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Pollution Control Team

The Borough Air Quality Bulletin

A Local Agenda 21/Environmental Quality Team Initiative

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IN THIS ISSUE

Ealing Borough Air Quality Bulletin

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Air Quality Policies That Work

A DEFRA commissioned report published in December 2004 demonstrates how a variety of differing air quality policies introduced since 1990 have improved pollutant emissions. The report "An evaluation of the air quality strategy" looked at road transport and energy generation and evaluated the effect that a number of specific legislative policies in both sectors have had over the evaluation period of 1990-2001. The report also looks over a projected period of 2002-2010, and compares the results against the estimated outcome of not having the policies.

For road transport, the policies looked at cover unleaded petrol, the sulphur content of petrol and diesel controls, and successive Euro standards (from Euro I to IV). The report highlights that the policies implemented have lead to an almost complete removal in lead emissions, a reduction of 96% in SO2 emissions, and a 35 to 55% reduction in the other main pollutants (NO_x, PM_{10}, CO, VOC) up to 2001 when compared with a 'done nothing' scenario. By 2010, these reductions are expected to increase, leading to a 69% reduction in NO_x and a 76% reduction in PM_{10} emissions.

For the electricity sector, various policies have lead to a 77% reduction in SO_2, a 58% reduction in NO_x and a 78% reduction in primary PM_{10} emissions up to 2001. By 2010, these are expected to increase to a 93%, 69% and 93% reductions in SO_2, NO_x and in PM_{10} emissions respectively.

The report goes on further with an analysis of the reduction in the population that is exposed to pollution levels above air quality objectives due to the policy measures and also the health benefits these measures have brought about in terms of annual reduction in deaths and hospital admissions avoided each year. The report can be found at http://www.defra.gov.uk/environment/airquality/strategy/evaluation/report-index.htm

Fare Rise to Pay for Emissions Cleanup

From April 2005, London taxi passengers will pay an extra 20p for every journey made in black cabs as part of a green levy that will go towards helping the Capital's 20,000 cabs meet emission standards by 2007. The money raised will allow drivers to invest in newer cleaner cabs, fit catalytic converters, or convert their cabs to run on LPG. The fare will be reviewed after three years.
http://news.bbc.co.uk/1/hi/england/london/4111373.stm

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.

West London Update

Ealing, along with 5 neighbouring Boroughs, form the West London Alliance (WLA), which works together to tackle our joint air quality problems. Officers responsible for air quality from each of these boroughs (Brent, Hammersmith & Fulham, Harrow, Hillingdon and Hounslow, joined by a representative from Richmond) meet approximately every six weeks as part of the West London Air Quality Cluster Group. The Group has been in existence for nearly 12 years and although primarily a forum for the exchange of information and best practice, the group has in recent years become more proactive in its approach and has engaged in joint working.

Under the banner 'New Solutions to Shared Pollution', the WLA have been investigating possible action plan policies that can be applied across the west London area. The most recent study identified three independent yet complimentary workstreams:

- The identification of air quality hotspots and potential measures that could be applied;
- The potential benefits for increasing the take-up of cleaner fuels and vehicles; and
- Gauging the status of public transport hubs and links, to encourage model shift.

Recommendations from this study provided short and long term measures that can be fed into our air quality action plans. The study also identified further avenues for investigation, including the identification of freight depots and routes, and sustainable travel modes, and these will be taken forward in the next year.

Horn Lane Dust Investigation

Emissions of fine particulate matter (PM_{10}) from a variety of industrial and commercial activities along a section of Horn Lane, Acton have prompted the Environmental Quality Team to carry out a detailed investigation into the air pollution levels. This detailed assessment, to be carried out during 2005, will consist of two elements, the monitoring of particulate matter in the area to reveal its source and concentrations, and modelling the dispersion of this particulate matter from its various sources to find out how far it spreads and how large an area will fail to meet air quality objectives. The monitoring will take the form of automated continuous analysers located on a grass verge on Horn Lane in front of the parade of shops at 309-333 Horn Lane. There will also be Frisbee Gauges to collect dust at 4 sites in the area, and these will be used to identify more clearly the source and extent of the emissions of large dust particles. For further details contact freemanj@ealing.gov.uk

Dry Cleaning Emissions

A new European directive means that most dry cleaners within the borough will now require permits to operate. The new directive sets limits on the amount of volatile organic compounds (VOCs) that can be released by certain processes. Dry cleaners use VOCs in the form of organic solvents to get clothes clean. Emissions of VOCs to the atmosphere can lead to high ozone concentrations, which can have a harmful effect on human health. The purpose of the new Directive is to prevent or reduce the direct and indirect effects of emissions of VOCs into the environment. All dry cleaners will have to ensure that they are operating their processes using Best Available Techniques so as to minimise the possibility of emissions. The Environmental Quality Team is currently in the process of contacting all dry cleaning establishments in the borough to inform them of the new requirements.

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/services/pollution+control/default.asp

Department for Environment, Food and Rural Areas
http://www.defra.gov.uk/environment/index.htm

National Society of Clean Air and Environmental Protection http://www.nsca.org.uk

The Air Quality Management Site
http://www.air-quality-management.co.uk/

Atmospheric Research & Information Centre (at Manchester Metropolitan University)
http://www.docm.mmu.ac.uk/aric/eae/

Friends of the Earth
www.foe.co.uk

Local Agenda 21 Pollution and Public Health Project Group
www.LA21.org

OMNI - Ealing Council's interactive website.
www.seiph.umds.ac.uk/o2/ealing/index.htm

Environmental Research Group - Kings College London. London Air Quality Network.
http://www.londonair.org.uk/london/asp/home.asp

The UK National Air Quality Information Archive
http://www.airquality.co.uk/archive/index.php

Italian Cities Ban Cars

Car traffic has been on the receiving end of a number of one day bans from 130 towns and cities across Italy over the past month. Cities like Rome, Milan and Verona have been experimenting with such bans in an attempt to tackle pollution levels. Increased public transport facilities were laid on, and in some cities this was actually free. Officials from the cities involved are considering whether to enact the one-day bans on a week-by-week basis, depending on pollution levels. Rome and Milan are testing a ban on cars with even and odd-numbered licence plates on alternate Thursdays, similar to a scheme tried out in Paris a few years ago.

http://www.guardian.co.uk/international/story/0,,1391820,00.html
http://www.iht.com/articles/2005/01/23/news/travel24.html

2004 an Improvement on 2003

Provisional statistics released by the Government show a marked improvement in air quality in 2004, over that experienced in 2003. According to DEFRA's annual Air Quality Headline Indicator published in January, there was 22 days of moderate or higher pollution in urban areas and 41 days in rural areas. This compares with 50 days in urban and 61 in rural areas for 2003 which, due to a very mild winter and hot summer, was a particularly bad year. These recent figures for urban areas are a return to the long term downward trend in the number of air pollution days monitored, largely because of a reduction in particulate matter and sulphur dioxide emissions (See page 1). There is no clear trend in the number of pollution days in rural areas over the long term and this reflects the variability in levels of ozone, the main cause of pollution in such areas. Production of ozone is strongly influenced by the weather, being created on sunny summer days. A high proportion is also blown over from main land Europe. As particulate and nitrogen dioxide pollution in urban areas reduces further, ozone pollution will become responsible for a higher percentage of pollution days experienced. More information can be found at
http://www.defra.gov.uk/news/2005/050113b.htm

Research Latest

Background Ozone on the Up

Long term monitoring on the West coast of Ireland has shown that background ozone concentrations are increasing by up to 0.5ppb per year. Monitoring first began at Mace Head in 1987, and in the 16 years to 2003, ozone levels have increased by 8ppb (24%). The upward trend has been observed during all seasons, although winter months have witnessed the largest trends.

Simmonds et al. 2004. Significant growth in surface ozone at Mace Head, Ireland, 1987–2003. Atmospheric Environment. Vol 38, Issue 28. Pp 4769-4778
Air Quality Management. November 2004. Issue number 106.

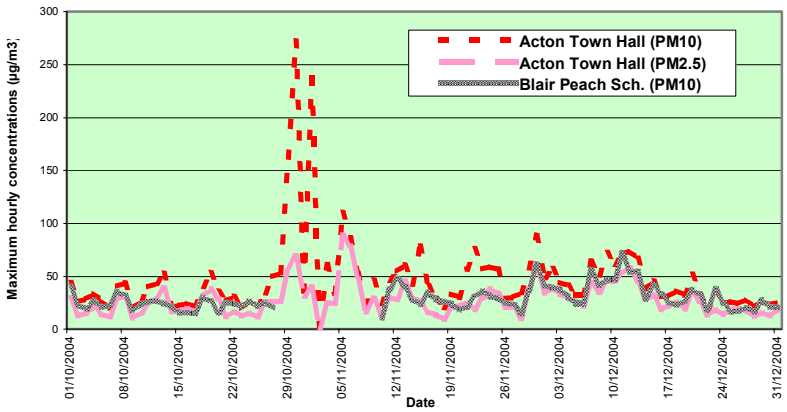
Pollution Impairs Lung Development

Recent research from California scientists shows that air pollution can have an adverse effect on the lung development of children. In their study, they looked at 1759 children, from schools across Southern California, with an average age of 10 years old. The areas where the children were from were chosen to represent a variety of differing exposures to ambient ozone, nitrogen dioxide and fine particles. Over 8 years, the lung function of these children was measured annually. What the researchers found was that those 18 year old who lived in areas with the highest pollution levels were nearly five times more likely to have low lung function than those that lived in areas with the lowest levels. The significance of these finding the scientists believe is that lung development is essentially complete by the age of 18. This means there is little chance for lung development to 'catch up', and that consequently this may increase the risk of developing respiratory conditions, particularly later in life.

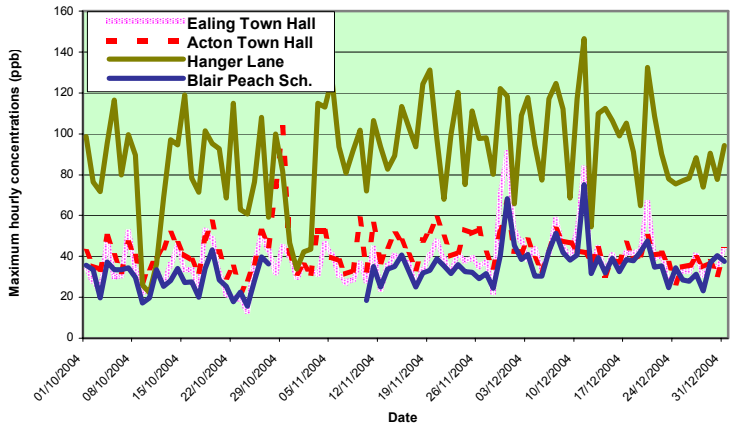
Gauderman et al. 2004. The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age. The New England Journal of Medicine. Vol 351, No 11. Pp 1057-1067
Air Quality Management. December 2004. Issue number 107

Air Pollution Results Oct to Dec 2004

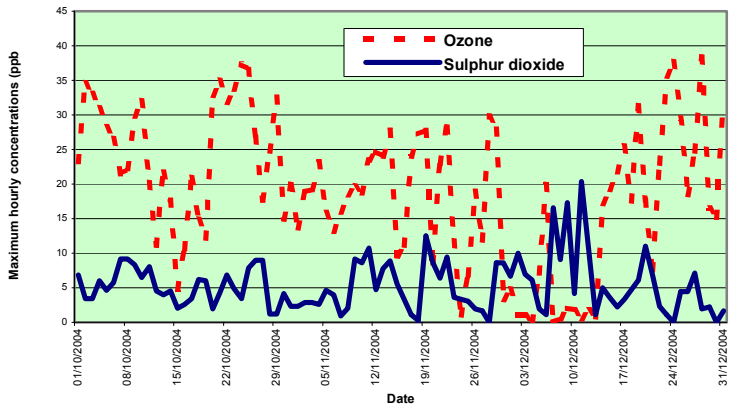
Particulate concentrations measured at Acton Town Hall



Nitrogen dioxide (NO2) levels measured in Ealing



Sulphur dioxide and Ozone levels at Ealing Town Hall



The last three months of 2004 witnessed two distinct pollution episodes. Guy fawkes night fell on a Friday and the associated fireworks and bonfire events over that weekend led to MODERATE PM_{10} levels in Acton, although HIGH levels were reached elsewhere in London. In mid December, a period of calm, settled weather lead to MODERATE PM_{10} levels for several days, across a large area of London.

Construction work outside Acton Town Hall around the 31st October led to levels of monitored PM_{10} reaching as high as 644µg/m3.

Other pollutant levels remained LOW for the six-month period.

Daily Forecasts

A daily air pollution forecast is published every day on the Residential Service's 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_3	<50	50-89	80-179	>180
SO_2	<100	100-199	200-399	>400
NO_2	<150	150-299	300-399	>400
PM_{10}	<50	50-74	75-99	>100

Measured as:

Ozone	(O_3)	hourly mean
Sulphur dioxide	(SO_2)	15 minute averages
Nitrogen dioxide	(NO_2)	hourly mean
Particulates	(PM_{10})	running 24 hour mean