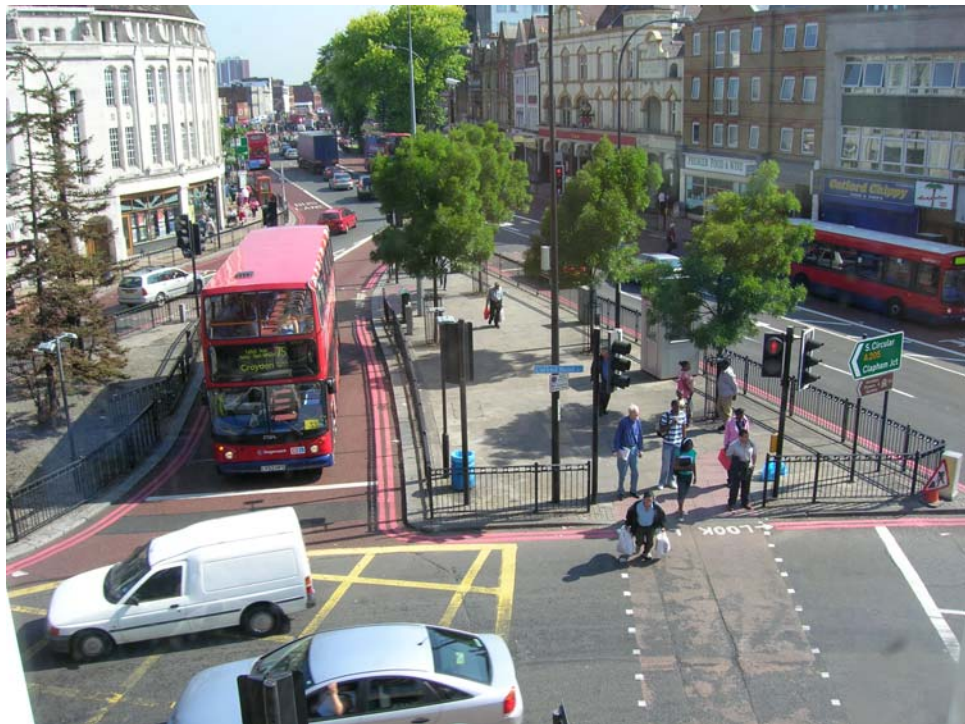


Review and Assessment of Air Quality in the London Borough of Lewisham

Progress Report 2008
April 2008



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Executive Summary

This report is the Air Quality Progress Report 2008 for the London Borough of Lewisham and fulfils the Council's commitment to the continuing Local Air Quality Management (LAQM) process. This report consists of two parts; an update on LAQM followed by an action plan progress report.

The Council's earlier reviews and assessments of air quality confirmed that there were locations across the Borough with relevant public exposure where the Government's air quality objectives might be exceeded.

The new monitoring data in this report confirms that the Government's air quality objectives for nitrogen dioxide are being exceeded widely at locations with relevant public exposure therefore the Council will maintain its Air Quality Management Areas (AQMAs). The PM10 objectives are currently not exceeded at the New Cross Road site. However previous modelling showed that the daily PM10 is at risk of being exceeded, although at fewer locations than the NO2 annual mean objective. PM10 arising from construction sites was not considered in the modelling study. Major regeneration is ongoing and planned across the Borough – therefore the PM10 remains a pollutant of primary concern. The monitoring for sulphur dioxide confirms that the air quality objectives are not currently being exceeded.

The previous progress report highlighted the need for an additional monitoring stations. As a consequence, a nitrogen dioxide diffusion tube monitoring at key locations around the borough was established in February 2008. Monitoring results for 2008 will be included in the next progress report. In addition, funds have been requested through the Defra air quality grant to install a further fixed continuous monitoring station in the northern part of the Borough.

An update on the progress made by the Council regarding its twenty one actions contained in the Council's Action Plan is also presented in this report.

The key achievements over last year included: the adoption of the final version of the Action Plan in February and a diffusion tubes monitoring network comprising established in the same month; fully compliance of the Council fleet with the Low Emission Zone, which was implemented also in February; a substantial increase in school travel plans; further progress with the Council travel plan, including the commitment of private large organisation to commit to a green travel plan. Over the next year actions (the same actions from the draft Action Plan were kept in the final version) will be reviewed and it is likely that some of them will be amended or completed. The review will include further quantification of benefits and costs of the major actions.

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1. INTRODUCTION

Part IV of the Environment Act 1995 places a statutory duty on local authorities to periodically review and assess the air quality within their area. This involves consideration of present and likely future air quality against relevant air quality objectives. Areas where it is measured or predicted that the targets will not be met must be declared as Air Quality Management Areas (AQMAs) and an Air Quality Action Plan (AQAP) must then be produced which sets out measures to improve air quality.

The air quality review and assessment in Lewisham found that targets for nitrogen dioxide (NO₂) and particles (PM₁₀) would be exceeded in the Northern part of the Borough and at locations close to the most congested roads. Five AQMAs were consequently declared in Jun 2001.

In 2004 a first draft action plan was produced, containing measures to improve air quality by the end of 2010. A revised draft was published in May 2007 together with a **Progress Report** on the previous Draft Action Plan. The feedback received during the consultation period following the publication of the above documents was incorporated in the final version of the Action Plan, which was formally adopted in February 2008. The findings of Lewisham previous Review & Assessment reports are summarised below.

First Round of Review And Assessment

Lewisham carried out its first round of “Review and Assessment” (R&A) between 1999 and 2003. The Council followed the phased approach required by the Government and described in detail in Annex.

In the third stage of the review and assessment the Council was required to undertake sophisticated modelling to ensure that an accurate and detailed review and assessment of current and future air quality was carried out. The Stage Three report assessed air quality across the whole of the Borough in accordance with DEFRA guidance. The detailed assessment predicted that there would be areas in the Borough that would exceed the NO₂ annual mean and 24-hour mean PM₁₀ objectives.

As a consequence five Air Quality Management Areas (AQMAs) were designated across the Borough in June 2001. The declaration of the AQMAs showed in Figure 1.1 was the outcome of a public consultation exercise carried out in 2000.

The Stage Four report subsequently remodelled the whole Borough using revised vehicle emission factors. The Stage Four modelling predictions confirmed the Stage Three findings that the annual mean NO₂ and 24-hour

mean PM₁₀ AQS objectives would be exceeded. The area where the annual mean NO₂ objective was predicted to exceed was much larger than that for PM₁₀.

A Draft Action Plan was produced in December 2003 and published in July 2004. A summary document was also produced and made available for public consultation during the summer at libraries and during the 'People's Day' held in July to promote services across the Council. No comments were made in respect to specific actions.

Second Round of Review And Assessment

The second round of review and assessment was undertaken between 2004 and 2006. The main conclusion was that the AQMAs should be maintained. Air Quality reports for this and other rounds of the R&A process in Lewisham can be downloaded from www.lewisham.gov.uk.

Third Round of Review And Assessment

The third round of review and assessment commenced in 2006. The Updating and Screening Assessment (USA) report in July 2006 concluded that a Detailed Assessment was not required to amend or revoke AQMAs since there were no changes to the current exceedances across the Borough.

Progress Report 2007

A progress report was completed in April 2007. The monitoring data for nitrogen dioxide and PM₁₀ in this report confirmed that the Government's air quality objectives were being exceeded widely at locations with relevant public exposure and therefore the Council should maintain its Air Quality Management Areas (AQMAs). The monitoring for sulphur dioxide confirmed that the air quality objectives were not being exceeded.

An update on the progress made by the Council regarding its twenty-one actions originally contained in the Council's Draft Action Plan was also presented. Additionally suggestions were made to investigate the introduction of NO₂ diffusion tube monitoring at key locations around the borough and the installation of a new continuous monitoring station in the north area of the Borough.

Lewisham Final Air Quality Action Plan (AQAP) – February 2008

The final AQAP sets out existing and future measures, which will deliver improvements to air quality primarily within the AQMAs. Traffic is the major source of pollution in our AQMAs, as such the majority of the measures will be implemented through the Local Implementation Plan. Air pollution from domestic, commercial and industrial sources are also addressed. Some measures are also aimed to inform, involve and educate the local community.

The implementation of the London Low Emission Zone (Action 1) is expected to have the highest benefit in improving air quality within Lewisham AQMAs and the all Borough. Freight quality partnerships (Action 7), fleet management (Action 4), travel planning (Action 9), road planning (Action 15) are also expected to have significant air quality benefits locally in the short-term. However the most significant improvements are expected through the effective implementation of the all package of measures included in the Action Plan and their cumulative impacts. Significant reduction in CO₂ emissions are also expected.

2. MONITORING DATA

The Council has carried out further monitoring of nitrogen dioxide (NO₂), sulphur dioxide (SO₂), particles (PM₁₀) and ozone during 2007/8. It has however not undertaken monitoring of the other LAQM air pollutants during this period.

The Government has adopted different air quality objectives for each of these pollutants as shown in Table 1. The new Air Quality Strategy for England, Scotland, Wales and Northern Ireland was published on 17 July 2007¹. The objectives set out in previous strategies were not removed with the exception of a provisional PM₁₀ target for 2010.²

An exposure reduction framework for minimising the health impact of particles has been adopted with the new strategy. This approach is based on the lack of an accepted safe level of exposure to fine particulate material (PM_{2.5}). The exposure reduction approach requires that the average exposure of the population to fine particles be reduced and differs from the former approach based on an air quality limit value which only requires measures in the most polluted locations that exceed the limit value. The strategy adopts a limit value of 25 µg/m³ for PM_{2.5} and a target of reducing the urban background concentration by 15% between 2010 and 2020. This changes the policy focus from addressing specific areas that approach or breach the air quality limit to an approach that considers all areas.

¹ <http://www.defra.gov.uk/Environment/airquality/index.htm>

² <http://www.defra.gov.uk/environment/airquality/strategy/pdf/air-qualitystrategy-vol1.pdf>

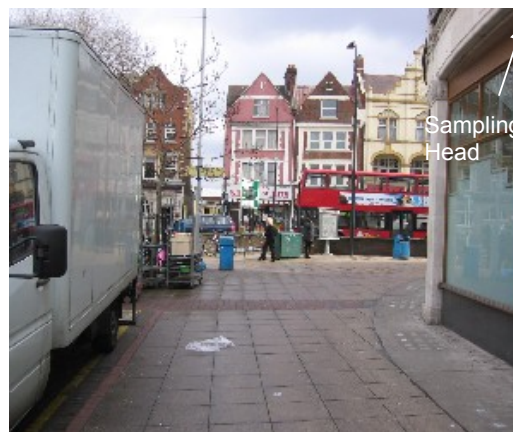
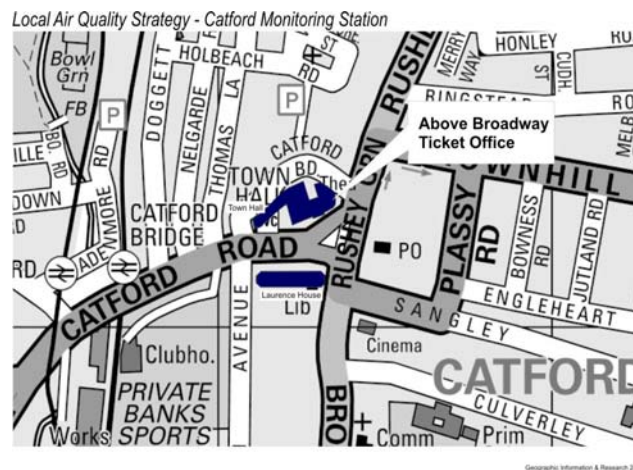
Table 1 - Air quality strategy objectives for NO₂, SO₂ PM₁₀ and ozone

Pollutant	Objective		Date to be achieved by
	Concentration	Measured as	
Nitrogen Dioxide (provisional)	200 µgm ⁻³ not to be exceeded more than 18 times a year	1 hour mean	31 Dec 2005
	40 µgm ⁻³	Annual Mean	31 Dec 2005
Sulphur Dioxide (SO₂)	350 µgm ⁻³ not to be exceeded more than 24 times a year	1 hour mean	31 Dec 2004
	125 µgm ⁻³ not to be exceeded more than 3 times a year	24 hour mean	31 Dec 2004
	266 µgm ⁻³ not to be exceeded more than 35 times a year	15 minute mean	31 Dec 2005
Particles (PM₁₀)	50 µgm ⁻³ not to be exceeded more than 35 times a year	24 hour mean	31 Dec 2004
	40 µgm ⁻³	Annual Mean	31 Dec 2004
Ozone (O₃)	100 µgm ⁻³ not to be exceeded more than 10 times a year	Daily maximum of 8 hour running mean	31 Dec 2005

3. Monitoring Locations

The Council currently operates two automatic high quality continuous monitoring analysers. Both sites are part of the LAQN and the standards of QA/QC applied meet the requirements of the LAQN. The sites are also representative of relevant exposure. The sites are as follows:

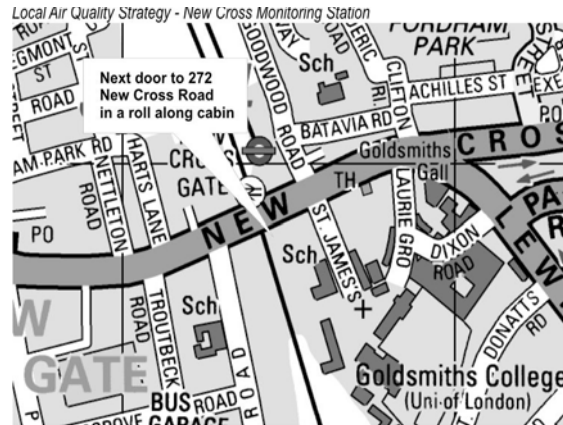
- *Catford Town Hall (Lewisham 1)* – an urban background site in Catford, SE6, in the middle of the Borough (this site has been operating since 1996). Urban locations are away from major sources and broadly representative of town/city-wide background concentrations, e.g. urban residential areas. The species monitored are Nitrogen Dioxide, Ozone and Sulphur Dioxide.



See Appendix 1 for the wind plot of Lewisham 1 site in 2006.

- *New Cross Road (Lewisham 2)* - a roadside site in New Cross that started operating in April 2002. Roadside site is defined as a site with sample inlets between 1m and 5m of the kerbside. Sampling heights are within 2-3m of the

ground. At this site the distance is just over 5 metres from the kerbside, with a sampling height of 3 metres. The species monitored are Nitrogen Dioxide, PM10 Particulate (by TEOM) and Sulphur Dioxide. See Appendix 1 for the wind plot of LW2 in 2006.



3.1 Nitrogen Dioxide

The Council has carried out monitoring of NO₂ using automatic chemiluminescent analysers at its two monitoring sites.

A passive monitoring network for NO₂ including 10 sites (and the co-locations of three tubes with the continuous monitoring station at New Cross Gate) was established in February 2008.

The Environmental Health group is also seeking external funding to install at least 1 new fixed continuous monitoring station to provide real-time measurements of nitrogen dioxide and particulates (PM₁₀ and/or PM_{2.5}) by the end of 2008.

Table 2 - Annual mean NO₂ concentrations for the Borough of Lewisham (1999 – 2006) (µgm⁻³)

Site	Catford (Lewisham 1)	New Cross (Lewisham 2)
Type	UB	R
1999	54	no
2000	52	no
2001	52	no
2002	50	<i>47</i>
2003	55	<i>67</i>
2004	49	<i>68</i>
2005	51	<i>57</i>
2006	55	<i>65</i>
2007	53	59

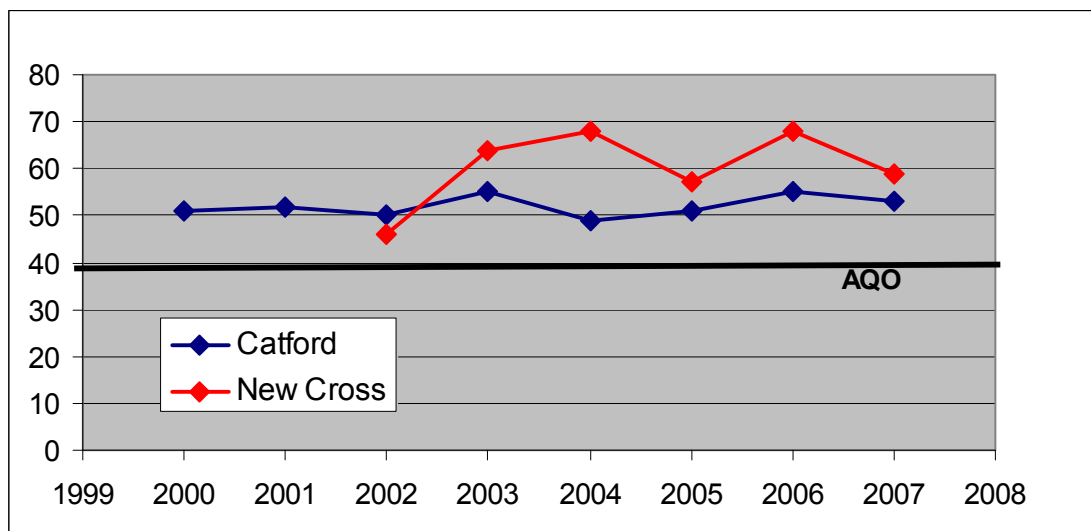
Note- no indicates not in operation; italics indicates < 90% data capture.
2007 Calculation included provisional data.

The monitoring results for both sites (see Table 2) have consistently been above the annual mean objective, although monitoring at LW2 only began in April 2002. Full details of the data capture are given in Appendix 2.

The annual mean results are illustrated in Figure 1. From this at the LW1 site it can be seen that the levels have hovered around the low 50's without any noticeable trend up or down. With the LW2 site there has been marked fluctuation in levels year on year, but the site has only been in operation for less than 6 years, and several of those years have had low data capture rates so statistically it can't be used to establish any trends. The monitoring station is located at the side of a busy A road. The new monitoring results for 2007 show a decrease in levels at both stations, with a more marked decrease at LW2.

However the results still show a significant of the long-term objective for nitrogen dioxide.

Figure 1 Annual mean levels of nitrogen dioxide (micrograms/m3)



The results for the hourly objective are given in Table 3. This shows that the hourly objective has not been exceeded during any year of monitoring, although it highlights that 2003 was more polluted than other years, based on the number of periods above the hourly standard.

Table 3 – Number of nitrogen dioxide hourly exceedences above 200 ug/m3 (not to be exceeded more than 18 times per year)

LAQN SITE	LEWISHAM 1	LEWISHAM 2
1999	0	no
2000	0	no
2001	0	no
2002	0	0
2003	1	<i>10</i>
2004	1	4
2005	3	6
2006	0	27
2007	7	8

(Note- no indicates not in operation; italics indicates < 90% data capture and 2007 results are provisional)

In conclusion, it is confirmed that the annual mean objective continues to be exceeded where there is relevant exposure.

3.3 Sulphur Dioxide

The Council undertakes sulphur dioxide monitoring using continuous analysers at both monitoring sites. Details of data capture are given in Appendix 2. The results are shown in Table 4 show that no exceedences of the three air quality objectives set for this pollutant were observed between 1999 and 2007.

The 15-minute mean objective is the most stringent of the three SO₂ objective and accordingly there are no recorded periods where the hourly and daily mean standards have been exceeded.

Table 4 - Air Quality Strategy Objectives for SO₂ (µgm⁻³) monitored at Lewisham 1 – Catford

Objective	<i>No more than 24 occurrences of hourly mean >350ug/m3</i>		<i>No more than 3 days where daily mean >125ug/m3</i>		<i>No more than 35 occurrences of 15min mean >267ug/m3</i>		
	Location	LW1	LW2	LW1	LW2	LW1	LW2
1999		0		0		0	
2000		0		0		0	
2001		0		0		0	
2002		0	0	0	0	0	0
2003		0	0	0	0	2	1
2004		0	0	0	0	0	0
2005		0	0	0	0	0	0
2006		0	0	0	0	0	0
2007		0	0	0	0	0	0

(Note- no indicates not in operation; italics indicates < 90% data capture)

The results for 2007 confirm that the sulphur dioxide objectives are being met in the Council's area.

3.4 Particulates

The Council undertakes continuous monitoring of PM₁₀ at its Lewisham 2 (LW2) roadside site in New Cross. The site uses a TEOM instrument for monitoring PM₁₀; the results are therefore presented as a gravimetric equivalent, i.e. TEOM times 1.3. The site began operation in April 2002 and the results are presented in Table 5. Full details of data capture are given in Appendix 2.

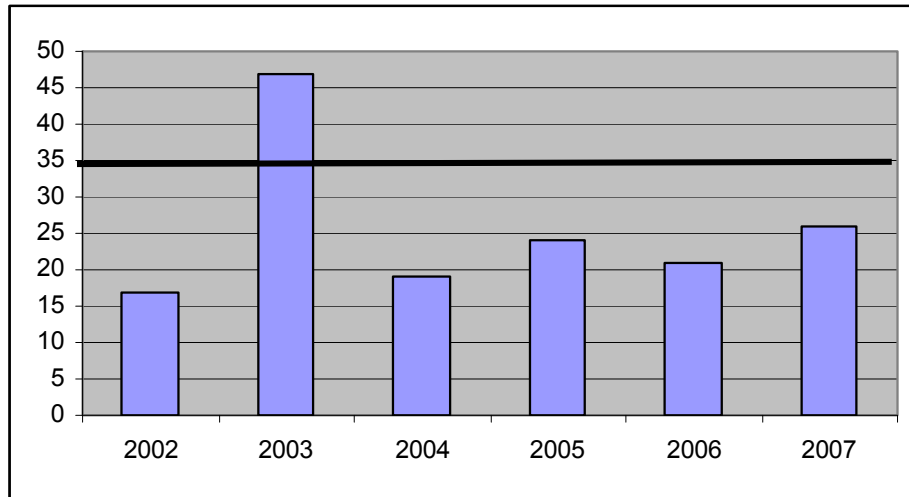
Table 5 - PM₁₀ monitoring at the Lewisham 2 site (µg/m³)

Objective	<i>Annual mean less than 40ug/m3 (gravimetric equivalent)</i>	<i>No more than 35 days where daily mean >50ug/m3 (gravimetric equivalent)</i>
2002	31	17
2003	37	47
2004	31	19
2005	30	24
2006	30	21
2007	30	26

(Note- italics indicates < 90% data capture and 2007 results are provisional)

The results confirm for each year of monitoring that there have been days when the daily mean standard of 50 µg m⁻³ was exceeded, with the current (i.e. 2004) daily mean objective only exceeded during 2003. The 2004 annual mean objective has not been exceeded over this period, although it was approached in 2003.

Figure 2 – Number of exceedences of the daily mean PM10 objective at Lewisham 2



The results in table 2 and figure 2 show that the more stringent daily average objective was only exceeded in 2003, which was a very polluted year. In 2007 the number of exceedences of the daily mean were more than in the previous year, but still well within the objective threshold.

In conclusion, the PM₁₀ objectives are currently not exceeded at the New Cross Road site. However previous modelling showed that the daily P PM₁₀ is at risk of being exceeded, although at fewer locations than the NO₂ annual mean objective. PM₁₀ arising from construction sites was not considered in the modelling study. Major regeneration is ongoing and planned across the Borough – therefore the PM₁₀ remains a pollutant of primary concern. The monitoring for sulphur dioxide confirms that the air quality objectives are not currently being exceeded.

3.5 Ozone

The Council undertakes the continuous monitoring of ozone at its LW1, an urban background monitoring site in Catford. The site is part of the LAQN and as such the site meets the QA/QC requirements of the LAQM. TG03 guidance.

The results for the period 2002 – 2007 are given in Table 6. The data capture for each year is reported in Annex 3.

Table 6 - Number of daily maxima exceeding 100 $\mu\text{g}\text{m}^{-3}$ based on 8-hour running mean at Lewisham 1 - Catford

Objective	2002	2003	2004	2005	2006	2007
Number of periods	2	17	1	14	9	3

Note- *italics indicates < 90% data capture ; 2007 calculation included provisional data.*

The Government's air quality objective, not to exceed 10 periods in a calendar year, was exceeded at the monitoring site during 2003 and 2005.

4. New Local Developments

This section outlines those local developments that have taken place that may affect air quality.

There are no new roads, landfill or mineral development planned in the borough. New industrial processes are listed in the Annex 3. None of them is expected to have significant impact on air quality.

The Lewisham roundabout will be replaced by an H-shaped junction as part of the Lewisham Gateway development. The final details of the scheme are yet being discussed. It is likely that construction work will start by the end of 2008. An air quality assessment was carried out to support the planning application and the Council will ensure that committed mitigation measures aimed to reduce the impact of the development on local air quality will be implemented during construction and operation. Further major developments are planned in the Lewisham town area: the Thurston Road development, which was discussed together with the Lewisham Gateway development in the previous progress report, and the Loampit Vale development. The Loampit Vale development air quality assessment will take into consideration cumulative impacts from the above mentioned schemes and impacts from the planned biomass installation.

5. Air Quality Action Plan Progress Report

In this second part of the Local Air Quality Management Report, we look at the progress the Council has made in implementing its Air Quality Action Plan.

The previous report included progress on measures set out in the Draft Air Quality Action Plan. This was finalised and adopted in February 2008. The Implementation of the plan continues to involve liaison across several Council Departments including Transport and Streets, Planning, the Sustainable Energy Team and Environmental Health.

Progress on each of the 21 actions are reported in the table below and refer to achievements since last year progress report. The key achievements over last year included: the adoption of the final version of the Action Plan in February and a diffusion tubes monitoring network comprising established in the same month; fully compliance of the Council fleet with the Low Emission Zone, which was implemented also in February; a substantial increase in school travel plans; further progress with the Council travel plan, including the commitment of private large organisation to commit to a green travel plan

Over the next year actions (the same actions from the draft Action Plan were kept in the final version) will be reviewed and it is likely that some of them will be amended or completed. The review will include further quantification of benefits and costs of the major actions.

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
Action 1 – Introduction of London Low Emission Zone (LEZ)	The council has identified this measure in its Local Implementation Plan. LEZ was due to be implemented in 2007 but this will now be from 2008.	LEZ implemented in Feb 08. LBL worked closely with TfL and GLA to publicize the scheme locally prior to its implementation.
Action 2 - Vehicle Emissions Testing.	This measure has not yet been progressed	VOSA ³ branch covering Lewisham area did not allocate any funding for monitoring traffic emissions. A joint bid ⁴ for Defra funding has been put together with the South London Cluster Group to use remote sensing equipment in 2008.
Action 3 – Measures to address idling Engines	This measure has not yet been progressed	Complaints about idling vehicles are now being recorded in order to identify hotspot areas and take appropriate action. EST ⁵ Eco-driving tip-cards were distributed during LBL Environmental Day (see Action 20). Funding are being requested through the Air Quality Grant to install signage at schools, following the Hillingdon example.

³ Vehicle and Operator Services Agency

⁴ Defra Air Quality Grant 2008/09 LINK

⁵ Energy Saving Trust

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
<p>Action 4 – Measures to encourage the Use of Cleaner Technology and Alternative Fuels in Council and Contractors Fleet.</p>	<p>Environmental friendly purchasing hierarchy, in place for fleet replacement. LPG refuelling point at the Wearside Council depot.</p> <p>The Council has 350 vehicles of which 50 are LPG 6 are electric and 1 is a hybrid. Of the remaining diesel fleet 5% are biofuel fuelled vehicles. Under the Council's Vehicle Replacement Policy recently purchased vehicles are all Euro VI.</p>	<p>The fleet is fully compliant with LEZ standards. 86% of the Council vehicles use Biodiesel – the remaining 14% vehicles use LPG 19% of the fleet is now Euro IV, with 67% Euro III and only 14% Euro II.</p> <p>An officer within the Procurement and Energy Efficiency team has been tasked with collating baseline data for LBL fleet emissions inventory. The same database will be used to obtain NO_x & PM₁₀ emissions (National Indicator NI194: : Reduction in NO_x and PM₁₀ emissions through local authority's estate and operations) together with CO₂ emissions (NI185)</p>
<p>Action 5 – Measures to encourage the Use of Cleaner Technology and Alternative Fuels in Public Transport Vehicles</p>	<p>The Council has supported TfL with the implementation of cleaner technology in buses. All London buses under contract to TfL met a minimum of Euro II emission standards for all pollutants by the end of 2005. Through the fitting of particulate traps on all Euro II and Euro III buses, the fleet also met a minimum of Euro IV emission standards for particulates by the end of 2005.</p>	<p>The bus replacement scheme has successfully been completed and LBL fleet is now fully compliant with the LEZ standards.</p>
<p>Action 6 - Measures to encourage the Use of Cleaner Technology and Alternative Fuels in taxis</p>	<p>The Taxi Emissions Strategy will be implemented through the Public Carriage Office London's black taxi fleet will be expected to meet strict emissions standards by mid 2008, under the Mayor's Taxi Emissions Strategy.</p>	<p>Support has been offered to GLA & TfL in implementing and publicizing the scheme locally</p>

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
Action 7 - Measures to encourage the Use of Cleaner Technology and Alternative Fuels in Delivery and Freight Road Vehicles	Lewisham is a member of the South London Freight Quality Partnership (SLFQP). Consolidation Centre in South London. Surveys on Deptford High Street regarding the loading and unloading freight have been commissioned and actions will be implemented.	LBL assisted in organizing and offered a venue for one of the SLFQP quarterly meetings. The SLFQP have received £180,000 from TfL for 2008/09 for consolidation and logistics development to improve deliveries, with each borough creating their own consolidation and delivery plans and developers to use cleaner and quieter vehicles. Night time delivery successfully piloted in Wandsworth and may be extended to similar sites in Lewisham.
Action 8 – Measures to support a sustainable Transport Strategy for Lewisham	The Transport Group actively works with their partners in bringing about improvements to public transport.	A sustainable transport strategy for Lewisham is being delivered through the London-wide Good Going Campaign. The Borough was allocated from the Mayor of London £3.27m of funding to spend on local transport improvements to make the borough safer, cleaner and greener through projects delivered by the council during 2007-08.

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
<p>Action 9 – Measures to encourage and promote the use of Travel plans</p>	<p>Lewisham Council developed its first Travel Plan in 1999. As the largest employer in the Borough it has an important role in setting an examples to other organisations of the need to reduce their employees reliance on cars to travel to and from work. Lewisham has moved forward considerably with the abolition car leasing, the introduction of staff parking charges at its Catford and Wearside sites. University Hospital London and Goldsmiths College have also developed travel plans.</p>	<p>Lewisham jointly won ‘Best London Borough Travel Plan’ with the borough of Hackney at the Transport for London ‘Sustainable Transport Awards’ 2007 for its innovation and commitment to promoting cleaner and healthier ways of travelling in London.</p> <p>The revised Council’s Staff Travel Strategy includes a range of new initiatives to promote sustainable transport modes such as interest free loans for season tickets and bicycles as well as car sharing and car pools. The Council also supports flexible working arrangements to reduce the need to travel. Lewisham appointed a permanent Travel Plan Coordinator post funded by parking revenue; and savings were made by removing the ‘essential car-user allowance’ and by managers’ careful assessment of staff travel expenses. The Council has also taken the bold step of charging staff £200 a year to park their cars at work to encourage them to use public transport and other environmentally friendly means to get to work. The Staff Travel Group works to promote sustainable transport within the Council. A number of large organisations within the Borough have committed to implement a green travel plan. The Staff Travel Strategy is available from the Council web-site.</p> <p>7 new School Travel Plans were approved in 2006/07 bringing the percentage of Schools within LBL with approved STP to 51%. It is expected that 100% of schools will have implemented a STP by Dec 2009</p>

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
<p>Action 10 – Measures to promote and publicise improvements to public transport</p>	<p>The DLR extension across the river to London City Airport has been completed. The Thameslink service is now in operation. Lewisham is actively involved in planning the ELL and the underground system will be upgraded. The Tramlink extension into Lewisham has been completed.</p>	<p>Events aimed to promote public transport have been organised through internal and external initiatives (e.g. through the travel planning department or the Good Going campaign)</p> <p>Schemes aimed over the last year to improve accessibility in public transport, include improvements to Deptford Station and upgrading of bus stops across the Borough.</p>
<p>Action 11 – Promotion of Walking</p>	<p>12% 2003-2005 drop in single car occupancy for council staff. Lewisham organises Annual walking festival with PCT.</p>	<p>Projects funded in 2007/08 included: £50,000 to improve walking and cycling facilities for pupils at local schools (All Saints, Baring, Chelwood Nursery, Hither Green, Holbeach, Sedgehill and Lewisham Bridge) as proposed in their School Travel Plans £110,000 to be spent over three years to create the Deptford Green Grid, as part of the wider East London Green Grid project which will improve and link together green spaces across East and South East London</p>
<p>Action 12 – Promotion of Cycling</p>	<p>A cycling officer has been appointed to liaise with Sustrans for cycling routes on Thames path and waterlink way. Lewisham cycling campaign is a local group and we respond to their needs and requests i.e. contraflows implemented at Deptford. Ongoing covered under workplace travel plans also across the borough town centres. Local Cycling Strategy has been adopted by Council.</p>	<p>The Lewisham Staff Cyclist Forum was successfully launched in October 2007 with the aim of provide advice and information about cycling, exchange information, bring any issues preventing employees from cycling to work, increase number of staff cycling to work, raise awareness of new initiatives.</p> <p>Projects funded in 2007/08 included:£200,000 to improve cycling facilities around Wearside Depot by the River Ravensbourne between Lewisham town centre and Ladywell, including the installation of a cycle path under the nearby railway bridge</p>

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
Action 13 - Measures to manage parking in the Borough	Council's Parking Plan adopted in 2004. An objective of the Parking Enforcement Policy is to protect the environment and to pursue sustainable development through use of parking control as a means of traffic restraint.	Lewisham has now 13 controlled parking zones. The Council is consulting on an increase in parking charges The number of on-street parking places for car club vehicles have been increased. Car parking ratios for new developments have been reduced, and parking spaces for car-clubs included in planning conditions for major developments.
Action 14 – Speed Management	Lewisham has been proactive in introducing a number of 20mph traffic schemes within residential areas. These use a combination of visual stimuli as well as physical measures to reduce traffic speed.	The Council has been consulting on new 20mph zones. A proposal for Lewisham to become the first London council to introduce a blanket 20mph speed limit is also under discussion. The new proposal is being pushed through to eliminate the need for speed humps (which would have a beneficial impact on air quality) and encourage people to walk or cycle.
Action 15 - The Council will work with external bodies such as TfL to manage road planning	Over the life time of this Plan it is likely that only small scale road improvements will take place in Lewisham as new major roads will not be planned. Traffic management is a useful tool for encouraging walking and cycling and implemented through the transport and urban planning teams.	The Council has been closely working with TfL to maximise the beneficial impacts of the Kender Triangle road scheme in New Cross Gate (£4.5 million programme that should be completed in the next three years). This new traffic scheme will improve congestion and the accompanying problems of noise and air pollution through easing traffic flows by changing roads back to two way working. Benefits include improved pedestrian safety and bus journey times.

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
<p>Action 16 - Measures to reduce emissions from new developments</p>	<p>When large developments within the borough are proposed developers are required to carry out both AQ and transport assessments. Information for developers is currently available on the Council's website.</p>	<p>The pollution control team has been working closely with the planning and sustainability teams to ensure that: developers follow the Code of Construction Practice; the air quality impacts of biomass installations are assessed and that the best available mitigation technologies are employed; parking free developments or reduced parking ratio (e.g. 0.3% for the Loampit Vale development); S106 funding towards schemes beneficial to air quality is increased.</p> <p>Funding committed through S106 for the Catford Greyhound development included for example residential and business green travel plan, free oyster cards taster credits, car clubs parking spaces</p> <p>A proposal to implement low emission strategies for new developments is under discussion.</p>
<p>Action 17 - Measures to reduce or eliminate emissions from commercial construction sites</p>	<p>When large developments within the borough are proposed developers are required to carry out both AQ and transport assessments. Information for developers is currently available on the Council's website.</p> <p>Council published a Code of Construction Practice in 2000 and this is enforced through Planning and Environmental Enforcements teams.</p>	<p>The Council Code of Construction Practice is being updated in partnership with the South London Cluster Group to include reference to the London-wide Best Practice Guidance. Publication of the new code is expected in May 2008.</p> <p>The Sustainable Construction Forum has been established to cover the greening of design, construction and maintenance work carried out in Lewisham.</p>

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
<p>Action 18 - Measures to reduce emissions from domestic buildings</p>	<p>Domestic composting and recycling advice is available on the Council's website. Advice on bonfires is available on Council's website and complaints are dealt with by the Environmental Enforcement team.</p>	<p>The Draft Council Climate Change Strategy drafted is being finalised. Lewisham coordinated a London-wide Climate Change awareness raising programme in 2007 on behalf of DEFRA</p> <p>There is a range of new groups within the Council that will work towards supporting the delivery of the Climate Change Strategy. These include: the Energy Forum which covers all energy efficiency and CO2 reduction issues and the 'Environment Champions', with staff who have volunteered to take an active role in promoting environmentally sustainable initiatives including encouraging people to switch off computers and to recycle more paper.</p>
<p>Action 19 - The Council will continue to control the release of emissions from Industrial and commercial premises</p>	<p>The Council has a statutory duty to inspect installations and liaise with the Environment Agency. The Health Impact Study was published in 2005. No notices issued or prosecutions during 2006</p>	<p>New permits have been issued for 56 dry cleaning installations and a waste wood burner.</p> <p>The latest stack monitoring results show emissions from SELCHP are well within the standards. No complaints have been received over the last year.</p>

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
<p>Action 20 - The Council will continue to assess the current air quality levels across the Borough and increase awareness on air quality issues</p>	<p>Air quality monitoring at 2 sites in the borough will continue. The Council will continue to attend cluster group meetings. Air quality information is available on the Council's website and can be posted to the public upon request. Action is ongoing 2006 monitoring data is available in Section 3 of this report</p>	<p>The final version of Lewisham Air Quality Action Plan was adopted in February 2008.</p> <p>An Environmental Day organised was organised by the Sustainability & Travel Planning teams in January 2008. The Pollution Control team participated with display boards on the AirText scheme and providing leaflets on air quality e.g. eco-driving tip cards.</p> <p>AirText scheme: nearly 40 users were recruited following the launch of the scheme in March 2007. An increase in registration by 20% followed the Environmental Day event. Contacts have been established with frontline officers working with elderly and young residents and offered to provide information on AirText.</p> <p>A diffusion tubes monitoring network for nitrogen dioxide was established in February 2008. The network, which comprises 10 sites (one of which includes triplicates co-located with a continuous monitoring station), is likely to be increased through a joint initiative with the Sustainability team, which will see Council staff part of the Environment Champions group being directly involved with the monitoring at new sites. Funding has been requested for establishing monitoring sites at schools and within community groups and having students and residents primarily involved in the surveys.</p> <p>Funding has been requested to install a new fixed continuous monitoring station to monitor also PM2.5 and investigate health impacts of air pollution on vulnerable categories of residents.</p> <p>Schemes being implemented through partnership work with the South London Cluster Group include a benchmarking exercise to appraise and improve local authorities air quality management activities.</p>

Action	Outcome to date (Progress Report 2007)	Outcome to date (Progress Report 2008)
Action 21 - The Council will implement procurement measures to reduce overall pollution levels across the Borough	Completed The Council published a 'Green Procurement Guide' in 2006 and is committed to reducing pollution through the procurement process. This document is available on Council's website.	The action was completed last year. The Council Green Procurement team is now working on ensuring that Council contractors implement best practice and in expanding the scheme to other large organisations within the Borough.

7. Conclusion

The up to date monitoring results continue to indicate that the Government's current air quality objectives are being exceeded widely at locations within the Air Quality Management Areas where there is relevant public exposure. Based on the findings in this report there is no need to progress to a Detailed Assessment either to revoke its existing AQMA or determine whether any new AQMAs are required.

The Council will continue its air quality monitoring programme and pursue the extension of the monitoring network in order that more exhaustive data will be included in the next progress report. prepare for its next round of Review and Assessment in 2007.

An update on the progress made by the Council regarding its twenty one actions contained in the Council's Action Plan is also presented in this report.

The key achievements over last year included: the adoption of the final version of the Action Plan in February and a diffusion tubes monitoring network comprising established in the same month; fully compliance of the Council fleet with the Low Emission Zone, which was implemented also in February; a substantial increase in school travel plans; further progress with the Council travel plan, including the commitment of private large organisation to commit to a green travel plan. Over the next year actions (the same actions from the draft Action Plan were kept in the final version) will be reviewed and it is likely that some of them will be amended or completed. The review will include further quantification of benefits and costs of the major actions.

9. Glossary of Terms

AADT	Annual Average Daily Traffic (vehicles per day)
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
AURN	Automatic Urban and Rural Network
DA	Detailed Assessment
Defra	Department for Environment Food and Rural Affairs
ERG	Environmental Research Group, King's College London
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LAQN	London Air Quality Network
mg/m ³	Milligrams of the pollutant per cubic metre of air
NO	Nitric oxide
NO ₂	Nitrogen dioxide
PM ₁₀	Particles with diameter less than 10µm
ppb	Parts per billion
ppm	Parts per million
QA/QC	Quality Assurance / Quality Control
SO ₂	Sulphur dioxide
TEOM	Tapered Element Oscillating Microbalance
µg/m ³	Micrograms of the pollutant per cubic metre of air

Appendices

Appendix 1

Figure 1 - Lewisham Air Quality Monitoring Network (T= diffusion tubes; L= fixed continuous monitoring station)

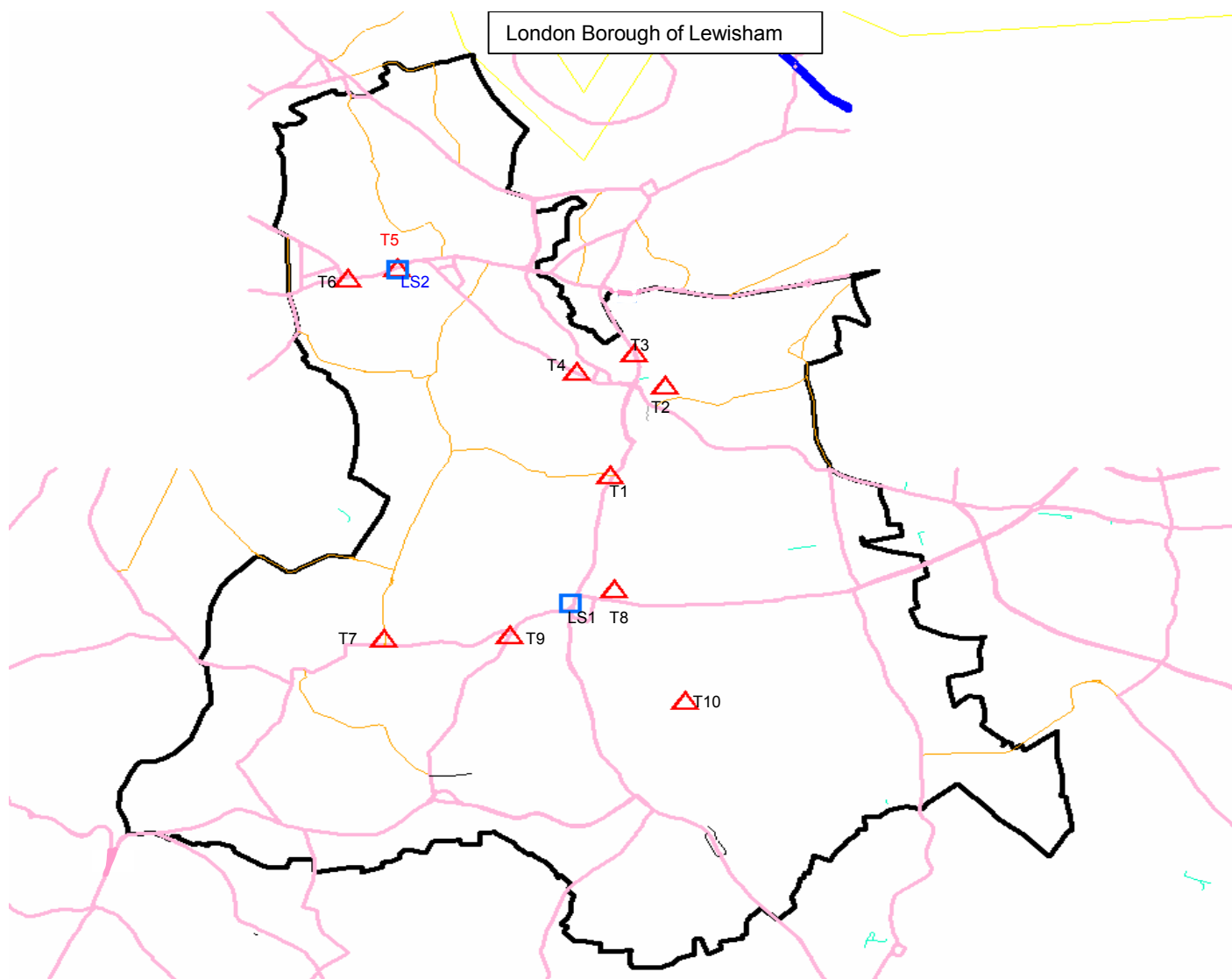


Table 1 – Location of Monitoring Sites in Lewisham(T= diffusion tubes; L= fixed continuous monitoring station)

Site ID	Area	Type	X-coord	Y-coord
T1	Lewisham - Ladywell	R	538020	174920
T2	Lewisham - Gateway	UB	538475	175785
T3	Lewisham - Gateway	R	538220	176100
T4	Lewisham - Gateway	R	537740	175920
T5	New Cross	R	536246	176922
T6	New Cross	R	535830	176830
T7	Brockley	R	536130	173337
T8	Catford	R	538055	173810
T9	Catford	UB	537180	173370
T10	Hither Green	UB	538640	172730
L1	Lewisham 1	UB	537680	173685
L2	Lewisham 2	R	536246	176922

Appendix 2

Table 2 - NO₂ data capture (%)

LAQN site	Type	1999	2000	2001	2002	2003	2004	2005	2006	2007
Lewisham 1	U	95	43	45	93	99	98	99	94	91
Lewisham 2	R	no	no	no	75	99	100	80	79	93

NB all 2007 data are provisional

Between 2000-2001 the LW1 site was closed for 6 months in each of the years due to building works on site
2002 capture of data only started in April when monitoring location was set up.

During 2006 the LW1 site had recurring difficulties with the maintenance of the NO_x analyser and the LW2 had a period over the summer where there was a fault with air conditioning and the analysers had to be turned off.

Table 3 - SO₂ data capture (%)

LAQN site	Type	2002	2003	2004	2005	2006	2007
Lewisham 1	U	96	99	98	97	97	98
Lewisham 2	R	75	96	100	100	84	94

NB all 2007 data are provisional

2002 capture of data only started in April when monitoring location was set up. LW2 had a period over the summer where there was a fault with air conditioning and the analysers had to be turned off.

Table 4 - PM₁₀ data capture (%)

LAQN site	Type	1999	2000	2001	2002	2003	2004	2005	2006	2007
Lewisham 2	R	no	no	no	75	99	100	99	80	93

NB all 2007 data are provisional

2002 capture of data only started in April when monitoring location was set up. LW2 had a period over the summer where there was a fault with air conditioning and the analysers had to be turned off.

Table 5 - Ozone data capture rate (%)

LAQN site	2002	2003	2004	2005	2006	2007
Lewisham LW1	88	97	88	99	99	98

NB all 2007 data are provisional

Appendix 3

New Industrial Installations in Lewisham

ProcessSiteOrganisation	PrimaryPgNote	Process Status
F.M. Conway	PG3/01 (04) Cement	Current
Lewisham Crematorium	PG5/ 2 Crematoria	Current
Shell Hillbrow	PG1/14 Petrol Station	Current
Tesco Loampit Vale	PG1/14 Petrol Station	Current
Star Service Station Carford	PG1/14 Petrol Station	Current
Sainsbury's Sydenham	PG1/14 Petrol Station	Current
Total Whitfoot Lane	PG1/14 Petrol Station	Current
Holts Accident Repair Centre	PG6/34 Respraying of road vehicles	Current
Penfold Motors Limited	PG6/34 Respraying of road vehicles	Revoked
Ascott Cab & Co Sales Ltd	PG6/34 (04) Respraying of Road Vehicles	Current
Volkespares Limited	PG1/ 1 Waste Oil Burner (Under 0.4Mw)	Current
The Engine Shop	PG1/ 1 Waste Oil Burner (Under 0.4Mw)	Revoked
London Wood Reclaim Ltd	PG1/12 (04) Combustion - solid waste	New
Horizon Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Professional Dry Cleaners	PG6/46 (04) Dry Cleaning	New
High Road Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Lewisham Dry Cleaneres	PG6/46 (04) Dry Cleaning	New
2001 Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Whistle and Flute	PG6/46 (04) Dry Cleaning	New
Busy Bees	PG6/46 (04) Dry Cleaning	New
BrookBank Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Kirkdale Express Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Turbo Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Clartone Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Speedway Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Michigan Laundrette Ltd	PG6/46 (04) Dry Cleaning	New
Forbs Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Trend Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Asik Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Finesse Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Black Rose Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Tuxedo Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Brownhill Road Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Swallow Express	PG6/46 (04) Dry Cleaning	New
STARLITE Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Ace Cleaners (Actontex Ltd)	PG6/46 (04) Dry Cleaning	New
Crofton Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Streakers Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Quality Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Strides Drycleaners	PG6/46 (04) Dry Cleaning	New
Downham Express Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Hydra Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Clean World	PG6/46 (04) Dry Cleaning	New

Express Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Cont. Process Site Organisation	Cont. Primary Pg Note	Cont. Status
Five Star Dry Cleaners Downham Way	PG6/46 (04) Dry Cleaning	New
Five Star Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Carlton Drycleaners	PG6/46 (04) Dry Cleaning	New
Ladywell Junction Express Cleaners	PG6/46 (04) Dry Cleaning	New
Quality Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Pel's Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Palace Cleaners	PG6/46 (04) Dry Cleaning	New
Blackheath Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Starbright Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Three Square Express Dry Cleaners	PG6/46 (04) Dry Cleaning	New
M & S Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Master Drycleaner	PG6/46 (04) Dry Cleaning	New
Starshine Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Friendly Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Honor Oak Cleaners	PG6/46 (04) Dry Cleaning	New
The Cleaning Touch Dry Cleaners	PG6/46 (04) Dry Cleaning	New
One Step Ahead	PG6/46 (04) Dry Cleaning	New
Manor Lane Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Perry Cleaners Ltd	PG6/46 (04) Dry Cleaning	New
Bellingham Cleaners	PG6/46 (04) Dry Cleaning	New
Catford Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Jubilee Cleaners	PG6/46 (04) Dry Cleaning	New
Stanstead Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Suits U Bespoke Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Aplanda Dry Cleaners	PG6/46 (04) Dry Cleaning	New
Shell Deptford	PG1/14 Petrol Station	Current
Shell Forest Hill	PG1/14 Petrol Station	Current
Star (Crown Auto Point)	PG1/14 Petrol Station	Current
Lee Self-Service Station	PG1/14 Petrol Station	Current
Sainsbury's New Cross Road	PG1/14 Petrol Station	Current
Foxberry Service Station	PG1/14 Petrol Station	Current
Sydenham Service Centre	PG1/14 Petrol Station	Current
Tesco Lewisham Road	PG1/14 Petrol Station	Current
Star Service Station Southend Lane	PG1/14 Petrol Station	Current
Tesco Grove Park Express	PG1/14 Petrol Station	Current
Shell Lewisham	PG1/14 Petrol Station	Current
BP/Safeway Bromley Road	PG1/14 Petrol Station	Current
Forest Hill Express	PG1/14 Petrol Station	Current