



# 2010 Air Quality Progress Report for London Borough of Lewisham

In fulfillment of Part IV of the Environment Act 1995  
Local Air Quality Management

October 2010



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## Executive Summary

This report is presented to comply with requirements of the Local Air Quality Management regulations and combines the Progress Report on Local Air Quality together with the Air Quality Action Plan Progress Report.

The report provides an interim assessment of local air quality following the most recent Updating and Screening Assessment (USA) published in June 2009. It also provides an update on progress made towards implementing actions from the Council's Air Quality Action Plan for the period up to and including April 2010.

The findings from this report are that the National Air Quality Objectives continue to be met for five out of the seven pollutants currently under LA control. These are:

- 1,3-butadiene
- Benzene
- Carbon monoxide
- Lead
- Sulphur dioxide

For particulate matter, both PM<sub>10</sub> objectives have again been met at monitoring locations and it is estimated that these are being met throughout most, if not all, of the borough. However, until the objective is met consistently and by a wider margin, we are continuing to maintain the designation of the existing Air Quality Management Areas (AQMAs) for PM<sub>10</sub>. In this way, we aim to secure further improvements to air quality and therefore, protect human health. A new PM monitor has been installed in the north of the borough identified as being affected by fugitive emissions from industrial sites. This has been installed relatively recently and data is not presented in this report. However, early indications show that the concentrations peak at very high levels but that the 24-hour averages are generally below the objective. Further analysis will be presented in a future report.

The annual average objective for nitrogen dioxide (NO<sub>2</sub>) continues to be exceeded and often by a wide margin at roadside sites. This includes one monitoring location that is currently outside of the existing AQMAs. Both objectives for NO<sub>2</sub> are being met at all background sites where monitoring is being carried out, although only slightly below in some cases. A Detailed Assessment providing more information on exceedences outside of the existing AQMAs and potential exceedences along busy, congested streets identified in the previous USA is to be submitted shortly.

The Action Plan Progress Report shows that progress with measures contained in the Action Plan are continuing and ongoing. There are some notable successes in terms of promotion of sustainable transport and awareness raising. However, the impacts of individual measures, in terms of the air quality benefits, are still proving difficult to quantify. Also, some actions are outside of the control of the local authority and there is reliance on external organisations to continue to work with us.

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# 1 Introduction

This report is the London Borough of Lewisham Progress Report which forms part of the fourth round of Review and Assessment of Air Quality. This report gives information on progress with air quality management since the last review and assessment undertaken (USA, 2009). This Progress Report forms part of the local air quality management system introduced in the Environment Act 1995 and subsequent regulations. It follows the latest prescribed guidance given in LAQM.TG(09).

## 1.1 Description of Local Authority Area

The London Borough of Lewisham is situated in southeast London. It is bordered to the west by Southwark, to the east by Greenwich and Bromley to the south. It has a small frontage on to the River Thames in the north. It is an inner London Borough comprising a densely populated area with an estimated population in 2010 of approximately 261,600. The Borough is mostly residential with areas of employment around the main commercial centres of Lewisham, New Cross, Catford, Deptford and Sydenham. However, compared to other London boroughs, Lewisham is relatively green with approximately one fifth of the borough being open space. The Borough has a broad socio-economic range combining a mix of wealthier wards and wards with more concentrated areas of deprivation. Some of the most deprived wards are New Cross, Evelyn, Deptford and Downham. In these areas health and the quality of housing are poorer.

The main sources of air pollutants are the busy and congested roads. Only 31% of the borough workforce are employed in the borough (Lewisham Employment Land Study, 2008) with the majority travelling outside the borough to work (2001 Census). 70 per cent of local people commute out of Lewisham to work, mainly to other parts of London but private vehicle ownership is relatively low. The main roads that run through the Borough include the A2, A20, A21 and the South Circular (A205). There are currently 74 minor industrial processes that are regulated by the Council and one Part A installation (SELCHP) regulated by the Environment Agency.

## 1.2 Purpose of Progress Report

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

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

## 1.3 Air Quality Objectives

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

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

<b>Pollutant</b>	<b>Concentration</b>	<b>Measured as</b>	<b>Date to be achieved by</b>
<b>Benzene</b>	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
<b>1,3-Butadiene</b>	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
<b>Carbon monoxide</b>	10.0 $\text{mg}/\text{m}^3$	Running 8-hour mean	31.12.2003
<b>Lead</b>	0.5 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
	0.25 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2008
<b>Nitrogen dioxide</b>	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2005
<b>Particles (PM<sub>10</sub>) (gravimetric)</b>	50 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g}/\text{m}^3$	Annual mean	31.12.2004
<b>Sulphur dioxide</b>	350 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g}/\text{m}^3$ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005



## 1.4 Summary of Previous Review and Assessments

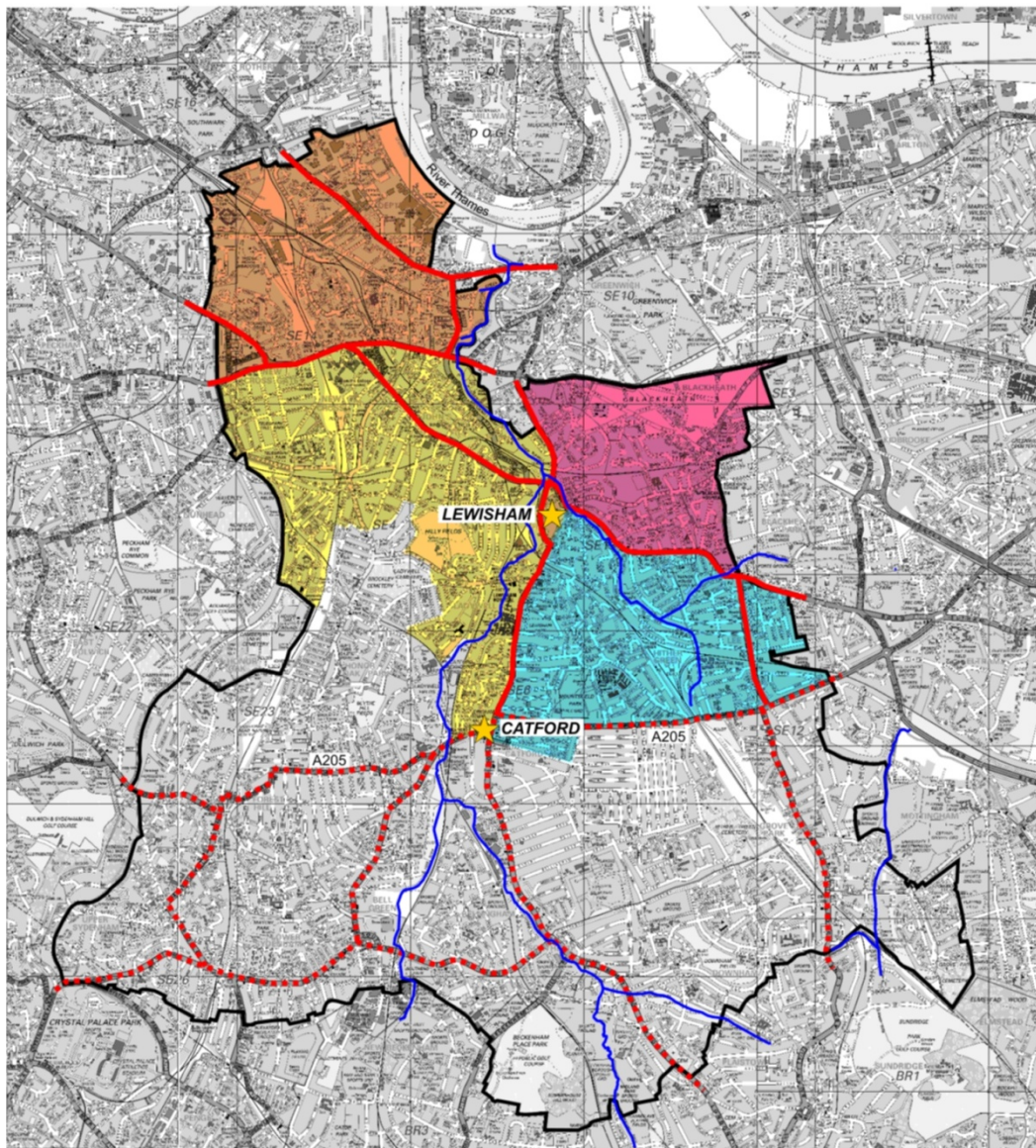
The Council undertook previous rounds of review and assessment of air quality in line with the system of Local Air Quality Management reporting requirements. The main issue following the first round, with respect to local air quality, was found to be emissions (NO<sub>2</sub> and PM<sub>10</sub>) emanating from road vehicles. As a result, the Council designated Air Quality Management Areas in parts of the Borough. These are shown in Figure 1.1 and consist of four large AQMAs and a series of ribbon roads (called AQMA 5).

The conclusions of the Council's subsequent Review and Assessment reports from 2003 to 2009 (see references) were that the designation of AQMAs should remain. These were primarily for exceedences of the annual mean objective for NO<sub>2</sub>, but also for the daily mean objective for PM<sub>10</sub> where there is a smaller area that exceeds. The most recent report, produced in 2009 using the guidance contained in TG(09), included monitoring data that showed exceedences of the annual objective for NO<sub>2</sub> were occurring outside of the existing AQMAs. In addition, changes in the guidance resulted in a further three roads being identified as warranting further investigation. Consequently, a Detailed Assessment is being prepared looking at the specific locations identified in the previous report. The earlier reports also identified that the proposed redevelopment of Lewisham could result in increased concentrations and that fugitive emissions from industrial sources in the north of the borough required monitoring.

**Table 1.2 List of Recent Reports submitted by London Borough of Lewisham under the System of Local Air Quality Management.**

<b>Year</b>	<b>Report</b>
2004	Updating and Screening Assessment
2005	Detailed Assessment
2006	Progress Report
2006	Updating and Screening Assessment
2008	Progress Report
2009	Updating and Screening Assessment

### Environmental Management



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- Borough Boundary
- Rivers
- ★ Key Town Centres

Air Quality Management Areas

- AQMA 1
- AQMA 2
- AQMA 3
- AQMA 4
- AQMA 5

Geographic Information & Research 2009  
Barts Environmental AQMA Map.cdr

**Figure 1.1 Map of London Borough of Lewisham showing AQMA Boundaries**

## 2 New Monitoring Data

### 2.1 Summary of Monitoring Undertaken

#### 2.1.1 Automatic Monitoring Sites

The Council has undertaken continuous monitoring at three fixed, long-term sites for several years. At the end of 2009, an additional monitoring station was located in the north of the borough at a site identified as being potentially affected by fugitive particulate emissions from nearby industrial processes. Monitoring data for this site is available from early 2010. The link below can be used to access a map showing the locations of the 4 sites:

<http://maps.google.co.uk/maps/ms?hl=en&ie=UTF8&msa=0&msid=111293626553174810961.000483933cd3c99c5aed9&z=13>

Further details about each of the monitoring stations is shown below:

- Lewisham 1 – an urban background site located in Catford (in the centre of the Borough). This monitoring site started operating in 1996. **Nitrogen dioxide, sulphur dioxide** and ozone are monitored at the site.  
[http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=LW1&details=location&mapview=all&la\\_id=23&network=All](http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=LW1&details=location&mapview=all&la_id=23&network=All)
- Lewisham 2 – a site located 6m from the roadside in New Cross, which is located in the north of the Borough closer to central London. This monitoring site opened in 2002. The site monitors **nitrogen dioxide, particles (PM<sub>10</sub>)** by TEOM and **sulphur dioxide**. The King's College Volatile Correction Factor has been applied to the monitoring data collected from the TEOM and presented in this report. The site represents relevant exposure.  
[http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=LW2&details=location&mapview=all&la\\_id=23&network=All](http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=LW2&details=location&mapview=all&la_id=23&network=All)
- Lewisham 3 – an industrial site located approximately 10m south of a strip of industrial premises and 2m from the kerb of a residential road that also provides access to the industrial sites. The site represents relevant exposure. The site monitors **particles (PM<sub>10</sub>)** using a Beta Attenuation Mass (BAM) Monitor and has a wind direction sensor attached to the station. As the monitoring site only started collecting data in February 2010, there is very little data available up to the present time and has, therefore, been omitted from this report. However, details of the site's location are provided and a Further Assessment will be carried out a later date.  
[http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=LW3&details=location&mapview=all&la\\_id=23&network=All](http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=LW3&details=location&mapview=all&la_id=23&network=All)
- Crystal Palace 1 – a roadside site located 4m from the kerb in the south west of the Borough on the border of three other neighbouring London boroughs (Southwark, Croydon and Bromley). The site opened in 1999 and is jointly owned between four Boroughs). The site monitors **nitrogen dioxide, carbon monoxide, particles (PM<sub>10</sub>)** by TEOM and **sulphur dioxide**. The King's College Volatile Correction Factor has been applied to the monitoring data collected from the TEOM and presented in this report. This station closed during the preparation of this report.  
[http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=CY1&details=location&mapview=all&la\\_id=23&network=All](http://www.londonair.org.uk/london/asp/publicdetails.asp?region=0&site=CY1&details=location&mapview=all&la_id=23&network=All)



All the above sites are operated to London Air Quality Network (LAQN) standards, which are similar to those of the AURN. The data produced have traceability to national standards and operational procedures defined for the LAQN and are therefore similar to AURN. A contract is in place with King's College Environmental Research Group covering the data collection, validation and ratification as well as to carry out 6-monthly site audits. A contract is also in place with an external provider to carry out the regular servicing and maintenance of the monitoring stations.



**Table 2.1 Details of Automatic Monitoring Sites**

Site Name	Site Type	OS Grid Ref		Pollutants Monitored	Monitoring Technique	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Lewisham 1 (Catford)	Urban background	537675	173689	NO2 SO2 O3	Chemiluminescent UV fluorescence UV photometer	Y (AQMA3)	Y*	3m	N
Lewisham 2 (New Cross)	Roadside	536241	176932	NO2 SO2 PM <sub>10</sub>	Chemiluminescent UV fluorescence TEOM	Y (AQMA3)	Y	6m	Y
Lewisham 3 (Mercury Way)	Industrial	535806	177612	PM10	BAM	Y (AQMA1)	Y	2m	Y
Crystal Palace 1 (Crystal Palace Parade)	Roadside	533901	171290	NO2 SO2 PM <sub>10</sub> CO	Chemiluminescent UV fluorescence TEOM	Y (just outside Borough boundary)	N	2m	Y

\* The monitor is located in a shopping precinct in which market stall holders are regularly present. Therefore, there is relevant exposure to all except the annual mean objectives.

### 2.1.2 Non-Automatic Monitoring

A monitoring survey of nitrogen dioxide, using passive diffusion tubes, started in 2008. The survey started with nine sites, with one additional triplicate site co-located with the Lewisham 2 continuous site. One of the sites (LWS01) was affected by construction works and did not provide any data. A further site (LWS12) was discontinued after collecting data for 12 months. These tubes have been relocated to two new sites (LWS17 and LWS18 respectively). In the first half of 2009, tube LWS008 was missing on four out of six occasions. It was, therefore, decided to relocate the tube to another location close by (LWS051). A further four sites have been added to the network since its inception (LWS014, LWS015, LWS016 and LWS052). LWS052 was first installed in August 2009 but repeatedly went missing so no data is available for this period and is, therefore, excluded from the results tables.

The details of the sites are given in Table 2.2. The background locations chosen are all close to residential facades on minor roads and worst-case locations noted as N (i.e. no). The worst-case locations indicated as Y (i.e. yes) are sited on lampposts close to kerbsides. In all cases the diffusion tubes are mounted using spacers and sited 2.5 to 3m above ground level.

The diffusion tubes used are analysed by Gradko International using a preparation method of 50% TEA in water. Gradko International participates in the Workplace Analysis Scheme for Proficiency (WASP), which is an independent analytical performance testing scheme. The scheme is an important QA/QC exercise for laboratories supplying diffusion tubes to Local Authorities for use in the context of Local Air Quality Management (LAQM). The Health and Safety Laboratory (HSL) operate the WASP scheme independently and the cost of operation is borne by the laboratories, which pay an annual fee to HSL. In the most recent round of Annual Performance Criteria for NO<sub>2</sub> Diffusion Tubes used in LAQM (DEFRA, 2010), the laboratory demonstrated good performance in a QA/QC scheme for analysis of NO<sub>2</sub> diffusion tubes.

The unbiased results of the diffusion tube monitoring in the Borough are provided in Appendix B. The monitoring began in February 2008 and, as outlined above is continuing at the majority of the original locations with some minor changes. Therefore, data for a full calendar year is now available.

In addition, a project to work with various schools in the borough on air quality monitoring was initiated in March 2009. This included siting a diffusion tube at each of the participating schools. Although the tubes do not form part of the NETCEN network, the same laboratory, preparation methods and QA/QC procedures are used. The majority of the sites are located in background sites with tubes being located in a mixture of school playgrounds and school boundaries adjacent to residential roads. The exceptions to this are tubes SCH013 and SCH020. SCH013 is located on the school boundary and is a roadside site on Perry Vale (B227) which was identified in the 2009 Update and Screening Assessment as meeting new criteria and, therefore, requiring further study. SCH020 is located at the school boundary and within 4m of the kerb of the A21. For ease of reading throughout the report, the results are presented separately from the data obtained from the NETCEN network.

A local co-location study using triplicate tubes was undertaken over 12 months at the Lewisham 2 roadside site in New Cross. The diffusion tubes were located within 0.5m of the inlet sampler of the chemiluminescent analyser at the continuous site. The study compared equivalent exposure periods, although the continuous results are provisional. The results from the study indicate that there was good precision and also good data capture for the continuous analyser.

Bias adjustment factors are specific to each year, analysing laboratory, method of analysis and location. Using the Air Quality Consultants spreadsheet available from the government's Review and Assessment website, the local factor based on 2009 data was calculated to be 0.84. The national factor in Version 03/10 of the bias adjustment spreadsheet is 0.99 so therefore would be more precautionary. A combined factor using local data and the data from the national spreadsheet was calculated to be 0.98. Further details on the calculations are included in Appendix A.

**Figure 2.1 Map of Monitoring Sites**

*Air Quality Monitoring*



Geographic Information & Research  
 AirQualityMonitoring2009.cdr

**Table 2.2a Details of Non- Automatic Monitoring Sites (NETCEN Network)**

Site Name	Site Type	Easting	Northing	In AQMA	Relevant exposure (Y/N with distance (m) to relevant exposure)	Distance to kerb (m) of nearest road (N/A if not applicable)	Worst-case location
LWS001	Roadside	540317	174100	Y	Y	10	N
LWS002	Background	538475	175785	Y	Y	1	N
LWS003	Roadside	538220	176100	Y	Y	10	N
LWS004	Roadside	537740	175920	Y	N	1.5	Y
LWS005-007	Roadside	535290	177295	Y	Y	6	Y
LWS008	Roadside	535830	176830	Y	Y	15	Y
LWS009	Roadside	536130	173337	N	Y	3	Y
LWS010	Background	538055	173810	Y	Y	0.5	N
LWS011	Roadside	537180	173370	Y	N	0.5	Y
LWS012	Background	538640	172730	N	Y	10	N
LWS013	Used as control						
LWS014	Background	535536	173192	N	Y	10	N
LWS015	Roadside	536523	175925	Y	Y	0.5	Y
LWS016	Roadside	539640	175934	Y	Y	0.5	Y
LWS017	Roadside	540037	173748	Y	Y	0.5	Y
LWS018	Background	538960	172740	N	Y	2	N
LWS051	Roadside	535751	176985	Y	Y	0.5	Y
LWS052	Roadside	535795	171570	N	Y	0.5	N

Tubes at sites shaded grey have been relocated as follows:

LWS001 → LWS017

LWS008 → LWS051

LWS012 → LWS018



**Table 2.2b Details of Non- Automatic Monitoring Sites (non-NETCEN Network)**

<b>Site Name</b>	<b>Site Type</b>	<b>Easting</b>	<b>Northing</b>	<b>In AQMA</b>	<b>Relevant exposure</b> <i>(Y/N with distance (m) to relevant exposure)</i>	<b>Distance to kerb (m) of nearest road</b> <i>(N/A if not applicable)</i>	<b>Worst-case location</b>
SCH001	Background	539250	176402	Y	N	25	N
SCH002	Background	539348	174477	Y	Y	5	N
SCH003	Background	540545	172840	N	Y	5	N
SCH004	Background	540149	171652	N	N	10	N
SCH005	Background	539063	171632	N	Y	8	N
SCH006	Background	539369	172480	N	Y	6	N
SCH007	Background	539089	173398	N	Y	8	N
SCH008	Roadside	537817	173323	Y	Y	5	Y
SCH009	Background	538456	172426	N	N	10	N
SCH010	Background	537453	172410	N	N	20	N
SCH011	Background	536245	171849	N	Y	8	N
SCH012	Background	535055	172357	N	N	20	N
SCH013	Roadside	535563	172740	N	Y	5	Y
SCH014	Background	535862	172685	N	Y	8	N
SCH015	Background	537438	173941	N	Y	5	N
SCH016	Background	536412	175131	N	Y	2	N
SCH017	Background	536118	175119	Y	Y	5	N
SCH018	Background	536924	177707	Y	Y	2	N
SCH019	Background	538311	175304	Y	Y	3	N
SCH020	Roadside	538025	174749	Y	N	2	Y
SCH021	Background	535028	172327	N	Y	5	N

## 2.2 Comparison of Monitoring Results with Air Quality Objectives

### 2.2.1 Nitrogen Dioxide

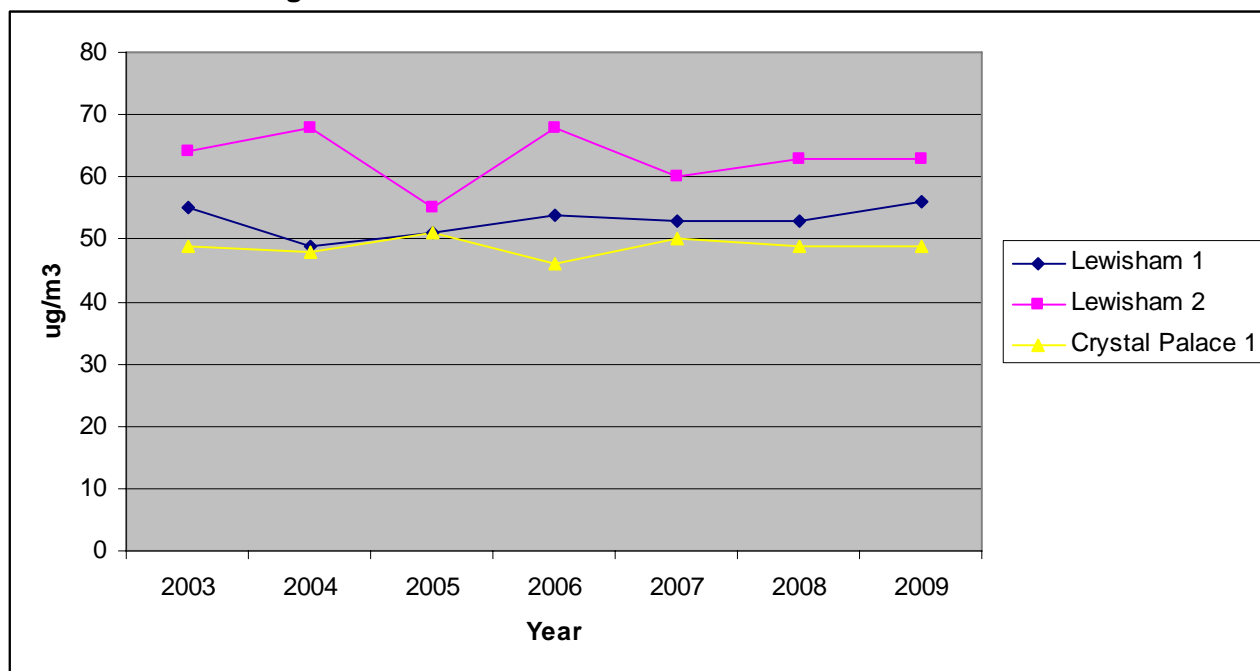
#### Automatic Monitoring Data

The results for the three continuous sites operated by the London Borough of Lewisham are shown in Table 2.3a below. The results are for the years from 2007 to 2009. Data for 2007 and 2008 are fully ratified while 2009 figures includes a period of unratified data. Any amendments to the data following ratification will be shown in future reports.

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

Site ID	Location	Within AQMA?	Data Capture for full calendar year 2007 (%)	Data Capture for full calendar year 2008 (%)	Data Capture for full calendar year 2009 (%)	Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ )		
						2007	2008	2009
Lewisham1	Broadway Theatre, Catford	Y	91	94	100	53	53	56
Lewisham2	New Cross, Hobgoblin PH	Y	92	94	93	60	63	63
Crystal Palace1	Crystal Palace Parade	Y (Outside Borough Boundary)	93	93	93	50	49	49

**Figure 2.2 Trends in Annual Mean Nitrogen Dioxide Concentration Measured at Automatic Monitoring Sites.**



Data capture was below 90% in 2006 at Lewisham 2 and in 2004, 2005 and 2006 at Crystal Palace 1

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

Site ID	Location	Within AQMA?	Data Capture for full calendar year 2007 (%)	Data Capture for full calendar year 2008 (%)	Data Capture for full calendar year 2009 %	Number of Exceedences of hourly mean ( $200 \mu\text{g}/\text{m}^3$ )		
						2007	2008	2009
Lewisham	Broadway Theatre, Catford	Y	91	94	100	8	2	4
Lewisham 2	New Cross, Hobgoblin PH	Y	92	94	93	11	5	6
Crystal Palace 1	Crystal Palace Parade	Y (Outside Borough Boundary)	93	93	93	0	0	0

The results show that the annual mean objective was exceeded at all three sites and in each of the years. Furthermore, the concentrations have remained static or slightly increased, contrary to the general downward trend that is often predicted. The results provide some evidence to confirm that emissions of  $\text{NO}_2$  directly emitted from road vehicles have increased (Carslaw D.C and Beevers, S. D, 2005).

As expected, the roadside site in New Cross shows the highest concentrations of annual mean  $\text{NO}_2$  but the levels at the urban background site in Catford are not much lower. Although the site meets the definition of urban background, the monitoring station is in a shopping area where vehicular access is restricted to deliveries and access to the commercial premises. It is situated approximately 25m from a busy road and 75m from the South Circular (A205). Therefore, the levels are expected to be slightly higher than some other urban background sites.

The hourly objective was not exceeded at any of the sites. The most recent year when the hourly objective was exceeded at the Lewisham 2 site was in 2006 while the standard has not been exceeded at the Crystal Palace site since 2003.

In December 2007, a widespread primary pollution episode arose at which time weather conditions were cold and calm, with very light winds. An initial analysis suggests that this was the most significant nitrogen dioxide incident for 10 years, when  $\text{NO}_2$  was elevated across the region. The highest hourly concentrations at the Lewisham sites in 2007 arose during episodes in November/ December and also February and April/ May. Additional pollution episodes were experienced in February 2008 and January 2009 again during periods of still calm weather that resulted in poor pollutant dispersal.

**Diffusion Tube Monitoring Data**

The results from the tubes are shown in Table 2.4 below. The results indicating an exceedence of the National Air Quality Objective are shown in bold. As can be seen, the majority of the sites where the diffusion tube data indicates that the objective is being exceeded are located within an existing AQMA. The exception to this is LWS009 located on Brockley Rise. This tube is located on the B218 and close to the junction with the South Circular (A205). The South Circular has already been designated as an AQMA while the B218 is the subject of further investigation provided in a separate Detailed Assessment.

**Table 2.4a Results of Nitrogen Dioxide Diffusion Tubes (NETCEN network)**

Site ID	Location	Within AQMA?	Data Capture for full calendar year 2008 %	Data Capture for full calendar year 2009 %	Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ )			
					2008	2009	2009 data with local factor applied	2009 data with national factor applied
LWS002 <sup>a</sup>	Boyne Road	Y	92	92	36.68	36.1	30.32	35.74
LWS003 <sup>a</sup>	Lewisham Road	Y	92	92	<b>47.76</b>	<b>49.65</b>	<b>41.71</b>	<b>49.15</b>
LWS004 <sup>a</sup>	Loampit Vale	Y	92	100	<b>61.01</b>	<b>60.01</b>	<b>50.41</b>	<b>59.41</b>
LWS005 <sup>a</sup>	New Cross Road	Y	83	92	<b>69.59</b>	<b>73.51</b>	<b>61.75</b>	<b>72.77</b>
LWS006 <sup>a</sup>	New Cross Road	Y	83	92	<b>70.23</b>	<b>73.88</b>	<b>62.06</b>	<b>73.14</b>
LWS007 <sup>a</sup>	New Cross Road	Y	92	75	<b>68.13</b>	<b>71.94</b>	<b>60.43</b>	<b>71.22</b>
LWS008 <sup>a</sup>	Pepys Road	Y	75	n/a	<b>52.35</b>	n/a	n/a	n/a
LWS009 <sup>a</sup>	Brockley Rise	N	92	100	<b>58.72</b>	<b>57.12</b>	<b>47.98</b>	<b>56.55</b>
LWS010 <sup>a</sup>	Ringstead Road	Y	92	100	36.59	38.31	32.18	37.93
LWS011 <sup>a</sup>	Catford Hill	Y	83	100	<b>57.1</b>	<b>57.72</b>	<b>48.48</b>	<b>57.14</b>
LWS012 <sup>a</sup>	Penderry Rise	N	83	n/a	24.16	n/a	n/a	n/a
LWS014 <sup>b</sup>	Stanstead Road	N	0	100	n/a	27.37	22.99	27.1
LWS015 <sup>c</sup>	Shardloes Road	Y	0	92	n/a	<b>60.63</b>	<b>50.93</b>	<b>60.02</b>
LWS016 <sup>c</sup>	Lawn Terrace	Y	0	100	n/a	<b>40.87</b>	34.33	<b>40.46</b>
LWS017 <sup>d</sup>	Baring Road	Y	0	75	n/a	<b>49.6</b>	<b>41.66</b>	<b>49.1</b>
LWS018 <sup>d</sup>	Hazelbank Road	N	0	58	n/a	31.11	26.13	30.8
LWS051 <sup>e</sup>	Hatcham Park Road	Y	0	42	n/a	<b>59.98</b>	<b>50.38</b>	<b>59.38</b>

<sup>a</sup> monitoring started in February 2008

<sup>b</sup> monitoring started in December 2008

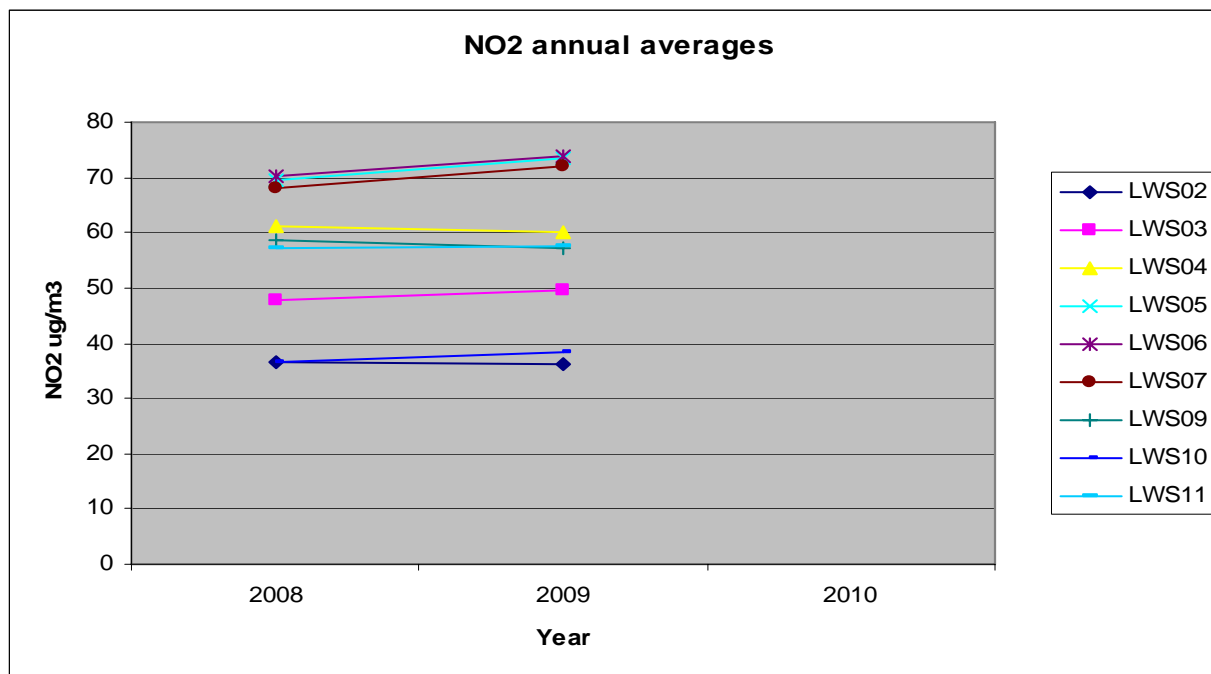
<sup>c</sup> monitoring started in January 2009

<sup>d</sup> monitoring started in March 2009

<sup>e</sup> monitoring started in July 2009 and data has been annualised. See [Appendix A](#) for details

n/a – Tubes not in position in this location during this year

Since the diffusion tube network was only started in 2008, data is currently only available for 2 years. Consequently, it is too early to provide any detailed analysis of trends in the annual averages. However, Fig 2.3 below shows the data to date (without bias adjustment) and has been included as a starting-point for future years' reporting.



**Figure 2.3 Trends in Annual Mean Nitrogen Dioxide Concentration Measured at Diffusion Tube Monitoring Sites**

With the exception of those sites indicated in the table below, monitoring at schools began in March 2009. Therefore, a full calendar year's worth of data was not available at the time this report was being prepared. However, as the monitoring period was for 10 months these results have not been annualised. For the three schools which had shorter monitoring periods, the results were annualised using the methodology set out in Box 3.2 of TG(09) and using the data sets from the 3 automatic monitoring stations provided in Table 2.3a. Details of the calculations are provided in [Appendix A](#). Where data capture is below 80% as a result of tubes being missing rather than a shorter monitoring period, the data has not been annualised since the data gaps are more sporadic.

**Table 2.4b Results of Nitrogen Dioxide Diffusion Tubes (non-NETCEN network)**

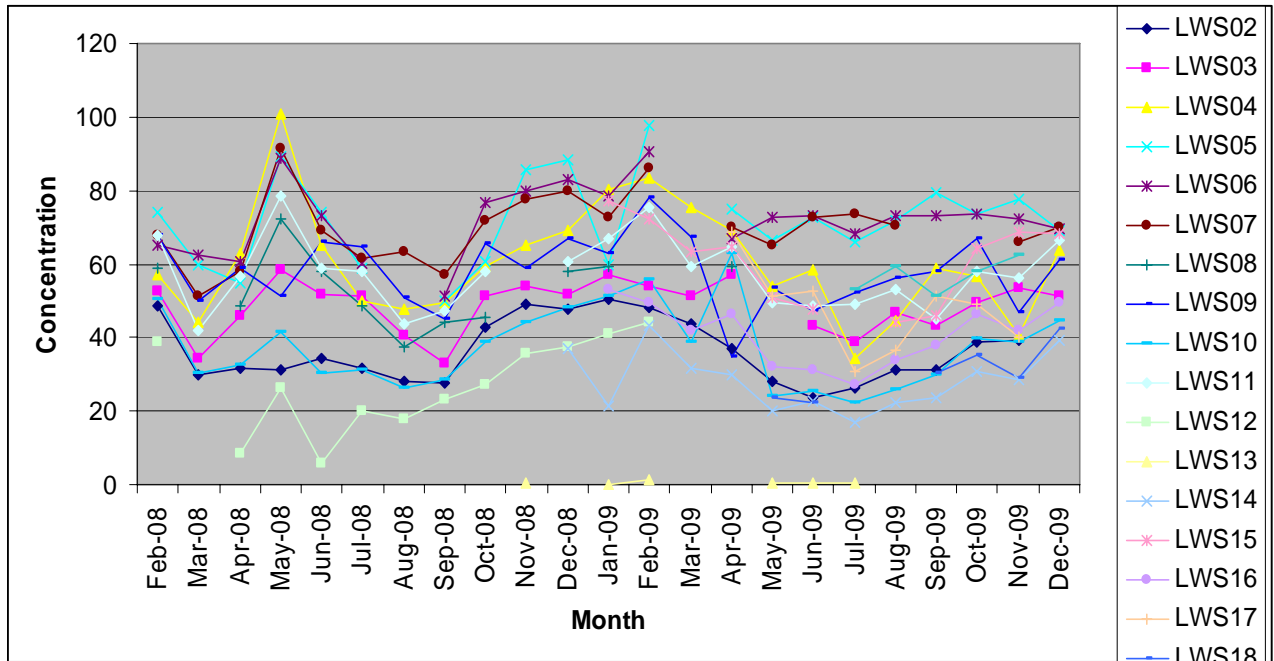
Site ID	Location	Within AQMA?	Data Capture for full calendar year 2009 %	Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ )		
				2009	2009 data with local factor applied	2009 with national factor applied
SCH001	All Saints CE Primary, Blackheath Vale SE3	Y	83.33	26.73	22.45	26.46
SCH002	Lee Manor Primary, Leahurst Road SE13	Y	75	28.52	23.96	28.23
SCH003	Cooper's Lane Primary, Pragnell Road, SE12	N	83.33	23.51	19.75	23.27
SCH004	Launcelot Primary, Launcelot Road BR1	N	75	23.23	19.51	23.00
SCH005	Bonus Pastor College, Winlaton Road BR1	N	66.67	22.11	18.57	21.89

SCH006	Forster Park Primary, Boundfield Road SE6	N	66.67	23.10	19.4	22.87
SCH007	Sandhurst Infants and Juniors, Minard Road SE6	N	75	26.76	22.48	26.49
SCH008	Holy Cross Primary, Culverley Road SE6	Y	83.33	31.63	26.57	31.31
SCH009 <sup>a</sup>	Catford High, Conisborough Crescent SE6	N	50	23.22	19.5	22.99
SCH010	Athelney Primary, Athelney Street SE6	N	75	22.77	19.13	22.54
SCH011	St Michael's CE Primary, Champion Road SE26	N	66.67	25.46	21.39	25.21
SCH012 <sup>a</sup>	St William of York RC School, Brockley Park SE23	N	66.67	28.72	24.13	28.43
SCH013	Christchurch CE School, Perry Vale SE23	N	75	31.27	26.27	30.96
SCH014	Perrymount School, Sunderland Road SE23	N	58.33	26.01	21.85	25.75
SCH015	Holbeach Primary, Doggett Road SE6	N	75	29.33	24.64	29.04
SCH016	St Mary Magdalen's RC School, Howson Road SE4	N	75	28.95	24.32	28.66
SCH017	Turnham Primary Foundation, Turnham Road SE4	Y	83.33	29.11	24.45	28.82
SCH018	Grinling Gibbons Primary, Clyde Street SE8	Y	58.33	33.34	28.01	33.01
SCH019	St Saviour's RC Primary, Bonfield Road SE13	Y	83.33	30.28	25.44	29.98
SCH020	St Mary's CE Primary, Lewisham High St SE13	Y	83.33	<b>61.33</b>	<b>51.52</b>	<b>60.72</b>
SCH021 <sup>b</sup>	Sydenham School, Dartmouth Road SE26	N	50	34.62	29.08	34.27

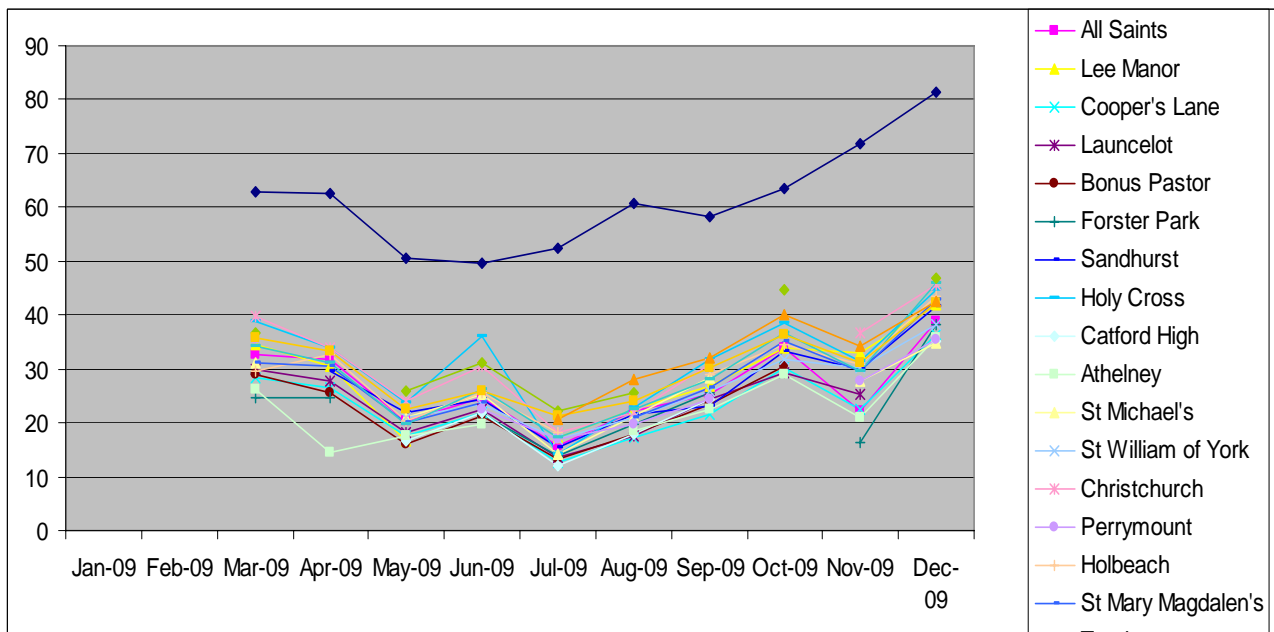
<sup>a</sup> – Monitoring started May 2009 and data has been annualised. See [Appendix A](#).

<sup>b</sup> – Monitoring started July 2009 and data has been annualised. See [Appendix A](#).

**Fig 2.4: Trend in Monthly Averages of Nitrogen dioxide from diffusion tube results (NETCEN network)**



**Fig 2.5: Trend in Monthly Averages of Nitrogen dioxide from diffusion tube results (non-NETCEN network)**



The graphs do not show any clear discernible trends over time apart from the slight variations between the summer and winter months. However, the graphs do clearly show the difference between the concentrations measured at background and roadside sites. At background locations, the monthly averages recorded using the diffusion tubes are generally below 40  $\mu\text{g}/\text{m}^3$  and therefore meet the annual average Air Quality Objective whereas at roadside sites, the monthly averages are almost always above 40  $\mu\text{g}/\text{m}^3$  so that the Objective is exceeded, often by a significant margin.

### 2.2.2 PM<sub>10</sub>

The two sites for which PM<sub>10</sub> data is available are Lewisham 2, situated at a roadside in New Cross, and Crystal Palace 1 which is another roadside location on the Borough's boundary. Lewisham 2 is representative of public exposure while Crystal Palace 1 is situated close to a road and adjacent to a park. There are residential properties on the other side of the road but these are set back behind vegetation and at a lower level than the road.

As can be seen from the results presented in Table 2.5, both the annual mean and the 24-hour mean objectives were met at both sites in all years. The last year when an exceedence of the PM<sub>10</sub> objective was reported was in 2003 when the 24-hour mean objective was exceeded at Lewisham 2. During this year, long periods of high pressure during the summer months contributed to exceedences across London.

A slight downward trend in the results can be observed since 2003 although the concentrations have remained relatively stable in recent years. However, as the episodes in 2003 and, to some extent, those in 2007 demonstrate, PM<sub>10</sub> concentrations can be greatly influenced by meteorological conditions. Therefore, there can be significant fluctuations from one year to the next and a precautionary approach is being adopted towards interpreting the implications of the results for the AQMA designation.

As discussed in Section 2.1, an additional monitoring station has been located in the borough since the previous Report was produced. The monitor is a BAM and has been located close to an industrial site in the north of the borough where potential problems arising from fugitive emissions from the industrial processes were identified. The monitoring site is located to the south of the processes and, therefore, downwind but it is close to the residential premises that would be affected in order to measure relevant public exposure. Data for this site is only available from February 2010 so has not been included in this report. However, early indications show that there are significant peaks in PM<sub>10</sub> concentrations occurring at the site but that the 24-hour mean objective is being met.

**Table 2.5 Results of PM<sub>10</sub> Automatic Monitoring: Comparison with Annual Mean and 24-hour Mean Objectives**

Site ID	Location	Within AQMA?		2007	2008	2009
Lewisham 2	New Cross, Hobgoblin PH	Y	Data Capture	93	93	92
			Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ ) (Objective: $40\mu\text{g}/\text{m}^3$ )	27	25	25
			No. of days $> 50\mu\text{g}/\text{m}^3$ (Objective: $\leq 35$ days)	27	16	12
Crystal Palace 1	Crystal Palace Parade	Y	Data Capture	90	87	87
			Annual mean concentrations ( $\mu\text{g}/\text{m}^3$ ) (Objective: $40\mu\text{g}/\text{m}^3$ )	26	24	24
			No. of days $> 50\mu\text{g}/\text{m}^3$ (Objective: $\leq 35$ days)	24	6	5
			90 <sup>th</sup> %ile of daily mean where data capture is below 90%		37.1	36.4

All results from TEOM PM10 analysers are now converted to reference equivalence using the volatile correction method. 2009 data has not yet been fully ratified.



### 2.2.3 Sulphur Dioxide

Sulphur dioxide is monitored at Lewisham1, Lewisham2 and the site on the borough's boundary, Crystal Palace1. As mentioned previously, Lewisham1 and Lewisham2 are representative of relevant public exposure while Crystal Palace1 gives worst-case concentrations as the public exposure is further away.

The data from each site for the past three years is shown in Table 2.6 below. Where data capture for the year is below 90%, the 99.9<sup>th</sup> percentile, 99.7<sup>th</sup> percentile and the 99<sup>th</sup> percentile for the 15-minute mean, the 1-hour mean and the 24-hour mean respectively are presented in brackets after the number of exceedences. These values are in  $\mu\text{g}/\text{m}^3$ .

As can be seen from the data, exceedences of the National Objectives have not occurred at any of the sites over the past 3 years. In order to try to present more meaningful statistics, the maximum 15-minute mean achieved at each site for each of the years is also given. At Lewisham1 in Catford, the trend has been steadily downwards indicating progressive improvement. However, there has been a slight increase at Lewisham2 in New Cross while results at Crystal Palace show significant fluctuations. It is possible that sulphur dioxide concentrations at both of these sites are affected by large point source emissions which may be located outside of the borough.

**Table 2.6 Results of SO<sub>2</sub> Automatic Monitoring: Comparison with Objectives**

Site ID	Location	Within AQMA?		2007	2008	2009 <sup>a</sup>	
Lewisham 1	Broadway Theatre, Catford	Y	Data capture %	97	97	100	
			Number of Exceedences of: ( $\mu\text{g}/\text{m}^3$ )	15-minute Objective (266 $\mu\text{g}/\text{m}^3$ )	0	0	0
				1-hour Objective (350 $\mu\text{g}/\text{m}^3$ )	0	0	0
				24-hour Objective (125 $\mu\text{g}/\text{m}^3$ )	0	0	0
			Max. 15-minute mean ( $\mu\text{g}/\text{m}^3$ )	154.9	150.7	141.2	
Lewisham 2	Hobgoblin PH, New Cross Rd	Y	Data capture %	93	91	88	
			Number of Exceedences of: ( $\mu\text{g}/\text{m}^3$ )	15-minute Objective (266 $\mu\text{g}/\text{m}^3$ )	0	0	0 (31.9)
				1-hour Objective (350 $\mu\text{g}/\text{m}^3$ )	0	0	0 (18.3)
				24-hour Objective (125 $\mu\text{g}/\text{m}^3$ )	0	0	0 (8.5)
			Max. 15-minute mean ( $\mu\text{g}/\text{m}^3$ )	125.1	128.3	130.2	
Crystal Palace1	Crystal Palace Parade	Y	Data capture %	86	86	90	
			Number of Exceedences of: ( $\mu\text{g}/\text{m}^3$ )	15-minute Objective (266 $\mu\text{g}/\text{m}^3$ )	0 (71.2)	0 (75.9)	0
				1-hour Objective (350 $\mu\text{g}/\text{m}^3$ )	0 (45.3)	0 (46.4)	0
				24-hour Objective (125 $\mu\text{g}/\text{m}^3$ )	0 (21.1)	0 (17.0)	0
			Max. 15-minute mean ( $\mu\text{g}/\text{m}^3$ )	140.9	154.1	112.5	

<sup>a</sup> 2009 data have not yet been fully ratified.

## 2.2.4 Carbon Monoxide

Carbon monoxide is monitored at Crystal Palace1 in Crystal Palace Parade, close to the southwest corner of the Borough. The site opened in 1999 and details of recent monitoring from 2007 to 2009, plus data capture, are given in Table 2.7 below based on scaled and ratified data (apart from 2009 which are still provisional).

There were no exceedences of the CO objective (rolling 8 hour mean  $>10\text{mg/m}^3$ ) at the site over this period. Details of annual mean and maximum one-hour concentrations are also provided for information purposes. The annual mean concentrations are low in comparison with the objective.

**Table 2.7 Results of CO Automatic Monitoring: Comparison with Objectives**

Inside AQMA?			2007	2008	2009
<b>Crystal Palace1, Crystal Palace Parade</b>	Y	Max 8 Hour	1.9	1.6	1.5
		Annual mean	0.5	0.4	0.4
		Max 1 Hour	3.1	3	2
		Data capture %	92	86	89

The results from the monitoring site are considered representative of busy roadsides in the Council's area. These indicate that the objective is being met. The results also indicate a fall in concentrations over time as outlined in the Council's previous updating and screening assessment.

### 2.2.5 Ozone

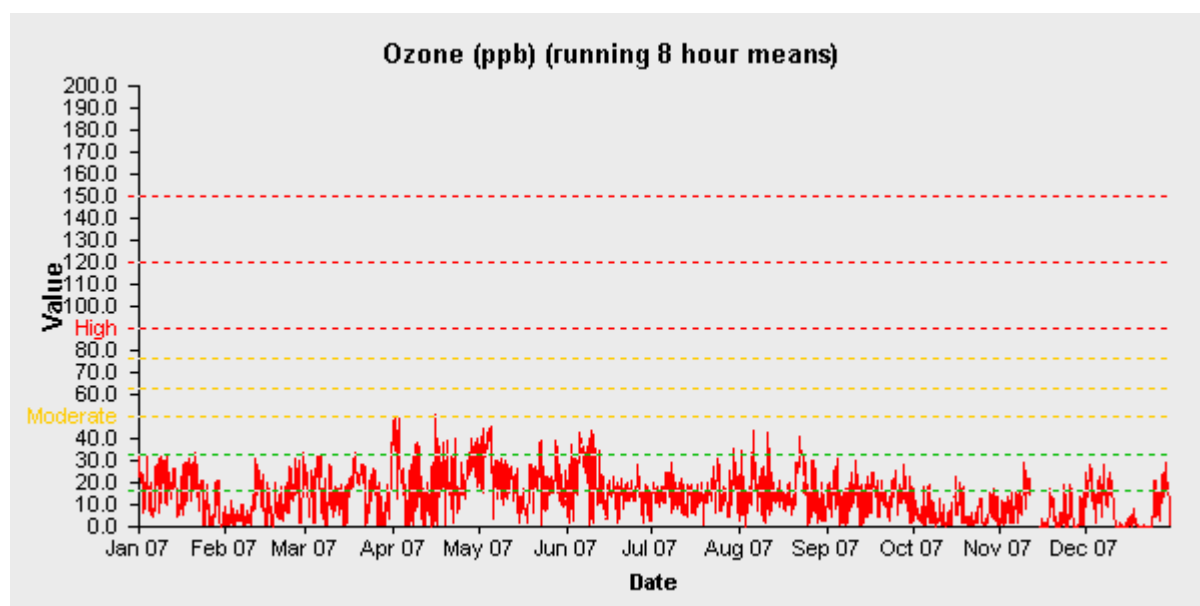
Ozone is monitored at the Lewisham1 site at the Broadway Theatre in Catford. Details of the site are contained in Section 2.1 of this report. The results from the most recent 3 years are presented in Table 2.7 below:

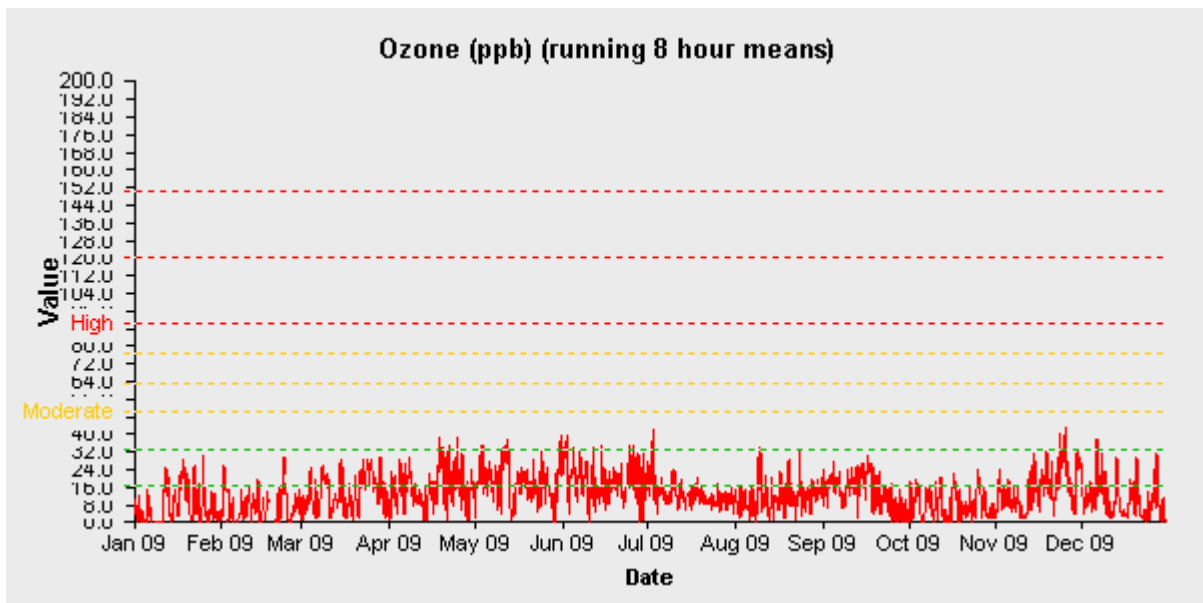
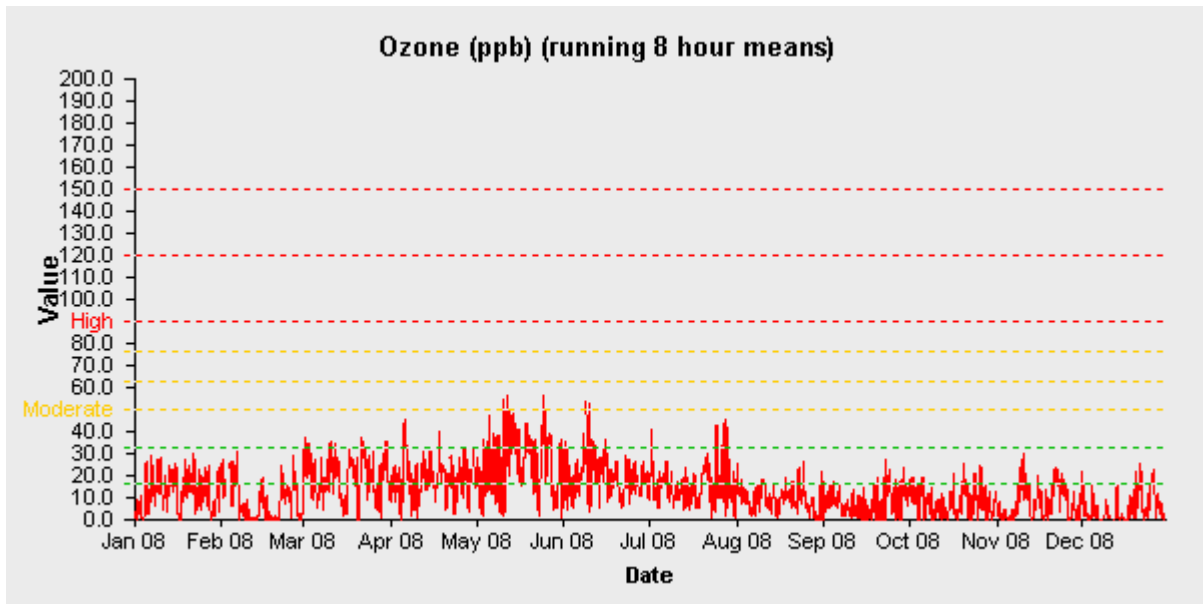
**Table 2.8 Results of O<sub>3</sub> Automatic Monitoring**

Site ID	Location	Within AQMA?		2007	2008	2009 <sup>a</sup>
Lewisham1	Broadway Theatre, Catford	Y	Data capture %	99	99	99
			Max hourly mean	119.5	126.5	98
			Max rolling 8-hourly mean	103.2	113.4	85.8
			No. of days max rolling 8-hour mean > 100 µg/m <sup>3</sup>	3	6	0

<sup>a</sup> 2009 data have not yet been fully ratified.

The Air Quality Objective for ozone is less than 10 days when the maximum rolling 8-hour mean exceeds 100 µg/m<sup>3</sup>. While the monitoring data indicates that the Air Quality Objective is being achieved at this location, concentrations of ozone often occur some distance from the sources and tend to be lower in urban environments. For this reason, the objective is not included in the Regulations at present and does not fall within the system of Local Air Quality Management. Graphs showing the rolling 8-hourly means for each of the three years shown in the table are shown below.





**Figs 2.6, 2.7 and 2.8** Graphs Showing Ozone Running 8 hour Means For 2007, 2008 and 2009 respectively

## 2.2.6 Summary of Compliance with AQS Objectives

London Borough of Lewisham has measured concentrations of nitrogen dioxide above the annual mean objective at relevant locations outside of the AQMA as reported in the 2009 Update and Screening Assessment. A **Detailed Assessment** for the roads identified is being submitted alongside this report.

No further locations where exceedences of this objective are occurring outside of an existing AQMA have been identified in this report.

No exceedences of any other objective were identified in this report. However, as explained in 2.2.2, PM<sub>10</sub> concentrations are variable and a precautionary approach is being adopted with regards to maintaining the existing AQMAs for potential exceedences of the 24-hour Air Quality Objective. Therefore, there is no need to progress to any further Detailed Assessment.

## 3 New Local Developments

### 3.1 New Local Developments

In 2009, work began on the redevelopment of the Old Seager's Distillery located at the junction of the A2 New Cross Road and the A2210 Brookmill Road. This development was granted planning permission in 2008 with a s.106 obligation for contributions to air quality monitoring. However, work on the development only began in the latter half of 2009.

**Table 3.1 Planning Applications (2009-10) where an Air Quality Assessment was submitted as part of an Environmental Statement**

Site Name	Location	Status	Summary of AQA
Loampit Vale	Loampit Vale / Elmira Street, Lewisham SE13	Approved, under construction	Using air quality models, maximum ground level pollutant concentrations once development is operational were predicted to be: NO2 annual mean 57.2µg/m <sup>3</sup> NO2 1 hour mean 209.0µg/m <sup>3</sup> PM10 annual mean 34.5µg/m <sup>3</sup> PM10 24 hour mean 58.3µg/m <sup>3</sup> PM2.5 annual mean 11.3µg/m <sup>3</sup> <a href="http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRA&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=56410">http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRA&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=56410</a>

London Borough of Lewisham has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area.

- Loampit Vale

The Loampit Vale development had been anticipated for some time and was highlighted in previous reports as one with the potential to affect local air quality. An adjacent development (Lewisham Gateway) submitted plans including an EIA previously and this received planning permission in May 2009. These will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012 in conjunction with other neighbouring proposed developments (Thurston Road, Lewisham Bridge Primary School).

## 3.2 Road Traffic Sources

London Borough of Lewisham confirms that, since the date of the last Updating and Screening Assessment, no more of the following have been identified:

- narrow congested streets with residential properties close to the kerb
- busy streets where people may spend one hour or more close to traffic
- roads with a high flow of buses and/or HGVs
- junctions
- bus or coach stations

An earlier Progress Report referred to plans to replace the roundabout in the centre of Lewisham with a H-shaped junction as part of the Lewisham Gateway development. It is understood that the development will still go ahead although works on the redesign of the road layout have not yet begun. The changes have the potential to impact on concentrations at the adjacent Loampit Vale development as well.

Proposals for the redevelopment of the Kender Street triangle (the area formed by the three roads: Kender Street, A2 and A202) include significant changes to traffic flows and these have been approved. The works are due for completion around the end of 2010 so will be covered in the next Progress Report.

London Borough of Lewisham has identified the following future changes to road traffic flows which may impact on air quality in the Local Authority area.

- Lewisham centre roundabout
- Kender Street triangle

These will be taken into consideration in the next Progress Report.

## 3.3 Other Transport Sources

London Borough of Lewisham confirms that there are:

- No relevant airports in the Borough;
- No locations where relevant exposure to emissions from steam or diesel trains arises within the Borough;
- No locations where there are large movements of diesel locomotives and potential long-term relevant exposure within 30m and
- No port or any shipping that meet the specified criteria within the Borough.

### 3.4 Industrial Sources

London Borough of Lewisham confirms that, since the last Updating and Screening Assessment, there have not been any

- New or proposed installations for which an air quality assessment has been carried out.
- Existing installations where emissions have increased substantially or new relevant exposure has been introduced.
- New or significantly changed installations with no previous air quality assessment.
- New major fuel storage depots storing petrol.
- New petrol stations.
- New poultry farms.

### 3.5 Commercial and Domestic Sources

**Table 3.2 Planning Applications (2009-10) where approval was granted for a biomass boiler**

Site Name	Location	Size/Type of boiler	Summary of Modelling Results
Loampit Vale	Loampit Vale SE13	550kW wood pellet	Using an air quality model, the worst-case impacts combining background concentrations with those arising from the biomass boiler were predicted to be: NO <sub>2</sub> annual mean 52.8µg/m <sup>3</sup> NO <sub>2</sub> 1 hour mean 181.5µg/m <sup>3</sup> PM <sub>10</sub> annual mean 24.0µg/m <sup>3</sup> PM <sub>10</sub> 24 hour mean 41.3µg/m <sup>3</sup> PM <sub>2.5</sub> annual mean 11.3µg/m <sup>3</sup>
Goldsmiths College	New Cross Road SE14	500kW wood pellet	A screening assessment carried out predicted that worst-case increases in ambient concentrations of both NO <sub>2</sub> and PM <sub>10</sub> were less than 1.0µg/m <sup>3</sup> <a href="http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/40929_11.pdf">http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/40929_11.pdf</a>
Heathside & Lethbridge	Lethbridge Close SE13	400kW wood pellet	Using an air quality model, the impacts as a result of the biomass boiler in 2023 when it will become operational are as follows: Greatest increase in annual NO <sub>2</sub> : 0.24µg/m <sup>3</sup> Greatest increase in annual PM <sub>10</sub> 0.02µg/m <sup>3</sup> Max concentration NO <sub>2</sub> (boiler + background) 49.35µg/m <sup>3</sup> Max concentration PM <sub>10</sub> (boiler + background) 23.5µg/m <sup>3</sup> <a href="http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/49266_9.pdf">http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/49266_9.pdf</a>
Deptford Green School	Amersham Vale SE14	425kW wood pellet	Using an air quality model, the impacts as a result of the biomass boiler in 2008 would have been: Greatest increase in annual NO <sub>2</sub> : 1.9µg/m <sup>3</sup> Greatest increase in annual PM <sub>10</sub> 0.65µg/m <sup>3</sup> Max concentration NO <sub>2</sub> (boiler + background) 32.5µg/m <sup>3</sup> Max concentration PM <sub>10</sub> (boiler + background) 22.7µg/m <sup>3</sup> <a href="http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/56754_12.pdf">http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/56754_12.pdf</a>
Tidemill School / Deptford Lounge	Frankham Street SE8	50kW wood pellet	<a href="http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/50918_1.pdf">http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/50918_1.pdf</a>



The locations and types of biomass boilers receiving planning consent within LB Lewisham are being recorded and mapped. The redevelopment of Deptford and New Cross together with the Building Schools for the Future Programme has resulted in an increasing number of biomass boiler applications in the north of the borough which is being monitored. However, there are currently no areas where the concentration of biomass boilers are a cause for concern.

London Borough of Lewisham confirms that there are no areas where the concentration of biomass boilers are a cause for concern.

The London Borough of Lewisham is designated a Smoke Control Area and there are no known areas within the borough where domestic solid fuel burning is an issue.

### **3.6 New Developments with Fugitive or Uncontrolled Sources**

London Borough of Lewisham confirms that there are no landfill sites nor quarries within the borough.

Other potential sources of fugitive particulate emissions, including waste transfer stations, were considered in the previous Updating and Screening Assessment. This identified that there is an area in the north of the borough where fugitive emissions from industry could be a problem and that complaints have been received about dust from local residents. For this reason, a particulate monitor was installed in the vicinity and started collecting data from February 2010. This issue will be considered in a future report once more data is available.



## 4 Planning Applications

### 4.1 Planning Applications which have the potential to impact on ambient air quality that have been submitted but which have not yet been decided

Name of Development	Location	Reference to Planning Application
Bond House	Goodwood Road, SE14 6BL	<a href="http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/59320_3.pdf">http://acolnet.lewisham.gov.uk/ACOLLATEDOCS/59320_3.pdf</a>
The Wharves	Oxestalls Road, Deptford SE8	<a href="http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRAP&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=58624">http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRAP&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=58624</a>
Marine Wharf	Plough Way,	<a href="http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRAP&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=58624">http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRAP&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=58624</a>

In addition to those outlined above, proposals for the redevelopment of Lewisham town centre are at various stages of the planning process. As discussed in Section 3.2, there are proposals for a new development called Lewisham Gateway which includes the redesign of the road system around Lewisham roundabout.

<http://acolnet.lewisham.gov.uk/LEWIS-XSLPagesDC/acolnetcgi.exe?ACTION=UNWRAP&RIPNAME=Root.PgeDocs&TheSystemkey=47110>

These plans were approved in May 2009 but work on the development has so far been limited to the demolition phase. An air quality assessment was carried out to support the planning application at the time and the Council sought to ensure that mitigation measures were in place to reduce the impact of the development on local air quality.

Adjacent to this site is the development outlined in Section 3.1 referred to as Loampit Vale. In addition, proposals are being discussed for the redevelopment of Lewisham Bridge Primary School next to the Loampit Vale development and also Thurston Road Industrial Estate on the opposite side of the A20 road.

Further major redevelopments are proposed in the north of the borough close to The Wharves and Marine Wharf sites mentioned above. Final plans have not yet been submitted but there are proposals to develop the Convoys Wharf site in Evelyn ward and the Surrey Canal Triangle around Millwall Football Stadium in New Cross.

## 5 Local Transport Plans and Strategies

London Borough of Lewisham has prepared a Local Implementation Plan that aims to:

- reduce the environmental damage that travel can cause;
- make transport from, to and within the borough as easy as possible;
- provide a guide to how Lewisham streets are managed.

The plan also sets out how the Council will implement the Mayor of London's Transport Strategy within Lewisham. It was approved by the London Mayor and adopted by the Lewisham Mayor in 2007.

A copy of the Local Implementation Plan is available on the Council website by using the following link:

<http://www.lewisham.gov.uk/TransportAndStreets/ConsultationPolicy/TransportPolicy/LocalImplementationPlan.htm>

A revised version is currently being worked on with a proposed publication date of December 2010.

## 6 Climate Change Strategies

London Borough of Lewisham published a Carbon Reduction and Climate Change Strategy in July 2008 which sets out how the Council aims to contribute to tackling climate change as well as adapting to its impacts. The ambition is for Lewisham to play a leading role in responding to climate change locally, regionally and nationally with the aim of achieving the lowest level of per capita level CO<sub>2</sub> emissions in London. Lewisham is the second lowest London borough for per capita CO<sub>2</sub> emissions and 12th out of 33 in terms of total emissions.

Many of the policies will have a natural synergy with those aimed at improving ambient air quality as many of the activities that generate greenhouse gases also generate nitrogen dioxide and particulates. For example, the Carbon Reduction Strategy includes details of how the Council aims to use cleaner technology in its fleet of vehicles and promote more sustainable forms of transport. Similarly, policies that ensure monitoring of energy consumption in Council buildings and subsequent reductions, the promotion of energy efficiency measures as well as encouraging renewable energies such as wind, solar and heat pumps all contribute to improving air quality both locally and nationally.

A full copy of the Carbon Reduction and Climate Change Strategy is available on the Council's website by using the following link.

<http://www.lewisham.gov.uk/NR/rdonlyres/EE812008-5D3B-4CC5-ADAA-1FDD8D67E8B3/0/ClimateChangeStrategyFINAL.pdf>

Some achievements arising from the Council's actions on Climate Change that also benefit local air quality are set out in Table 7.1 below.

## 7 Implementation of Action Plans

**Table 7.1 Action Plan Progress**

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
1	Support for and promotion of the implementation of the London Low Emission Zone	Make information on the LEZ publicly available and to promote the extension of the LEZ to include a wider range of vehicles.	GLA	Adoption of a London-wide LEZ; Categories of vehicle to which standards apply.	High.	Phases I and II have been introduced. Consultation regarding deferring the introduction of Phase III until 2012 has been undertaken by GLA.	Information on the London LEZ is available via a link on the Council website. Response to consultation being prepared expressing disappointment at the deferment to the introduction of Phase III	2012 for implementation and ongoing thereafter.	TfL estimates that including larger vans and minibuses in the LEZ in January 2012 would reduce emissions of Particulate Matter (PM) by around 80 tonnes and emissions of Oxides of Nitrogen (NOX) by around 1,200 tonnes by 2015.
3	Measures to Address Idling Engines	Discourage Engine Idling through information and education.	LBL	No. of Complaints about idling engines validated; No. of signs advising	V Low	1 complaint about engine idling received.	Complaint investigated and added to list for future signage.	Signs to be erected at 'hotspot' locations by Mar 2011. Complaint monitoring	

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
				drivers to switch off engines erected.				ongoing	
4	Encourage Cleaner Technology/Alternative Fuels in Council Fleet	Increase number of Council and Contractors' Vehicles that use cleaner technology/alternative fuels; Provision of alternative refuelling locations; Driver training.	LBL	Number of fleet vehicles using different types of cleaner technology; Fleet fuel consumption; Reduction in emissions of NOx and PM <sub>10</sub> from Council's fleet; Number of alternative refuelling points available.	Medium	All Council fleet now meets Euro V standards. 40 vehicles use LPG. 5% biodiesel used across the whole fleet. 11 electric Hybrid vehicles have replaced conventional engine cars including the Mayor who has 1 LPG powered Volvo and a Honda Civic IMA hybrid car.	Total NOx emissions from Council's fleet fell from 609.07kg in 2008/09 to 583.08 in 2009/10. Total PM <sub>10</sub> emissions from Council's fleet fell from 6.58kg to 6.27kg for the same period. 4 twin electric vehicle charging points have been purchased and installed in Council car parks. Sainsbury's has also installed 2 EVCPs at their Sydenham site while an application for Shell to install LPG refuelling tanks was approved.	Ongoing. First 4 EVCPs to be available for public use by end August 2010.	N1194 is used to monitor emissions from Council's own fleet. Resultant reduction in ambient concentrations more difficult to measure.

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
5	Encourage Cleaner Technology/Alternative Fuels in Public Transport	To support TfL initiatives aimed at making public transport within LBL cleaner.	TfL / LBL	Buses operating within LBL that use cleaner technology / alternative fuels; PTAL map of borough	Medium	No data on indicators provided	Work has progressed on the East London Line extension with the Dalston Junction to West Croydon route passing through LBL. The line, which opened in May 2010, provides for improved connections from 6 stations in LBL with refurbished stations, new air-conditioned trains and regular services.	Ongoing	Public transport initiatives have the potential to significantly reduce emissions across the borough. Any changes are, however, part of a wider transport strategy. In this instance the air quality benefits gained may be tempered by the reductions in train services that local train operators have since implemented.
7	Encourage Cleaner Technology/Alternative Fuels in Delivery and Freight Road	Implement initiative to reduce freight movements by road within the borough	LBL	Reduction in freight movements by road from	Medium	Active participation in SLFQP. Schemes to	Through SLFQP, examples of good practice are being considered for	Minimum of one scheme to be implemented	Emission reductions can be significant in a small

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
	Vehicles			a minimum of one scheme		improve freight movements within town centres and to reduce freight movements through consolidation being investigated.	implementation within LBL. LBL is already working with LB Bromley, on a joint commercial vehicle access map for an industrial area on the borough boundaries. This aims to also reduce the number of vehicle strikes on a low bridge situated along the main route between the two industrial areas. LBL are working with a local branch of a national chain of timber suppliers on freight consolidation and movements.	by end of 2011.	localised area with wider but lesser benefits also observed.
9	Encourage and Promote the Use of Travel Plans	LBL to have Travel Plan in place and regularly review it. Promote the adoption of Travel	LBL	Results from Lewisham Council's Staff Travel Survey.	Low	Lewisham Councils' Sustainable Transport Team and	Results from the 2009 Staff Travel Survey show a 6% reduction in staff travelling to		



No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
		Plans among major employers within the borough.		Number of local businesses with Travel Plans in place.  % of schools with School Travel Plan in place.		Road Safety Teams won awards at TfL's Sustainable Transport Awards for their work. The percentage of pupils travelling to school by car has decreased year on year to 18.87% in 2008/09.	work in a car on their own (see table 7.2 below). Our Sustainable Transport Team has worked with a major local business to put in place a Travel Plan. 96 out of 99 schools now have a School Travel Plan which equates to 99% of pupils in the borough.		
10	Promote and publicise improvements to public transport.	Provision of information to LBL residents about public transport improvements.	LBL	Trends in modal shifts within LBL – Proportion of journeys made by public transport.	Low to Medium	Public Transport infrastructure in Lewisham as of March 2009 was: 20 rail stations, 3 DLR stations, 2 London Underground stations, 42 bus routes.	LBL is trying to secure a new station on the East London Line extension at Surrey Canal Road. DLR upgrades have continued and improvement works to the forecourt at Lewisham rail station now complete.		LBL's role is limited to making residents aware of the improvements. The potential for significant reductions comes from the improvements themselves which are delivered by

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
							Improvements publicised at various events including Lewisham People's Day and Lewisham Country Fayre.		TfL. Fares were increased in January 2009, including a 6.3% rise in bus fares and further price increases in January 2010. These are likely to have a negative impact on public transport use.
11	Promotion of Walking	Encourage walking instead of use of motor vehicles and make access to services easier on foot	LBL	Trends in modal shifts within LBL – Proportion of journeys made on foot; Traffic on Walkit.com for routes in LBL area.	Low	Walking Map and Walking Strategy produced. Printed information on local walks available.	6 monolith signs, 2 new park beacon signs and 2 new finger posts erected providing walking information. LB Lewisham now covered by Walkit.com. Worked with PCT on promoting walks for health and included details of local walks on website. Upgrade to		

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
							Thames Path in progress with plaques having been installed to mark route. 45 schools participated in Walk to School Week.		
12	Promotion of Cycling	Encourage cycling instead of use of motor vehicles through improvements to infrastructure and security.	LBL / TfL	Trends in modal shifts within LBL – Proportion of journeys made by bike; No. Of people receiving cycle training; No. Of Council staff taking up Bike Loan Scheme.	Low	See map of current cycle routes and parking facilities using link below.	Maps of cycle routes and cycle parking facilities available on Council website. 1km of new cycle path laid through Beckenham Place Park with other paths in the park being upgraded. 87 new cycle stands installed and cycle ramps put in at Brockley station. Cycle training provided to children and adults. Bike and Kite festival held on Blackheath. Arranged Bike doctor sessions at events.		

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
13	Management of Parking	To ensure that parking provisions are appropriate to the nature of the area through designation of zones and enforcement.	LBL / TfL	Changes to Controlled Parking Zones implemented; No. of consultations on parking restrictions undertaken; No. of members of Streetcar.	Low - Medium	There were 16 Controlled Parking Zones in place at end of 2009. The times of the controls are varied but all information is provided on the Council website. Total members of Streetcar in Jan 2009 was 1518.	New pay and display parking bays were installed in Frankham Street to replace a shoppers' car park on Giffin Street. The new tree-lined boulevard with lighting, landscaping and public art provides convenient access to Deptford Market, Deptford High Street and Wavelengths Leisure Centre. Consultation on introduction of CPZ in Ladywell undertaken. Total members of Streetcar in Jan 2010 was 2243. The average utilisation figure was 123%.		Management of Parking is a balance between discouraging car use and providing adequate facilities where required. We will aim to monitor the impacts on air quality from introducing further parking controls.

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
14	Speed Management	To manage speed in a way that promotes a smoother flow of traffic while ensuring road safety.	LBL / TfL	Number of 20mph zones implemented; methods used to manage speed; Average speed measures.	Low	64% of the Borough's roads (not inc. TLRN) had speed management measures in place by March 2009.	An additional 20mph zone was created in Forest Hill using a combination of speed humps and cushions. This increased the total of Borough's roads (not inc. TLRN) with speed management to 65.8%.		The impacts on air quality from installing speed humps needs to be assessed.
16	Reduce Emissions from New Developments	Using the planning system to ensure that emissions from new developments are minimised	LBL	No. of major applications approved that are to be car-free; No. of new developments required to provide car club schemes and/or electric vehicle charging points; No. of biomass boilers approved;	Medium		All planning applications proposing a biomass boiler have been required to produce an Air Quality Assessment. As set out in Table 3.2, 5 applications for biomass boilers were approved in the last financial year. At least 3 developments with >10 residential units are to be car-free		

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
							although none of these are larger developments.		
17	Reduce Emissions from Commercial Construction Sites	To ensure that construction sites manage emissions and comply with the Clean Air Act 1993.	LBL	Major developments adopting mitigation measures from London Councils Code of Construction Practice. No. of dark smoke complaints received and investigated.	Low – Medium	For larger developments, applicants are requested to conduct an Air Pollution Risk Assessment then submit a Construction Environmental Management Plan detailing appropriate mitigation measures.	London Councils Code of Construction Practice is available on Council website.		The impacts will be greater in the immediate vicinity of construction sites and will primarily deliver improvements to PM <sub>10</sub> concentrations
18	Reduce Emissions from Domestic Buildings	To ensure that domestic properties are complying with the Clean Air Act 1993 and to discourage domestic properties from having bonfires. Also to work with carbon reduction strategies where there are simultaneous benefits for ambient	LBL	No. of complaints about unauthorised fuel use received and investigated. No. of complaints about domestic bonfires received and investigated.	V. Low	System for monitoring and recording of complaints put in place.	2 complaints received and investigated about unauthorised fuel use. Advice given, 1 case resolved and 1 case still being monitored. Links providing information on authorised fuels and exempt appliances put on Council webpage.		

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
		air quality.					<p>Within our Energy Action Zone, we engaged with 2,650 residents in 3 wards providing advice and information and helping 115 residents access grants for energy efficiency primarily loft and cavity wall insulation. A new free service for residents to deposit garden waste at key sites was launched in July 2009, which reduces the likelihood of garden bonfires. The service is seasonal and since its introduction, approx 375 tonnes of garden waste has been sent for composting.</p>		

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
19	Control the Release of Emissions from Industrial and Commercial Premises	Ensure that all industrial installations falling under LAPPC / IPPC regime are regulated and inspected.	LBL / EA	No. of installations requiring authorisation; No. of installations inspected; Enforcement action taken or required against industrial installations.	Low	76 installations were permitted under the EPR at end Mar 2009.	73 installations were permitted under the EPR at end Mar 2010. 41 installations were inspected during the year. During the year 12 Variation Notices and 1 Revocation Notice were served. 1 Variation Notice was still being processed and a new application has since been submitted.		
20	Assess Air Quality Levels and Increase Awareness of Air Quality Issues	Monitor air quality levels within the borough, analyse trends and disseminate information to the public.	LBL	No. of pollution monitors operating within LBL; Trends in air quality; Exceedences of Air Quality Objectives; No. of awareness-raising / educational campaigns	Low	Automatic monitoring stations operating in New Cross, Catford and Crystal Palace Parade. Diffusion tubes located in 37 different locations including one triplicate	New automatic monitor installed to measure PM <sub>10</sub> from fugitive industrial emissions in north of the borough. Data being collected since February 2010. Diffusion tube monitoring carried out at schools since March 2009. Discussions		Although the emission reductions from this measure are relatively low, this action is important for education and awareness raising.



No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
				undertaken.		collocated with automatic monitor.	with local community group in New Cross to build on their own short-term pollution monitoring project. Air Quality classes delivered to 3 different schools to raise awareness among young people and theatre workshops on sustainable transport delivered to 5 different schools; Advertising campaign in doctors' surgeries to promote airText alert system. Participation at various events to raise awareness of air quality and disseminate information.		
21	Implement	To ensure that	LBL		Low	A revised	Lewisham Council		

No.	Measure	Focus	Lead authority	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
	Procurement Measures to Reduce Overall Pollution Levels	Council's own procurement has the least possible impact on air quality by having an established policy in place.				version of the Council's Green Procurement Guide was published in July 2008 and is available on the Council website. <a href="http://www.lewisham.gov.uk/NR/rdonlyres/44EF75C5-5E537-4DD0-ADF8-EFA36DF97C50/0/GuideToGreenProcurementAprilSmall.pdf">http://www.lewisham.gov.uk/NR/rdonlyres/44EF75C5-5E537-4DD0-ADF8-EFA36DF97C50/0/GuideToGreenProcurementAprilSmall.pdf</a>	received the Indirect Engager Special Award for its groundbreaking work in assessing its carbon footprint across the supply chain and encouraging suppliers to reduce emissions.		

## 7.1 Additional Information

Additional supporting information on the above measures and progress towards their completion is included below. The information relates primarily to the work of London Borough of Lewisham as this data is more readily available within the organisation. However, progress by partners towards improving air quality has also continued, whether specifically for improving air quality or as an indirect benefit of other motivated actions such as climate change, road safety and tackling obesity.

### Action 9: Encourage and Promote the Use of Travel Plans

A Staff Travel Survey is carried out among employees of London Borough of Lewisham every 3 years and the most recent was carried out in 2009. Table 7.2 below shows the percentage of employees travelling by the various modes of transport based on the survey responses received from the two most recent surveys.

**Table 7.2 Data from most recent Staff Travel Survey including changes in % shares of different modes of transport used**

MAIN MODE	2007 %	2009 %	CHANGE %
Bicycle	9	9	0
Bus	18	19	+ 1
Car on own	38	32	- 6
Car with others	7	6	- 1
DLR / Underground	1	2	+ 1
Motorbike / Scooter	1	1	0
Not answered	0	0	0
Other	0	1	+ 1
Taxi	0	0	0
Train	12	15	+ 3
Walk	14	15	+ 1

The Council is reducing the amount of staff travel, both within its own fleet and also staff mileage and last year made reductions amounting to 2%. The overall increase in travel emissions reported in the NI194 data is a result of increased travel by contractors on Council business.

### Action 10: Promote and publicise improvements to public transport

London Borough of Lewisham has supported the London Overground Network via the extension of the East London Line from New Cross gate to West Croydon and Crystal Palace in the south and to Dalston in the North. This became operational in May 2010 and has provided a significant increase in capacity and new trip destinations for Lewisham residents . The Council also supports the extension of phase 2 of the line from Surrey Quays to Clapham junction with the provision of a new station at Surrey Canal Road. The extension is on target to be implemented by May 2012 but currently there is no funding for a new station at Surrey Canal Road. In January, Lewisham Council approved contingency funding of up to £3million to provide the financial security necessary to ensure the project could go ahead. However, a decision by Department for Transport regarding the remainder of the funds is still pending. London Borough of Lewisham continues to seek commitment for a new station on the London Overground line at Surrey Canal Road, as part of the large scale redevelopment of the area.

Upgrades to the DLR to allow for an additional carriage have continued. Works are now completed at all stations within LBL due for an upgrade. The first 3-carriage trains ran on the DLR in February 2010 increasing capacity by 50%.

Improvements have also taken place to the forecourt at Lewisham station to make it a more passenger-friendly space.

The Mayor's Transport Strategy includes reference to proposals for an extension to the DLR south of Lewisham and an extension to the Bakerloo line that would continue to Hayes via Peckham and Lewisham. LBL will make comment and be involved in discussions on the progress of these proposals. We support the principle of increasing the accessibility of Lewisham borough residents to public transport and will aim to ensure that residents are kept informed.

The Council directly helps deliver a number of the London Mayor's Transport Strategy objectives. The Council, along with the 32 other London borough councils, funds the 'Freedom Pass', providing free public transport travel for elderly and disabled people. It also funds with TfL and other borough councils the Taxicard and the (minicab based) Capital Call service providing subsidised travel for people with disabilities.

The Council itself is a major fleet operator, providing both passenger and non-passenger transport related services. As a provider of Door-to-Door transport the Council is a passenger transport provider of significant size, meeting some of the access needs of some of Lewisham's most travel disadvantaged residents. Pressures on budget and the withdrawal of funding have the potential to impact on Council services and we will seek to ensure that this does not have negative consequences for local air quality.

### **Action 11: Promotion of Walking**

As part of the redevelopment of New Cross and Deptford, London Borough of Lewisham were able to secure 6 monolith signs as part of the Legible London project. These signs have been erected in strategic locations and provide walking information including local maps. In addition, 2 new park beacon signs and 2 new finger posts have been located in this area.



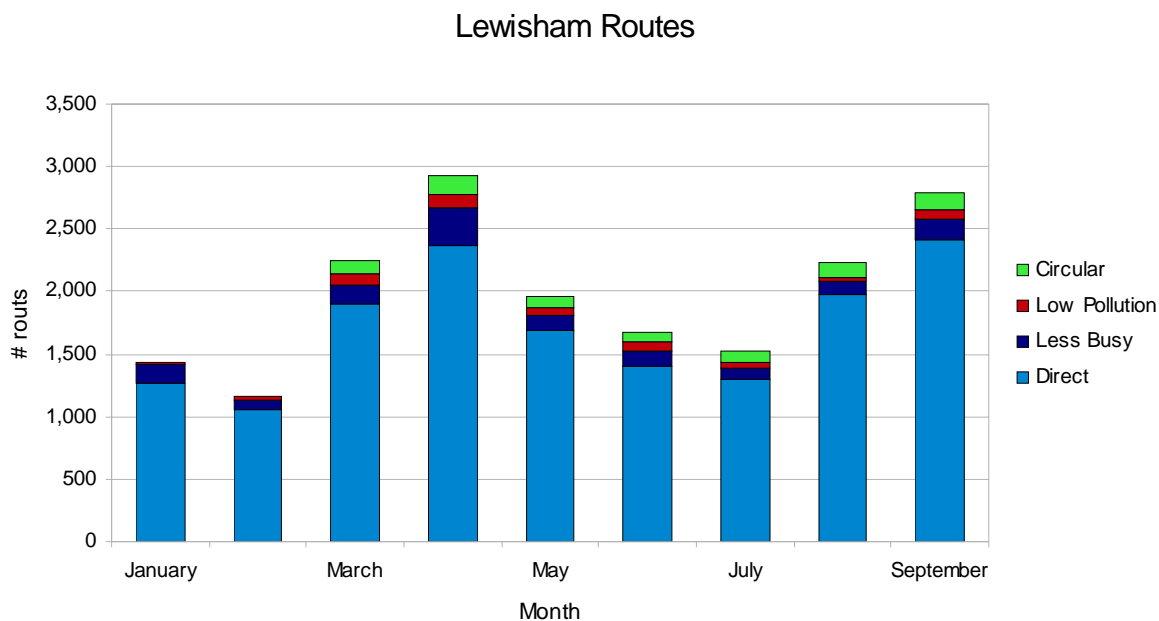
During European Mobility Week, a number of initiatives were run to promote walking within the borough. In conjunction with the Ramblers, a walk around community gardens and allotments within the borough was organised to encourage people to grow their own produce, thereby, reducing Food Miles. In addition, a Walk 'n' Win competition was launched in which people had the opportunity to win prizes by answering questions correctly which was only possible by shopping locally. As the week coincided with the Green Chain Walking Festival, the Council worked with the organisers to help promote all Green Chain walks that were taking place within the borough. The Council also promoted the local WalkLondon events organised for the autumn.

Lewisham PCT also engaged a consultant to research walking routes and initiatives across the whole of the borough. Copy was then provided for inclusion on the Lewisham website. This involved collating information from a number of sources both within the Council and beyond, that included Friends' groups, Walking for Health and London Footprints. Five walking routes were devised – two in Brockley and three in and around Crofton Park – and

an electronic record of the routes was created in addition to the digitising of previously created walks for NHS staff around the Waldron Health Centre.

During 2009, LBL coordinated a joint project with neighbouring boroughs to collect data on and digitise walking routes. The information was then included on the Walkit.com website and made publicly available from Spring 2010. The statistics showing usage of the site for routes within LB Lewisham are shown in the chart below:

**Fig 7.1 Number of routes requested within LB Lewisham from Walkit.com website**



**Action 12: Promotion of Cycling**

Over 1,000 copies of the free Cycling Map “Cycling in Lewisham” have been distributed to residents. Maps showing cycle routes

<http://www.bing.com/maps/Default.aspx?v=2&cp=51.44799076174871~-0.004815710357434&lvl=13&cid=B35079F0C51C77FF!113>

and cycle parking information

<http://www.bing.com/maps/?v=2&cp=51.42881623362462~-0.022562742233276367&lvl=15&sty=c&cid=B35079F0C51C77FF!118>

are now available on the Lewisham web site.

It has also been made easier for cyclists to report faults such as worn/obscured markings and potholes via the Council website. A report was approved by Mayor and Cabinet in September 2009 which allowed funding to be used to carry on with LCN+ /crisp studies completions and Local cycle schemes.

Thirty-nine “Bikeability” Level 2 and eight “Bikeability” Level 1 school cycling courses were run during the year with a total of 620 school children being trained. Ninety 2-hour adult cycle lessons were delivered and 70 riders were trained to take part in the London to Brighton Staff Cycling Challenge.



London Borough of Lewisham are currently in negotiations with Transport for London on the Cycle Superhighway that is proposed to traverse the borough.

#### Other Actions:

- Applicants wishing to install a biomass boiler are asked to provide data on the air quality impacts as well as comparative information on ground level pollutant concentrations that would arise from a conventional gas boiler. Suitable mitigation measures to minimise air quality impacts have been requested and a s.106 contribution from two sites planning to install larger boilers has been secured. The Core Strategy is now being amended so that targets will be set in terms of carbon reduction rather than proportion of energy from renewable sources. In this way, developers can seek alternative ways to meet their requirements for carbon reduction and minimising global warming.
- Lewisham was one of the boroughs with the highest uptake of organised Big Lunch events when streets were closed off to motor vehicles.
- Links were established with the OPAL Air Centre based at Imperial College, London. Hundreds of copies of their Air Quality Survey were distributed at various Council events throughout the year. In addition, schools participating in the Council's air quality monitoring project were made aware of the educational work that OPAL carries out including the possibility of a talk being given at the school.
- 425 Street Trees have been planted under the Mayor's Street Trees Programme.

## **8 Conclusions and Proposed Actions**

### **8.1 Conclusions from New Monitoring Data**

The monitoring data presented above shows that the annual mean nitrogen dioxide objective continues to be exceeded. Exceedences occur at all of the roadside locations while all background locations showed levels below the objective. However, the background sites of LWS002 and LWS010 were close to the objective and, given the degree of error associated with the monitoring method, cautious optimism is being applied in the interpretation of the results. LWS009, which is located outside of an AQMA continues to exceed the annual mean objective and a Detailed Assessment is being carried out to explore this further.

Monitoring data for PM<sub>10</sub> show that both the daily and annual mean objectives are being met. However, as explained previously, the levels are affected significantly by meteorology and are subject to fluctuations from one year to the next. Previous analysis of trends have shown that levels are not continuing to decrease and may, in some locations, actually be increasing. Therefore, a cautionary approach is being adopted with regards to the designation of the AQMA and the existing AQMAs will not be revoked for PM<sub>10</sub> until further data has been collected showing that the objective is consistently being met.

The 2008 monitoring of carbon monoxide and sulphur dioxide confirms that the objectives for these pollutants have been met.

### **8.2 Conclusions relating to New Local Developments**

Section 3 of this Report provides details of new local developments that have received planning permission which may impact on air quality as well as those which are anticipated. The redevelopment of Lewisham centre centred around the roundabout in front of the DLR, train and bus stations is a significant project which will include new residential and commercial units as well as a Leisure Centre and the redesign of the existing road layout. This is a combination of projects known as Lewisham Gateway and Loampit Vale as well as smaller developments at Thurston Road and changes to the Prendergast Vale Primary School. As these developments are at a very early stage, it is planned to consider the impacts in the next Updating and Screening Assessment, by which time, work is likely to be at a more advanced stage.

A number of significant projects are also planned for the north of the borough around the river frontage and the Millwall Football stadium. These include the redevelopment of Convoys Wharf and the Surrey Canal Triangle among others. These applications are not as advanced as those for Lewisham centre but further information should be available by the time when the next Updating and Screening Assessment is due.

### **8.3 Proposed Actions**

This report is intended to provide an update on changes to air quality within the London Borough of Lewisham over the past 12 months as well as a progress report on our work towards implementing the measures in the Air Quality Action Plan.

Further to the review of the most recent monitoring data, the conclusions are that:



- There continues to be exceedences of the annual average objective for nitrogen dioxide at all roadside locations;
- Exceedences of the annual average objective for nitrogen dioxide are not occurring at background locations although at some of these locations, the levels are only marginally below the objective and not outside a reasonable margin of error;
- Exceedences of the annual average objective for nitrogen dioxide are occurring outside of the existing AQMA at Brockley Rise. This was identified in the previous USA and, therefore, a Detailed Assessment is currently being prepared;
- Exceedences of the objectives for PM<sub>10</sub> have not been recorded but, again, the levels are not sufficiently and consistently below the threshold to warrant a change to the existing AQMAs.
- Fugitive emissions of PM<sub>10</sub> from industrial sources in the north of the borough were identified as a potential problem in previous reports. A new PM<sub>10</sub> monitor has been installed in a nearby location and early indications suggest that the objectives are being met. However, additional monitoring data is required before any conclusions can be drawn;
- There are no other findings that have indicated that there are new changes that require the Council to undertake a Detailed Assessment for the other LAQM pollutants

The Council will therefore undertake the following actions:

1. Undertake consultation on the findings arising from this report with the statutory and other consultees as required.
2. Maintain the automatic monitoring stations at Catford, New Cross and Mercury Way as well as the NETCEN diffusion tube network. The diffusion tubes at schools will be reviewed when the project comes to an end to determine those locations where it would be useful to continue monitoring.
3. Complete and submit a Detailed Assessment of Brockley Rise and those narrow congested streets (Perry Vale, Mayow Road and Brockley Road) identified as at risk of exceeding the annual mean NO<sub>2</sub> objective in the previous USA. The expected date for submission of the Detailed Assessment is December 2010.
4. Continue with the implementation of our Air Quality Action Plan in pursuit of achieving the national air quality objectives.
5. Submit a further Progress Report in 2011.



## 9 References

1. Lewisham Employment Transport Study (2008),
2. 2001 Census (<http://www.statistics.gov.uk/census2001/profiles/00AZ-A.asp> )
3. DEFRA, 2010. WASP – Annual Performance Criteria for NO<sub>2</sub> Diffusion Tubes used in Local Air Quality Management (LAQM), 2008 onwards and Summary of Laboratory Performance in Rounds 103-107. AEA January 2010.
4. Carslaw D.C. and Beevers, S. D., 2005 – Estimations of Road Vehicle Primary NO<sub>2</sub> Exhaust Emission Fractions using Monitoring Data in London in *Atmospheric Environment* 39 pp.167-177
5. Technical Guidance LAQM.TG(09) published by DEFRA (Department for Environment, Food and Rural Affairs)
6. The Review and Assessment Helpdesk website at <http://www.uwe.ac.uk/lagm/review/>
7. The UK National Air Quality Information Archive website at <http://www.airquality.co.uk>
8. The London Air Quality Network website at <http://www.londonair.org.uk>

## Appendices

### Appendix A: QA:QC Data

#### Annualisation of Data for Short-Term Monitoring

The diffusion tubes have been sited with the intention of collecting long-term data and, therefore, will be exposed for a minimum of 12 months. However, where the start of the monitoring period did not coincide with the start of the calendar year, there are some gaps in the monitoring data. Where monitoring began in April or after, the maximum data capture for the calendar year is limited to 75 per cent or less. In these instances, the data has been annualised using the procedure detailed in Box 3.2 of the Technical Guidance TG(09). This has not been carried out where the data capture is below 75 per cent owing to spurious or missing results as the gaps in the monitoring data are sporadic.

Of the data provided in Table 2.4a, only LWS051 has been annualised. The calculation was carried out using the background locations and values shown in the table below:

**Table A1** Figures used in annualisation of NETCEN diffusion tube data

	Lewisham1: Catford	Lambeth3: Loughborough Junction	Tower Hamlets1: Poplar
2009 Annual Mean (Am) ( $\mu\text{g}/\text{m}^3$ )	56.1	33.3	35.4
Period Mean (01/07/09 – 05/01/10) (Pm) ( $\mu\text{g}/\text{m}^3$ )	54.9	29.9	34
Ratio of Annual Mean to Period Mean (Am/Pm)	1.02	1.11	1.04
Average of Ratios (Ra)	1.0567		

For the diffusion tubes located at schools, monitoring began at locations SCH009 and SCH012 on 29/04/09 and at SCH021 on 13/07/09. Therefore, these results have been annualised. The calculation was carried out using the background locations and values shown in the table below:

**Table A2** Figures used in annualisation of non-NETCEN diffusion tube data

	Lewisham1: Catford	Lambeth3: Loughborough Junction	Tower Hamlets1: Poplar
2009 Annual Mean (Am) ( $\mu\text{g}/\text{m}^3$ )	56.1	33.3	35.4
Period Mean <sup>a</sup> (29/04/09 – 05/01/10) (Pm) ( $\mu\text{g}/\text{m}^3$ )	53.1	29	32.4
Period Mean <sup>b</sup> (13/07/09 – 05/01/10) (Pm) ( $\mu\text{g}/\text{m}^3$ )	55.6	30.1	34.5
Ratio of Annual Mean to Period Mean <sup>a</sup> (Am/Pm)	1.06	1.15	1.09
Ratio of Annual Mean to Period Mean <sup>b</sup> (Am/Pm)	1.01	1.11	1.03
Average of Ratios (Ra) <sup>a</sup>	1.1		
Average of Ratios (Ra) <sup>b</sup>	1.05		

### Diffusion Tube Bias Adjustment Factors

As discussed in 2.1.2, triplicate tubes are co-located at Lewisham 2, the automatic monitoring station located at the roadside on New Cross Road. The diffusion tubes are located within 0.5m of the inlet sampler of the chemiluminescent analyser at the site. Comparing the data from the two monitoring methods and using the AEA spreadsheet, a local bias adjustment factor was calculated which is shown in the table below with the national bias adjustment factor.

**Table A3 2009 Bias Adjustment Factors**

2009	Bias adjustment factor
Local	0.84
National	0.99

The co-location study compared equivalent exposure periods, although the continuous results are provisional. Data from the diffusion tubes were available for 11 of the 12 monitoring periods while data capture from the automatic monitoring station was above 80% for all but one of the corresponding periods. The results from the data quality check on the spreadsheet indicate that there was good precision for the diffusion tubes. The term "precision" indicates how well the diffusion tubes produce similar results from the triplicate study undertaken. The criterion is somewhat arbitrary and it reflects both the laboratory's performance in preparing and analysing the tubes, plus the handling of the tubes in the field. The precision is based on an assessment of the coefficient of variation. "Good" precision is defined as achieving a coefficient of variation less than 20% for eight or more periods in a year and the average is less than 10%.

The local bias adjustment factor indicates that the results over-estimate continuously monitored concentrations by a much larger margin than that seen nationally. The bias adjustment factors are specific to each year, analysing laboratory, method of analysis and location. The factors are therefore also limited to the data supplied. The Review and Assessment website advises that "in many cases, using an overall correction factor derived from as many co-location studies as possible will provide the 'best estimate' of the 'true' annual mean concentration, it is important to recognise that there will still be uncertainty associated with this bias adjusted annual mean. One analysis has shown that the uncertainty for tubes bias adjusted in this way is  $\pm 20\%$  (at 95% confidence level). This compares with a typical value of  $\pm 10\%$  for chemiluminescence monitors subject to appropriate QA/QC procedures."

The results of a nation-wide survey of nitrogen dioxide diffusion tube co-location studies were further used to improve current understanding of diffusion tube bias (AQC, 2006). The data suggested that tubes close to a road were more likely to underestimate concentrations, once they have been adjusted for laboratory bias, and conversely tubes further away from roads were more likely to overestimate concentrations. (Note this is the opposite of the local findings reported here).

Further analysis of the results suggested that it was not the distance from roads that mattered; rather it was the different concentrations of nitric oxide, nitrogen dioxide and ozone in the atmosphere. The different concentrations influenced the chemistry taking place within the diffusion tube, in particular the formation of additional nitrogen dioxide from a reaction of ozone with nitric oxide.

Table A4: 2009 Diffusion Tube Collocation Data (Lewisham2)

Diffusion Tube Collocation Data Questionnaire For Local Authorities 2009						
Please Read the "Notes" sheet and then fill in the white boxes of this questionnaire						
Should you require assistance, email kiribrown@aqconsultants.co.uk or phone 0117 974 1086						
Your Details	Date form filled in	Name of Local Authority	Your name	Phone number	Contact email	
	21/04/2010	London Borough of Lewisham	Dave Trew	020 8314 9783	<a href="mailto:dave.trew@lewisham.gov.uk">dave.trew@lewisham.gov.uk</a>	
Site Details	Distance from kerb (m)	Site type (e.g. roadside, background). Definitions of site types are given on the "Notes" sheet	Distance from diffusion tube(s) to continuous analyser inlet (m)	Location (site name or a brief description)	Grid Reference of Site (if available)	
	6	Roadside	0.5	Lewisham 2, Hobgoblin P.H., New Cross Road	536241, 176932	
Diffusion Tube Details	Prepared by (if known; e.g. Harwell Scientific Services)	Analysed by (e.g. Kent Scientific Services)	Preparation method (e.g. 50% TEA in acetone; 50% TEA in water)	How are diffusion tubes deployed? (e.g. with a clip, spacer, shelter box, just tape)		
	Bureau Veritas	Gradko International	50% TEA in acetone	with spacer		
Continuous Analyser Details			Analyser type	QA/QC (e.g. local or network)		
			ML9841B Chemiluminescent analyser	LAQN		
Data from the Automatic Analyser (Matching Individual Diffusion Tube Periods)						
Period	Start Date (dd/mm/yy)	End Date (dd/mm/yy)	% Data Capture	Ratified / Provisional	NOx (if available) (ug/m <sup>3</sup> )	Nitrogen Dioxide (ug/m <sup>3</sup> )
1	07/01/2009	03/02/2009	39	R	187.06	68.83
2	03/02/2009	03/03/2009	93	R	238.29	99.46
3	03/03/2009	03/04/2009	80.6	P	171.21	80.02
4	03/04/2009	29/04/2009	100	P	143.03	78.9
5	29/04/2009	03/06/2009	100	P	120.89	66.33
6	03/06/2009	01/07/2009	100	P	138.49	75.3
7	01/07/2009	29/07/2009	93	P	77.17	41.09
8	29/07/2009	02/09/2009	97.1	P	73.66	36.42
9	02/09/2009	30/09/2009	100	P	132.9	59.14
10	30/09/2009	04/11/2009	100	P	138.76	58.94
11	04/11/2009	03/12/2009	100	P	89.73	41.52
12	03/12/2009	05/01/2010	100	P	148.71	59.99
13						
Please express NOx as NO <sub>2</sub> (e.g. ppb x 1.913) or alternatively note the approach / units here:						
When you are identifying the automatic monitoring periods that match your diffusion tube exposure periods, please be as precise as possible. It is not, however, necessary to match start times to the exact hour that you put out your tubes.						
Individual Period (monthly) Mean Nitrogen Dioxide Data from the Diffusion Tubes (ug/m <sup>3</sup> )						
Period		Tube 1	Tube 2 (if available)	Tube 3 (if available)	Tube 4 (if available)	
1		59.58	78.37	72.74		
2		97.61	90.55	86.21		
3		N/A	N/A	N/A		
4		74.89	67.06	70.18		
5		66.4	72.92	65.12		
6		72.57	73.29	72.87		
7		66.19	68.44	73.45		
8		71.9	73.28	70.59		
9		79.22	73.16	N/A		
10		73.44	73.76	N/A		
11		77.75	72.32	66.18		
12		69.11	69.52	70.08		
13						
Other Information	Are the concentrations stated in ug/m <sup>3</sup> ?	Did the diffusion tube supply or analysis method change during the monitoring period? When, from what, to what?	Were there any significant problems with the continuous analyser during the monitoring period?	Are there any other relevant issues with your data?		
	yes	no	no	no		
Please Return Completed Questionnaires to: kiribrown@aqconsultants.co.uk						
This questionnaire has been compiled and distributed by Air Quality Consultants Ltd on behalf of Defra and the DAs						

### **Discussion of Choice of Factor to Use**

The choice of which bias factor to use is not straightforward; hence the two factors (local and default) are reported above to provide context. Box 3.3 of the TG 09 guidance provides some suggestions as to which factor might be the most appropriate. In this instance, there are reasons for using either. For information, the results using both adjustment factors for 2009 data is shown in the table below. However, as a precautionary approach is to be adopted, the results using the national factor have been utilised when comparing to the National Objectives.

### **PM Monitoring Adjustment**

PM is measured at Lewisham 2 using a TEOM and at Lewisham 3 using a BAM. ERG King's College have developed a correction factor for PM data obtained using a TEOM known as the Volatile Correction Model and this has been applied to the data reported here from Lewisham 2. As explained previously in the report, Lewisham 3 only started collecting data relatively recently and there is insufficient data available for inclusion in this report. Details of the Volatile Correction Model are provided in TG(09).

**Appendix B: Monthly Unbiased NO<sub>2</sub> Diffusion Tube Results (µg/m<sup>3</sup>)**

	LWS 002	LWS 003	LWS 004	LWS 005	LWS 006	LWS 007	LWS 008	LWS 009	LWS 010	LWS 011	LWS 012	Blank	LWS 014	LWS 015	LWS 016	LWS 017	LWS 018	LWS 051
Feb 08	48.7	52.75	57.16	74.26	65.33	67.95	58.74	67.67	50.61	67.96	39.03							
Mar 08	29.86	34.24	44.02	59.87	62.57	51.42		50.07	30.52	41.72								
Apr 08	31.57	45.89	62.85	54.87	60.86	58.01	48.53	59.00	32.66	56.45								
May 08	31.13	58.47	100.86	89.31	88.97	91.64	72.10	51.22	41.62	78.31	26.28							
Jun 08	34.40	51.80	65.25	74.00	73.31	69.15	57.99	66.19	30.33	58.86	5.75							
Jul 08	31.71	51.25	50.17	58.75	60.02	61.37	48.74	64.88	31.10	57.93	20.25							
Aug 08	28.28	40.61	47.72			63.37	37.28	50.80	26.25	43.75	17.64							
Sep 08	27.87	33.12	49.64	49.90	51.34	57.05	44.23	44.95	28.54	47.27	23.23							
Oct 08	42.97	51.45	59.24	60.81	76.94	71.80	45.37	65.62	38.61	58.10	27.43							
Nov 08	49.26	53.76	64.98	85.85	80.05	77.61		58.79	44.15		35.91	0.32						
Dec 08	47.68	51.97	69.20	88.24	82.89	80.07	58.15	66.78	48.14	60.61	37.37		36.99					
Jan 09	50.34	57.32	80.48	59.58	78.37	72.74	59.36	63.07	51.52	67.08	41.19	0.29	21.28	77.20	52.88			
Feb 09	48.15	54.05	83.52	97.61	90.55	86.21		77.93	55.84	75.59	44.13	1.25	43.31	72.33	49.63			
Mar 09	43.62	51.26	75.43					67.51	38.86	59.12			31.77	63.21	41.72	65.61	34.68	
Apr 09	36.99	56.93	69.10	74.89	67.06	70.18	59.27	34.94	62.74	64.81			29.89	64.64	46.37	68.61		
May 09	27.89		53.93	66.40	72.92	65.12		53.71	23.89	49.72		0.66	20.09	50.64	31.91	51.36	23.44	
Jun 09	23.51	43.41	58.41	72.57	73.29	72.87		47.21	25.53	48.48		0.48	22.66	47.54	31.08	52.78	22.49	
Jul 09	26.29	38.85	34.20	66.19	68.44	73.45	52.89	52.17	22.52	49.06		0.51	17.10		27.04	30.78		
Aug 09	31.12	46.92	44.58	71.90	73.28	70.59		56.03	25.87	53.01			20.22	44.37	34.12	36.71		59.33
Sep 09	31.12	43.27	59.10	79.22	73.16			57.98	29.96	44.92			23.46	46.15	38.08	51.43	30.14	51.15
Oct 09	38.77	49.33	56.72	73.44	73.76			66.70	39.73	58.09			30.92	64.31	46.48	49.04	35.26	58.13
Nov 09	39.33	53.36	40.75	77.75	72.32	66.18		46.98	38.62	56.07			28.65	68.48	41.84	40.09	29.22	62.30
Dec 09		51.44	63.88	69.11	69.52	70.08		61.17	44.68	66.64		0.26	39.14	68.10	49.36		42.57	
Jan 10	44.40	55.22	67.20	72.23	74.44	69.92		61.17		60.84		2.25	35.14	69.30	47.80		39.63	61.05
Feb 10	38.80	55.45	65.94					58.79	38.59			1.43	32.30	65.33	53.11	76.15	38.05	57.12
Mar 10	30.57	47.98	47.43	58.48	59.51	57.12		46.38	30.79	60.36		1.02	26.97	52.97	33.29		26.50	
Apr 10	28.85	46.48	70.91	67.37	69.20	64.23		52.40	30.41	55.73		1.43	25.21	50.98	42.09	65.48	27.37	99.57

**Appendix C: List of Part B Processes within London Borough of Lewisham**

<b>Company/Name of Process</b>	<b>Address</b>	<b>Type of Process</b>
BP	411 Bromley Road, Bromley BR1 4PJ	PG1/14 – Petrol Station
BP	193 Lee High Road SE13 5PQ	PG1/14 – Petrol Station
Esso	Foxberry Service Station, 242-246 Brockley Road, SE4 2SU	PG1/14 – Petrol Station
Tesco/Esso	Forest Hill Express, 86 London Road, Forest Hill SE23	PG1/14 – Petrol Station
Tesco	340 Baring Road, London SE12 0DU	PG1/14 – Petrol Station
Tesco	290 Lewisham Road, Lewisham SE13	PG1/14 – Petrol Station
Tesco	97-99 Loampit Vale, London SE13 7TG	PG1/14 – Petrol Station
Sainsbury's	263 New Cross Road, Lewisham, London SE14 5UL	PG1/14 – Petrol Station
Sainsbury's	Bell Green, Southend Lane, Sydenham SE26 4PU	PG1/14 – Petrol Station
Shell	357-361 Lewisham High Street, Lewisham SE13	PG1/14 – Petrol Station
Shell	163-165 Stanstead Road, Forest Hill SE23	PG1/14 – Petrol Station
Shell	101 Evelyn Street, London SE8	PG1/14 – Petrol Station
Shell	96A Bromley Hill, Bromley BR1	PG1/14 – Petrol Station
Petrocell Service Station	169 Lewisham Road, Lewisham SE13 7PY	PG1/14 – Petrol Station
Star Service Station	315 Southend Lane, London SE6 3WD	PG1/14 – Petrol Station
Sydenham Service Station	277 Kirkdale, London SE26 4DD	PG1/14 – Petrol Station
Texaco	Star Service Station, Brownhill Road, London SE6 1AD	PG1/14 – Petrol Station
TotalFinaElf Limited	Verdant Lane, London SE6 1TP	PG1/14 – Petrol Station
Lewisham Crematorium	Verdant Lane, London SE6 1TP	PG5/2 – Crematoria
London Wood Reclaim Ltd	Hinkcroft Transport Limited, Deptford Recycling Centre, London SE14 5RS	PG1/12 – Air Curtain Incinerator
H Sivyver (Transport) Ltd	160 Sydenham Road, Sydenham, London SE26 5JZ	PG3/16 – Mobile Crusher
FM Conway	Bolina Road Depot, Lewisham SE16 3LD	PG3/1 – Blending, Packing, etc of Bulk Cement
Ascott Cab Co & Sales Ltd	Victoria Wharf, Grove Street, London SE8	PG6/34(b) – Vehicle Respraying
2001 Dry Cleaners	141 Stanstead Road, Forest Hill SE23 1HH	PG6/46 – Dry Cleaners
Ace Cleaners	380 Baring Road, London SE12 0EF	PG6/46 – Dry Cleaners
Aplanda Dry Cleaners	50 Sydenham Road, Sydenham SE26 5QF	PG6/46 – Dry Cleaners
Asik Dry Cleaners	250 Brockley Road, London SE4 2SF	PG6/46 – Dry Cleaners
Bellingham Cleaners	30 Randlesdown Road, London SE6 3BT	PG6/46 – Dry Cleaners
Blackheath Dry Cleaners	20 Blackheath Village, London SE3 9SY	PG6/46 – Dry Cleaners
Brookbank Dry Cleaners	155 Brookbank Road, London SE13 7DA	PG6/46 – Dry Cleaners
Brownhill Dry Cleaners	277 Brownhill Road, Catford, London SE6 1AE	PG6/46 – Dry Cleaners
Busy Bees	146 Sydenham Road, Sydenham, London SE26 5JZ	PG6/46 – Dry Cleaners
Carlton Dry Cleaners	6 Catford Broadway, Catford SE6 4SP	PG6/46 – Dry Cleaners
Catford Dry Cleaners	24 Rushey Green, London SE6 4JF	PG6/46 – Dry Cleaners

Clean World	56 Baring Road, London SE12 0PS	PG6/46 – Dry Cleaners
Crofton Dry Cleaners	385 Brockley Road, London SE4 2PH	PG6/46 – Dry Cleaners
Downham Express Dry Cleaners	448 Bromley Road, Bromley BR1 4PP	PG6/46 – Dry Cleaners
Finesse Dry Cleaners	250 Evelyn Street, London SE8 5BZ	PG6/46 – Dry Cleaners
Five Star Dry Cleaners	6 Burnt Ash Road, London SE12 8PZ	PG6/46 – Dry Cleaners
Forbs	19 Lewisham Way, London SE14 6PP	PG6/46 – Dry Cleaners
Friendly	186 Hither Green Lane, London SE13 6QB	PG6/46 – Dry Cleaners
High Road Dry Cleaners	136a Lee High Road, Lewisham SE13 5PR	PG6/46 – Dry Cleaners
Honor Oak Cleaners	42 Honor Oak Park, London SE23 1DY	PG6/46 – Dry Cleaners
Horizon Dry Cleaners	118 Woodpecker Road, London SE14 6EU	PG6/46 – Dry Cleaners
Hydra Dry Cleaners	51 Brockley Rise, London SE23 1JG	PG6/46 – Dry Cleaners
Jubilee Cleaners	6 Sandhurst Market, London SE6 1DL	PG6/46 – Dry Cleaners
Kirkdale Express Dry Cleaners	155 Kirkdale, London SE26 4QJ	PG6/46 – Dry Cleaners
Ladywell Junction Express	75 Ladywell Road, London SE13 7JA	PG6/46 – Dry Cleaners
Lewisham Dry Cleaners	13 Lee High Road, London SE13 5LD	PG6/46 – Dry Cleaners
M & S Dry Cleaners	118 Deptford High Street, London SE8 4NS	PG6/46 – Dry Cleaners
Manor Lane Dry Cleaners	176 Manor Lane, Lee, London SE12 8LP	PG6/46 – Dry Cleaners
Master Drycleaner	22 Downham Way, Bromley BR1 5NX	PG6/46 – Dry Cleaners
Michigan Launderette	197 Brockley Road, London SE4 2RS	PG6/46 – Dry Cleaners
One Step Ahead	189 Lewisham Way, London SE4 1UY	PG6/46 – Dry Cleaners
Palace Cleaners	9 Sydenham Road, Sydenham SE26 5ET	PG6/46 – Dry Cleaners
Pel's Dry Cleaners	80 Brockley Rise, London SE23 1LN	PG6/46 – Dry Cleaners
Perry Cleaners Ltd	174 Perry Vale, London SE23 2LR	PG6/46 – Dry Cleaners
Popular Dry Cleaners	18 Bromley Hill, Bromley BR1 4JX	PG6/46 – Dry Cleaners
Quality Dry Cleaners	77 Rushey Green, London SE6 4AF	PG6/46 – Dry Cleaners
Sam's Dry Cleaners	5 Brockley Cross, London SE4	PG6/46 – Dry Cleaners
Speedways	191 New Cross Road, London SE14 5DG	PG6/46 – Dry Cleaners
Starbright Dry Cleaners	86 Brownhill Road, Catford SE6 2EW	PG6/46 – Dry Cleaners
STARLITE Dry Cleaners	370 Brockley Road, London SE4 2BY	PG6/46 – Dry Cleaners
Starshine Dry Cleaners	3 St George's Parade, Perry Hill, London SE6 4DT	PG6/46 – Dry Cleaners
Streakers Dry Cleaners	3 Burnt Ash Hill, London SE12 0AA	PG6/46 – Dry Cleaners
Strides Dry Cleaners	418 Downham Way, Bromley BR1 5HR	PG6/46 – Dry Cleaners
Suits U Bespoke Dry Cleaners	35 Staplehurst Road, London SE13 5ND	PG6/46 – Dry Cleaners
The Cleaning Touch	173 Kirkdale, Sydenham SE26 4QH	PG6/46 – Dry Cleaners
Three Square Express	6 Dartmouth Road, London SE23 3XU	PG6/46 – Dry Cleaners
Trend Dry Cleaners	239 Bromley Road, London SE6 2RA	PG6/46 – Dry Cleaners
Turbo Dry Cleaners	17 Brockley Rise, London SE23 1JG	PG6/46 – Dry Cleaners



Tuxedos	266 New Cross Road, London SE14 5PL	PG6/46 – Dry Cleaners
Whistle & Flute	144 New Cross Road, London SE14 5BA	PG6/46 – Dry Cleaners
Whitehouse Dry Cleaners	166 Hither Green Lane, London SE13 6QA	PG6/46 – Dry Cleaners