



Pollution Control Team

# The Borough Air Quality Bulletin



A Local Agenda 21/Environment Group Initiative

Spring 2002

## The next Stage towards cleaner air

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### **Ealing Borough Air Quality Bulletin**

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Ealing's Further Review and Assessment of Air Quality (more commonly known as 'Stage 4') has finally been produced in draft form by the Council's consultants ERG-Kings College, London. Delays in releasing key emissions inventory data and vehicle emissions factors by the Government, have resulted in the later than expected production of this vital document. Having designated the whole borough an Air Quality Management Area in December 2000, the Council has to produce a written Action Plan detailing measures it intends to use to work towards meeting the prescribed air quality objectives. The Council also has to undertake a further review of air quality (Stage 4) to refine the outcomes of earlier stages. This should include details of how much an improvement is needed and to what extent different sources of pollution contribute to the problem.

The results show that the Council was justified in declaring a whole borough AQMA, by confirming that parts of the borough will exceed the Objectives for NO<sub>2</sub> and PM<sub>10</sub>. The air quality "hotspots" identified in previous reports are still present, although with improved data sets and methodology, their size and extent differ. Further investigation within these hotspots show that the main contribution to nitrogen oxide (NO<sub>x</sub>) concentrations within the borough is road traffic

(80%), whilst the majority of PM<sub>10</sub> concentrations can be attributed to background sources, with road traffic making up between 15 and 40% depending on location. This is further broken down to the contribution from different vehicles. Cars are the major contribution of NO<sub>x</sub> in the west of the borough and along the A40, while along the A406 it is HGVs that contribute the most. For PM<sub>10</sub>, HGVs are the main source of the traffic contribution.

A scenario was also tested based on a Low Emission Zone (LEZ), which bars the most polluting vehicles from entering an area, to assess the potential of such a measure for meeting the Objectives. The results show that with the introduction of an appropriate LEZ, the whole borough would meet the PM<sub>10</sub> Objective, and that the annual NO<sub>2</sub> Objective would also be met except at "hotspots" along parts of the A40 and A406, and on South Road, Southall. It appears then that an LEZ should form a major part of any Action Plan, in combination with other measures if the air quality objectives are to be met.

We aim to keep readers informed regarding air quality management in Ealing and to bring you up to date on general air quality issues. If you have any comments on how to improve this bulletin or if there are any topics you would like to see included, then please get in touch with the Editor.

## **Chancellor's Budget encourages lower emissions**

In his Budget speech on 17 April, Chancellor of the Exchequer Gordon Brown included incentives for the uptake of more environmentally friendly vehicles. From next year, a fuel duty incentive for sulphur free fuel is to be introduced. From April 17<sup>th</sup>, there will also be 100% enhanced capital allowances on companies' investments in new cars emitting up to 120g/km of carbon dioxide; and on vehicle refuelling infrastructure for compressed natural gas or hydrogen fuel. New petrol cars below this limit include the Honda Insight and the MCC Smart; diesel vehicles include the new Renault Clio, Ford Fiesta, and Peugeot 307.

Last year's budget also saw a two pence per litre reduction in the duty on ultra-low sulphur petrol, and a three pence per litre reduction in the duty on ultra-low sulphur diesel. However, this year, the Chancellor also announced a cut of £55 in the licence fee for the least polluting vans, cuts of £30 for the least polluting cars, and cuts of £35 for motorcycles. This means a difference of £100 between the most and least polluting cars.

## **Controlling air pollution from industry in LB Ealing**

*Did you know that*

Under the Environmental Protection Act, 1990, the Council regulates nearly 80 industrial and commercial activities ("processes") that are capable of causing air pollution, including

- \* 33 petrol stations
- \* 21 mobile concrete crushers and screeners (probably the highest number authorised by any local authority in the country)
- \* 15 car resprayers
- \* plus a variety of engineering companies and a petfood factory.

Pollutants that are controlled included volatile organic compounds (e.g. solvents), paint spray (particles), smoke, dust, and odour. Council officers are required to inspect all the larger processes twice a year. A public register is maintained at Perceval House, which can be consulted on request. There is an up to date

list of processes on the Pollution Control web site. For further information about any process, contact John Freeman on 020 8758 5738 or e-mail [freemanj@ealing.gov.uk](mailto:freemanj@ealing.gov.uk).

## **Chief scientist calls for end of petrol and diesel vehicles**

The Government's Chief Scientific Advisor has said that deadlines should be put in place to end the sale of all petrol and diesel powered vehicles in the UK, on air quality and climate change grounds. Professor David King stated in a national newspaper that the UK should follow the example of the Italian region of Lombardy, which following chronic air pollution problems in certain cities, plans to ban the sale of fossil fuel powered vehicles from January 2005. Professor King believes that such an incentive is required in this country to force car manufacturers and oil companies to develop 'green' cars powered by hydrogen fuel cells and electricity. However, he refused to state which year a ban should be implemented.

## **Air Quality on the Internet**

Here is a selection of air quality sites on the Internet:-

- Ealing Council's Pollution Control Team  
[www.ealing.gov.uk/pollcon](http://www.ealing.gov.uk/pollcon)
- Department for Environment, Food and Rural Areas  
<http://www.defra.gov.uk/environment/index.htm>
- National Environmental Technology Centre  
[www.aeat.co.uk/netcen/airqual/welcome.html](http://www.aeat.co.uk/netcen/airqual/welcome.html)
- National Society of Clean Air and Environmental Protection  
<http://www.nasca.org.uk>
- The Air Quality Management Site  
<http://www.ifi.co.uk/air.htm>
- Atmospheric Research & Information Centre (at Manchester Metropolitan University)  
<http://www.docm.mmu.ac.uk/aric/eae/>
- Friends of the Earth [www.foe.co.uk](http://www.foe.co.uk)
- Local Agenda 21 Pollution and Public Health Project Group  
[www.LA21.org](http://www.LA21.org)
- OMNI - Ealing Council's new interactive website.  
[www.seiph.umds.ac.uk/o2/ealing/index.htm](http://www.seiph.umds.ac.uk/o2/ealing/index.htm)
- Environmental Research Group - Kings College London. London Air Quality Network.  
<http://www.erg.kcl.ac.uk/london/asp/home.asp>

## Research Latest

### Lung cancer linked to air pollution

For the first time, clear evidence has been produced that links long-term exposure of fine particles to an increased risk of dying from lung cancer. The research, published in the Journal of the American Medical Association, found that people living in the most heavily polluted metropolitan areas in America have a 12 percent increased risk of dying of lung cancer than people in the least polluted areas.

Researchers gathered air pollution data and 16 years of personal health records of 500,000 people from cities scattered across the US. By comparing the levels of pollution in the area where each patient lived to the cause of death, the researchers discovered a striking link between certain illnesses and pollution. They found that the death rate from lung cancer increased by 8% for every increase of 10  $\mu\text{g}/\text{m}^3$  of fine particulates. Other heart and lung related causes of death increased 6 percent for every 10  $\mu\text{g}/\text{m}^3$  increase. Previous research by Harvard University and the American Cancer Society strongly linked these fine particles to high mortality rates from cardiopulmonary diseases such as heart attacks, strokes and asthma. Until now, however, scientists lacked sufficient statistical evidence to directly link those emissions to elevated lung cancer death rates. The study found that the risks of living in such heavily polluted areas did not approach those caused by a person smoking cigarettes. However, it was comparable, said the researchers, with that faced by non-smokers exposed to second-hand smoke over an extended period.

**Washington Post.** 6/3/02. 'Pollution ties pollution, risk of lung cancer' by Eric Pianan.

<http://c.moreover.com/click/here.pl?e33358790&e=6347>

**BBC online.** 'Air pollution cancer fears grow'

[http://news.bbc.co.uk/1/hi/english/health/newsid\\_1853000/1853675.stm](http://news.bbc.co.uk/1/hi/english/health/newsid_1853000/1853675.stm)

### Ozone may cause asthma after all

New research from the US suggests that contrary to conventional wisdom, rather than just exacerbate asthma, ozone may in fact be one of the causes of the illness. The study tracked 3535 children from 12 communities in southern California for up to five years, none of which were asthmatic at the onset of the investigation. Six of the communities had high levels of ozone concentration, with the other six being low ozone communities. The researchers found that 265 of the children were diagnosed with asthma during the study, and that those children who exercised heavily in areas of high ozone were 3.3 times more likely to

develop asthma. In low-ozone communities, they found no increased risk of asthma in children who played team sports. The findings show that the children who played the most active sports in the most polluted areas developed the most asthma. It suggests that although exercise is extremely healthy for children, on days when air pollution levels are expected to be high, children should limit prolonged outdoor exertion.

**Washington Post.** 1/02/02. 'Study: pollution may cause Asthma' by William Booth. <http://www.washingtonpost.com/wp-dyn/articles/A6057-2002Jan31.html>

**Edie Weekly Summary.** 8/2/02. Ozone causes asthma, suggests new study. <http://www.edie.net/news/Archive/5162.cfm>

**Air Quality Management.** February 2002. Issue number 74.

### Global warming may increase asthma and hay fever numbers

A new report published in the March edition of the scientific journal of the American College of Allergy, Asthma and Immunology, warns that diseases such as hay fever and asthma may increase in the future due to global warming. Research from Harvard University demonstrates that plant pollen production was 61% higher in plants that were exposed to higher levels of  $\text{CO}_2$ . Global warming has produced a 29% increase in  $\text{CO}_2$  levels since pre-industrial times, which is likely to double again between 2050 and 2100. Such an expected increase gives rise to the fear of greater production of airborne allergens such as pollen, through quicker and more abundant growth of plants, which may result in more cases of respiratory ailments.

**Edie weekly summaries.** 22/03/02. Respiratory illnesses may increase with global warming by Sorcha Clifford.

[www.edie.net/news/Archive/5320.cfm](http://www.edie.net/news/Archive/5320.cfm)

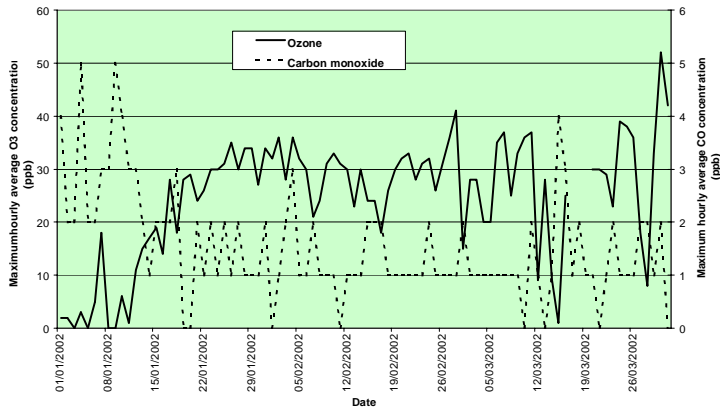
### Caution required

Any association between pollution and ill health may be affected by cold weather researchers believe. Taking mortality, weather and pollution data from between 1976 and 1995, they looked for patterns linking the various variables. They found a link between episodes of pollution and atypical patterns of prolonged cold weather. They warn that this could give false impressions of mortality associated with air pollution.

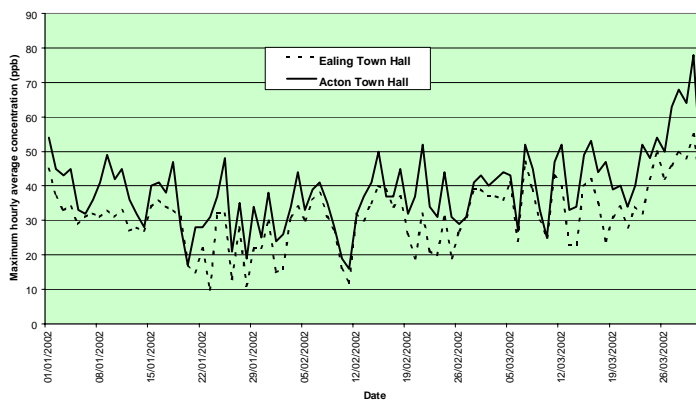
**Air Quality Management.** January 2002. Issue number 73.

## Air Pollution Results January to March 2002

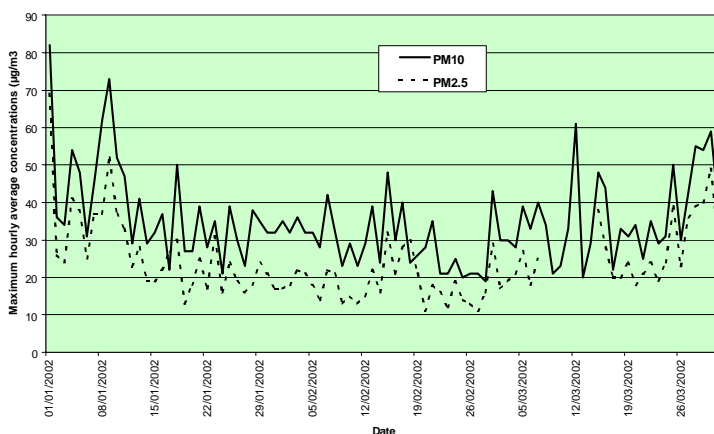
Levels measured at Ealing (O<sub>3</sub>) and Acton (CO) Town Halls



Nitrogen dioxide (NO<sub>2</sub>) levels measured in Ealing



Particulate concentrations measured at Acton Town Hall



The weather played a major part in the 2 days of MODERATE particulate levels Ealing experienced over the past three months. Elevated levels of PM<sub>10</sub> were measured in the early morning of 1<sup>st</sup> January possibly due to fireworks in the area. The first MODERATE episode around the 9<sup>th</sup> January was due to calm, settled conditions that allowed PM<sub>10</sub> levels across London to rise. Similarly, around the 28<sup>th</sup> March, a high pressure system over the UK brought calm, sunny weather. Local pollution was worsened by light easterly winds bringing polluted air from the continent

Other pollutants remained LOW for the three month period.

### Daily Forecasts

A daily air pollution forecast is published every day on the Pollution Control website, as well as recent air pollution levels. You will also find details of Ealing's Air Quality Review and Assessment, the results of Ealing's public consultation on air pollution and other related topics, including back issues of the Air Quality Bulletin.

### Pollution Bandings

	low	moderate	high	v.high
O <sub>3</sub>	<50	50-89	80-179	>180
CO	<10	10-14	15-19	>20
NO <sub>2</sub>	<150	150-299	300-399	>400
PM <sub>10</sub>	<50	50-74	75-99	>100

Measured as:

Ozone	(O <sub>3</sub> )	hourly mean
Carbon monoxide	(CO)	running 8 hour mean
Nitrogen dioxide	(NO <sub>2</sub> )	hourly mean
Particulates	(PM <sub>10</sub> )	running 24 hour mean