos. As recognition for the above, the school were awarded a "Higher Standards Level" in 2007 by TfL as part of their Sustainable Travel Accreditation Scheme. In 2008, the school hope to improve further and achieve the TfL "Outstanding" standard.

### **Package 2: Strategic Route Assessment for Identification of Measures to Improve Air Quality**

With the cancellation of the West London Transit scheme, the West London AQ group commissioned a study, using BSP environment funds, to take a whole route approach to identify potential measures that could be implemented to improve air quality along the route. The project examined current conditions along the route in terms of congestion, traffic flow, air quality concentrations, identified committed planning developments and identified both short-term and long-term recommendations for implementation. Any implementation will be taken forward by the West Trans group or via individual borough BSP bids.

### **Packages 2 and 3: Sustainable Freight**

The BSP environment allocation for 07/08 funded further work on freight in the borough. Three additional industrial business areas (IBAs) were audited in the south of the borough. The work has included:

- Audit of, and improvement of, signage to the IBAs to avoid unnecessary freight movements along residential roads;
- Automatic traffic counts on approach roads to quantify the HGV movements;
- Face to face interviews with on-site companies to promote the work of the WLFQP, the establishment of travel plans and the LEZ criteria.

### **Package 3: Best Practice Guide for Cab Firms**

The West London AQ cluster group have commissioned a report to review the options available for cab firms to reduce emissions. The scope includes reviewing current technologies and fuels for both local and global emission reductions, drawing on current experience from local firms and forming recommendations for use as a basis for a best practice guide for cab firms.

### **Package 3: Compilation of a Fleet Emissions Inventory**

Hillingdon undertook to compile an inventory on the council-owned fleet and the opportunity was taken to include both local air quality pollutants and global i.e. carbon dioxide, in the inventory. This has provided emissions information on Hillingdon-owned fleet vehicles and has established a baseline for the setting of future targets and improvements. This was presented at the Examples of Best Practice Workshop run by the GLA in January 2008 and has been included in both

the GLA Review of Best Practice in Local Air Quality Management in London and the LACORS Air Quality toolkit as an example of good practice.

**Package 4: PSDH - Adding Capacity at Heathrow consultation.**

This was published in November 2007 and acknowledgement was made that there would be relevant exposure to exceedances in 2010 and in 2015 even with the airport under current constraints i.e. 480,000 air transport movements per annum. However, the conclusions for future air quality were that a 3<sup>rd</sup> runway, and increased capacity via the operation known as mixed mode, could be put in place at Heathrow in the time-line of 2020-2030 and keep relevant locations within the EU limit value for annual mean nitrogen dioxide.

Hillingdon, as part of the political grouping of 12 local authorities known as 2M ([www.2Mgroup.org.uk](http://www.2Mgroup.org.uk)) employed consultants to help evaluate more than one thousand pages of technical documentation accompanying the consultation report. The main conclusions of the Hillingdon response are detailed below:

- Key recommendations from the Air Quality Technical Panel have not been taken forward in the work carried out in the consultation. This work was designed to act as best practice and inform the air quality modelling work;
- The air quality model is under-predicting and the predicted improvement trends in air quality concentrations are not substantiated with scientific fact. For example, the LHR2 monitor on-airport is predicted in the documentation to drop from 55µg/m<sup>3</sup> as in 2007 to 44µg/m<sup>3</sup> in 2010. This drop of 9µg/m<sup>3</sup> would be unprecedented as the concentrations have been consistently well above 50µg/m<sup>3</sup> throughout the last 10 years of operation. There are no actions in place with regards to emission reductions that could substantiate such a large drop in concentrations;
- Assessments into the uncertainties and sensitivities into the future have not been addressed. and key inputs provided by the airport operator and other stakeholders have been inadequately independently audited;
- There are a large number of sources that impact on the local air quality of the area close to Heathrow. No organisation or body is in control of all sources and in some cases e.g. aircraft technology, the control is international. No control mechanism is proposed within the documentation and it is of great concern that without this there is no guarantee that future air quality levels can be maintained. For example, if monitoring stations show exceedances can it be expected that either a major road such as the M4 or a runway will be operated on a partial basis to protect the air quality at relevant receptors?
- An assumption is made in the documentation that the UK Government will both seek, and be granted, a derogation. As there are no concrete action plans in place to address the exceedances acknowledged in the documentation, merely plans to double the air transport movements and ensuing road traffic, Hillingdon will be seeking advice from the EU as to whether the UK should be allowed a derogation in such circumstances.;
- There is no evidence presented to suggest the Government can be confident in the air quality modelling results.

**Package 7: Nottingham Declaration on Climate Change**

Hillingdon signed up to this on World Environment Day 5<sup>th</sup> June 2007. This now commits the borough to writing a Climate Change Strategy and developing an action plan aimed at reducing carbon emissions. In order to help gain baseline information Hillingdon are working with the Carbon Trust and undertaking energy audits and carbon footprint calculations for a range of establishments e.g. school, library, large housing estate, day centre, sheltered housing, council depot.

## Chapter 5 Conclusions, and the way ahead

One of the major conclusions of this report, echoing the findings of previous years, is that NO<sub>2</sub> levels in Hillingdon show little or no sign of improvement, despite the growing number of vehicles with much reduced NO<sub>x</sub> emissions in the car fleet and continued progress with the action plan.

There are several reasons for this. The first is that the reduction in emissions per vehicle is countered to some extent by increased traffic on the roads. The second is that concentrations of NO<sub>2</sub> are influenced not solely by local emissions of NO<sub>x</sub>, but also by regional emissions and a complex atmospheric chemistry, involving ozone. Both problems were recognised in the development of the action plan, and explain why it was concluded that such an extensive plan was needed if we are to move significantly towards non-exceedance of the annual mean NO<sub>2</sub> objective in Hillingdon.

There is, however, also good news from the monitoring networks, that concentrations of all other pollutants monitored in the Borough in 2006 did not exceed the objectives set by government. That said, there is a continuing need to monitor concentrations of fine particles because of continued concern about their health impacts.

The major source of NO<sub>x</sub> emissions in the south of the Borough will remain the airport for the foreseeable future, followed by traffic, particularly on the major roads that go through the Borough. The Council does not have direct control of either source. It is essential therefore that it continues to encourage the relevant government departments and agencies and the airport operator to improve performance.

This progress report demonstrates that most of the measures contained in the action plan are underway, a few are completed, whilst a significant number are now part of rolling programmes that will continue for some time to come. The measures that have yet to start and those that are still at the planning stage need to be reviewed. This is being done as part of an audit of progress with the plan which will report shortly. This will also consider whether there is a need to restructure the plan, include additional measures (for example, any found particularly useful by other councils) or eliminate some of those listed in the original plan.

Uncertainty over the future expansion of Heathrow is a major problem for the plan. In the medium term it could negate the need to undertake a number of measures in areas that are currently just to the north of the airport.



## Appendix 1: Checklist

	Location	Comments
<b>New Monitoring results</b>		
Data	Chapter 2, Appendix 2	
Present a map showing monitoring locations	Figure 3, Table 4	
Present summary tables of concentrations of regulated pollutants in a format to allow comparison with the objectives	Appendix 2	
Provide plots of summary data *to show annual trends	Figure 2, Figure 7 and Figure 8	
Highlight results for new sites	Chapter 2 and Appendix 2	See results for the Hillingdon 3 (start date 1/3/05), Sipson (21/9/06) and London Harmondsworth (1/7/07), all established after AQAP publication.
Discuss trends. Take account of number of years of available data	Sections 2.2, 3.2 and Appendix 2	Section 3.2 highlights the discrepancy between observed (measured) trend and levels forecast in the Heathrow consultation
Project forward results to the objective years using LAQM.TG(03) Guidance	Chapter 2, Appendix 2	Monitored data show no clear trend towards meeting the objectives.
Report any results for unregulated pollutants, e.g. ozone, PAHs, etc.		Ozone monitored at London Hillingdon AURN
Report other air quality data, e.g. odour complaints, dust deposition results, radiation monitoring, etc.		Nothing to report
<b>Action Plans</b>		
Limit measures in action plan and implementation timescales	Chapter 4, Appendix 3	
Provide update on progress implementing measures	Chapter 4, Appendix 3	
<b>Planning and Policies</b>		
Identify and list new developments that may affect air quality	Chapter 3	
Log planning applications for new developments for which air quality assessment is being provided	Chapter 3	
List local policies that relate to air quality and any changes that may have been introduced	Appendix 3	See measures 2.05, 2.08, 4.01, 4.07, 4.10, 4.20, 5.05, 6.04, 6.06 and 6.08.
<b>Local Transport Plans and Strategies</b>		
Summarise measures in the LTP that have a direct bearing on air quality		This has been addressed in the action plan and in the 2005/6 annual reports which brought out the strong links between the AQAP and the LIP (=LTP)
Report on progress with implementing these measures	Appendix 3	

## Appendix 2: Monitored Levels of Air Pollution in Hillingdon

### A2.1 Summary of monitoring activities

The London Borough of Hillingdon undertakes monitoring of atmospheric concentrations of the following pollutants:

- NO<sub>2</sub> (by automatic monitoring and diffusion tubes)
- PM<sub>10</sub> (by automatic monitoring)
- Benzene (by diffusion tubes)

None of the other pollutants covered by the National Air Quality Strategy are monitored by the Council as they are not likely to be present at concentrations high enough to exceed objectives. However, CO, O<sub>3</sub> and SO<sub>2</sub> are monitored in the Borough at sites run within the Automatic Urban and Rural Network (AURN).

#### A2.1.1 Quality Assurance and Quality Control (QA/QC)

To ensure that monitoring equipment is reading correctly it is subject to a programme of quality assurance and quality control, as follows:

Diffusion Tubes:

The NO<sub>2</sub> diffusion tubes are prepared and analysed by Gradko. This laboratory takes part in the NO<sub>2</sub> Network QA/QC Field Inter-comparison.

Automatic monitoring site:

The automatic monitoring sites are calibrated fortnightly and serviced 6-monthly.

#### A2.1.2 Data ratification

The automatic monitoring data presented in this report are ratified by AEA Energy & Environment and the Environmental Research Group. Data less than 12 months old may be subject to further ratification and may change in the future.

#### A2.1.3 Automatic monitoring sites

Continuous monitors within Hillingdon and selected sites in the surrounding local authorities are listed in Table 4 below. Reference to monitors sited outside of the Borough allows a more comprehensive assessment of air quality in the Hillingdon area. It can also provide additional information that is useful in assessing the robustness of any trends that may be observed within the Borough.

**Table 4. Details of automatic monitoring sites in and around Hillingdon**

Title	Location	Pollutants monitored	Network	Type	Easting	Northing	Start date
LHR2	Heathrow Airport	NO <sub>2</sub> , CO, PM <sub>10</sub>	LAQN	Airport	508399	17644	01/01/1993
London Hillingdon		CO, NO <sub>2</sub> , O <sub>3</sub> , PM <sub>10</sub> (TEOM), SO <sub>2</sub>	AURN	suburban	506900	178600	02/08/1996
Hillingdon 1	South Ruislip	NO <sub>2</sub> , PM <sub>10</sub> (TEOM)	LAQN	3m from roadside	510770	184960	01/01/1994
Hillingdon 2	Hillingdon Hospital	NO <sub>2</sub> , PM <sub>10</sub> (TEOM)	LAQN	8m from roadside	506991	181951	25/09/2002
Hillingdon 3	Oxford Avenue	NO <sub>2</sub> , PM <sub>10</sub> (TEOM)	LAQN	roadside	509557	176994	01/03/2005
London Harlington		CO, NO <sub>2</sub> , O <sub>3</sub> , PM <sub>10</sub> (TEOM)	AURN	Airport	508300	177800	01/01/2004
Hounslow 2	Cranford	NO <sub>2</sub> , O <sub>3</sub> , PM <sub>10</sub> (TEOM), SO <sub>2</sub>	LAQN	suburban	510300	177200	02/01/1999
Colnbrook	Slough	NO <sub>2</sub> , PM <sub>10</sub> (TEOM)	Calibration Club	urban background	503546	176824	19/10/2000
Ealing 7	Southall	NO <sub>2</sub> , PM <sub>10</sub> (TEOM)	LAQN	urban background	511679	180072	13/07/2004
Hillingdon Sipson	Sipson	NO <sub>2</sub>	LAQN	urban background			08/09/2006
London Harmondsworth		NO <sub>2</sub> PM <sub>10</sub>	LAQN	Airport	505561	177661	01/07/2007
Heathrow Green Gates	Longford	NO <sub>2</sub> PM <sub>10</sub> PM <sub>2.5</sub>	LAQN	Airport			04/05/2001

**Note: The London Harmondsworth site has only operated for 5 months. Results from this site have been shown in this report for interest.**

Data collected at these sites, specifically in relation to compliance with the objectives laid down in the Air Quality Strategy, are shown in the following tables:

Table 5: NO<sub>2</sub>

Table 6: PM<sub>10</sub>

Table 7: CO

Table 8: SO<sub>2</sub>

The tables include new monitoring data for 2007, together with information on all other years, data capture rates and whether the relevant air quality standard was achieved during that monitoring year.

Sites included in this report for the first time this year include London Harmondsworth and Heathrow Green Gates.

**Table 5. Automatic Monitoring data summary for NO<sub>2</sub> in Hillingdon. Shading highlights non-achievement of objectives.**

Site	Year	Data capture	Objective: Annual mean of 40 $\mu\text{g m}^{-3}$ not to be exceeded		Objective: 1 hour mean of 200 $\mu\text{g.m}^{-3}$ not exceeded >18 times in year
			Achieved?	Value	Achieved?
LHR2	1994	86%	No	60.5	No
	1995	96%	No	60.7	Yes
	1996	95%	No	63.0	No
	1997	95%	No	60.0	No
	1998	96%	No	54.0	Yes
	1999	98%	No	55.5	Yes
	2000	97%	No	56.6	Yes
	2001	98%	No	53.8	Yes
	2002	96%	No	52.1	Yes
	2003	96%	No	58.8	Yes
	2004	99%	No	55.2	Yes
	2005	97%	No	53.5	Yes
	2006	86%	No	53.2	Yes
	2007	99%	No	54.0	Yes
Hillingdon 1	1999	27%	No	46.7	Yes
	2000	98%	No	44.4	Yes
	2001	97%	No	45.1	Yes
	2002	98%	No	43.7	Yes
	2003	99%	No	52.7	No
	2004	83%	No	48.5	Yes
	2005	79%	No	45.8	Yes
	2006	98%	No	41.8	Yes
London Hillingdon	2007	77%	No	48.7	No
	1996	82%	No	43.9	Yes
	1997	97%	No	58.7	No
	1998	75%	No	50.9	Yes
	1999	45%	No	50.2	Yes
	2000	98%	No	47.7	Yes
	2001	96%	No	46.2	Yes
	2002	97%	No	45.2	Yes
	2003	83%	No	53.7	Yes
	2004	98%	No	45.3	Yes
Hounslow 2	2005	94%	No	45.3	Yes
	2006	90%	No	49.7	Yes
	2007	98%	No	45.0	Yes
	1999	94%	No	42.2	Yes
	2000	98%	Yes	36.6	Yes
	2001	96%	No	40.9	Yes
	2002	96%	No	43.1	Yes
2003	90%	No	54.5	No	

	2004	86%	Yes	35.6	Yes
	2005	88%	Yes	37.6	Yes
	2006	90%	Yes	37.3	Yes
	2007	96%	Yes	34.2	Yes
Colnbrook	2000	18%	Yes	34.9	Yes
	2001	93%	Yes	35.9	Yes
	2002	98%	Yes	36.0	Yes
	2003	99%	No	42.2	Yes
	2004	100%	Yes	30.8	Yes
	2005	100%	Yes	31.0	Yes
	2006	80%	Yes	33.0	Yes
	2007	100%	Yes	33.0	Yes
Hillingdon 2	2002	2%	No	60.2	Yes
	2003	41%	No	41.4	No
	2004	85%	Yes	36.7	No
	2005	88%	Yes	38.6	Yes
	2006	91%	Yes	37.3	Yes
	2007	27%	No	43.4	Yes
London Harlington	2004	99%	Yes	38.2	Yes
	2005	99%	Yes	38.1	Yes
	2006	98%	Yes	36.8	Yes
	2007	94%	Yes	37.0	Yes
Hillingdon 3	2005	73%	Yes	37.3	Yes
	2006	75%	No	41.1	Yes
	2007	97%	No	43.4	Yes
Ealing	2004	25%	Yes	39.0	Yes
	2005	96%	Yes	33.6	Yes
	2006	89%	Yes	32.5	Yes
	2007	80%	Yes	29.9	Yes
Sipson	2006	31%	No	45.0	No
	2007	82%	No	40.3	Yes
Heathrow Green Gates	2001	50%	Yes	29.0	Yes
	2002	97%	Yes	32.0	Yes
	2003	97%	No	46.0	Yes
	2004	99%	Yes	39.0	Yes
	2005	99%	Yes	36.0	Yes
	2006	99%	Yes	37.0	Yes
	2007	90%	Yes	38.0	Yes
Hillingdon Harmondsworth	2007	40%	Yes	35.0	Yes

**Table 6. Automatic Monitoring data summary for PM<sub>10</sub> in Hillingdon, Shading highlights non-achievement of objectives.**

Site	Year	Data capture	Objective: Annual mean of 40 $\mu\text{g m}^{-3}$ not to be exceeded		Objective: 24 hour mean of 50 $\mu\text{g m}^{-3}$ not to be exceeded more than 35 times a year
			Achieved?	Value	Achieved?
LHR2	1994	7%	Yes	14.5	Yes
	1995	94%	Yes	32.5	No
	1996	93%	Yes	33.1	No
	1997	78%	Yes	28.1	No
	1998	77%	Yes	23.2	Yes
	1999	94%	Yes	27.6	Yes
	2000	98%	Yes	26.7	Yes
	2001	96%	Yes	28.1	Yes
	2002	98%	Yes	27.0	Yes
	2003	97%	Yes	30.9	No
	2004	98%	Yes	26.6	Yes
	2005	98%	Yes	30.4	Yes
	2006	86%	Yes	30.9	Yes
	2007	99%	Yes	29.0	Yes
Hillingdon 1	1999	27%	Yes	23.9	Yes
	2000	93%	Yes	27.2	Yes
	2001	94%	Yes	28.2	Yes
	2002	96%	Yes	28.1	Yes
	2003	84%	Yes	30.1	No
	2004	19%	Yes	30.2	Yes
	2005	82%	Yes	28.2	Yes
	2006	94%	Yes	29.5	Yes
London Hillingdon	1996	99%	Yes	27.9	Yes
	1997	98%	Yes	32.4	No
	1998	93%	Yes	26.4	Yes
	1999	98%	Yes	26.7	Yes
	2000	98%	Yes	25.4	Yes
	2001	97%	Yes	25.7	Yes
	2002	98%	Yes	24.6	Yes
	2003	89%	Yes	29.8	Yes
	2004	98%	Yes	27.1	Yes
	2005	96%	Yes	27.2	Yes
	2006	97%	Yes	29.1	Yes
Hounslow 2	1999	93%	Yes	22.8	Yes
	2000	98%	Yes	22.1	Yes
	2001	96%	Yes	23.0	Yes
	2002	92%	Yes	23.0	Yes

	2003	93%	Yes	25.7	Yes
	2004	70%	Yes	22.1	Yes
	2005	94%	Yes	22.2	Yes
	2006	94%	Yes	22.7	Yes
	2007	95%	Yes	21.9	Yes
Colnbrook	2000	18%	Yes	22.3	Yes
	2001	92%	Yes	23.8	Yes
	2002	99%	Yes	24.3	Yes
	2003	98%	Yes	27.2	Yes
	2004	97%	Yes	22.2	Yes
	2005	99%	Yes	17.0	Yes
	2006	85%	Yes	18.0	Yes
	2007	90%	Yes	23.0	Yes
Hillingdon 2	2002	2%	Yes	36.7	Yes
	2003	55%	Yes	31.3	Yes
	2004	86%	Yes	27.1	Yes
	2005	86%	Yes	23.9	Yes
	2006	97%	Yes	23.9	Yes
	2007	28%	Yes	28.7	Yes
London Harlington	2004	100%	Yes	25.6	Yes
	2005	85%	Yes	25.1	Yes
	2006	99%	Yes	26.2	Yes
	2007	77%	Yes	25.0	Yes
Hillingdon 3	2005	72%	Yes	24.1	Yes
	2006	92%	Yes	24.8	Yes
	2007	96%	Yes	24.7	Yes
Ealing	2004	42%	Yes	20.7	Yes
	2005	95%	Yes	23.1	Yes
	2006	39%	Yes	25.1	Yes
	2007	91%	Yes	24.0	Yes
Hillingdon Harmondsworth	2007	48%	Yes	22.0	Yes
Heathrow Green Gates	2001	66%	Yes	25.0	Yes
	2002	100%	Yes	25.0	Yes
	2003	99%	Yes	30.0	No
	2004	94%	Yes	26.0	Yes
	2005	96%	Yes	25.0	Yes
	2006	98%	Yes	27.0	Yes
	2007	96%	Yes	25.0	Yes



**Table 7. Automatic Monitoring data summary for CO in Hillingdon. Shading highlights non-achievement of objectives.**

Site	Year	Objective: Maximum daily running 8-hour mean of 10.0 mg m <sup>-3</sup> not to be exceeded		
		Data capture	Achieved?	Value
LHR2	1994	96%	No	10.7
	1995	95%	Yes	4.7
	1996	89%	No	11.0
	1997	95%	Yes	8.3
	1998	55%	Yes	3.0
	1999	68%	Yes	3.5
	2000	97%	Yes	4.3
	2001	98%	Yes	3.5
	2002	97%	Yes	2.5
	2003	93%	Yes	2.4
	2004	97%	Yes	2.9
	2005	81%	Yes	2.1
	2006	81%	Yes	1.9
	2007	19%	Yes	0.5
London Hillingdon	1996	88%	Yes	9.1
	1997	96%	Yes	8.4
	1998	97%	Yes	7.2
	1999	97%	Yes	3.1
	2000	91%	Yes	6.2
	2001	94%	Yes	4.2
	2002	86%	Yes	2.7
	2003	96%	Yes	4.0
	2004	98%	Yes	3.1
	2005	81%	Yes	2.1
	2006	81%	Yes	1.9
	2007	69%	Yes	0.4
London Harlington	2004	92%	Yes	3.2
	2005	99%	Yes	2.3
	2006	98%	Yes	1.9
	2007	97%	Yes	0.3

**Table 8. Automatic Monitoring data summary for SO<sub>2</sub> in Hillingdon.**

Site	Year	Data capture	1 hour mean of 350 µg m <sup>-3</sup> not to be exceeded more than 24 times per year	24 hour mean of 125 µg m <sup>-3</sup> not to be exceeded more than 3 times per year	15 minute mean of 266 µg m <sup>-3</sup> not to be exceeded more than 35 times per year
			Achieved?	Achieved?	Achieved?
London Hillingdon	1996	94%	Yes	Yes	Yes
	1997	94%	Yes	Yes	Yes
	1998	96%	Yes	Yes	Yes
	1999	96%	Yes	Yes	Yes
	2000	97%	Yes	Yes	Yes
	2001	67%	Yes	Yes	Yes
	2002	96%	Yes	Yes	Yes
	2003	96%	Yes	Yes	Yes
	2004	96%	Yes	Yes	Yes
	2005	96%	Yes	Yes	Yes
	2006	94%	Yes	Yes	Yes
	2007	73%	Yes	Yes	Yes
	Hounslow 2	1999	96%	Yes	Yes
2000		96%	Yes	Yes	-
2001		81%	Yes	Yes	-
2002		96%	Yes	Yes	-
2003		90%	Yes	Yes	-
2004		93%	Yes	Yes	Yes
2005		84%	Yes	Yes	Yes
2006		87%	Yes	Yes	Yes
London Harlington	2004	96%	Yes	Yes	Yes

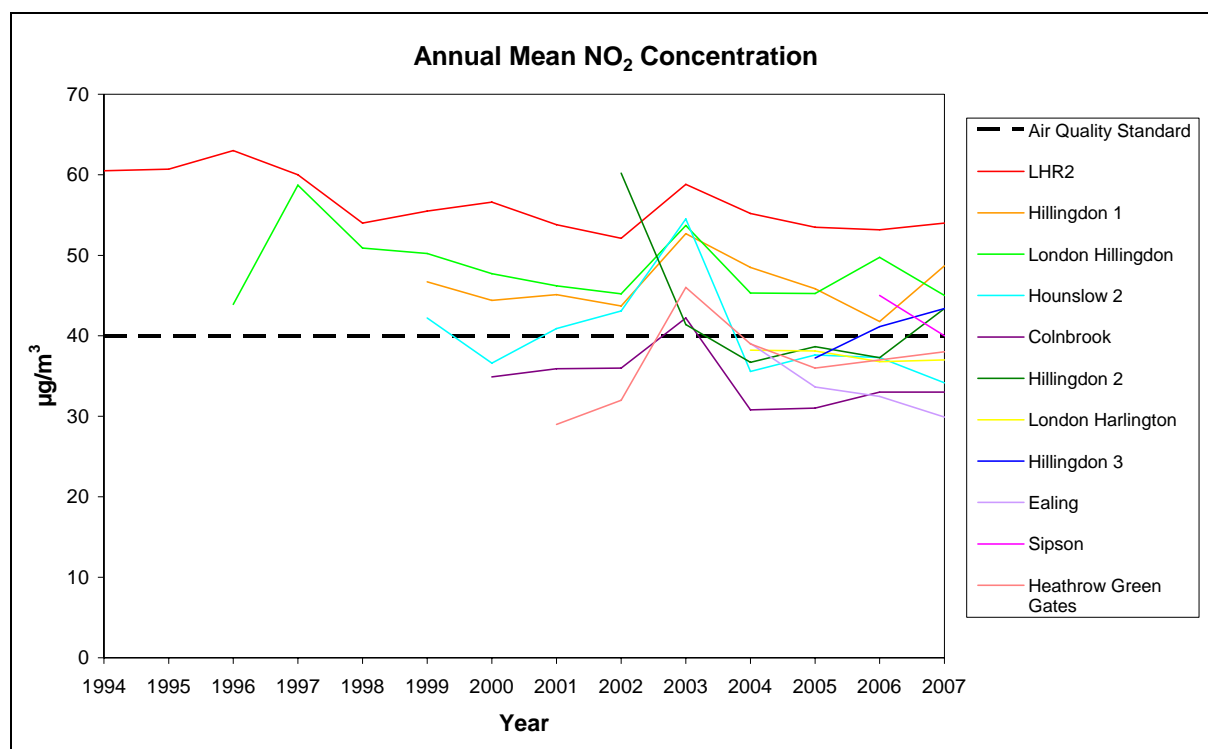
## A2.2 Automatic Monitoring Results

### A2.2.1 NO<sub>2</sub> results

Data from the automatic monitoring sites illustrate that achievement of the annual mean NO<sub>2</sub> objective of 40µgm<sup>-3</sup> in the Borough and surrounding region has been a problem for several years. During 2007 it was not achieved at six monitoring stations: LHR2 (54.0µgm<sup>-3</sup>), London Hillingdon (45.0µgm<sup>-3</sup>), Hillingdon 1 (48.7µgm<sup>-3</sup>), Hillingdon 2 (43.4µgm<sup>-3</sup>), Hillingdon 3 (43.4µgm<sup>-3</sup>) and Sipson (40.3µgm<sup>-3</sup>). Hillingdon 1, 2 and 3 are roadside sites and LHR2 is located at the airport where heightened concentrations may be expected. However, London Hillingdon and Sipson are suburban and urban background sites respectively and representative of residential areas of the Borough close to the airport and major roads. It should be noted that, due to low data capture rates, the results from Hillingdon 2 cannot be used in assessment against compliance with the air quality objective

Figure 7 demonstrates the trends observed in the monitored data. It shows that concentrations have been well above the standard at Hillingdon 1, Hillingdon 2 and LHR2 since monitoring commenced. Year to year variations in the weather affect the annual mean concentrations so that interpreting trends can be difficult: the very hot weather in 2003 is likely responsible for the peak observed in that year, and the poor weather of 2002 for the dip in levels then. Although there was some evidence of reduction in concentrations during the second part of the 1990s, there is no evidence of improvement since that time.

There was a small reduction in annual mean concentrations in 2007 at some sites (London Hillingdon, Sipson, Hounslow 2, and Ealing) however; this could have been due to the poor weather during the summer of 2007. These trend data suggest that it is unlikely that the annual mean NO<sub>2</sub> objective will be reached at LHR2, London Hillingdon or Hillingdon 1 in the coming years.

**Figure 7. Long-term annual mean NO<sub>2</sub> concentration in and around Hillingdon**

The hourly NO<sub>2</sub> mean has also been observed during 2007 (see Table 5). Only one site – Hillingdon 1 did not meet the objective of not exceeding the 1 hour mean of 200 µg m<sup>-3</sup> more than 18 times a year. Hillingdon 1 is a roadside site where heightened NO<sub>2</sub> levels may be expected. However, the hourly concentrations will continue to be monitored.

Mapped data from the diffusion tube network show a similar pattern, with exceedance at a number of locations in 2005, 2006 and 2007, including background sites (Chapter 2, Figure 3). There is no evidence of any improvement in NO<sub>2</sub> concentrations from the diffusion tube data.

These findings are entirely in agreement with the conclusions of previous air quality reports from which it was concluded that the southern half of the Borough should be declared an AQMA. Sites outside the AQMA have not been shown as likely to exceed the Air Quality Strategy objectives.

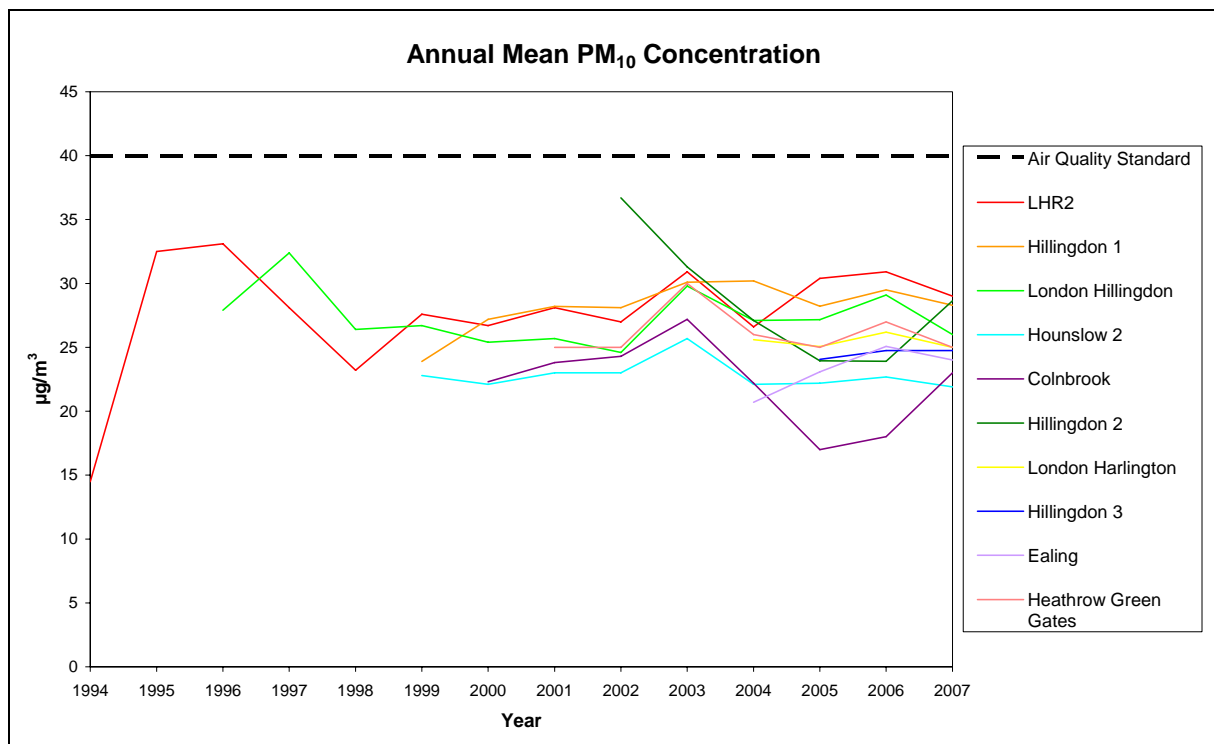
### A2.2.2 Other pollutants

Table 7 for CO and Table 8 for SO<sub>2</sub> indicate that there have been no problems within the Borough in achieving the air quality objectives for those two pollutants.

All objectives were recorded as being achieved in all years when assessed against the permitted number of exceedances (24 times a year for the 1 hour mean, 3 times a year for the 24 hour mean and 35 times a year for the 15 minute mean).

PM<sub>10</sub> is continuously monitored at several locations within Hillingdon and the surrounding Boroughs. The available data (Table 6) indicate that the annual and short-term standards for this pollutant were achieved within the Borough during 2007. Figure 8 illustrates the trend in mean annual concentrations (the metric considered by various groups, including WHO, as the one most related to poor health) through time. It shows that concentrations have been static at around 10-15µgm<sup>-3</sup> below the objective at the monitoring locations. Due to the importance of this pollutant, Hillingdon will continue to monitor it and actions within the AQAP aim to also reduce concentrations of PM<sub>10</sub>.

**Figure 8. Long-term annual mean PM<sub>10</sub> concentration in and around Hillingdon**



### A2.3 Diffusion tube monitoring sites

LB Hillingdon carries out monitoring of NO<sub>2</sub> by diffusion tubes at 38 sites within the Borough. These are listed in Table 9 below. Hillingdon also monitors benzene concentrations via diffusion tubes at sites HD31, HD46, HD48, HD50 and HD58. Due to concerns about railway emissions tubes HD79 and HD80 have been added, one near to the railway, the other at the nearest residential location.

LB Hillingdon is also taking part in the national survey organised on behalf of the highways Agency. Two Hillingdon sites are included in this survey, one roadside site and one residential.

**Table 9. Details of the London Borough of Hillingdon diffusion tube survey. Sites that contain both NO<sub>2</sub> and benzene tubes are shaded.**

LOCATION	TUBE REF	GRID REF	TYPE
AURN Monitoring Station (triplicate)	HD31	506940 178601	S
Barra Hall	HD41	509358 181215	B
Uxbridge Technical College	HD42	510417 180752	R
Uxbridge Day Nursery	HD43	505996 184058	R
South Ruislip Monitoring Station (triplicate)	HD46	506940 178601	S
Hillingdon Primary School	HD47	507617 182506	R
Citizens Advice Bureau (outside AQMA)	HD48	509094 187645	B
83 Hayes End Drive	HD49	508651 182274	B
Hillingdon Hospital Monitoring Station (triplicate)	HD50	510821 184923	R
4 Colham Avenue	HD51	506333 180294	R
101 Cowley Mill Road	HD52	505159 183232	B
Warren Road	HD53	506243 185653	B
Harold Avenue	HD55	509918 179015	B
15 Phelps Way	HD56	509798 178634	B
25 Cranford Lane	HD57	508758 177718	B
Brendan Close	HD58	508414 177125	B
7 Bomber Close	HD59	507296 177323	B
Harmonsworth Green	HD60	505736 177752	B
Heathrow Close	HD61	504851 176770	B
1 North Hyde Gardens, Hayes	HD62	510285 178880	R
370 Sipson Road, Sipson	HD63	507148 178030	R
34 Hatch Lane, Sipson	HD64	505873 177613	R
28 Pinglestone Close, Sipson	HD65	506079 177081	R
486 Sipson Road, Sipson	HD66	507305 177520	R
31 Tavistock Road	HD67	505731 180288	R
Ratcliffe Close, Uxbridge	HD68	505776 182567	R
Hillingdon Health Centre	HD69	507703 184795	R
Harefield Hospital (outside AQMA)	HD70	505299 190923	R
Oxford Avenue, Cranford	HD71	509556 176974	R
2 Vineries Close	HD72	507245 177929	B
Queensmead School (outside AQMA)	HD73	511825 185655	R
Field End Road/Field End School, S. Ruislip (outside AQMA)	HD74	511889 186563	R
Sidmouth Drive, S. Ruislip (outside AQMA)	HD75	510125 186144	R
Kaduna Close, Eastcote (outside AQMA)	HD76	510531 188785	R
Chamberlain Way, Eastcote (outside AQMA)	HD77	511094 189738	R
Gateway Close, Northwood (outside AQMA)	HD78	508210 191830	R
86 Stormount Drive, Hayes (outside AQMA)	HD79	508310 179577	R
86 Stormount Drive, Hayes (outside AQMA)	HD80	508316 179600	R

#### Notes

B – background, R – roadside, S – suburban

Shaded locations have both NO<sub>2</sub> and Benzene tubes

Green locations were added due to concerns over railway emissions.

#### A2.3.1 NO<sub>2</sub> diffusion tube results

Diffusion tube data have been prepared in accordance with the method in Box 6.3 of the technical guidance for Local Air Quality Management (LAQM.TG(03), DEFRA 2003). This requires that results are adjusted for bias using co-location results and uncertainty inherent in the monitoring technique. Data are presented in Table 11 and

Table 12 of Annex 1 to this Appendix. The results of the Hillingdon diffusion tube survey are mapped in Figure 3 in the main text of this report. These maps demonstrate that the annual mean standard for NO<sub>2</sub> has been widely exceeded since 2000 at both background sites representative of large parts of the Borough and roadside sites. Results for 2006 were overall better than those for 2005, however; results for 2007 are again worse. As with the continuous monitoring it is difficult to make firm interpretation of the overall trends in these data.

These data continue to support the declaration of the Hillingdon AQMA and the need for the Hillingdon AQAP.

### A2.3.2 Benzene diffusion tube results

Unadjusted results (there are no co-location sites to allow bias correction) of the Hillingdon benzene diffusion tube survey are presented in Table 10. They indicate that the benzene standard (annual mean of 5 µg/m<sup>3</sup>) was comfortably achieved at these sites within the Borough during 2007. These results support the current decision that this standard should be achieved at all locations within the Borough.

**Table 10. 2007 benzene diffusion tube results for Hillingdon.**

Site Code	HD31	HD46	HD48	HD50	HD58
Jan	1.40	1.22	1.61	1.06	1.28
Feb	2.39	3.71	2.83	2.99	2.59
Mar	1.33	1.61	1.11	2.36	1.31
Apr	1.69	2.18	2.07	1.60	1.59
May	1.74	1.74	1.53	1.39	1.22
Jun	1.88	2.11	1.75	2.11	1.64
Jul	2.02	2.87	3.05	3.62	2.54
Aug	1.25	1.47	2.56	1.31	1.50
Sep	0.87	1.05	1.14	1.05	0.98
Oct	2.42	3.25	3.15	3.00	2.88
Nov	2.37	2.60	2.57	2.20	2.24
Dec	1.97	2.61	2.23	2.12	2.44
Annual Mean µg/m <sup>3</sup>	1.78	2.20	2.13	2.07	1.85
Standard Achieved?	Yes	Yes	Yes	Yes	Yes

## A2.4 Conclusions

From the monitoring data presented in this report it has been concluded that:

- During 2007, the annual mean standard for NO<sub>2</sub> was exceeded at roadside, suburban and background sites within the Borough and its neighbouring local authorities. These include sites monitored continuously in the National and London networks as well as those within the Hillingdon diffusion tube survey.
- There is no progress towards achieving the NO<sub>2</sub> standard discernible in the 2007 data when taken as a whole with other data showing the results and trends over several years, going back to the mid 1990s.



- These results support the decision to declare and continue with the AQMA and to adopt the AQAP based on exposure of the Hillingdon population to NO<sub>2</sub>.
- Other monitoring results indicate that the standards for other air quality strategy pollutants were achieved during 2007, supporting the decision not to declare the AQMA on the basis of exposure to these other pollutants, though continued monitoring, especially of fine particles, remains desirable.

Annex 1 – NO<sub>2</sub> diffusion tube data.

Table 11. Details of co-location bias calculations

2007 AURN

Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 $\mu\text{g m}^{-3}$	Tube 2 $\mu\text{g m}^{-3}$	Tube 3 $\mu\text{g m}^{-3}$	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data Capture Check
1	01/01/2007	31/01/2007	38.73	40.15	41.04	40	1.2	3	2.9	43.41	94.35	Good	Good
2	01/02/2007	28/02/2007	48.5	54.2	58.0	54	4.8	9	11.8	63.21	87.65	Good	Good
3	01/03/2007	31/03/2007	36.5	35.7	37.6	37	1.0	3	2.4	49.69	94.62	Good	Good
4	01/04/2007	30/04/2007	39.4	36.7	37.8	38	1.4	4	3.4	47.75	91.53	Good	Good
5	01/05/2007	31/05/2007	39.6	42.0	42.4	41	1.5	4	3.7	40.68	94.62	Good	Good
6	01/06/2007	30/06/2007	53.1	51.1	53.0	52	1.1	2	2.8	43.44	95.00	Good	Good
7	01/07/2007	31/07/2007	44.6	46.3	49.0	47	2.2	5	5.5	38.95	88.31	Good	Good
8	01/08/2007	31/08/2007	43.0	39.7	39.0	41	2.1	5	5.3	34.75	95.30	Good	Good
9	01/09/2007	30/09/2007	18.1	12.1	15.3	15	3.0	20	7.5	32.85	95.42	Poor Precision	Good
10	01/10/2007	31/10/2007	52.0	52.5	53.5	53	0.8	1	1.9	47.13	95.70	Good	Good
11	01/11/2007	30/11/2007	43.0	47.3	48.0	46	2.7	6	6.6	48.26	95.00	Good	Good
12	01/12/2007	31/12/2007	56.8	57.9	60.3	58	1.8	3	4.4	55.64	95.42	Good	Good
13													
It is necessary to have results for at least two tubes in order to calculate the precision of the measurements											Overall survey -->	Good precision	Good Overall DC

2007 Hillingdon 1

Diffusion Tubes Measurements										Automatic Method		Data Quality Check	
Period	Start Date dd/mm/yyyy	End Date dd/mm/yyyy	Tube 1 $\mu\text{g m}^{-3}$	Tube 2 $\mu\text{g m}^{-3}$	Tube 3 $\mu\text{g m}^{-3}$	Triplicate Mean	Standard Deviation	Coefficient of Variation (CV)	95% CI of mean	Period Mean	Data Capture (% DC)	Tubes Precision Check	Automatic Monitor Data Capture Check
1	01/01/2007	31/01/2007	44.27	45.56	39.86	43	3.0	7	7.4		0.00	Good	Poor Data Capture
2	01/02/2007	28/02/2007	58.3	57.0	56.3	57	1.0	2	2.5		0.00	Good	Poor Data Capture
3	01/03/2007	31/03/2007	44.6	50.0	47.1	47	2.7	6	6.6	51.02	29.70	Good	Poor Data Capture
4	01/04/2007	30/04/2007	53.3	53.1	53.8	53	0.4	1	0.9	54.09	96.25	Good	Good
5	01/05/2007	31/05/2007	50.4	42.7	49.3	47	4.2	9	10.4	37.00	99.06	Good	Good
6	01/06/2007	30/06/2007	49.5	50.3	56.5	52	3.8	7	9.6	43.17	99.72	Good	Good
7	01/07/2007	31/07/2007	40.5	43.4	38.1	41	2.7	7	6.6	36.75	99.73	Good	Good
8	01/08/2007	31/08/2007	42.9	43.0	41.4	42	0.9	2	2.2	42.52	100.00	Good	Good
9	01/09/2007	30/09/2007	23.0	29.0	33.3	28	5.2	18	12.8	47.67	99.72	Good	Good
10	01/10/2007	31/10/2007	61.6	60.9	59.8	61	0.9	2	2.3	57.67	99.87	Good	Good
11	01/11/2007	30/11/2007	58.2	54.4	57.9	57	2.1	4	5.2	58.13	99.86	Good	Good
12	01/12/2007	31/12/2007	59.2	61.1	57.7	59	1.7	3	4.2	61.23	97.64	Good	Good
13													
It is necessary to have results for at least two tubes in order to calculate the precision of the measurements											Overall survey -->	Good precision	Good Overall DC

In 2006, three sites – London Hillingdon (AURN), Hillingdon 1 and Hillingdon 2 – were used to calculate bias adjustment. For 2007, the data capture at Hillingdon 2 was too low for this site to be used so only London Hillingdon (AURN) and Hillingdon 1 was used. These sites had triplicate tubes and automatic monitoring equipment. The 2007 bias factor was calculated using the AEA designed spreadsheet to assist Diffusion Tube users in calculating the Precision and Accuracy (Bias) of co-location studies (<http://www.airquality.co.uk/archive/laqm/tools.php>). The NO<sub>2</sub> diffusion tubes are prepared and analysed by Gradko. The UWE bias adjustment factors for Gradko were taken into account although the bias adjustment calculated from the London Hillingdon AURN site was used. The Gradko bias adjustment factor was much lower than that for London Hillingdon, Hillingdon 1 and than the Gradko calculated factors from previous years. It was decided that the Hillingdon bias adjustment factors were likely to be more representative of the borough.

A summary of the bias adjustment factors for the Hillingdon sites for 2005-7 is shown in Table 12. The key data and bias adjusted annual mean results for Hillingdon are presented in Table 13. A mapped summary of these results is presented in the main part of this report (Figure 3).

**Table 12. Details of overall bias calculations**

<b>Co-location site</b>	<b>Site Type</b>	<b>Site Bias 2005</b>	<b>Site Bias 2006</b>	<b>Site Bias 2007</b>
London Hillingdon	S	1.07	1.18	1.05
Hillingdon 1	R	0.93	0.89	0.99
Hillingdon 2	R	0.89	0.89	-
Average		<b>0.96</b>	<b>0.99</b>	<b>1.02</b>
Gradko Bias		1.10	1.04	0.86

Table 13. Diffusion tube results for the London Borough of Hillingdon 2007

Tube Number	Site Name	Site Type	Unadjusted	Adjusted AURN	Adjusted Hill1	Adj by ave bias	Achieved Objective?
HD31	AURN Monitoring Station	S	42.8	45 (39 - 53)	42 (37 - 50)	43.6	No
HD31	AURN Monitoring Station	S	43.0	45 (39 - 53)	43 (37 - 50)	43.8	No
HD31	AURN Monitoring Station	S	44.6	47 (41 - 55)	44 (39 - 52)	45.5	No
HD41	Barra Hall	B	32.4	34 (29 - 40)	32 (28 - 38)	33.0	Yes
HD42	Uxbridge Technical College	R	38.1	40 (35 - 47)	38 (33 - 44)	38.9	Yes
HD43	Uxbridge Day Nursery	R	49.4	52 (45 - 61)	49 (43 - 57)	50.4	No
HD47	Hillingdon Primary School	R	33.8	36 (31 - 42)	33 (29 - 39)	34.5	Yes
HD48	Citizens Advice Bureau	B	29.9	31 (27 - 37)	30 (26 - 35)	30.5	Yes
HD49	83 Hayes End Drive, Hayes End, Middlesex (on drain pipe)	B	27.9	29 (25 - 34)	28 (24 - 32)	28.4	Yes
HD51	4 Colham Avenue	R	35.7	38 (33 - 44)	35 (31 - 41)	36.4	Yes
HD52	101 Cowley Mill Road	B	41.0	43 (37 - 50)	41 (36 - 48)	41.8	No
HD53	Warren Road	B	43.4	46 (39 - 53)	43 (38 - 50)	44.2	No
HD55	Harold Avenue	B	43.0	45 (39 - 53)	43 (37 - 50)	43.9	No
HD56	15 Phelps Way	B	34.6	36 (32 - 43)	34 (30 - 40)	35.3	Yes
HD57	25 Cranford Lane	B	40.2	42 (37 - 49)	40 (35 - 47)	41.0	No
HD58	Brendan Close	B	42.9	45 (39 - 53)	42 (37 - 50)	43.8	No
HD59	7 Bomber Close	B	37.7	40 (34 - 46)	37 (33 - 44)	38.4	Yes
HD60	Harmonsworth Green	B	32.2	34 (29 - 40)	32 (28 - 37)	32.9	Yes
HD61	Heathrow Close	B	36.2	38 (33 - 45)	36 (31 - 42)	36.9	Yes
HD62	1 North Hyde Gardens, Hayes (rear of residents property - open access)	R	40.8	43 (37 - 50)	40 (36 - 47)	41.7	No
HD63	370 Sipson Road, Sipson, Middlesex (on drainpipe)	R	35.7	37 (32 - 44)	35 (31 - 41)	36.4	Yes
HD64	34 Hatch Lane, Sipson, Middlesex (on drainpipe)	R	34.4	36 (31 - 42)	34 (30 - 40)	35.1	Yes
HD65	28 Pinglestone Close, Sipson, Middlesex (on drainpipe)	R	31.9	34 (29 - 39)	32 (28 - 37)	32.5	Yes
HD66	486 Sipson Road, Sipson, Middlesex (on drainpipe)	R	33.4	35 (30 - 41)	33 (29 - 39)	34.0	Yes
HD67	31 Tavistock Road (on lamp-post outside house)	R	34.8	37 (32 - 43)	34 (30 - 40)	35.5	Yes
HD68	Ratcliffe Close, Uxbridge (1st lamp-post on the left)	R	33.0	35 (30 - 41)	33 (29 - 38)	33.6	Yes
HD69	Hillingdon Health Centre, Freezeland Way (on drain-pipe)	R	36.8	39 (33 - 45)	36 (32 - 43)	37.5	Yes
HD70	Harefield Hospital, Hill End Road (lamp-post outside entrance)	R	24.7	26 (22 - 30)	24 (21 - 29)	25.2	Yes
HD46	South Ruislip Monitoring Station	R	48.8	51 (44 - 60)	48 (42 - 57)	49.8	No
HD46	South Ruislip Monitoring Station	R	49.2	52 (45 - 61)	49 (43 - 57)	50.2	No
HD46	South Ruislip Monitoring Station	R	49.3	52 (45 - 61)	49 (43 - 57)	50.2	No
HD50	Hillingdon Hospital Monitoring Station	R	41.3	43 (38 - 51)	41 (36 - 48)	42.1	No
HD50	Hillingdon Hospital Monitoring Station	R	40.3	42 (37 - 50)	40 (35 - 47)	41.2	No
HD50	Hillingdon Hospital Monitoring Station	R	40.6	43 (37 - 50)	40 (35 - 47)	41.4	No
HD71	Oxford Avenue, Cranford (1st lamp-post on left)	R	44.0	46 (40 - 54)	44 (38 - 51)	44.9	No
HD72	2 Vineries Close (drainpipe rear of house)	B	33.8	35 (31 - 42)	33 (29 - 39)	34.5	Yes
HD73	Queensmead School, South Ruislip. (lamppost opposite Jubilee Drive)	R	30.9	32 (28 - 38)	31 (27 - 36)	31.5	Yes
HD74	Field End Road/Field End School, S.Ruislip. 3rd Lamp-post south of school entrance	R	34.2	36 (31 - 42)	34 (30 - 40)	34.9	Yes
HD75	Sidmouth Drive, South Ruislip. Lamp-post outside Nursery, 2nd lamp-post from West E Rd	R	31.3	33 (28 - 38)	31 (27 - 36)	31.9	Yes
HD76	Kaduna Close, Eastcote. Lamppost outside No's 1 Kaduna Close (Monitoring Joel Street).	R	26.8	28 (24 - 33)	27 (23 - 31)	27.3	Yes
HD77	Chamberlain Wy, Eastcote. 1st lamppost left in Chamberlain Wy. Monitoring Cuckoo Hill	R	27.5	29 (25 - 34)	27 (24 - 32)	28.1	Yes
HD78	Gateway Close, Northwood. 1st lamp-post on left of Gateway Close. Monitoring Rickmansworth Road	R	32.0	34 (29 - 39)	32 (28 - 37)	32.6	Yes
HD79	Rear Garden of 86 Stormount Drive, Hayes, UB3 1RH. Attached to building, rear of property	R	35.4	37 (32 - 43)	35 (31 - 41)	36.1	Yes
HD80	Rear of 86 Stormount Drive, UB3 1RH. Attached to fence line that borders the railway	R	34.0	36 (31 - 42)	34 (30 - 39)	34.7	Yes

## Appendix 3: Progress with the Action Plan

The following tables were produced using EMRC's Action Plan Tracker database, showing progress against each measure. Overall progress with the plan was reviewed above in Chapter 4.

Package 1:	Switching to cleaner transport options, for example, shifting freight from road to rail and promoting cycling and walking .....	40
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The London Borough of Hillingdon

## Air Quality Action Plan Progress Report

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 1. Switching to Cleaner Transport Modes							
1. 01.	Establish a Green Travel Plan for Hillingdon.	2010	In progress	Staff survey on intranet March 2007 to gain baseline information on existing travel patterns.	Still draft	Local Authority Led	Planning and Transportation
1. 02.	Improve access to, and quality of, public transport travel information for people living and working in the Borough.	2008	Ongoing	Specific public transport information booklets developed for the Chimes shopping centre, South Ruislip, Uxbridge IBA. Article in Hillingdon People promoting car share and Heathrow-specific car share.	Face to face interviews at Uxbridge and South Ruislip Industrial Business Areas to roll out freight audit leaflets and public transport booklets; Improvements made to 10 bus stops in Hillingdon with regards to service information.	Local Authority Led	Planning and Transportation
1. 03.	Encourage the development of more dedicated cycle (priority) lanes and signalling.	2008	Ongoing	Implemented routes in 06/07 via BSP: Route 39 - Uxbridge Road; Route 88A - Hayes/Harlington/Heathrow; Route 89 - Uxbridge to Heathrow; Link 95 – Hayes and Yeading.	Hillingdon has rolled out Bikeability and currently has 1,500 children at level 1 and 2 across the borough. Improvements made along 17 cycling routes – all within the AQMA and along routes of air quality exceedances.	Local Authority Led	Highways
1. 04.	Extend provision of more parking for motorcycles, mopeds and bicycles at public sites and new developments.	2007	Ongoing	No specific policy on motorbike parking yet, bicycle parking is well established throughout the borough with every opportunity taken to increase this, e.g. new developments. No formal audit taken though.	SPD on section 106 obligations currently out for consultation. Developments of less than 20 staff/occupiers must provide a minimum of cycle storage facilities as part of a "Move for Action" plan, developments over 20 staff/occupiers must provide a full travel plan which includes cycle facilities, storage, promotion of cycle routes etc	Local Authority Led	Highways

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
1. 05.	Improve provision for pedestrians.	2008	Ongoing	<p>Pedestrian Crossings - 10 put in place last year.</p> <p>More congestion hot spots looked at for traffic management measures to smooth traffic flow, 4 of these are in the AQMA.</p> <p>Local Safety Schemes implemented via BSP at 6 key points in the borough, 5 of which are within the AQMA.</p> <p>20mph zone put in place at Oak Farm Estate.</p> <p>Canal towpath improvements for pedestrians</p>	10 pedestrian crossings in place in 07-08, 3 of these associated with improving pedestrian access to Field End School (which is within the AQMA) as part of their School Travel Plan.	Local Authority Led	Borough Transport Strategy



Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
1. 06.	Introduce more Safe Routes to School throughout the Borough with special regard to the schools within the highest exceedance areas.	2010	Ongoing	<p>Air quality packs sent to all schools in the borough. Integration of air quality packs information into the school curriculum to be put in as a key requirement for Hillingdon School Travel Plans. Production of free bespoke "Don't choke us" signs for schools in the borough, 39 schools participated. Timescales - 36% schools with plan by 2006; 57% by 2007; 78% by 2008, 100% by 2009.</p> <p>Latest figures, overall, for School Travel Plans is a 12% modal shift away from the private car across the borough - this compares to a London average of 6%.</p>	<p>A further 23 schools submitted travel plans in 2007/08. This is on target for meeting the goal of 100% schools with travel plans by 2009. Over 1,500 pupils are now registered under the Bikeability scheme aimed at encouraging safe cycling to school; The Walk on Wednesday (WOW) scheme now has 40 schools across Hillingdon participating regularly which includes 15,000 children. This is the 2<sup>nd</sup> highest number of schools participating in London and has achieved an overall modal shift (for WOW alone) of 14% as opposed to the national average of 6%. Healthy Hillingdon are a part of the School Travel Plan Steering Group which has ensured the links are made between health and reducing car use on school journeys. Field End School Case Study – overall reduction in car use from 2005 53.29% to 2007 36.76% therefore a 16.53% reduction. Walking routes have been improved and pedestrian crossing installed, a cycle club hut has been built in the school grounds, pupils take part in the Hillingdon Bikeability initiative.</p>	Local Authority Led	Borough Transport Strategy

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
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.	2007	Ongoing	Specific air quality targets to be included in all business travel plans as a requirement under the LDF framework, included in draft out for consultation in Feb 07. There are 3 car clubs operating successfully in Hillingdon - all associated with new planning developments, developed as part of s106 agreements.	See 1.04 for details on new developments; Follow up to freight audits at Industrial Business Areas has included face to face interviews with 26 separate companies promoting the establishment of travel plans.	Local Authority Led	Planning Department
1. 08.	Improve access to, and quality of, public transport travel information on a regional basis both inside and outside the GLA boundary.	2008	Ongoing	Car share promotion in Hillingdon People including Heathrow Carshare. Mobility Management Group under HATF set up to address access to Heathrow, plans to extend this regionally. Hillingdon is a member of the group.	Project commissioned to integrate sustainable travel links into the Heathrow Airwatch website; The opening of T5 on 27 <sup>th</sup> March 2008 has provided better connectivity with regards to local access to the airport. Funding has been received for 08/09 via West Trans for the integration of sustainable travel information into the West London air quality website	Partnership	West London Air Quality and Transport Group
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.	2008	Ongoing	£228,000 received via BSP for bus priority measures, includes 222, E7 routes both of which are within exceedance areas within AQMA. £183,750 received via BSP for bus stop accessibility projects at 30 stops across the borough.	9 key bus priority routes and 10 specific bus stops received funding via BSP for improvements. Link also to action 1.12.	Partnership	Borough and West London Transport Strategy
1. 10.	Improve the north-south public transport provision in the Borough.	2010	In progress	Potential for a Community Transport link to be explored in the poor air quality areas around West Drayton/Yiewsley/Hayes – funding to be sought via BSP. Trialling of low emission vehicle for HCT	Feasibility study commissioned to assess potential for a flexible community bus around the south of the borough in the poorest air quality areas, seeking to replace current short car journeys. If viable the contract for the bus will include low emission technology as one of the criteria.	Partnership	Borough Transport Strategy

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
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.	2008	Ongoing	Station Access Improvements carried out in 2006/07 at: <ul style="list-style-type: none"> <li>• Northwood;</li> <li>• Northwood Hills;</li> <li>• Eastcote (Step 1);</li> <li>• Uxbridge (Step 1);</li> <li>• Ruislip.</li> <li>• Ruislip and Eastcote step 2</li> </ul> Grand Union Canal – 1 <sup>st</sup> stage improvements at Northolt	Improvements were taken forward by West Trans BSP funding with an allocation of £550,000 for implementation of improvements to station access throughout the West London region	Partnership	West London Air Quality and Transport Group
1. 12.	Encourage development of efficient and high quality bus corridors.	2008	Ongoing		Improvements to 9 bus priority schemes in the AQMA along high AQ exceedance roads	Partnership	West London Air Quality and Transport Group
1. 13.	Investigate potential for more night buses.	2007	Planning phase	No progress to date, however improvements are being sought by Hillingdon for Safer Travel at Night initiatives. These would be required to be in place before proposals for night buses could be safely assessed. Initiatives include ensuring the adequacy of lighting, paving, street furniture, signage and CCTV at Eastcote, Uxbridge and Ruislip stations and involvement in a Safer Travel campaign across the borough.	This measure has been incorporated into the LIP for implementation. Air Quality Action – monitor success of funding bid.	Partnership	Transportation Team
1. 14.	Investigate the feasibility of working with relevant stakeholders to subsidise bus, train and underground fares in order to achieve significant modal shift.	2007	Not started	No progress to date, however this was highlighted in the consultation on the LIP as a measure to take forward.	Air Quality Action – to identify with the Transportation team opportunities to lobby for subsidised travel. 7% increase in Heathrow express fares	Lobbying	West London Authorities

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 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.	2007	Ongoing	2006/07 – new Home Zone in Oak farm, Hillingdon. Consideration of further site in Barnhill.	New Home Zone introduced along Coldharbour Lane – borough road with high air quality exceedances	Local Authority Led	Transportation Team
2. 02.	Support the West London Transit Scheme project if appropriate.	2007	Abandoned	2006 – the Council Cabinet resolved to be an objector to the West London Tram Scheme, the borough wish for a connection at Hayes to improve access to Heathrow plus extension out to Denham not considered as part of the current scheme.	Project commissioned via West London AQ group to examine potential alternatives for traffic flow improvement along the Uxbridge Road.	Local Authority Led	Planning and Transportation
2. 03.	Ensure the provision of sufficient signage and details of spaces for public car parks.	2007	Ongoing	Electronic signs erected for Uxbridge town centre.		Local Authority Led	Highways Department
2. 04.	Investigate the creation of Clear Zones.	2007	Planning phase	No progress. GLA advise to look into clear zone – consultation letter	Air quality Action – to seek information from Camden on condition and criteria for Clear Zone.	Local Authority Led	Hillingdon Transportation Team
2. 05.	Develop best practice advice to ensure air quality assessments are made for proposals for new transport infrastructure and changes to traffic management.	2005	Ongoing	2006/07 – WLAQ group to establish communication strategy for guide. Communication Strategy in place, workshop for air quality and transport officers in April 2007, presentation at Bristol Conference in March 07.		Partnership	West London Air Quality and Transport Group
2. 06.	Work in partnership with TfL to implement schemes along the high exceedance corridors designed to smooth traffic flows.	2006	Planning phase	Recommendations to be given to WLTS for implementation via WL BSP funding.	See 2.02	Partnership	West London Air Quality and Transport Group
2. 07.	Improve coordination of road works and provide more effective signing around them.	2007	Ongoing	Traffic Manager in post (Apr07).	Hillingdon now have a network management plan for borough roads. Improvements in air quality have been incorporated as a key objective.	Hillingdon	West London Air Quality and Transport Group

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
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.	2007	In progress	Meeting with HA 20/11/06. M4 Route Management Strategy now finalised. Planning and the Strategic Road Network – document on DfT website – gives clarity to HA role, general presumption that there will be no capacity enhancements on routes of strategic national importance purely to accommodate new developments, in any case would be subject to stringent environmental assessment. Heathrow Junction 4 M4 improvements total completion by February 2007. Should give beneficial impact on air quality from reducing queue lengths. Study due to start in early 2007 on what will be needed to cope with the impact of T5 opening. Any improvements to the M4 will come via TVMMS measures e.g. speed limits, ramp metering etc. Decision in Spring 2007 as to which measures will be taken forward.	DMRB currently being revised, overhaul of approach to give a quick progression to detailed assessment in areas where the EU limit is breached, also to take into account cumulative impacts, criteria for negligible change also being revised. CO2 emissions will be factored in to DMRB. M4 junction 4 improvements now complete, ongoing traffic speed and flow monitoring will help to quantify the success of this improvement	Partnership	West London Air Quality and Transport Group
2. 09.	Investigate the use of light rail/tram schemes along other high exceedance corridors such as the A4 and A40.	2010	Planning phase	It had been hoped that PSDH would consider the A4, but this was not done.	The Adding Capacity report did not specifically examine the use of light rail or trams for air quality improvements	Partnership	West London Air Quality and Transport Group
2. 10.	Investigate measures such as variable message signing to smooth traffic flows on the HA/TfL routes M4 and surrounding link roads.	2007	Planning phase	Meeting with HA 20/11/06. (see 2.08)	Impact of variable speed limits appears to be a site-specific issue with regards to impacts of air quality improvements. HA to examine on site specific basis, eg M20 to be assessed for feasibility if funding received.	Partnership	West London Air Quality and Transport Group

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
2. 11.	Investigate use of speed limits on major roads at the optimal level for NOx and PM10 emissions for the current traffic profile.	2007	In progress	Meeting with HA 20/11/06. (see 2.08)	Study on M1 in Sheffield, main air quality issues from congestion in peak hours so results not conclusive, free-flowing traffic would show better results. In the M4 area this measure may be part of recommendations from TVMMS on measures to take forward although the impact of lowering speeds will be site specific dependent on the air quality issues of the particular road. M20 variable speed limits to be assessed subject to funding	Partnership	West London Air Quality and Transport Group
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.	2009	Ongoing	10 more congestion hot spots looked at for traffic management measures to smooth traffic flow, 4 of these are in the AQMA.	Continued development of the West London Traffic Emissions Modelling tool – project commissioned to examine impact on emissions of different transport measures e.g. tighter LEZ standards, implementation of a bus lane, effect of queuing at junctions	Partnership	West London Air Quality and Transport Group
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).	2010	Planning phase	Crossrail and Airtrack both identified in the Adding Capacity consultation for improvements in access to Heathrow. Airtrack is at early stages of feasibility and will require funding.	Rail % to Heathrow: 2004 – 9.3; 2005 – 9.6; 2006 – 8.8 (three quarters only).	Lobbying	West London Transport Group
2. 14.	Work in partnership to investigate use of fiscal measures, such as road pricing, for reducing traffic on major road networks.	2007	Planning phase		Ambiguity in Adding Capacity consultation. Reference is made only to the potential for road pricing to be a part of a surface access strategy if further expansion is granted.	Lobbying	DfT

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
2. 15.	Consider establishment of cross-agency regional group to address air quality issues with regards to roads.	2006	Planning phase	Suggested at HATF in June meeting. Discussed as AOB at December HATF meeting. Group approval, Chair of Steering Group to action.		Lobbying	West London Air Quality and Transport Group



Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 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.	2006	Ongoing	Updated assessment from Clean Vehicle Programme in November 2006. Fleet emissions inventory commissioned March 2007, submission of this should lift Hillingdon to Gold level in next year.	Driver training money secured via BSP for 2008-09. Driver training to be incorporated into Council policy, currently seeking to include reducing emissions as an integral part of the policy.	Local Authority Led	Hillingdon Fleet Management Team
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.	2007	Ongoing	Hillingdon Freight Meeting in June 06. Follow on from freight audits of Uxbridge and South Ruislip business areas – production of fact sheets of key points found from the studies for dissemination to the businesses, production of site specific public transport information brochures for staff at the 2 sites. Regional funding received for audits of Yiewsley and West Drayton business areas, air quality assessment integral part of project.	Following on from the freight audits, 26 face to face interviews with on-site companies have been carried out to encourage sign up to WLFQP and the establishment of company travel plans.	Local Authority Led	Hillingdon Transportation Team
3. 03.	Provide training for local authority drivers to minimise emissions, and consider opening training opportunities to other drivers working for businesses in Hillingdon.	2006	In progress	Community transport ensure all drivers are trained, awareness of smooth driving and vehicle maintenance integral part of training.	Potential to roll this out more widely, e.g. to bus operators. ENV bid put in via BSP for driver training. Bid successful for financial year 08/09	Local Authority Led	Hillingdon Fleet Management Team
3. 04.1.	Ensure the implementation of the Idling Vehicles Regulations.	2006	Ongoing	Article in Hillingdon People. Free school signs offered, 39 schools requested them with a total of 88 signs being sent out. Funding applied and received via BSP for driver training, will include switching off when idling	Rolling out of turn off engine signs in council owned premises to be explored in 08/09. Link to 3.03	Local Authority Led	Hillingdon Transportation Team

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
3. 04.2.	Actively promote the use of the Dirty Diesel Hotline for reporting smoky vehicles spotted in Hillingdon.	2006	Ongoing	Incorporated into council website		Local Authority Led	Hillingdon Transportation Team
3. 05.	Consider the recommendations of the London Low Emission Zone Feasibility Study jointly with the GLA, ALG and TfL.	2006	Completed	Cabinet report on LEZ submitted, overall support but with more information needed on the impact upon small businesses and minibus users such as schools, community groups etc.	LEZ now in force, signs erected around Hillingdon as an outer borough. Success will be monitored via TfL	Local Authority Led	Cabinet
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.	2006	In progress	Article in Hillingdon People advising of legislation and air quality impacts of idling vehicles.	Funding applied and received via BSP for signs for next year  See 3.04	Local Authority Led	Highways
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.	2007	Ongoing	Trial of electric SMART car for use as a pool car. Demo requested of Modec electric van.	Feasibility study for flexibly routed bus service – if proved feasible will look to incorporate environmental criteria on low emissions into procurement contract; Presentation to GLA Best Practice workshop on fleet emissions inventory.	Local Authority Led	Hillingdon Fleet Management Team
3. 08.	Participate in the London-wide Vehicle Emissions Testing programme.	2007	Planning phase	London wide programme has come to an end.	Interest to participate in any future programme of this type, but measure will not be taken forward until future funding is agreed.	Local Authority Led	Vehicle Emissions Testing Steering Group
3. 09.	Investigate the provision of low or zero emission buses for schools within the high exceedance areas.	2010	Planning phase	No progress to date.	School Travel Plans, to date, have tended to focus on alternatives such as cycling and walking. However, TfL are looking to fund buses for 2 schools in the Borough.	Local Authority Led	Fleet Management Team

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
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.	2010	Ongoing	Implemented via LEZ	Links into 2.01 – use experience from that to inform more widespread implementation especially along corridors? Taken forward via LEZ	Local Authority Led	Hillingdon Transportation Team
3. 11.	Investigate the potential for discounts for residents with low emission vehicles in Parking Management Areas.	2006	Planning phase	No progress.	Speak to Roy Clark	Local Authority Led	Sustainability Steering Group
3. 12.	Develop sub-regional Bus Quality Partnerships focussed on addressing the contribution of buses and coaches to emissions.	2010	Ongoing	Implemented via LEZ	The Heathrow Bus and Coach Strategy, published in 2007, has incorporated reducing emissions and using low emission technology as a key objective	Partnership	West London Air Quality and Transport Group
3. 13.	Work in partnership for the provision of low emission buses in the West London/Heathrow region.	2010	Ongoing	Heathrow Bus and Coach Strategy published, commitment in the Strategy to ensure only LEZ compliant vehicles are stipulated in future BAA supported contracts.	See 3.12	Partnership	Heathrow Area Transport Forum (HATF)
3. 14.	Ensure freight developments in the West London area are subjected to an air quality assessment before implementation.	2005	Completed	Freight workshop organised at Hillingdon, ideas from group discussion to be taken forward by Hillingdon. Regional funding received to progress with audits at Hayes and West Drayton Industrial Business Areas, air quality impact is an integral part of the audit.	Freight Project 07/08 – this has involved improvements to directional signing to protect residential streets from unnecessary freight movements; Audits of additional industrial business areas in the south of the borough carried out in 07/08; Face to face interviews (26 to date) with companies from Uxbridge and South Ruislip Industrial Areas to promote the establishment of workplace travel plans.	Partnership	Hillingdon Transportation Team and WLFQP

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
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.	2006	In progress	Regular attendance at WLFQP meetings by member of WL AQ cluster group, opportunities raised for joint projects. Baseline freight map of the West London area has now been produced.	<p>Following a successful year in funding freight studies and implementing freight improvement measures in West London, the WLFQP has secured £145k from TfL LIP Programme for 2008/09. TfL Freight Unit will be providing further funding for our engagement with businesses and with the freight industry in West London. Key initiatives we will be progressing with in 2008 are:</p> <ul style="list-style-type: none"> <li>• Improved Directional Signage and Mapping Guidance for freight deliveries and collections in West London urban centres and industrial areas.</li> <li>• Working with businesses to identify and to reduce Goods Vehicle PCN Hotspots and to roll out Delivery and Serving Plans.</li> <li>• Environment and Road Safety Improvements relating to freight activity in West London.</li> <li>• Undertake initial investigation into the use of Home Delivery Centres as a means to reduce goods vehicle movements through residential areas.</li> <li>• Undertake an investigation into alternative Freight Routes to minimize the impacts of freight vehicle traffic.</li> </ul>	Partnership	West London Freight Quality Partnership (WLFQP)

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
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.	2007	In progress	SWELTRAC, of which Hillingdon is a member are seeking funding for electric charging points and feasibility for a biodiesel project.	The West London AQ group has commissioned a best practice review of emissions technologies for cab companies. Key recommendations from this will be rolled out to cab firms throughout the region.	Partnership	West London Air Quality and Transport Group
3. 17.	Lobby national government to provide incentives through the fuel duty system for cleaner fuels, inc. further vehicle excise duty reductions for retrofitting to smaller vehicles and increased retrofitting grants.	2005	Ongoing	Website live Feb 2007, at <a href="http://www.westlondonairquality.org.uk">www.westlondonairquality.org.uk</a> . Relevant information and consultations will feature on the website including information on grants and cleaner vehicle technology.		Lobbying	West London Air Quality Group
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.	2005	In progress	London Congestion Charge Zones and LEZ schemes are led by TfL therefore not in Hillingdon control. Any Hillingdon-specific scheme will look to include these points.	Being taken forward by TfL.	Lobbying	West London Air Quality and Transport Group
3. 19.	Promote best practice in terms of emissions management with the train operators, the Strategic Rail Authority and Network Rail.	2010	In progress	Monitoring in place close to railway and at nearest residential location.	Adding Capacity at Heathrow consultation suggests that emissions from rail (i.e. diesel locomotives) on the Great Western line will reduce significantly in the next decade	Lobbying	West London Air Quality and Transport Group

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 4. Measures Specific to Heathrow Airport							
4. 01.	Continue to oppose any further expansion at Heathrow that leads to negative air quality impacts.	2010	Ongoing	Air Quality Technical Panel (set up by DfT) published report in July 2006, outlines best practice methodology for predicting air quality at Heathrow. This will form the basis of the air quality work which will inform the PSDH report due in summer 2007.	Hillingdon have sent in a robust response to the Adding Capacity consultation. Hillingdon do not believe sufficient evidence has been supplied to ensure the Government can be confident that the EU limit value will be met and maintained in exposure areas around Heathrow.	Local Authority Led	Environmental Protection Unit (EPU)
4. 02.	Develop system for auditing the ATM limit and parking provisions for operational T5.	2008	Ongoing	Further progress pending the opening of T5.	Whilst compliance with the ATM limit is a matter for BAA to manage, the Council, in common with the T5 Inspector, regards it as a critical control over the environmental impact of Heathrow. Will have to be over-turned if capacity increases given go ahead	Local Authority Led	Aviation Team
4. 03.	Audit all air quality conditions for the construction phase of Terminal 5.	2008	Complete	PM continues to be monitored around the T5 site. No exceedances of PM noted at residential locations during 2006, construction now moving to internal fit-out stage.	Complete	Local Authority Led	Environmental Protection Unit (EPU)

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
4. 04.	Pursue the retaining of the T5 related air quality monitoring network post T5 construction.	2008	Complete	AQ station at Longford and Oaks Road both to be retained post T5 opening. These are both at key residential locations.	Complete – agreement to keep LHR2, London Harlington, Green Gates and Oaks Road as sites for continuous monitoring. HA will be monitoring highway capacity issues which may arise from opening of T5 and dedicated spur off M25 eg potential for queuing back to M4/M25 and merging of increased M25 traffic on to M4. ATCs installed on borough roads leading to airport – in place prior to opening to monitor for any increased traffic on local roads	Local Authority Led	
4. 05.	Quantify and pursue emission reductions for all new on-airport development.	2007	Ongoing	Mitigation sought for on-airport developments in 2006 e.g. car rentals consolidation car park close to residents in Longford and potential redevelopment of Terminal 2, the Heathrow East terminal, which would include a new on-airport Energy Centre.	Hillingdon continue to seek emission reductions from on-airport development as part of the planning process. Heathrow East will be the next major project on-airport unless decisions are made sooner with regards to further capacity. Comments were given at the planning application stage with regard to the suggested use of biomass in the accompanying Energy Centre and attention was drawn to the need to address any local air quality issues that may arise for taking this option forward.	Local Authority Led	Aviation Team
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.	2006	Planning phase	August 2005 - Lack of resources resulted in failure to submit a successful bid.	Recommendation from consultant that Hillingdon could continue pursuit of this objective by joining the ARC organisation.	Partnership	Heathrow Air Quality Working Group

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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.	2010	In progress	Publication of Civil Aviation Sustainable Strategy. Progress Report on Air Transport White Paper published in December 2006. Heathrow expansion via mixed mode and/or 3rd runway still supported by Govt but only if strict environmental criteria such as AQ objectives can be met. Full PSDH consultation due in summer 2007. OMEGA set up by Govt, a multi-disciplinary partnership to study environmental, business and operational impacts of aviation. Hillingdon and Hounslow to attend meeting in April 2007 for update on OMEGA workstreams. Consultation response on aviation into EU ETS	Adding Capacity consultation shows clear non-compliance with EU 2010 limit at relevant locations. Hillingdon will pursue via 2M group to approach EU on the issue of a derogation.	Partnership	Local Authorities
4. 08.	Assess the potential to set an emissions cap for Heathrow.	2008	Not started		Not an option reviewed as part of Adding Capacity documentation	Partnership	Heathrow Air Quality Working Group
4. 09.1.	Assess the potential to use landing emissions charges scheme to create revenue stream for public transport improvements.	2008	Not started		Not an option reviewed as part of Adding Capacity. Heathrow already has emissions charges in place although the Heathrow AQ Action plan 2007-2011 notes this has low emissions benefit for NOx reduction	Partnership	Heathrow Air Quality Working Group
4. 09.2.	Introduce differentiated landing charges at a level that would force cleaner engine technology.	2010	Not started		Not an option reviewed as part of Adding Capacity – no recommendations on control of this source was made in the consultation material	Partnership	BAA



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4. 10.	Audit progress on the BAA Heathrow Air Quality Action Plan (2001-2006).	2005	Ongoing	Progress on Heathrow AQ Action Plan during 2006: Aircraft towing trial with Virgin to assess its effectiveness in reducing taxiing emissions and operational feasibility for Heathrow; Concluded the first year of Clean Vehicles Incentive Fund, awarding £100k to CVP members to adopt low emission technologies; Completed a feasibility study for the Clean Vehicles Programme to become compulsory for all airside vehicles and to be extended to address CO2 emissions as well as NOx; Committed to BAA roads being part of the London LEZ should it proceed.	Now replaced by AQ Action Plan for 2007-2011	Partnership	Heathrow Air Quality Working Group
4. 11.	Review air quality monitoring regime at Heathrow and identify potential gaps.	2005	Completed	Monitors now in place at Sipson and Harmondsworth, monitors in Harlington, Longford and Oaks Road retained		Partnership	Heathrow Air Quality Working Group
4. 12.	Maintain production of externally audited Emissions Inventory on bi-annual basis.	2010	Ongoing	Emission Inventories produced as part of the Adding Capacity consultation		Partnership	BAA Heathrow

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4. 13.	Identify the areas where the existing BAA 5 year Action plan can be strengthened.	2006	Ongoing	Draft new Action Plan sent out for consultation March/April 2006. Comments sent from Heathrow local authorities requesting inclusion of quantification of emission reductions on measures, cost-effectiveness and annual progress reports in line with DEFRA guidance. March 2007 – new Action Plan still not published, letter sent from Heathrow local authorities requesting update on the issue.	Heathrow Air Quality Action plan 2007-2011 published. Examples below: <ul style="list-style-type: none"> <li>Managing emissions from aircraft operations – of the 6 actions put forward 4 have high emission reductions benefits but all 4 have tradeoffs with other pollutants;</li> <li>Managing emissions from airside vehicles – 7 actions, 3 medium emission benefits;</li> <li>Managing emissions from landside vehicles – 5 actions, 2 of medium benefit;</li> <li>Fixed sources – 1 action, low emission benefit.</li> </ul>	Partnership	Heathrow Air Quality Working Group
4. 14.	Pursue quantification of measures in the BAA Air Quality Action Plan and Surface Access Strategy in terms of air quality impacts.	2006	In progress	March 2007 – neither the Action Plan nor the Surface Access Strategy have been published, letter sent from local authorities surrounding Heathrow requesting update on the issue.	2007-2011 Heathrow AQ Action Plan published; Heathrow Surface Access Strategy not yet finalised	Partnership	Heathrow Air Quality Working Group
4. 15.	Assess feasibility of Congestion/Access Charging at Heathrow to reduce overall travel movements to the airport.	2006	Not started		Not reviewed in depth as part of Adding Capacity consultation. Decision. To be left to planning application stage if Govt approve capacity increases.	Partnership	DfT
4. 16.	Assess feasibility of an Heathrow specific LEZ to reduce emissions and accelerate take up of cleaner vehicle technology.	2006	Completed	Commitment from BAA to include BAA roads and motorways should LEZ proceed.	If the London LEZ does not go ahead Hillingdon will still push for a Heathrow specific LEZ. BAA roads included Heathrow Roads included	Partnership	DfT

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4. 17.	Assess appropriate target for modal shift to maximise air quality improvements.	2006	Planning phase	Mode Share figures: 2004 - car 35%, hire car 2.8%, taxi/minicab 25.9%, bus/coach 12.4%, tube 14.2%, rail 9.3%, other 0.3%; 2005 - car 33.6%, hire car 2.8%, taxi/minicab 26.5%, bus/coach 13.9%, tube 13.4%, rail 9.6%, other 0.2%; 2006 - car 34.4%, hire car 2.5%, taxi/minicab 27.4%, bus/coach 12.8%, tube 13.5%, rail 9.0%, other 0.4%.	Adding Capacity documentation suggests high increases in surface access to Heathrow e.g. 27% increases in traffic volumes during the inter-peak. Severe increases in capacity of the Piccadilly line and other modal transport alternatives will be required if the Govt give approval for expansion.	Partnership	DfT
4. 18.	Define programme for the establishment of code of practice for airlines best operating practice to maximise reduction of emissions.	2006	Planning phase		Via ICAO? There is a programme via ICAO looking at this option, progress to date is slow.	Partnership	Heathrow Air Quality Working Group
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.	2006	In progress	Consultation meeting with BAA Heathrow on Heathrow Surface Access Strategy (HSAS), consultation comments returned to BAA. Comments included the need to make strong links with the air quality levels in the region and indicate how the HSAS measures will contribute to addressing this. March 2007 – HSAS still not published.	No obvious links have been made in the Heathrow AQAP 2007-2011 to any targets/objectives in the forthcoming Heathrow Surface Access Strategy	Partnership	Heathrow Air Quality Working Group
4. 20.	Assess feasibility of specifying emissions criteria for Heathrow taxis, buses and coaches using the Central Bus Terminal, and car hire shuttles, hopper buses etc.	2006	Completed	Heathrow Bus and Coach Strategy has committed to ensuring that only LEZ compliant vehicles are stipulated in future BAA supported contracts.	Incorporated into the LEZ	Partnership	Heathrow Air Quality Working Group

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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).	2006	Planning phase	Updated Heathrow Action Plan and Surface Access Strategies not yet published.	Freight addressed via the BAA Clean Vehicle Programme	Partnership	Heathrow Air Quality Working Group
4. 22.	Assess the use of bus priority, guided buses and high occupancy vehicle lanes in the Heathrow area.	2010	Not started		Adding Capacity documentation did not review this option	Partnership	Heathrow Air Quality Working Group
4. 23.	Assess the feasibility of a Park and Ride scheme specifically for Heathrow.	2006	Not started		Adding Capacity documentation did not review this option	Partnership	Heathrow Air Quality Working Group
4. 24.	Assess the health impact of Heathrow Airport and associated activities.	2007	Not started		Adding Capacity documentation did not review this option	Partnership	Heathrow Air Quality Working Group
4. 25.	Lobby Central Government to pursue more stringent emission standards for plant, aircraft and airside vehicles.	2007	Ongoing	Council has lobbied government, but no response on this issue to date.		Lobbying	Local Authorities
4. 26.	Explore feasibility of reducing fares on the Heathrow Express.	2010	Not started	January 2007 - Fares on HEX increased by 7%. May be addressed by PSDH to promote modal shift.	As above	Lobbying	Local Authorities
4. 27.	Pursue relevant organisations to prioritise public transport provision to Heathrow, particularly rail links to the west, east and south.	2008	Ongoing	Responding to TfL consultation on public transport links to T5.	TfL have increased bus connectivity to Heathrow	Lobbying	Local Authorities
4. 28.	Explore feasibility of an airport passenger tax, ring-fenced for increased public transport.	2010	Not started		Adding Capacity documentation did not review this option	Lobbying	Local Authorities

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 5. Measures Concerning Local Industries and Other Businesses							
5. 01.	Support opportunities for Combined Heat and Power where appropriate within the Borough.	2010	In progress	Biomass assessment to be part of 2007 APPLE work programme.	Caution advised with regards to biomass installations in new developments. AQ assessments on biomass requested as part of planning submission	Local Authority Led	Planning
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.	2007	Ongoing	New monitoring station location finalised, due in place by April 07, Grundons supporting purchase of, and running costs of the station for 5 years. Harmondsworth monitor now in place, new monitor to be located in Hayes	BAM chosen for PM monitoring due to non-compliance issues with TEOMs, as advised by DEFRA.	Local Authority Led	Environmental Protection Unit (EPU)
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.	2005	Completed	Press release passed to AQ group on prosecution by EA of Clinical Energy in Hillingdon. Emission data available at <a href="http://www.emissions.hillingdon.gov.uk">http://www.emissions.hillingdon.gov.uk</a> .	Hillingdon working with EA, Slough, health agencies and Grundons to set up a website with on-line monitoring data available when Slough Incinerator is in full operation.	Local Authority Led	Environmental Protection Unit (EPU)
5. 04.	Discourage the use of bonfires on all industrial sites.	2005	Completed	Launched at GLA November 2006, used in Hillingdon as planning condition. Measure complete via use of Best Practice Guide.	Use of Best Practice Guidance advised on all relevant planning applications	Local Authority Led	Environmental Protection Unit (EPU)
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.	2005	Completed	Covered by Best Practice Guide: Control of Emissions from Construction and Demolition from GLA/APPLE.	See above (5.04)	Local Authority Led	Environmental Protection Unit (EPU)

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
5. 06.	Ensure continued regulation of part B processes and maintenance of part B register. Ensure register is available on-line.	2006	Ongoing	New Part B website launched January 2007, link on council website, gives details of processes and permits within Hillingdon. 100% of inspections carried out on industrial processes in 2007, all information relating to inspections available via specialised website		Local Authority Led	Environmental Protection Unit (EPU)
5. 07.	Investigate introduction of Air Quality Action Plans for local industries, including those currently un-regulated under EA.	2008	Not started		Current resources do not permit this to extend beyond statutory actions.	Local Authority Led	Environmental Protection Unit (EPU)
5. 08.	Consider introduction of Environmental Award system for local industries and businesses.	2008	Not started	No progress to date.		Local Authority Led	Sustainability Steering Group
5. 09.	Encourage businesses to participate in environmental management schemes and to continue to improve environmental performance.	2008	Planning phase	Freight forum and Green Business Forum will act as vehicles to provide information and encourage environmental awareness.	No progress on this issue in 2007	Local Authority Led	Sustainability Steering Group

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 6. Improving Eco-efficiency of current and future developments, inc. 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.	2007	Ongoing	Presentation on air quality to Ickenham Residents Group, Business Forum, Residents group around Heathrow. Participation in Streets Ahead Day, and World Environment Day promoting local and global air quality issues. AirText launched March 2007, article in Hillingdon People and local press, target to get 300 sign ups. Inconvenient Truth DVD showing to Labour Group.	Green Roadshow held in May 2007, raising awareness of recycling, low carbon life-styles, energy saving, use of alternative technologies; Streets Ahead scheme set up in Hillingdon – representatives from Environmental services visit a different ward each month, ensuring that initiatives like AirText are promoted monthly throughout the borough; World Environment Day event held – Nottingham Declaration on Climate Change signed	Local Authority Led	Sustainability Steering Group
6. 02.	Work with existing buildings and housing stock to secure improvements in emissions.	2007	Ongoing	Energy efficiency awareness campaigns are underway for local residents.	Ongoing campaign to promote energy efficiency via several events throughout the year	Local Authority Led	Energy Efficiency Programme
6. 03.	Ensure continued use of existing mechanisms such as Section 106 agreements for improvements in air quality.	2008	Ongoing	S106 SPD being re-drafted, air quality integrated into transport section as well as stand alone section.	S106 SPD out to consultation March 2008	Local Authority Led	Planning Department
6. 04.	Review and update Air Quality Supplementary Guidance when appropriate (see planning application form at Appendix 7).	2006	In progress	Hillingdon LDF re-drafted, timetable for review of AQ SPD put back.	AQ SPD to be reviewed Sept 2008, consideration to be given to links to climate change	Local Authority Led	Planning Department
6. 05.	Quantify cumulative effects of new developments within AQMA.	2007	Ongoing	Awaiting finalisation of LDF. Pushing for consideration of cumulative impacts of development to be considered where appropriate.	LDF still not finalised – Hillingdon asked to re-visit LDF due to Adding Capacity consultation, unlikely to be finalised before summer 2008	Local Authority Led	Environmental Protection Unit (EPU)
6. 06.	Develop supplementary planning guidance for sustainable design and construction.	2006	Completed			Local Authority Led	Planning
6. 07.	Raise awareness of sustainable waste management practices.	2006	Completed	Home composting being promoted in addition to actions undertaken in previous years.	Green kerbside recycling in place at all homes	Local Authority Led	Sustainability Steering Group

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
6. 08.	Development of West London Air Quality SPD to ensure consistency across borough boundaries, explore opportunities for joint Section 106 agreements.	2005	Planning phase	Air quality and climate change linked in new draft of the Hillingdon LDF as key spatial objectives.	London Plan re-visited in 2008, Heathrow Opportunity Area identified with a requirement for a minimum of 10,750 homes.	Partnership	West London Air Quality Group



Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 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.	2006	Ongoing	Air quality and climate change as key objectives in draft LDF for Hillingdon, consultation ends March 2007.	See 6.05 for progress on LDF;	Local Authority Led	Planning Policy Unit
7. 02.	Develop an environmental management system for Hillingdon Borough Council.	2008	Not started	No progress.		Local Authority Led	LSP
7. 03.	Establish an Environment Coordination Office for more effective integration of actions to improve environmental performance within and outside the Council.	2008	Not started	No progress.		Local Authority Led	LSP
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.	2006	Planning phase	Tendering process now formally all electronic only - cuts down on paper, transport, etc.	See outcome to date; Procurement policy for fleet vehicles being considered in next financial year	Local Authority Led	Sustainability Steering Group
7. 05.	Provide air quality information to interested parties and link with other health initiatives.	2006	Ongoing	Articles in Hillingdon People for car share, update on new air quality monitoring within the borough, AirText sign up. Reports and presentations given to local residents groups with regard to air quality, progress on PSDH. Industrial emissions website established. (see 5.03)	Public meetings held and regular press releases given with regard to Adding Capacity at Heathrow consultation; AirText regularly promoted at Streets Ahead events throughout the borough	Local Authority Led	Environmental Protection Unit (EPU)

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7. 06.	Work with the London Sustainable Distribution Partnership to implement infrastructure for effective and integrated distribution of goods in London.	2008	Not started	No progress.		Partnership	LSP
7. 07.	Work in partnership to ensure consistency of Action Plan measures and explore all opportunities for regional measures for reducing emissions.	2007	Ongoing	Joint projects identified with WL Freight Quality partnership. Highways Agency meetings identified as annual event for Heathrow area. Environment Agency meetings identified as 6-monthly event for Heathrow specific issues, attendance also at WL AQ Cluster Group. Review of WL Air Quality Strategy complete, includes links with Climate Change and a Communication Strategy.	Continued regional working with West London Air Quality group, successful bids via West Trans BSP and DEFRA grants for joint actions	Partnership	West London Alliance
7. 08.	Development of regional Air Quality Strategy to tackle cross-boundary issues and include all National Air Quality Strategy pollutants, climate change etc.	2007	Planning phase	Nottingham declaration signed 5 <sup>th</sup> June 2007; Consultation response to Draft Climate Change Bill 11 <sup>th</sup> July 2007 – issues raised included strengthening the role of local authorities in the bill, the inclusion of other greenhouse gases to ensure any trade-offs with issues impacting on local air quality are fully understood and specific aviation comments requiring the inclusion of aviation in the climate change reduction targets.		Partnership	Local Authorities
7. 09.	UK Government to actively support air quality improvement in Hillingdon.	2007	Ongoing	Opportunities identified in 2006/06 include responses to EU Thematic Strategy, the PSDH process, the review of the National Air Quality Strategy.	Hillingdon working with 2M group to assess process needed for UK Govt to be granted a derogation in the area around Heathrow	Lobbying	DEFRA

Ref.	Action Plan Measure	Original Timescale	Progress with Measure	Outcome to date	Comments	Local Authority Role	Responsibility
Package 8. Action Plan Management							
8. 01.	Develop and maintain management system for implementation of the plan.	2010	Ongoing			Local Authority Led	Environmental Protection Unit (EPU)
8. 02.	Identify and secure all potential funding for Action Plan initiatives.	2010	Ongoing	S106 sought on new developments, BSP funding of 45,000, SCE bids submitted each year for air quality monitoring, modelling and action plan measures.	Ongoing via BSP, DEFRA grant, section 106, West Trans BSP	Local Authority Led	Environmental Protection Unit (EPU)
8. 03.	Maintain, and where necessary expand, the existing air quality monitoring network.	2010	Ongoing	New tubes located in congested areas in north of borough, tubes places out for monitoring impact of the railway, participation in HA motorway monitoring, new analyser in Sipson village and in Harmondsworth.	Ongoing, funding received for new monitor in Hayes in residential area suffering from poor air quality	Local Authority Led	Environmental Protection Unit (EPU)
8. 04.	Review and assessment of air quality in line with DEFRA guidance.	2010	Ongoing	Rolling programme in place (see annual reports on air quality issued by Hillingdon).	Ongoing	Local Authority Led	Environmental Protection Unit (EPU)
8. 05.	Prioritise measures, providing a schedule for implementation.	2006	Ongoing	Audit of action plan is underway.		Local Authority Led	Environmental Protection Unit (EPU)
8. 06.	Provide progress report to DEFRA on annual basis.	2010	Ongoing	Progress Report 2007 submitted on time.	Ongoing	Local Authority Led	Environmental Protection Unit (EPU)
8. 07.	Review and adapt the action plan according to opportunity and circumstance.	2010	Ongoing	Audit of the action plan being undertaken.	Outcome of PSDH is key to this measure.	Local Authority Led	Environmental Protection Unit (EPU)
8. 08.	Maintain consultation process to disseminate information on progress against defined targets to other stakeholders.	2010	Ongoing	Consulted with various residents group, briefing notes prepared for business groups.	Ongoing	Local Authority Led	Environmental Protection Unit (EPU)
8. 09.	Examine potential for the development of regional action plan on cross boundary issues.	2007	Ongoing	Continued attendance at bodies such as West London Air Quality Group, HATF and APPLE.	Ongoing	Local Authority Led	Environmental Protection Unit (EPU)

