

**Annual Air Quality Report
And Action Plan Update
2007**

Summary

All local authorities are required to undertake regular reviews and assessments of air quality within their areas according to a timetable set out by Central Government.

This report is in two parts. Part 1 presents a summary of the Air Quality monitoring results for the London Borough of Lambeth during 2006. Part 2 outlines the progress that has been made in implementing the Borough Air Quality Action Plan.

In 2006 there was, as in previous years, a number of pollution incidents recorded over Greater London as a whole. The United Kingdom Automatic Urban and Rural Network (AURN) of air pollution monitors measured high levels of air pollution across Southern England during June and July 2006. This was due to record-breaking levels of sunshine and temperature that together resulted in the formation of higher than average ozone and nitrogen dioxide concentrations. A further spell of fine weather in September and October also led to several clearly definable pollution episodes. However not all of the 15 total recorded episodes over London impacted at each of the Lambeth air quality monitoring sites.

The Borough continues to suffer from high levels of fine particles (PM10) and Nitrogen Dioxide (NO₂). Although roadside Nitrogen Dioxide levels show some signs of improvement the 2006 data point to possible increasing levels borough wide. The main 2006 findings are summarised below:

- Average NO₂ levels exceeded the Government's targets at all 3 of the Lambeth automatic road and kerbside sites as well as at Crystal Palace which is close to the Borough boundary on Crystal Palace Parade. The NO₂ standard was exceeded by a very significant margin at the Lambeth 4 site which recorded the highest number of exceedences for NO₂ within the whole of the London Air Quality Network. Nitrogen Dioxide was also monitored using diffusion tubes at 15 sites in the Borough. 8 of these sites had concentrations that exceeded the annual average air quality objective. Overall 2006 concentrations were slightly less than recorded for 2005 but the results point to a trend in increasing levels of NO₂ borough-wide.
- The results for fine particles (PM10) show little change for the automatic monitoring stations with the Lambeth 4 kerbside site again failing to meet the government targets. The 2006 results do however continue a trend of year on year decreasing concentrations; the number of days exceedence of the 24 hr mean standard reducing by 47% when compared to the 2004 result. Annual mean levels at the Lambeth 4 monitoring site also show a slow year on year decrease although the 2006 levels were still significantly above the 2010 target levels.
- Ozone was monitored using diffusion tubes at 2 of the 15 sites in the Borough. Average 2006 results showed a slight decrease in 2005 levels to 34µgm/m³ and were well within the annual mean EC levels for information and warning

- Carbon monoxide was monitored at the Crystal Palace automatic station. Levels continued to be low and well within the 8hr rolling average limits set by the Government.
- Sulphur Dioxide was monitored at all the Lambeth automatic stations as well as at the 15 diffusion tube sites. 2006 levels remained low and the national objectives were met at all of the automatic monitoring stations. The diffusion tube sites met the EC target values for the protection of ecosystems from Sulphur Dioxide
- Ozone was measured using diffusion tubes at two sites in the Borough. The annual average was slightly less than for 2005 with an annual average concentration of 33µgm/m³.
- Benzene was monitored at all 15 diffusion tube sites across the Borough. Concentrations were within the national objectives. Concentrations were slightly higher overall than in 2005 but the overall trend is a decline in levels of benzene since monitoring began in 1997, which reflects the national pattern.

Air Quality Assessment and Review 2006

In 2001 Lambeth declared an initial Air Quality Management Area (AQMA) for the northern part of the borough for Nitrogen Dioxide (NO₂) (both the annual mean and hourly mean objectives were found to be regularly breached) as well as Particulate matter (PM₁₀) (24 hour objective only). By 2003 it had become clear that predicted improvements in motor vehicle engine emission technology were unlikely to give the benefits originally anticipated. In 2003 Lambeth undertook its Stage 4 Review and Assessment of local air quality which indicated a likelihood of national air quality objectives continuing to be exceeded. As a result the whole of the Lambeth borough area was declared an AQMA (for the NO₂ annual mean objective only).

A second Updating and Screening Assessment (USA), was undertaken for Lambeth in 2006 and it is apparent from this that hourly mean objectives for NO₂ as well as PM₁₀ should have been included in the 2003 AQMA order. It is intended therefore in 2007 to revoke the 2003 AQMA and replace it to cover the two additional objectives identified above. A full copy of the 2006 Lambeth USA is available on the Council's website.

The Pollutants

Road traffic continues to be the primary cause of air pollution in London and in Lambeth over 90% of all air pollution is caused by road vehicles. Vehicle pollutants of greatest concern are Nitrogen Dioxide, Fine Particles (PM₁₀), Carbon Monoxide and Volatile Organic Compounds such as Benzene and 1, 3-Butadiene. Ozone is also a pollutant of some concern.

Nitrogen Dioxide

NO₂ is largely a secondary pollutant formed by the oxidation of Nitrogen Oxide (NO). In Lambeth, road transport is the dominant source of oxides of Nitrogen (NO_x). This is reflected in the general distribution of NO₂, with the greatest annual mean concentrations being measured near roads and in central London locations.

The National Air Quality Strategy stipulates two objectives for NO₂:

- (i) An annual mean of 21ppb (40 µg/m³) and
- (ii) An “incident based” Objective of 104.6ppb (200 µg/m³) as an hourly mean not to be exceeded more than 18 times a year.

Fine Particles (PM₁₀)

Unlike other air pollutants, fine particles (known as PM₁₀), do not comprise a single defined chemical compound like for example Sulphur Dioxide. The composition of PM₁₀ varies with location, time of year. PM₁₀ can often contain a mixture of primary sources, which tend to be locally emitted from vehicle exhausts, as well as secondary sources (mainly from distant sources) and coarse particles whose origin can on occasions be as far away as continental Europe. PM₁₀ levels can also be elevated by local building and road works.

There are two Air Quality Standards for PM₁₀. These are in line with EC Daughter Directive – Stage Limit Value for PM₁₀:

- (i) An annual mean of 40 µg/m³.
- (ii) An incident-based objective of 50 µg/m³, measured as a daily mean not to be exceeded on more than 35 days a year.

Sulphur Dioxide

The distribution of Sulphur Dioxide (SO₂) concentrations is influenced by both road traffic and industrial point sources. Road traffic is the main factor influencing annual mean concentrations, whereas industrial point sources can produce short-term high values due to plume grounding. The annual mean concentrations of SO₂ do not vary to a large extent over London.

The Air Quality Strategy stipulates three objectives for SO₂:

- (i) No more than 24 occurrences of an hourly mean of >150 µg/m³.
- (ii) No more than 3 days where the daily mean >125 µg/m³.
- (iii) No more than 35 occurrences of 15min mean >267 µg/m³.

Ozone

Ozone is caused by complex reactions in the atmosphere involving a cocktail of combustion generated pollutants. In the presence of sunlight and high temperatures chemical reactions take place in which Ozone gas (O₃) is formed. Ozone is often described as a seasonal pollutant, with the highest concentrations being recorded during the summer months. It is also a regional pollutant, with episodes of high concentrations often extending over hundreds of miles.

The greatest concentrations of Ozone have, in recent years, been measured at sites in outer London and the Home Counties, with somewhat lower levels being recorded in Lambeth and other inner London boroughs. Significant local variations in Ozone concentrations have also been reported. In heavily trafficked areas this is believed to be due to the scavenging effect of NO close to NO_x emission sources, for example at roadsides, which has the effect of lowering Ozone levels around the immediate area.

The Air Quality Strategy has a single objective of 100 µg/m³(50ppb) measured as a rolling 8 hr mean, which should not be exceeded on more than 10 days a year.

Benzene

The main source of Benzene in the UK is the combustion and distribution of petrol, of which Benzene is a minor constituent. Petrol is the only product marketed to the general public in the UK in which Benzene is present in more than trace amounts. There are no specific industrial processes in Lambeth emitting quantities of Benzene such as oil refineries. Although national policies already in hand should continue to reduce future concentrations of Benzene, Lambeth has been monitoring long term levels of Benzene at 15 sites in the Borough since 1997.

The major health risk associated with low-level exposure to Benzene is leukaemia. Based on data from the Institute for Environment and Health, estimated exposure to Benzene for the general population is three times less than the lowest exposures reported to be associated with adverse effects.

The Air Quality Strategy has a future objective of 5 µg/ m³ measured on an Annual Mean basis.

Carbon Monoxide

Carbon Monoxide (CO) is a toxic gas which is emitted into the atmosphere as a result of combustion processes. It is also formed by the oxidation of hydrocarbons and other organic compounds. In Lambeth, CO is produced almost entirely from car and lorry engines although it is eventually oxidised naturally in the air to Carbon Dioxide (CO₂). High levels of CO can prevent the normal transport of oxygen by the blood. This can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease.

The Air Quality Strategy has a single objective of:

- (i) 10 mg/m³ (8.6 ppm) maximum on a daily running 8 hour Mean

Air Quality Objectives within London

Air Quality Objectives are health based standards which are to be achieved by a given date. These objectives must continue to be met beyond the deadline. Objectives have been set with different time averaging periods for each pollutant. The different averaging periods reflect the way in which some pollutants may be harmful to health over relatively short exposure times. Table 1 below, identifies the pollutants of concern that have been incorporated into UK Regulations together with the relevant information in relation to each of the objectives.

Table 1.

Pollutant	Concentration	Measured as	Date to be achieved
Benzene	16.25µg/m ³	running annual mean	31.12.2003
	5.00µg/m ³	annual mean	31.12.2010
1,3-butadiene	2.25µg/m ³	running annual mean	31.12.2003
Carbon Monoxide	10 mg/m ³	max daily running 8hr mean	31.12.2003
Lead	0.5 µg/m ³	annual mean	31.12.2004
	0.25 µg/m ³	annual mean	31.12.2008
Nitrogen Dioxide	200 µg/m ³ (not to be exceeded more than 18 times per year)	1hr mean	31.12.2005
	40 µg/m ³	annual mean	31.12.2005
Particles (PM ₁₀)	50µg/m ³ (not to be exceeded more than 35 times per year)	24 hr mean	31.12.2004
	40µg/m ³	annual mean	31.12.2004
Sulphur Dioxide	350 µg/m ³ (not to be exceeded more than 24 times per year)	1 hr mean	31.12.2004
	125µg/m ³ (not to be exceeded more than 3 times per year)	24 hr mean	31.12.2004
	266 µg/m ³ (not to be exceeded more than 35 times per year)	15 minute mean	31.12.2005

For two pollutants – Particles (PM₁₀) and Polycyclic Aromatic Hydrocarbons (PAHs), further objectives have been set within the local air quality management framework. These have not yet been incorporated within the Air Quality Regulations but are shown in table 2 below.

Table 2.

Pollutant	Concentration	Measured as	Date to be achieved
Particles (PM ₁₀)	50 µg/m ³ not to be exceeded more than 10 times per year	24 hr mean	31.12.2010
	23 µg/m ³	annual mean	31.12.2010
	20 µg/m ³	annual mean	31.12.2015
Polycyclic aromatic hydrocarbons (PAH)	25 µg/m ³	annual mean	31.12.2010

Objectives adopted but not yet incorporated within the Air Quality Regulations.

An objective for a further pollutant, Ozone (O₃), is shown in table 3 below. This has not been adopted for the purposes of local air quality management because of the difficulties of dealing with it at a local level. A brief section on the assessment of PAH and Ozone has been included within this document, for information purposes only.

Table 3 – Adopted Objectives

Pollutant	Concentration	Measured as	Date to be achieved
Ozone	100µg/m ³ not to be exceeded by more than 10 times a year	Daily maximum 8 hour mean	31.12.2005

Monitoring Air Quality in Lambeth

This section considers pollution monitoring results and trends in Lambeth. Additional data have been obtained from other monitoring stations located close to the borough boundary where necessary.

Active and Passive Air Quality Monitoring

In 2006 the Council continued to undertake monitoring using both automatic high quality continuous monitoring analysers (active monitoring) and diffusion tubes (passive monitoring) across the borough. Automatic long-term continuous analysers are located at:

- Christchurch Road (Lambeth 1) - a roadside site in Streatham Hill towards the south of the Borough (this site has been operating since 2000).
- Loughborough Junction (Lambeth 3) – an urban background site installed in late 2001.
- Brixton Road (Lambeth 4) – a kerbside site installed in late 2003.
- Vauxhall Cross (Lambeth 5) - a kerbside site re-sited in the middle of a traffic island that started operating in 2005.
- Crystal Palace – a jointly operated site located on Crystal Palace Parade on the southern edge of the Borough.

N.B There is no longer a Lambeth 2 site. Lambeth 2 was formerly the Vauxhall Cross site The site started operating in late 2001 and closed in July 2003 due to remodelling of the Vauxhall Cross Interchange A repositioned monitor, known as Lambeth 5 began operating at the Vauxhall Cross Interchange again in 2005.

All four automatic sites are part of the London Air Quality Network and therefore standards of quality control are similar to those of the Government's ARUN sites. Regular calibrations are carried out, with subsequent data ratification undertaken by the ERG at King's College London.

The Lambeth monitors provide a useful contribution to the London Wide Air Quality Network, as well as provide valuable real time air quality information covering arterial roads (kerbside) main roads (roadside) and less busy (urban background) sites in the Borough. The Lambeth active monitors measure levels of Nitrogen Dioxide (NO²) Particulates (PM₁₀), Sulphur Dioxide (SO²). In addition, Carbon Monoxide (CO) is measured at the Crystal Palace site.

The Council has also undertaken for a number of years a programme of passive (non-continuous) monitoring from an additional 15 sites in the Borough. These sites are also shown on the map at the Appendix to Part 1 of this report. These sites monitor Nitrogen Dioxide, Sulphur Dioxide, and Benzene. Two sites additionally monitor Ozone levels. These sites have served to confirm the results found across the borough at the automatic monitoring stations. The council has decided that 2006 will be the last year that diffusion tube monitoring will be undertaken. It has however applied to Defra for financial assistance in setting up an additional automatic monitoring station in Lambeth.

A national scheme for describing air quality based upon possible ill health effects has been in place for some time. The scheme has been designed to provide a readily understandable system for people to be able to relate air pollution levels to possible ill health effects. The bands together with the potential health effects are set out at Table 4 below.

Table 4 – Public Dissemination Banding

Banding	Index	Health Descriptor	
Low	1	Effects are unlikely to be noticed even by individuals who know they are sensitive to air pollutants	
	2		
	3		
Moderate	4		
	5		Mild effects, unlikely to require action, may be noticed amongst sensitive individuals.
	6		
High	7	Significant effects may be noticed by sensitive individuals and action to avoid or reduce these effects may be needed (e.g. reducing exposure by spending less time in polluted areas outdoors). Asthmatics will find that their 'reliever' inhaler is likely to reverse the effects on the lung.	
	8		
	9		
Very High	10	The effects on sensitive individuals described for 'High' levels of pollution may worsen.	

Table 5 below shows the number of days where air pollution was measured as being moderate or above on the Public Dissemination Banding in Lambeth

Table 5 – 2006 Air Quality Banding

Pollutant	Location	Days Moderate	Days High	Days Very High
Nitrogen Dioxide	Christchurch Road (R)	0	0	0
	Vauxhall Cross (R)	0	0	0
	Loughborough Junction (U)	0	0	0
	Brixton Road (K)	221	1	0
	Crystal Palace(R)	0	0	0
Particulate Matter (PM₁₀)	Christchurch Road (R)	27	8	1
	Vauxhall Cross (R)	73	91	86
	Loughborough Junction (U)	27	6	2
	Brixton Road (K)	105	32	7
	Crystal Palace (R)	6	0	0
Sulphur Dioxide	Christchurch Road (R)	0	0	0
	Vauxhall Cross (R)	0	0	0
	Loughborough Junction (U)	0	0	0
	Brixton Road (K)	0	0	0
	Crystal Palace (R)	0	0	0

Key: Levels 1 to 3 = Low Levels 4 to 6 = Moderate Levels 7 to 9 = High Level 10 = Very High
R = Roadside Site K = Kerbside Site U = Urban Background Site

Compliance with National Air Quality Objectives

The Following tables show the results of each active monitoring station in Lambeth and to what extent the National Air Quality Objectives were met in 2006.

Table 6

Lambeth 1 – Christchurch Road (Roadside)

Pollutant	Objective	Result	Achieved Objective
Nitrogen Dioxide	Annual mean not exceeding 40 µg/ m ³	59	NO
Nitrogen Dioxide	No more than 18 occurrences of hourly mean >200 µg/ m ³	0	YES
PM ₁₀ Particles	Annual mean less than 40 µg/ m ³ (gravimetric)	25	YES
PM ₁₀ Particles	No more than 35 days where daily mean >50 µg/ m ³ (gravimetric)	9	YES
Sulphur Dioxide	No more than 35 days where daily mean > 350 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 3 days where daily mean > 125 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 35 occurrences of 15 min mean >267 µg/ m ³	0	YES

Table 7.

Lambeth 5 Vauxhall Cross (Roadside)

Pollutant	Objective	Result	Achieved Objective
Nitrogen Dioxide	Annual mean not exceeding 40 µg/ m ³	80	NO
Nitrogen Dioxide	No more than 18 occurrences of hourly mean >200 µg/ m ³	4	YES
PM ₁₀ Particles	Annual mean less than 40 µg/ m ³ (gravimetric)	66	NO
PM ₁₀ Particles	No more than 35 days where daily mean >50 µg/ m ³ (gravimetric)	199	NO
Sulphur Dioxide	No more than 35 days where daily mean > 350 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 3 days where daily mean > 125 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 35 occurrences of 15 min mean >267 µg/ m ³	0	YES

Table 8.Lambeth 3 Loughborough Junction (Urban Background)

Pollutant	Objective	Result	Achieved Objective
Nitrogen Dioxide	Annual mean not exceeding 40 µg/ m ³	36	YES
Nitrogen Dioxide	No more than 18 occurrences of hourly mean >200 µg/ m ³	0	YES
PM ₁₀ Particles	Annual mean less than 40 µg/ m ³ (gravimetric)	22	YES
PM ₁₀ Particles	No more than 35 days where daily mean >50 µg/ m ³ (gravimetric)	9	YES
Sulphur Dioxide	No more than 35 days where daily mean > 350 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 3 days where daily mean > 125 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 35 occurrences of 15 min mean >267 µg/ m ³	0	YES

Table 9.Lambeth 4 – Brixton Road (Kerbside)

Pollutant	Objective	Result	Achieved Objective
Nitrogen Dioxide	Annual mean not exceeding 40 µg/ m ³	220	NO
Nitrogen Dioxide	No more than 18 occurrences of hourly mean >200 µg/ m ³	4150	NO
PM ₁₀ Particles	Annual mean less than 40 µg/ m ³ (gravimetric)	40	NO
PM ₁₀ Particles	No more than 35 days where daily mean >50 µg/ m ³ (gravimetric)	54	NO
Sulphur Dioxide	No more than 35 days where daily mean > 350 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 3 days where daily mean > 125 µg/ m ³ (gravimetric)	0	YES
Sulphur Dioxide	No more than 35 occurrences of 15 min mean >267 µg/ m ³	0	YES

Table 10.Crystal Palace (Roadside)

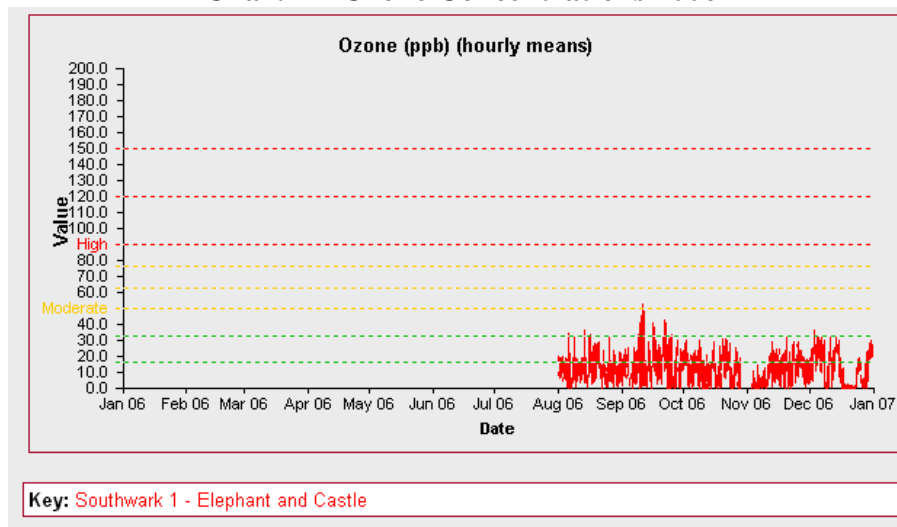
Pollutant	Objective	Result	Achieved Objective
Carbon Monoxide	No occurrences of rolling 8 hr mean $>10 \mu\text{g}/\text{m}^3$	0	YES
Nitrogen Dioxide	Annual mean not exceeding $40 \mu\text{g}/\text{m}^3$	46	NO
Nitrogen Dioxide	No more than 18 occurrences of hourly mean $>200 \mu\text{g}/\text{m}^3$	0	YES
PM ₁₀ Particles	Annual mean less than $40 \mu\text{g}/\text{m}^3$ (gravimetric)	29	YES
PM ₁₀ Particles	No more than 35 days where daily mean $>50 \mu\text{g}/\text{m}^3$ (gravimetric)	10	YES
Sulphur Dioxide	No more than 35 days where daily mean $>350 \mu\text{g}/\text{m}^3$ (gravimetric)	0	YES
Sulphur Dioxide	No more than 3 days where daily mean $>125 \mu\text{g}/\text{m}^3$ (gravimetric)	0	YES
Sulphur Dioxide	No more than 35 occurrences of 15 min mean $>267 \mu\text{g}/\text{m}^3$	1	YES

Commentary on Results

Ozone

The high levels of Ozone were measured across the UK during June and July 2006. The Nearest Ozone Active Monitoring Station to Lambeth is located close to the borough boundary with the London Borough of Southwark. Unfortunately no data are available for the June and July episodes but reference to chart 1 below shows the daily variation in Ozone concentrations from August to December.

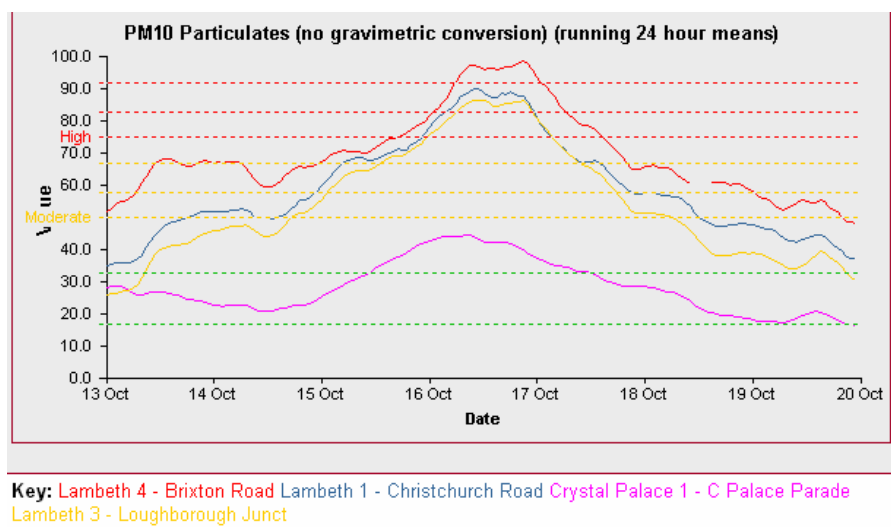
Chart 1 – Ozone Concentrations 2006



Particles

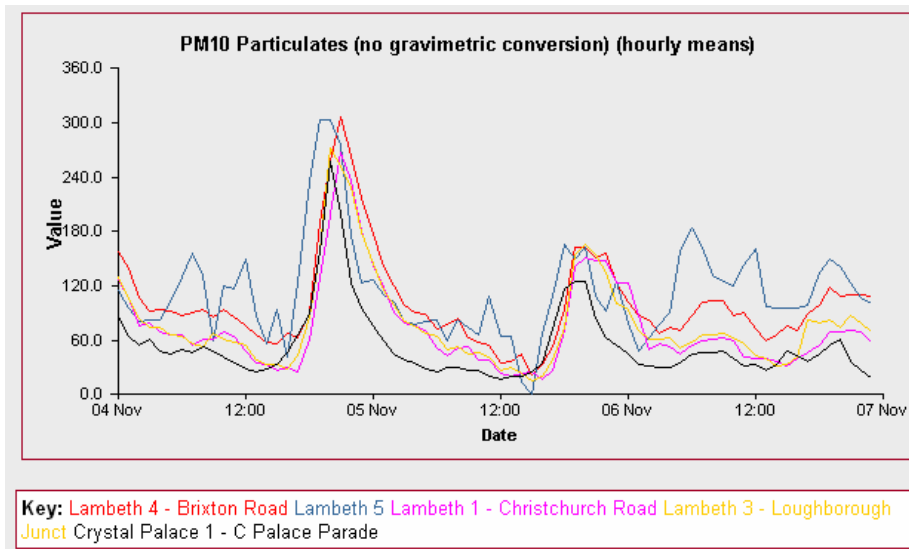
Reference to PM₁₀ monitoring data (chart 2 below) shows how during the second week of October, elevated PM₁₀ levels were recorded at all 4 Lambeth sites.

Chart 2 – PM₁₀ Episode 15 – 19 October 2006



The Lambeth results were typical of the widespread PM₁₀ particulate that was measured throughout London during this period. The episode was caused by a very significant influx of PM₁₀ from continental sources that combined with locally emitted PM₁₀. Roadside levels were generally significantly above the 24 hour average objective value of 50 µgm/m³. High levels of particles were again recorded at all the Lambeth automatic monitoring sites around 5th November. Chart 3 below shows this.

Chart 3 – Elevated PM10 levels associated by Bonfire Night

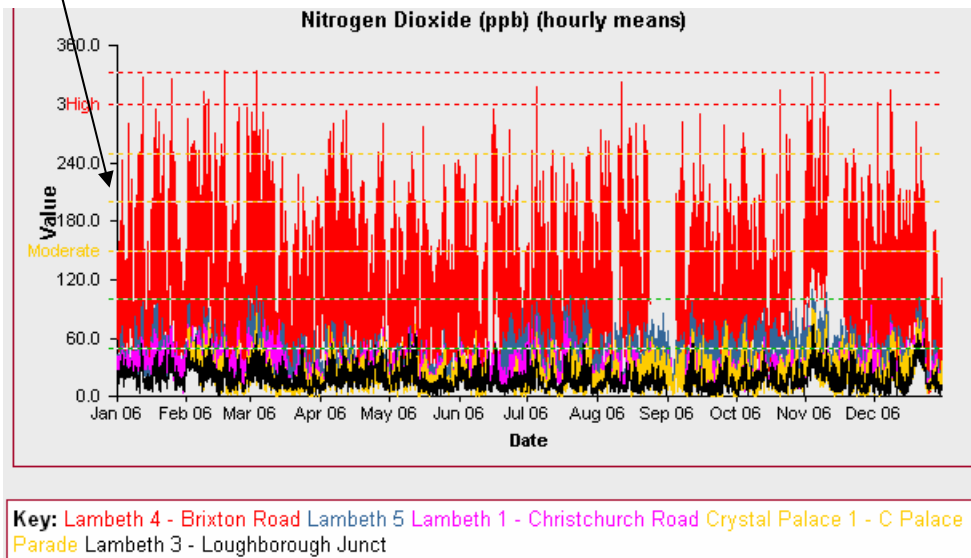


Nitrogen Dioxide

The Brixton Road kerbside site consistently recorded levels at or above the 200Ugm/3 hourly objective. The recorded levels were again the highest recorded at any of the automatic sites in London Air Quality Network. The following chart compares the results of the Lambeth 4 to the other local automatic monitoring stations

AQ Objective
200Ugm/3

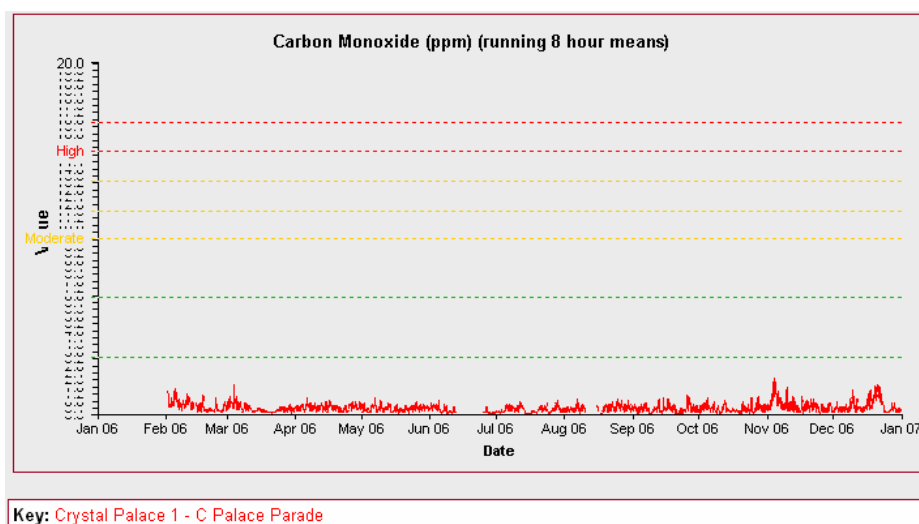
Chart 4 – Annual Nitrogen Dioxide Levels



Carbon Monoxide

CO is actively monitored at the Crystal Palace Roadside site. Levels during 2006 were similar to previous years and well within the objective values, (8.6ppm). This can be seen in chart 5 below.

Chart 5. Crystal Palace Roadside Site.



Passive (Non Continuous Monitoring Results)

Diffusion tube monitoring for 2006

The Council has for a number of years, undertaken sampling at fifteen locations in Lambeth using passive diffusion tube samplers.

The tubes are exposed for a 4/5 week period approximating to a calendar month. Although this method is less accurate than fully automated techniques (the diffusion tube method tends to under-estimate concentrations) it is possible to factor the results to account for known differences in the methodologies and thus arrive at data which can be compared to those obtained from the automatic monitoring sites. A bias factor of 1.34 has been used for the 2006 data.

Benzene Results 2006

There is now a single objective for the assessment of Benzene. The objective is zero exceedences of an annual mean $5\mu\text{g}/\text{m}^3$ concentration (to be achieved by December 2010).

Benzene was monitored using diffusion tubes, at all 15 Lambeth sites. Concentrations of the hydrocarbon continue to be well below the Government air quality objectives.

2006 Benzene concentrations were higher than for the previous year at all monitoring sites, although the overall trend since monitoring began in 1997 is downwards, which reflects the national pattern.

Chart 6. - Annual average benzene levels using diffusion samplers

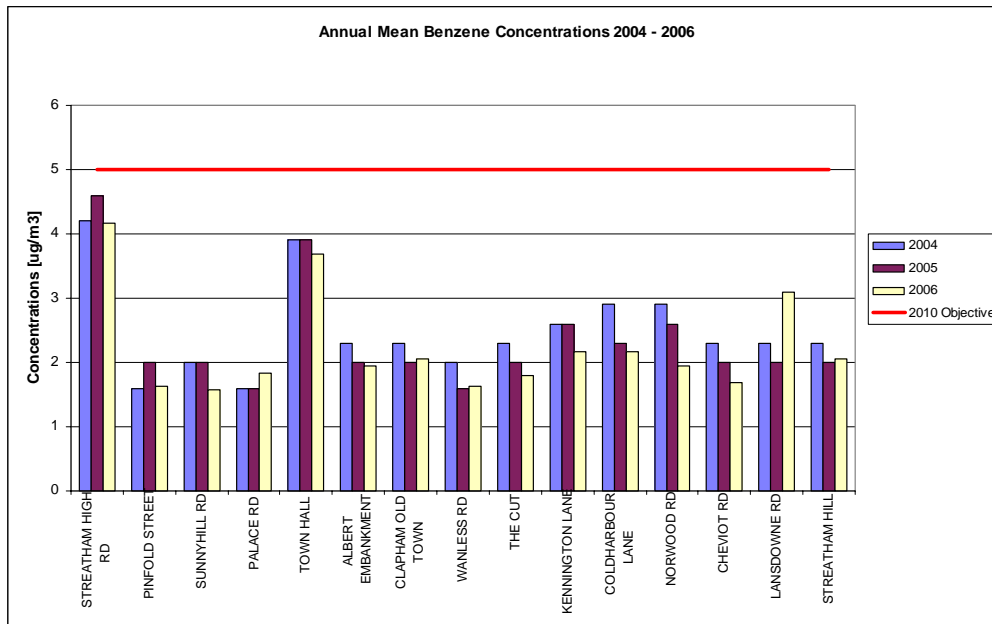
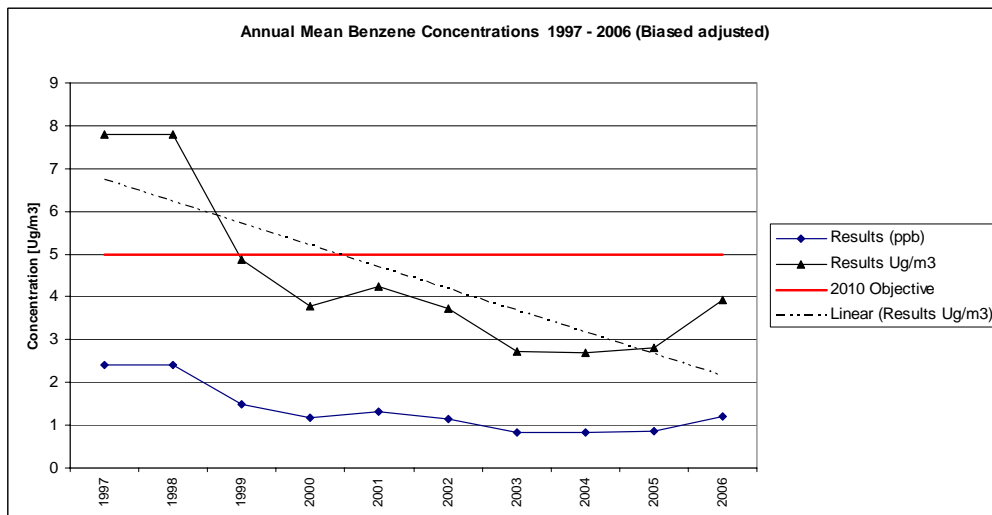


Chart 7. - Lambeth Average Benzene Levels 1997 - 2006



Note: Benzene 1 ppb = 3.25 $\mu\text{g m}^{-3}$ 1 ppb = 3.19 $\mu\text{g m}^{-3}$

Overall concentrations of Benzene continue to be below the government air quality objectives. Concentrations were higher than in 2005 but the overall trend is a decline in levels of benzene since monitoring began in 1997, which reflects the national pattern.

Nitrogen Dioxide

Table 1. of this report sets out the two different objectives for nitrogen dioxide. (NO₂); a short term objective of 200µg/m³ not to be exceeded more than 18 times per year as a one hour mean, and a longer term objective of 40µg/m³ as an annual mean, both to be achieved by the end of 2005.

Passive diffusion tubes have been used to monitor nitrogen dioxide in the borough since 1992. Chart 8 below sets out the 2006 diffusion tube results for NO₂

Chart 8. Nitrogen Dioxide – Diffusion Tube Results

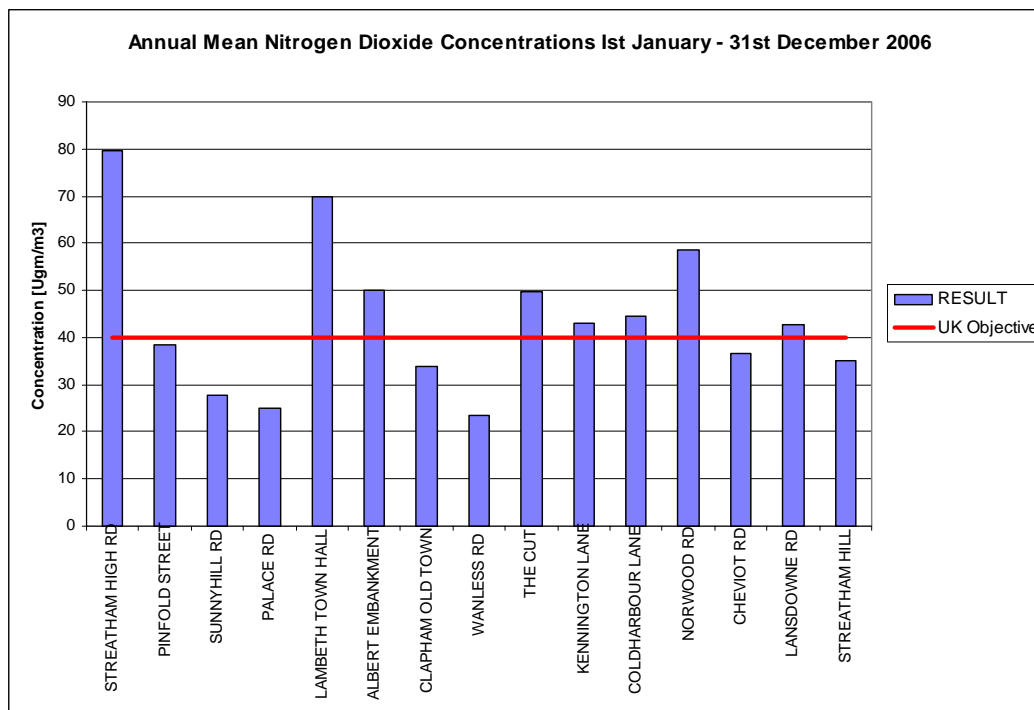
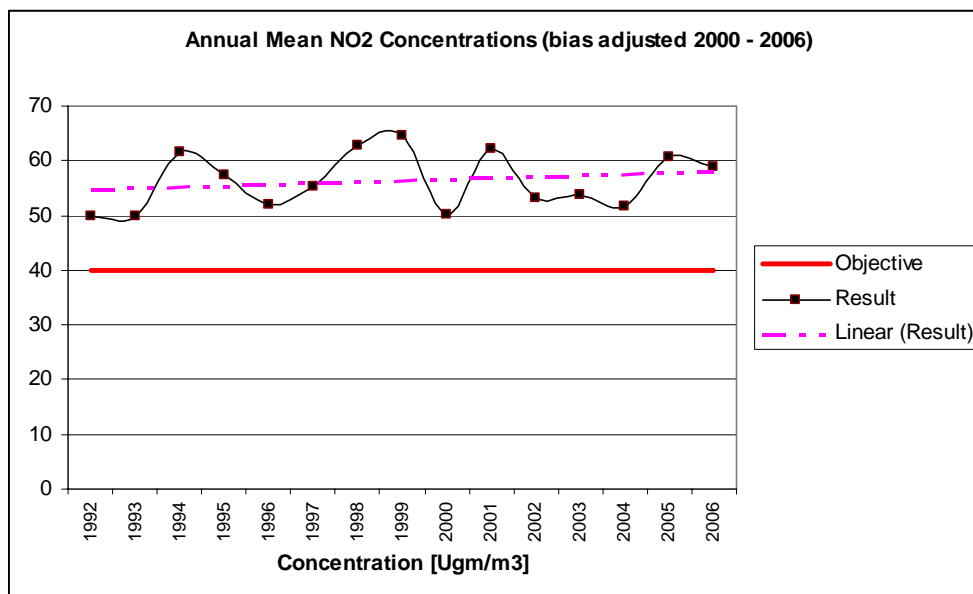


Chart 9 below shows the average annual NO₂ concentrations for the Lambeth area over the years 1929 to 2006. An upward trend in average levels is in accordance with the position reported in most other areas of London.

Chart 9. – Lambeth Annual Mean NO₂ Concentrations 1997 – 2006



Sulphur Dioxide

Three objectives have been set for this pollutant; a one hour mean of 350 µg/m³ (not to be exceeded more than 24 times per year), a 24 hour mean of 125µg/m³ (not to be exceeded more than 3 times per year) and a 15 minute mean of 266 µg/m³ (not to be exceeded more than 35 times per year).

Monitoring of Sulphur Dioxide has been undertaken in the borough since 1952. The monitoring data have shown that annual average and peak levels have declined substantially. This has been largely due to the switch from coal and oil for heating to gas from both domestic and commercial sources.

The SO₂ results are shown graphically in the following two charts (Charts 10 and 11). Chart 11 compares the results from all 16 diffusion tube sites for the years 2003 to 2006. A trend of rising levels exists at most sites although actual levels are overall still well within the EEC Target Value for the protection of Ecosystems. A similar trend has also been reported at other monitoring sites in London.

Chart 10. - Annual Mean Sulphur Dioxide Concentrations 2006

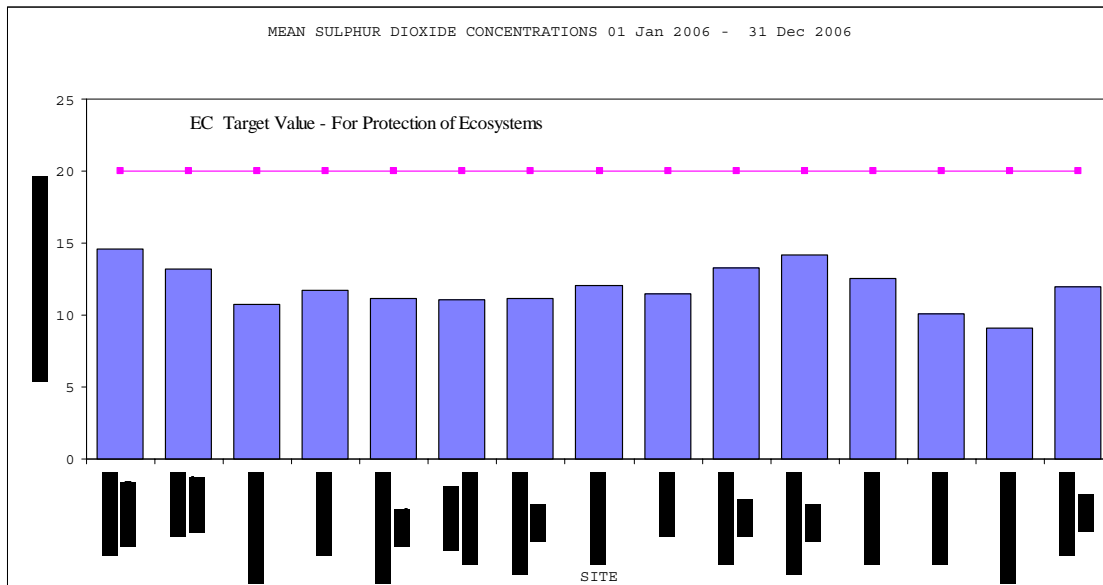
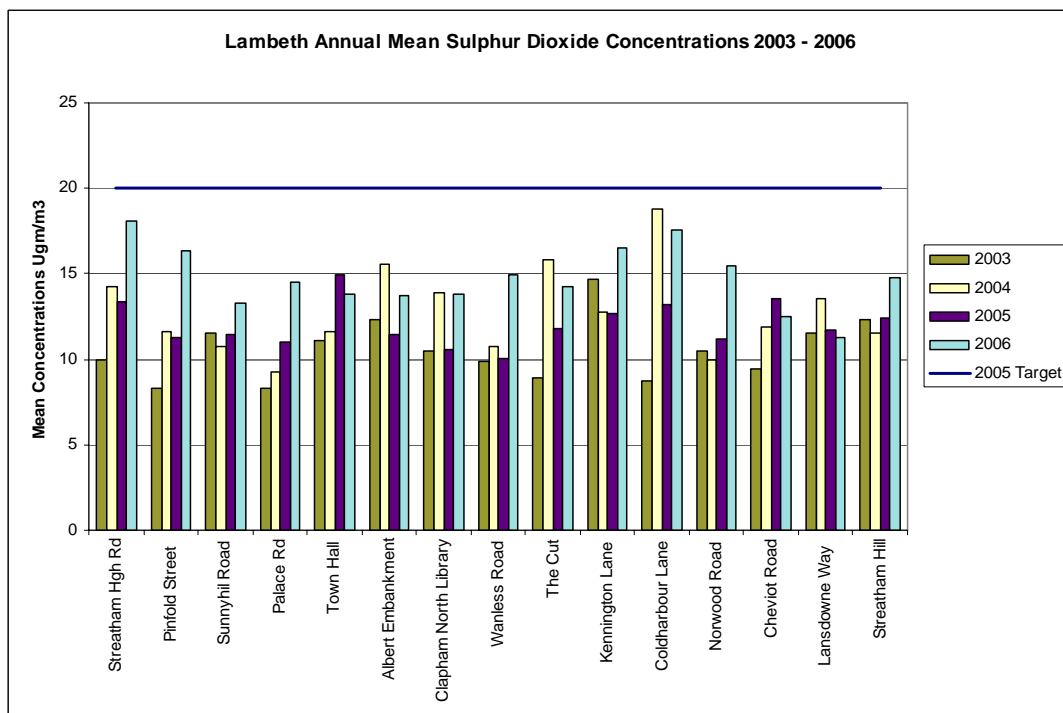


Chart 11. Lambeth Annual Mean SO2 Concentrations 2003 –2006



Ozone

Ozone is one of a group of what are often known as “secondary pollutants”. Ozone formed during periods of warm sunny weather in the presence of other necessary pollutants. The “precursor” pollutants may frequently cross regional and national boundaries. Chart 12 below shows a trend of slightly increasing Ozone levels measured by the diffusion tubes.

Monitoring is undertaken at two locations using diffusion tubes. The following chart (Chart 12) shows the results for 2006. Unlike most pollutants, Ozone levels tend to be depressed at locations close to busy main roads. This is because oxides of Nitrogen (NO_x) emitted from vehicle exhausts will scavenge Oxygen molecules from Ozone and thus reduce its level.

Overall Ozone levels were slightly reduced for 2006 when compared to 2004 and 2005. Actual levels were typical for those recorded at other main road monitoring locations in London.

Chart 12. – Lambeth Mean Ozone Concentrations 1997 - 2006

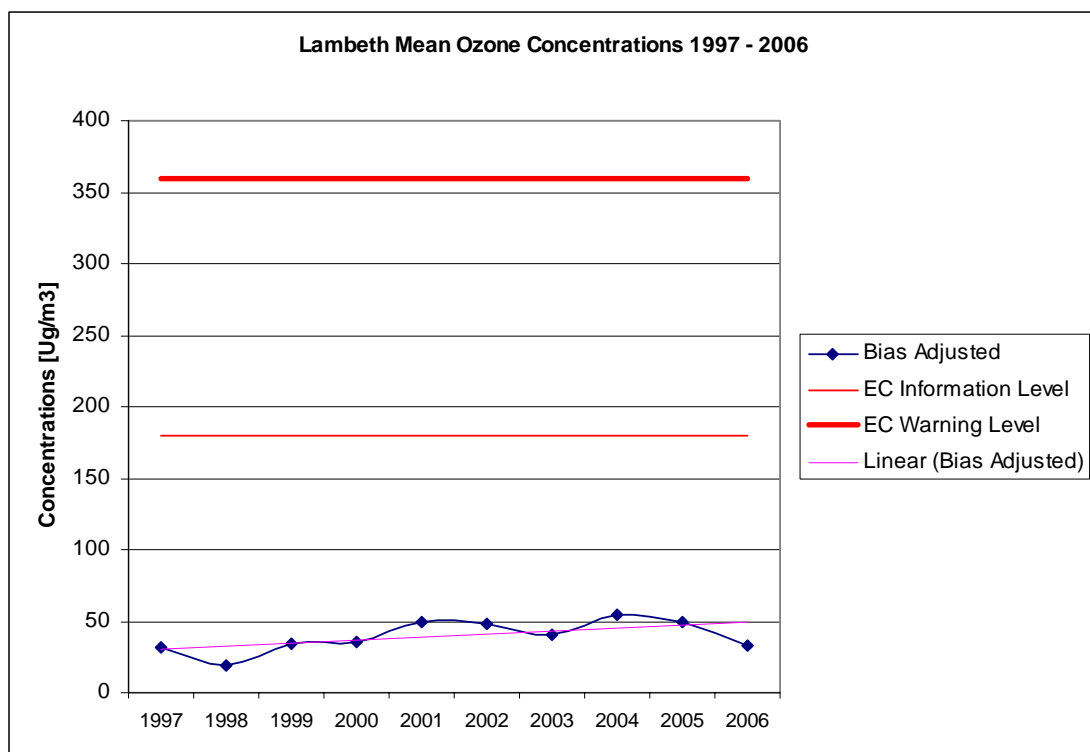
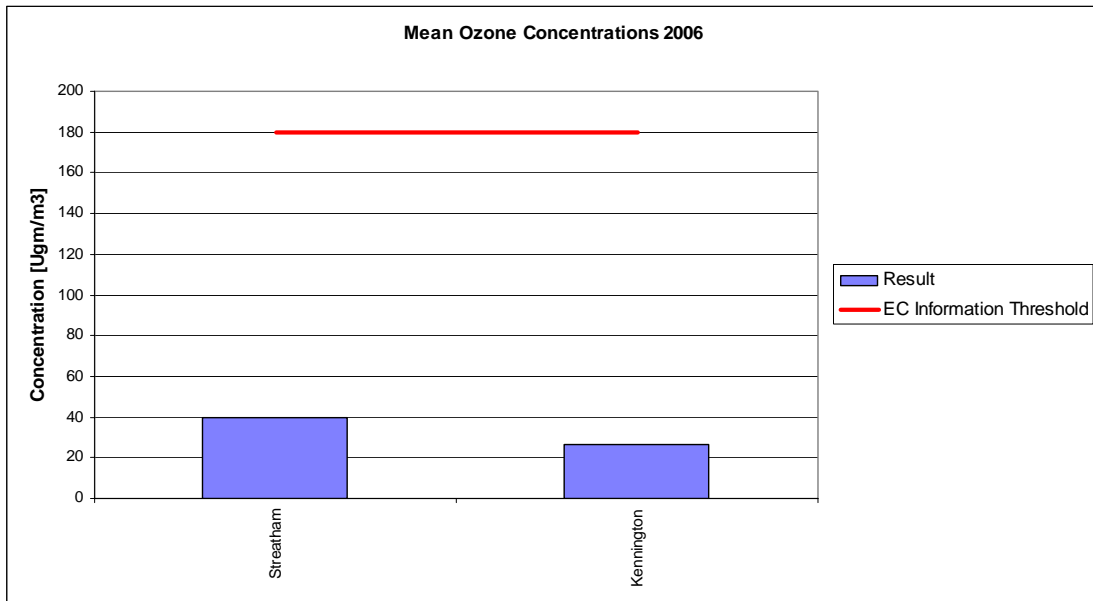


Chart 13. Ozone Diffusion Tube Individual Site Results 2006



Point Sources of Air Pollution - Authorised industrial activities -Part A and Part B processes

There are no Part A processes operating or planned in the Borough. Currently there are 25 authorised Part B processes; these have been operating for some time. All are regularly inspected. At the year end some 52 applications for permits to operate had been received from existing dry cleaning establishments in the borough. As part of an EU initiative to control the release of Hydrocarbon solvents into the atmosphere, all dry cleaning establishments in the UK will be required to strictly control solvent losses to atmosphere by October 2007 and hold a permit to operate from their respective local authority. Permits will only be issued where local authorities are satisfied that the dry cleaning plant is capable of operating to the required standard.

New Initiatives to Reduce Local Air Pollution in Lambeth

Lambeth Council has been introducing a range of policies and practices designed to encourage the use of sustainable forms of transport, and was named Sustainable Transport Borough of the Year by TfL last year. The Council was given the prestigious award at the annual Sustainable Transport Awards at the Hayward Gallery in Waterloo on Thursday 6 July 2006. Special mention was made of the Council's own travel plan, school and workplace travel plans, travel awareness work and campaigns such as travel without polluting as well as car clubs coming "*further, faster than any other borough*".

Lambeth was also commended in the categories of 'best council travel plan' and the 'good going campaign'

Lambeth will receive a provisional allocation of nearly £4.3M for local transport improvements in 2007/08 from Transport for London. This is the largest ever award to Lambeth and reflects the Council's recent success in delivering projects and initiatives that make a real difference to how people travel around Lambeth. £1.3M has been being allocated for projects related to cycling, walking, travel planning and travel awareness initiatives.

Other new initiatives to assist with improving local air quality include:

- (i) An "emissions based" policy on parking permits that charges the owners of less fuel efficient vehicles more, and owners of environmentally friendly vehicles less, for their parking permits.
- (ii) Support for Car Clubs - the Council has set aside a number of parking spaces for the exclusive use of Car Club members in Lambeth, to encourage more people to join the schemes.
- (iii) Providing a fleet of 'pool' bikes for use by staff and councillors to cycle between meetings.

- (iv) Actively Promoting sustainable transport, including a number of Bike Fun Days in parks, and a Climate Change conference and the Travel without Polluting initiative (November 2006)
- (v) Travel Plans - Lambeth aims to meet the national target where every primary school in the borough will have a School Travel Plan by 2009. Currently 70% of schools have a School Travel Plan and interest is growing.
- (vi) An electric “pool” car for use by staff while at work.
- (vii) With the [Cross River Partnership](#), [Transport for London](#) and other London boroughs the Council is actively campaigning to bring trams back to Lambeth and South London.
- (vii) Air Quality Alerts London: “airTEXT” is a free service which has been introduced London wide. It gives health advice and information on air quality to people who are potentially most vulnerable during times of poor air quality. Under the scheme, people can sign-up to receive local air pollution alerts by mobile phone text message, voicemail or email. People in need of the service can register for the alerts online at www.airtext.info or by calling the AirTEXT co-ordinators on 020 8760 5483. Users of the service can arrange to either receive a text, email or voice message during the evening before increased pollution levels are forecast, thus allowing them to make changes to their plans for the next day. If no message is received it means that air pollution levels are forecast to be low and the user should not be at risk. Alternatively, if participants prefer, messages can be sent out in the morning of the day when increased pollution levels are forecast.
- (vix) Investigating greater use of town planning powers (section 106 agreements) - to seek to ensure that commercial applicants use the best technology readily available to control emissions to air e.g. requiring supermarket operators to use electric powered vehicles on site.

Overall Conclusions.

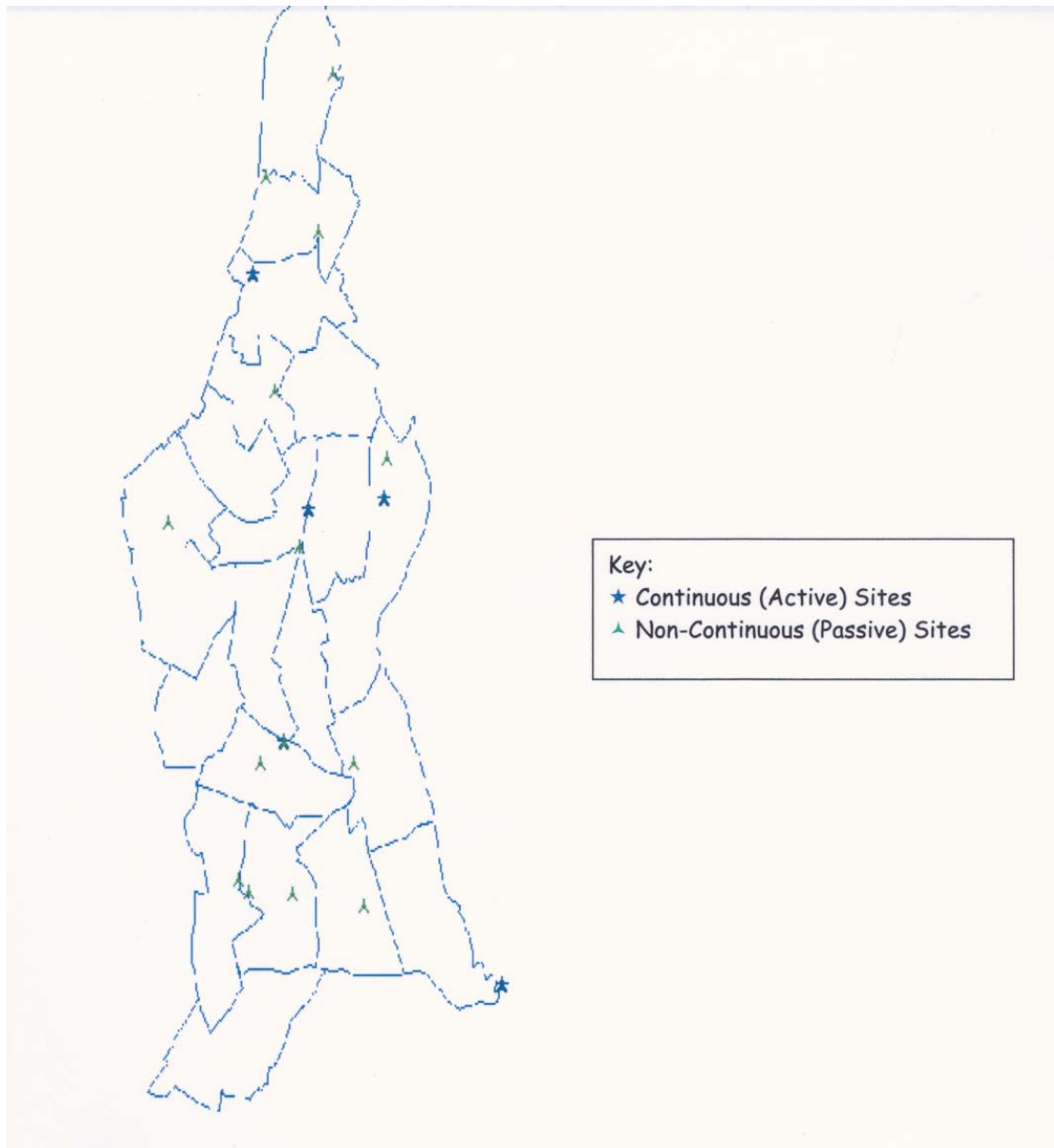
Despite making good progress in implementing our Action Plan, and adopting a wide range of innovative local initiatives local air quality is not significantly improving. This is common across London and is due to the fact that the major contributor to poor air quality in the greater London area is motorised vehicles. In recent years the southeast of England has also been affected on a regular basis by pollutants, particularly fine particles, which originate from continental Europe.

In 2006 the Council undertook a further Updating and Screening Assessment of local air quality. The conclusions of this review were:

- There was no risk of breaching the air quality objectives for carbon monoxide, benzene, 1, 3-butadiene, lead and sulphur dioxide anywhere in the Council's area.
- A previously identified risk that the air quality objectives for NO₂ and particles would be likely to be exceeded has proved correct. Further monitoring confirms that the annual mean NO₂ and daily mean PM₁₀ objectives have been exceeded. The council was therefore justified in designating an Air Quality Management Area across the whole of Lambeth.
- There is a risk that the air quality objectives for PM₁₀ (for 2010 only) will be exceeded at some in the future.

Appendix 1.

Monitoring Location map



Technical Appendix

Conversion Factors for Pollutants

EC Standards for Pollutants

20° C and 1013mb

Ozone 1 ppb = 2.00 $\mu\text{g m}^{-3}$

Nitrogen dioxide 1 ppb = 1.91 $\mu\text{g m}^{-3}$

Carbon monoxide 1 ppm = 1.16 mg m^{-3}

Sulphur dioxide 1 ppb = 2.66 $\mu\text{g m}^{-3}$

1,3-butadiene 1 ppb = 2.25 $\mu\text{g m}^{-3}$

World Health Organisation (WHO) Standards

25° C and 1013mb

ppb = 1.96 $\mu\text{g m}^{-3}$

1 ppb = 1.88 $\mu\text{g m}^{-3}$

1 ppm = 1.15 mg m^{-3}

1 ppb = 2.62 $\mu\text{g m}^{-3}$

1 ppb = 2.21 $\mu\text{g m}^{-3}$

Annual Air Quality Report 2006

Part 2 –

Progress with the Air Quality Action Plan

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
C: High	1. Proposal: Low Emission Zone	The Council will continue to work with the ALG, GLA and other London Boroughs in assessing the feasibility of a introducing a London – wide LEZ The Council will implement the scheme if the proposal is shown to be viable following the results of the feasibility study.	Participation in and support for the feasibility study Provide air quality and traffic data to support the feasibility study and implementation of the LEZ	Environment Culture & Community Safety, Transport and Streets	On going No date for implementation yet available	TfL will introduce LEZ London Wide as from February 2008 Implementation phased starting 2008 through to 2012
C: High (Est. funding of £30m to 2004) ER: High (for individual vehicles)	2. Proposal: Promotion of cleaner vehicle technologies and alternative fuels	The Council will promote the environmental and financial benefits to both its staff and other organisations through its travel plans strategy The Council will lobby the Government and GLA to encourage the increased uptake of cleaner vehicles and fuels and to provide the necessary infrastructure to support such expansion Support the GLA and TfL in their efforts to achieve a programme of replacement to Euro2 + RPC and increasing the use of water-diesel emulsion by 2005	Introduce travel information into staff induction packs Response to future consultation documents Consultation and liaison groups	Cultural Change Board / Strategy & Corporate Services Environment Culture & Community Safety, Transport and Streets	March 2003 On going 2005	Staff Travel Plan in place. Staff re-surveyed in 2006. No new initiatives from Government – “Powershift” government grants scrapped. The water – diesel option no longer being progressed on cost / benefit grounds.
C: High (but EST. funding and offset by low fuel costs)	3. Proposal: Replace Council’s own vehicle fleet with green fuelled fleet	Provide properly equipped cars/ vehicles (using zero or very low emission fuels) for duties where it is deemed essential for a vehicle to be used When appropriate but before March 2007, only pay expenses to staff who use their own vehicle to work duties if that vehicle is using zero or very low emission fuels Due to the above mentioned action, begin the phase out of essential user car allowances as the staff receiving them are provided with the use of low emission pool vehicles Continue with the programme of converting its own fleet to zero or low emission vehicles Investigate the feasibility of replacing the Mayors car with a low emission vehicle.	Each business unit to provide sufficient pool vehicles to allow essential visits to be covered using low emissions transport. Negotiations with Senior Management Board and Unions will be needed before implementation can proceed Review of car allowance system Rate of implementation depends upon availability of vehicles and the renewal dates of current contracts Replaced Mayors Car (lease expires-2002) with LPG powered vehicle	Each Directorate Cultural Change Board / Strategy & Corporate Services Strategy & Corporate Services Each Directorate Transport and Streets	Cost Benefit Analysis by March 2003 March 2007 March 2007 March 2003	Fleet replacement on going with new LPG vehicles 75% of fleet now LPG powered. Not pursued. As above Fleet diesel vehicles now all meet Euro III standards Mayoral car now LPG powered

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
		Commitment to the minimum standard for the Council vehicle fleet and those of any contractors of Euro2 + RPC or Euro2 by 2005			Implementation started- Final completion date March 2005	Fleet diesel vehicles now all meet Euro III standards Project on going.
C: High (but EST. funding and offset by low fuel costs)	4. Proposal: Encourage greater availability of green fuels throughout the borough	The Council will approach local fuel providers to encourage them to stock fuels such as LPG Any new development including proposals for a filling station will be required through the planning system to stock LPG The Council will investigate the installation of electric charging points in its car parks to facilitate the lease of electric pool vehicles	Promotional leaflet to be produced and circulated to local fuel providers UDP Policy – through the planning process Investigate costs and practicalities of providing charging points for electric cars pool	Sustainable Development Policy Officer/ Pollution Team Environment Culture & Community Safety Facilities Mangers	December 2003 December 2003 December 2003	Done. 3No. local fuel providers stocking LPG. LPG outlets published on the Council's website Pilot Electric Pool Car funded by TfL and now operating from Blue Star House Awaiting outcome of Pilot
H: High (but Govt funded £0.5m bid to DfT for 2 yr joint testing programme) ER: Low (although may have a significant effect on requiring improvements in individual vehicles)	5. Proposal: Support a London wide approach to Vehicle Emissions Testing	The Council will carry out vehicle emissions testing within its Air Quality Management Areas in order to enforce the vehicle emissions standards (with a target to carrying out 18 test days per year within the borough) The Council is supporting and participating with the ALG joint working party in developing a detailed proposal and costings for a coordinated London-wide programme of testing The Council will bid for the full Government (DTLR) funding of a 2 year programme of testing	The Council will adopt new legal powers to enforce exhaust emissions standards	Pollution Team, Pollution Team ALG working party /Pollution Team	Adopt new powers May 2002 Commence Test programme April 2003 Funding to support year London-wide programme secured October 2002	Done participated in the London wide emissions testing initiative 2003 -2004 Awaiting further Government future years
	6. Proposal: Implementation of traffic reduction	The Council endorse the concept of traffic reduction in Lambeth through policies in the UDP	The UDP will incorporate the mechanisms for achieving targets set within the framework of the Mayors Transport Strategy and guidance from	Planning	December 2003	Traffic Reduction Strategy embraced in Replacement UDP (2004) and carried forward into the Council's

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
	measures		TfL The Statutory Road Traffic Reduction Report will be included as part of the BSP (Borough Spending Plan)	Transport and Streets	BSP for 2003/2004	2005 LIP Done
C: High ER: Low Area wide but may have high impact in localised areas such as car free developments	7. Proposal: Traffic reduction through land use planning	The Council will seek to reduce the impact of transport on the environment by coordinating land-use and transport so as to reduce the need to travel, and by encouraging more use of public transport, walking cycling and less car use.	Developing a programme of Home Zones and looking at the role of car free or car capped housing combined with on-street parking controls as a way of discouraging car dependency, reducing vehicle volumes and managing on-street parking stress associated with residential development Strategic proposals for improving the level and continuity of cycling provision along the major arteries in the borough, with some schemes designed and ready for construction	Planning	On going – Currently consulting on proposals On going	The 2004 Replacement UDP Policies 8 – 14 establishes the policy framework to deliver this objective Strategic proposals contained in the 2007 LIP for promotion and marketing of cycling
C; High for implementation but offset by revenue stream C: Low for individual vehicles ER: Low/med	8. Proposal: recognises Congestion Charging as a method of direct traffic restraint	The Council is working with TfL and others to study in more detail the effects of congestion charging in North Lambeth and along the principal routes into the north of the Borough	Infrastructure works now in place throughout the central London charge area boundary to allow monitoring and enforcement of the scheme	GLA	On going	On going
	9. Proposal: Lambeth and neighbouring boroughs will work with the GLA and TfL to maximise the within the congestion charge area of North Lambeth	The Council is proposing a number of local actions through its UDP and BSP in support of the Mayors congestion charging scheme. These include A combination of area wide traffic management and street improvements to encourage through traffic to keep to the principal route network Review of Controlled Parking Zones in the north of the borough Improvements for pedestrians and cyclists combined with safety measures along on the Wandsworth Road	Congestion Charging and the infrastructure to support it implemented by the London Mayor The Council is seeking funding not only to implement these local supporting measures but also encouraging the Mayor to invest a proportion of congestion charging revenue within the street environment around the boundary in	GLA / TfL Planning	Implemented Feb 2003 On going	Done On going

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
		<p>Implement with TfL the Vauxhall “pod” Public Transport interchange and associated bus, cycle and pedestrian measures</p> <p>“Gating” traffic on radial routes to extend the traffic reduction benefits back into Lambeth</p> <p>Working through the Cross River Partnership and with TfL to deliver Cross River Transit/The London Tram to provide quick and clean access into and across the proposed charge area.</p>	Lambeth for a number of years.			Vauxhall Interchange now operational
C; Medium ER: Low (depending on uptake)	10. Proposal: Lambeth will promote Workplace and School Travel Plans	<p>Introduce travel information into induction packs</p> <p>Audit and improvement to walking routes between council offices</p> <p>Audit and Improvements to cycle routes between council offices</p> <p>Investigate travel options for staff needing to work late</p> <p>Provide properly equipped cars/vehicles/ pool cycles (using zero or very low emission fuels) for duties where it is deemed essential for a vehicle to be used</p> <p>Review essential and casual car user allowance system</p>	<p>Lambeth has a strategy for promoting travel plans in its own offices and on other organisations within the borough</p> <p>We are working to:</p> <p>Ensure Travel Plans are produced and adhered to by developers and agreed as part of development control process</p> <p>Promote Travel Plans on a voluntary basis to existing employers through an awareness campaign involving publicity literature, presentations at business forums and employers groups.</p> <p>The promotion of Voluntary Travel Plans requires extensive time resource and funding to support awareness raising initiatives. The Travel Plan development is part funded by contributions from DTLR and TfL.</p> <p>Individual initiatives are to be funded from facilities budgets unless other funding sources can be found. Lambeth council will provide a specified travel plan budget to cover the initiatives listed</p>	<p>Cultural Change Board/ Strategy & Corporate Services</p> <p>Transport and Streets</p> <p>Transport and Streets</p> <p>Cultural Change Board / Strategy & Corporate Services</p> <p>Strategy & Corporate Services Corporate Finance/ Travel Plans co-ordinator</p>	<p>March 2003</p> <p>March 2004</p> <p>On going completion by March 2007</p> <p>March 2003</p> <p>March 2003</p>	<p>Development of Green workplace travel plan incorporated into 2004 – 2007 Service Plan objectives.</p> <p>Council internal Travel plan produced. Copy published on the Council’s website</p> <p>On going publicity encouraging Lambeth Businesses to prepare voluntary travel plans</p> <p>Funding via BSP Travel Awareness Allocation.</p> <p>No further action.</p>

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
		<p>Provide cycle parking facilities, shower and changing facilities at all sites where over 10 employees are based</p> <p>Introduction of car share data base for setting up car clubs</p> <p>Review cycle allowance/ cycle loan scheme</p> <p>Investigate the provision of an intranet based journey planning service</p> <p>Only pay expenses to staff who use their own vehicle for work duties if that vehicle is using zero or very low emission fuels</p> <p>Each year the Council will support international , national , and local promotional events to support sustainable travel and promote these to council staff .e.g. Don't Choke Lambeth, Walk to School etc.</p>		<p>Each Directorate Facilities Manager</p> <p>Lambeth IT</p> <p>Cycle Officer</p> <p>Transport and Streets /Lambeth IT</p> <p>Cultural Change Board</p> <p>Cultural Change Board</p>	<p>December 2002 March 2004</p> <p>March 2007</p> <p>On going</p> <p>March 2007</p> <p></p> <p></p>	<p>On going</p> <p>Done</p> <p>Scheme in place</p> <p>Done</p> <p>Not taken forward</p> <p>Support given to National Car Free Day and In Town Without My Car Day 2003 /04 Adoption of "Good Going"</p>
<p>C: Low/Med For Individual schemes offset by income from parking revenue ER: Low</p>	<p>11. The Council will manage the supply of parking spaces as a means of restricting traffic and promoting sustainable choices</p>	<p>The Council seeks to prioritise the use of existing spaces for the disabled, local residents and essential business use. Through the careful and strategic use of street parking regulations such as:</p> <p>Limiting parking supply at new developments</p> <p>Prioritising road- space for local communities e.g. Home Zones</p> <p>Special arrangements for deliveries by large vehicles</p> <p>Special parking arrangements at transport interchanges(e.g. tube and rail)</p>	<p>The London Mayor's Strategy sets out issues for the local authorities to incorporate within a fair and effective parking management system.</p> <p>The Council is now developing a strategy for parking in Lambeth that reflects the competing interests of road users in the Borough , as well as " promote sustainable transport choices and reduce reliance on the car for travel to work and other journeys"</p> <p>The Council seeks to prioritise the use of existing parking space for the disabled, local residents and essential businesses</p>	<p>Regeneration and Planning/Highway s/TfL</p>	<p>Parking Strategy by March 2003</p>	<p>Parking & Enforcement Plan published. A copy is available on the Council's website.</p>

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
C: Low ER: Low	12 Proposal: The Council will develop its Parking Enforcement Plan to discourage commuter traffic and improve bus journey times/reliability	The Council is currently developing a parking Enforcement Plan that aims to introduce consistent enforcement strategies across Lambeth The introduction of roadside camera (CCTV) enforcement on some of the busiest bus routes As a response to congestion charging, Lambeth will be reviewing the operation of Controlled Parking Zones (CPZ's) in the north of the borough and will be looking at the need for them at unofficial park-and-ride- locations around certain rail stations	Lambeth is currently consulting on its Parking Strategy. It will consider enforcement strategies for bus lanes (to improve bus journey times and reliability) and the use of CCTV to improve our ability to enforce parking restrictions across the Borough	Regeneration and Planning/Highways /TfL	Parking Strategy by March 2003 CCTV enforcement by December 2003 In line with congestion charging timetable	Done - Lambeth Parking Plan now adopted. Implemented
C: not known ER: low	13. Proposal: The Council will work with TfL to promote and implement a package of enhanced, intensified and enforced bus priority measures in the most heavily used bus routes	Expansion of the Bus Priority Network throughout Lambeth CCTV roadside camera enforcement on busiest routes Provision of more road space for buses and longer bus stop clearways (subject to impact on congestion) Extended bus lane operating hours Bus Plus routes will be introduced along some of the most heavily used bus route in Lambeth, which give enhanced bus priority	These measures are being delivered through the London Bus Initiative (a partnership between the London Boroughs and TfL) The Lambeth bus network must be planned and implemented to meet the changing demands and needs of its customers, and to integrate effectively with other modes. TfL will undertake research into bus travel patterns to ensure that it is customer-focussed, reflecting passenger needs and priorities, and responding to changes in local demand or operating conditions. Particular attention will be paid to developing routes that fit the real needs of all bus users.	TfL/Lambeth (London Bus Initiative)	Initial Target April 2003 with future funding on going programme of improvements	The Council continues to work with TfL. CCTV cameras / enforcement in place On going. The effective and appropriate enforcement of bus priority measures has been incorporated into Lambeth's parking enforcement plan.
C: Medium / High	14. Proposal: All bus routes will be effectively enforced	As above	As above	As above		CCTV cameras/ bus lane enforcement now in place

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
C: High ER: Low	15. Proposal: Lambeth is supporting and developing the Cross River Transit/London Tram scheme	Working with TfL/ GLA to develop the new Tram link from Camden to Brixton The Council will look at the possibility of extending the link from Brixton to Streatham and Norwood and possible extensions to the Croydon Tram link	The Council will through its UDP process, safeguard the corridors for this scheme in terms of applications for other developments and streetscape. Parking proposals etc. along these routes The Council is proposing to undertake the study on service feasibility from Croydon to Streatham. Authorisation has now been given to secure the Transport and works order to allow construction	Council / TfL LB Lambeth/ LB Croydon /TfL		Policies in the 2004 Replacement UDP safeguard the route of the Proposed Cross River Transit. Study confirmed that extensions to Streatham and Crystal Palace feasible. TfL consulting on route options. Further consultation expected in 2007.
C: High ER: Low	16. Proposal: Lambeth will work with the GLA and TfL in their programme of investment and expansion of the underground tube network as a means of enhancing more sustainable transport in London	The Council welcomes and supports the extension of the East London Line via Tulse Hill and Streatham to Wimbledon The Council will work with TfL to investigate the long term possibility of an additional extension of the East London Line to fit in with the Brixton hub proposals and the southwards extension of the Victoria Line to provide a new interchange at Herne Hill Station	Powers for the southern extension of the line are currently being sought by the GLA. If granted services could be operating on the line by 2006 Response to future consultation	Council/ GLA/TfL Council /TfL	2006 At discussion stage only	The Council continues to maintain that access to the East London Line Extension (ELLX) is viable either at Brixton or Loughborough. The Council welcomes further studies into these options.
C: High ER: Low	17. Proposal: Lambeth will pursue possibilities to improve rail services provision in the borough in order to promote rail travel as a viable alternative to the car	The Council is developing a number of proposals to promote improved rail service in Lambeth The Brixton Hub proposals Examining the feasibility of providing South London Line High Level platforms at Brixton Station Linking to this are proposals by the Mayor to develop the South London Line between Victoria and London Bridge to become part of a possible longer term "orbirail" providing orbital opportunities to bypass congested central London lines and stations (such as	An Urban Design Framework for East Brixton was published in December 2001 providing a basis for all future development in the Hub area. Development is likely to take an incremental form due to the variety of transport proposals at this point. Funding is currently being sought from the Strategic Rail Authority for these improvements Response to future consultation	Transport and Planning Council Council / TfL Council / TfL /	On going At discussion stage On going	On going On going On going

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
		Victoria and Waterloo) In terms of frequency of service the Council, working with SELTRANS and the GLA is supporting the investigation of the development of a South London Metro. The aim is to create a high frequency, high capacity, “turn u and go” metro service	Development is on going in conjunction with the South West trains. All stations are being brought to the minimum standards set by the SRA ad funding is being sought to extend platforms to cope with the increased frequency and capacity.	GLA		
	18. Proposal : The Council supports river transport on the Thames as an alternative mode of transport for commuters and tourists	The Council will investigate the options for improved interchange facilities that both encourage greater passenger use, and transfer of freight from road to river to relieve road congestion	The Council will through its UDP policies protect existing piers and where possible investigate interchange facilities to encourage greater passenger use	Regeneration and Planning	On going	2005 LIP confirmed commitment in 2004 Replacement UDP.
C: Low ER: Low	19. Proposal: Lambeth will continue to develop its Walking Strategy in order to improve the walking environment	Lambeth has set up a transport taskforce (Feet First) to promote walking and re-balance the priorities for action away form the car and towards pedestrians The Taskforce will identify the fine detail of those factors presently discouraging walking, such as poor lighting levels, footway conditions, poor pedestrian safety and pedestrian signing, and propose ways in which these issues can be rectified	The Borough Spending Plan has provision for a significant five- year programme of footway maintenance, and a five-year programme of street clutter removal along key walking routes Audit and Improvements to walking routes between council offices	Feet First / Taskforce Transport and Streets	On going date for completion 2007 On going due for completion March 2005	On going Work done to contribute to Mayor’s 2004 Walking Strategy including implementation of TfL walking plan.
C: Medium (£20k) funding from TfL) ER: Low	20. Proposal: Lambeth will work with TfL to encourage walking as a viable alternative to	The Council is developing a walking map of Lambeth Lambeth is commissioning a study to develop a North South-South Walking route in Lambeth	The map is being drawn with the help of the Walk First group in Lambeth - £20k funding from TfL to develop and implement the scheme	Transport and Streets	On going	Work done to contribute TfL Walking Plan

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
	other forms of transport	TfL are developing an internet based journey planner that will include waking routes in addition to public transport options	Lambeth are working with TfL to make this internet service available to Lambeth staff and residents	TfL / Transport and Streets	On going	On going
	21. Proposal: The Council will continue to develop its Walking Strategy to encourage children to walk to school as an alternative mode of transport	Identify safe routes to school Improvements to physical road safety Road Safety Education Promoting national schemes such as Walk to School Week	School Travel Plans – promotion and awareness raising / survey/ questionnaire Surveyed by school/Highways- identified funding Kerb craft- a road safety initiative for schools	Transport and Streets Transport and Streets TfL/ Transport and Streets	On going due for completion 2007 On going due for completion March 2005	Lambeth has adopted its own School Travel Policies New initiatives identified in the current LIP On going
C: high ER: Low	22. Proposal: The Council will continue to carry out and support measures to promote and make cycling safer and more convenient	The Council supports the continued development of the London Cycle Network throughout the borough Provide continuous and safe cycle networks and other facilities such as cycle parking – the aim is to reduce road anger and improve driver attitude so that all roads can be used by cyclists, but also to provide separate cycle lanes where traffic speeds are high The provision of separate cycle paths will be done by taking road space from motor vehicles rather than pedestrians and shared use of footpaths will only be considered where pedestrian safety can be maintained Improving facilities at public transport interchanges to ensure secure cycle parking at transport hubs and the council will lobby for spaces for bikes to be provided on trains Major road-works and junction improvements will take into account the needs of the cyclist, adapting infrastructure for improved cycle provision	Audit and Improvements to cycle routes Cycle audit and identification of “level of service” on the Transport of London road network in Lambeth to identify strategic proposals for improving the level and continuity of cycling provision along the major arteries in Lambeth with some schemes designed and ready for construction Lambeth’s commitment to promoting cycling is reflected in its UDP, its policy to “Think Bike” and the high priority given to cycling within the Lambeth Road Use Hierarchy. However, this will not be carried out to the detriment of other high volume public transport modes such as the bus.	Transport and Streets Cultural Change Board / Strategy & Corporate Services	Ongoing Awaiting finance from TfL On going On going	On going – cycle map of the borough produced Finance awarded in 2006/7LIP On going On going

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
		The introduction of formal cycle audit and review procedures for all schemes as part of a Cycling Strategy to be incorporated within the Local Implementation Plan				
C: High ER: Low	23. Proposal: The Council will require developers to include cycle facilities within new developments and where appropriate encourage them to provide shower and changing facilities	Cycling will be considered in all aspects of transport planning in accordance with the council's policy of developing a truly integrated transport system. Provision of secure and assessable cycle storage at new developments Provision of changing and shower facilities	The Council will use its planning process to require safe, secure and accessible cycle parking provision and facilities in all new public and commercial developments	Development Control	On going	On going
	24. Proposal: Lambeth will support the work of the Mayor to investigate methods for reducing emissions from their diesel powered stock wherever possible	The council is supporting the programme of diesel replacement of rail freight stock through its liaison with SELTRANS	Future consultation	Council / GLA	On going	On going
C: High (cost of monitoring stations, monitoring programme and review & assessment)	25. Proposal: Lambeth welcomes the commitment in the Mayor's Strategy to take action to reduce particulate emissions	The Council will continue to work in partnership with other central London Boroughs (Central London Cluster Group) to support the work of the GLA to reduce particulate emissions throughout London The Council will produce a 4 th Stage Review and Assessment of Air Quality in Lambeth which will specifically model existing and future levels of particulate pollution in the borough	Future consultation and feedback The Council will continue its programme of monitoring, reviewing and assessing the levels and future trends of ambient particulate pollution throughout the borough through a network of continuous air quality monitoring stations provided by central Government funding (SCA bids) and air pollution modelling	Pollution Team Environment Culture & Community Safety / Central London Air Quality Cluster Group Pollution Team (E&C)	March 2003 March 2003	Done Done

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
C: High R: Low NO2	26. Proposal: Lambeth welcomes and supports the environmental controls proposed for London wide airport development	Air Transport movement limit cap to Heathrow at 80 mmpa in line with BAA's development application Lambeth will give full consideration to the environmental, economic and transport implications of the development	Future consultation Representation through SERAS (South East Regional Airports Study) £5k funding to support legal challenge for expansion for night flights	Pollution Team Environment Culture & Community Safety / GLA	On going On going On going	High Court Challenge to Airport White Paper Decision given Jan 05 Successful outcome to Judicial Review of 2004. Further JR launched in September 2006 to Night Flight Decision
C: High (for enforcement / admin costs as well as remedial works by industry ER: low/ med (locally)	27. Proposal: The Council will continue to regulate pollution from industrial processes	Part B authorisation / Statutory Nuisance Air Quality Review and Assessment	Regulate industrial processes in line with DEFRA guidance and to ensure Best Available Techniques are used to reduce emissions such that these emissions do not lead to exceedences of the NAQS objectives Investigate complaints about Nuisance Monitor air quality and undertake mandatory air quality strategy commitments	Pollution Team Environment Culture & Community Safety	On going On going On going	All Part B authorised premises now transferred to national permit to operate regime. As a result, installations will have to meet stricter conditions. All current installations have now been issued with permits On going
C: High/ Med ER: low/ Med(locally)	28. Proposal: Reduce emissions of Volatile Organic Compounds from industrial processes	Part B authorisation of Dry Cleaners, small scale vehicle resprayers , degreasing operations	The Council will fulfil its obligations under EU Directive on volatile organic compounds, which will bring new processes within the remit of Part 1 of the EPA 1990 as prescribed industrial processes requiring authorisation (including certain vehicle resprayers, degreasing operations and dry cleaners)	Pollution Team Environment Culture & Community Safety	On going	All dry cleaning businesses in the borough have now been sent an application form to apply for a Part B permit Existing dry cleaners have until 31s October 2007 to be permitted.
C: Low /Med ER : Med/ High (locally)	29 Proposal: Promote the best practices and procedures to ensure pollution emissions and dust generation is kept to a minimum during construction	Council to promote the uptake of the BRE Code of Construction Best Practice when finalised Ensure Air Quality is taken into account along with other material considerations in making decisions on development proposals	Make it a standard recommendation on planning consents that developers adopt the BRE practices and procedures to ensure dust generation is kept to a minimum Housing to investigate feasibility of requiring compliance with BRE Code of Best Practice for Housing Contracts	Regeneration and Planning and / Pollution Team Environment Culture & Community Safety Housing and Planning (Regeneration)	April 2003 April 2003	On going On going

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
	activities		Produce supplementary planning guidance on air quality	Pollution Team Environment Culture & Community Safety	December 2004	No further action taken.
C: Medium (enforcement costs) ER: high individual / locally)	30. Proposal: The Council will use its statutory nuisance powers to control smoke nuisance from bonfires	Statutory nuisance action to be taken in cases where such action is considered necessary and appropriate Council to increase priority of bonfires complaints by improving response time. Target: same day response	Service of Statutory Notices under the Environmental Protection Act 1990 where Statutory nuisance has been substantiated Draft corporate enforcement policy directing new same day response time (within office hours)	Pollution Team Environment Culture & Community Safety Pollution Team Environment Culture & Community Safety	On going April 2003	On going Done
C: High E: Low	31. Proposal: The council will promote composting and recycling of waste to encourage greener methods of disposal other than bonfires	To recycle or compost 15% of household waste To ensure 100% of the population of Lambeth is either serviced by a kerbside collection of recyclables or lives within a kilometre of a recycling centre To have the green box service available to all street domestic properties To have 20% of households with gardens participate in home composting To Achieve 100% composting of all horticultural arisings in Lambeth's Parks and Estates	The Council's Waste Recycling Plan – set out the Council's waste recycling objectives and how they will be achieved. The policy is one of reductions, Reuse , Recycling and composting The aim is to increase the number of residents in the borough who participate in recycling services by increasing their level of involvement and understanding	Street Care & Cleaning Environment Culture & Community Safety - Street Care & Cleaning with Planning (Parks) / Housing (Ground Maintenance)	On going April 2004	New contractor Target Achieved with %17 household waste recycled + 6.5% composted On going
C: High ER: High on an area wide basis over a 5-10 yr period	32. Proposal: The Council will seek to use the cleanest conventional energy sources in its own buildings	The Council continue an ongoing programme of oil to gas conversion	In order to reduce the amount of fuel burned and therefore emissions created by domestic and commercial heating systems throughout Lambeth, the UDP will incorporate the principles of sustainable design and construction having regard to the Mayor's Energy Strategy for London	Housing /Regeneration	Ongoing – completion 2005	On going

Cost Effectiveness Rating C=cost ER=emissions Reduction	PROPOSAL	Key Actions	Implementation	Responsibility	Target Date	Progress as at December 2006
C: High ER: Medium	33. Proposal: The Council will introduce policies in its revised UDP to encourage high standards of energy efficiency and the use of renewable energy in developments through sustainable design principles	The Council will: Require developers to consider sustainable design and resource efficient principles in new buildings in line with its Sustainable Construction Policy (2001) Encourage the use of natural ventilation and lighting and effective energy conservation and thermal insulation to conserve energy and reduce heat loss and air pollution Encourage new developments to meet the highest standards of sustainable design and construction, including the re-use of existing building stock where practicable Consider and require efficient local energy generating schemes where practicable Consider and require efficient local energy generating schemes where practicable Assess combined heat and power schemes (CHP) proposals using Customs and Excise “Good quality CHP” index and ensuring developers demonstrate that opportunities for utilising heat have been fully assessed	Planning policies will require the layout of new developments to promote energy conservation and hence reduce the emissions of greenhouse gasses. They will also encourage building designs and materials that have the least environmental impact as well as regulating and encouraging renewable energy. Review opportunities to integrate renewable energy sources in all office/school refurbishments	Planning Design and Technology Services / Education	On going April 2004 On going On going On going	In 2004 Replacement UDP