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Pollution Control Team

The Borough Air Quality Bulletin

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IN THIS ISSUE

Ealing Borough Air Quality Bulletin

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www.ealing.gov.uk/services/pollution+control/

The London-wide roadside vehicle emission testing programme has been launched by the Mayor of London Ken Livingstone and the Association of London Government. From the end of July, potentially polluting vehicles driving through Ealing will be pulled over by police officers so that qualified independent testers can carry out spot checks. They will be testing vehicles for pollutants including carbon monoxide, smoke and hydrocarbons. The crackdown aims to reduce the huge contribution vehicles make to pollution in London. One in five vehicles are estimated to break the legal amount of emissions set under the MOT test. Due to the health impacts of London's poor air, the British Lung Foundation has fully endorsed the programme.

Testing will begin with a four-week amnesty period which means that the driver of any vehicle tested in this period and found to be over the limits, will receive a caution instead of a fine and given advice on how to clean up their vehicle to avoid the fine. After this period drivers of vehicles found to be above the emission limits set by MOT tests can be issued with a £60 fixed penalty charge, reduced to £30 if the vehicle is brought to MOT standard within 14 days. Testing will take place at a number of sites across Ealing and the rest of London. To minimise inconvenience to drivers, tests will be carried out as quickly as possible. Testing is set to run until the end of March 2004. Details of the programme are being advertised through a major leaflet and poster campaign, bearing the newly created 'Smoking kills' logo. They give motorists information that will help improve the capital's air quality and could also save them money. Advice includes keeping their engines tuned, avoid accelerating and braking sharply, and switching off their vehicle's engine when parked. For more details of the scheme, visit the programmes web site at http://www.alg.gov.uk/smokingkills/index.htm.

LEZ study published

The results of the Low Emission Zone Feasibility Study have finally been published, setting out the options available for reducing emissions from road vehicles in order to improve London's air quality. The study was commissioned to investigate the possibility of introducing one or more low emission zones (LEZs) in London. A LEZ is a defined area that bars entry to vehicles that do not comply with set emission standards.

Continued on page 2.

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.

LEZ study published continued…
The main conclusions of the study are that if a LEZ is to be pursued:

- It should cover the whole of Greater London.
- It should initially target lorries, buses and coaches.
- Standard for entry into a LEZ should start at Euro II with reduced pollution certificate.
- Alongside an LEZ, schemes to tackle the very oldest cars and vans should be investigated.

The study predicts that such a LEZ could achieve a 20% reduction in total PM10 emissions in 2010, and a 40% reduction in the area of London exceeding the relevant PM10 air quality targets. It puts the costs to operators as being between £64m and £135m with additional costs to enforce and operate the scheme. This is against an estimated saving of £100m in terms of lost days at work due to pollution-related illness and NHS costs. The study suggests that the earliest such a zone could be implemented would be in 2007. It is now up to the Mayor of London, the Association of London Government and London boroughs to decide on whether to implement such a scheme before public consultation can be considered.

New Monitoring Site for Ealing

Ealing has just taken delivery of a new monitoring station to be located at the Hanger Lane Gyratory on the A406. The station will continuously monitor nitrogen dioxide and feed the results through automatically to our consultants ERG, Kings College London who will process the information and publish the results on the London Air Quality Network web site (http://www.erg.kcl.ac.uk/london/asp/home.asp). It will complement Ealing's two existing monitoring stations at Ealing Town Hall and Acton Town Hall and will provide valuable data concerning NO2 levels in what is one of the most polluted areas of the borough. NO2 was identified in our last review and assessment of air quality as the pollutant for which the air quality objective will be the most difficult to meet.

Strange Deposits

Every now and then, Ealing Council receives complaints about strange, orangy red deposits found on cars, washing out to dry and on windows. Residents complain about the damage such deposits cause to their paintwork, and are obviously concerned about any potential health risk associated with them. Being worm like and only about 1cm in length, birds and trees are unlikely to be the cause and so naturally the finger of suspicion falls on industrial pollution or a similar man-made source. A few years ago, officers from Environmental Health investigated this phenomenon. Samples were taken away for analyse which found they contained a very high pollen count. The spotlight fell on bees as being the culprits and sure enough a local beekeeper confirmed that bee droppings are indeed orange/red worm-like deposits. There are a number of bee keepers in Ealing along with a number of wild colonies. Determining which colony is responsible could prove a tricky proposition. The large colonies of bees that can cause such problems occur during the May-June period and so any nuisance should be short-lived. Badly kept and positioned colonies can be a nuisance and so the Council can take action if necessary. Beekeepers should exercise good bee management and the British Beekeeping Association web site provides plenty of advice in this regard. (http://www.bbka.org.uk).

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/

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.erg.kcl.ac.uk/london/asp/home.asp

Research Latest

Traffic and asthma links

Research from Taiwan and Germany seems to show that vehicle exhaust emissions can lead to an increased risk of respiratory disorders in children living in areas with high traffic volumes. In a study of 800 schools, scientists from Taiwan compared pollution levels and cases of hayfever. They discovered that children exposed to high levels of traffic pollution had up to a 17 percent higher risk of hayfever, which is linked to the development of asthma. In a German study, scientists compared the health records of nearly 4,000 children to traffic density and exposure to pollutants. They revealed that children living within 50 metres of roads with traffic volumes of over 33,000 vehicles were almost twice as likely to suffer from asthma than other children.

Anon. 2003. Traffic fumes shown to raise asthma risk in children. The Environment Post. 23rd June 2003. Issue number 198.

Pollution favours city trees

US ecologists have found that trees in New York grow twice as much as counterparts planted in rural areas. Identical root cuttings of the Cottonwood (Poplar) tree were taken and planted at rural and urban sites in and around New York City. After three seasons the urban trees had thrived, weighing twice as much as the rural ones. The scientists were able to rule out factors such as soil composition, temperature and CO_2 as influencing factors. What was left was the effect that city derived pollution and ozone in particular has on the rural landscape surrounding large urban areas. Ground-level ozone is not directly emitted from any man made source but is created by the action of sunlight on other pollutants such as volatile organic compounds and nitrogen oxides. Levels can build up quickly in cities but other traffic-derived chemicals can act as 'scavengers', reacting with the ozone and causing levels to drop dramatically at night and in the winter. However, when ozone is blown into rural areas, with fewer cars and therefore less of the scavengers to mop up ozone, then cumulative exposure can be greater than in the cities themselves. It's these higher ozone levels that appear to be having a detrimental effect on rural trees, leading to stunted growth.

Briggs, H. 2003. Trees grow larger in Big Apple. BBC News Online. http://news.bbc.co.uk/1/hi/sci/tech/3055010.stm July, 2003

Firework Pollution

Indian researchers have assessed the impact of firework celebrations on air quality during a 1999 Diwali festival in Hisar City, India. During the festival, when many fireworks are traditionally set off, the levels of sulphur dioxide were found to rise ten-fold at a number of sites. Concentrations of nitrogen dioxide and particulates increased 2-3 times compared to normal. The researchers noted that the pollution observed during Diwali was found to be moderately high, which can be associated with serious health impacts.

Ravindra et al. 2003. Short-term variation in air quality associated with firework events: A case study. Journal of Environmental Monitoring. 2003. Vol 5 (2), pp260-264.

Air Quality Management**. July 2003. Issue number 91.**

Trees not the sponges we thought

The ability of trees to act as carbon sinks has been thrown into doubt by new research from the University of Basel, Switzerland. The research measured the carbon content of leaves and wood from trees in a mature forest, and found that they use only 33 – 45% of their own carbon stores, on average, during the year, making it unlikely that they would absorb any more from the atmosphere. The study flies in the face of popular scientific thinking that trees can compensate somewhat for rising carbon dioxide levels. The fact that trees may already have all the CO_2 they need deals a blow to companies who want to fund forest planting as a means of meeting Kyoto targets and so mitigating their contribution to global warming.

Anon. 2003. New research suggests trees are bad carbon sinks. Edie weekly summaries. http://www.edie.net/news/Archive/7310.cfm

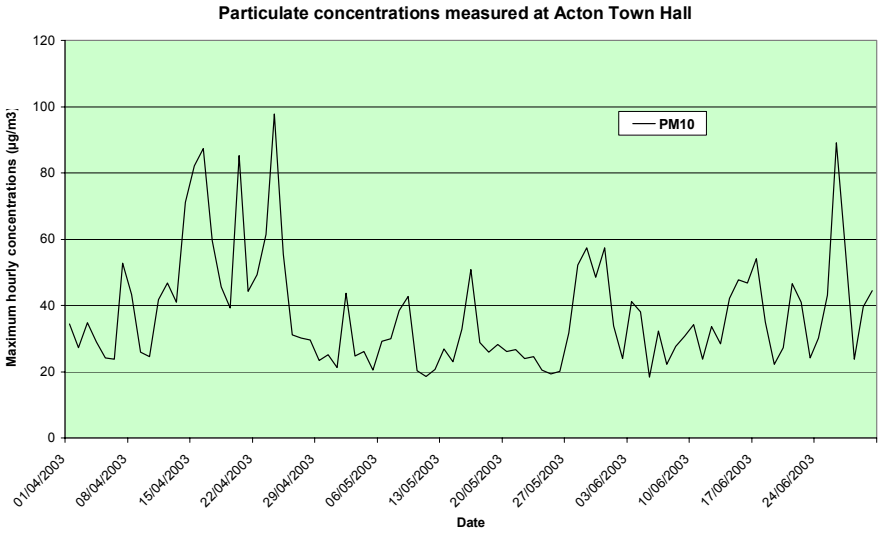
Heavy Metal Dandelions

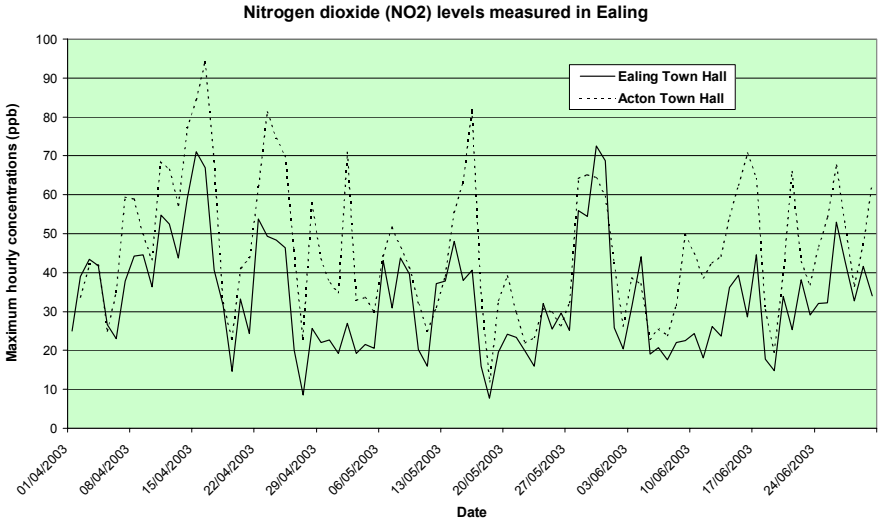
Bulgarian scientists have found that heavy metal uptake by dandelions is representative of street dust pollution. Taking samples of street dust and various plant species along streets in Germany in 1999, they found that concentrations of platinum group metals (platinum, palladium, rhodium, ruthenium and iridium) found in street dust, matched concentrations found in dandelions. Such platinum group metals are typically found in three-way exhaust catalysts. Concentrations in dandelions today are some 200 times higher than in 1985, before catalysts were used.

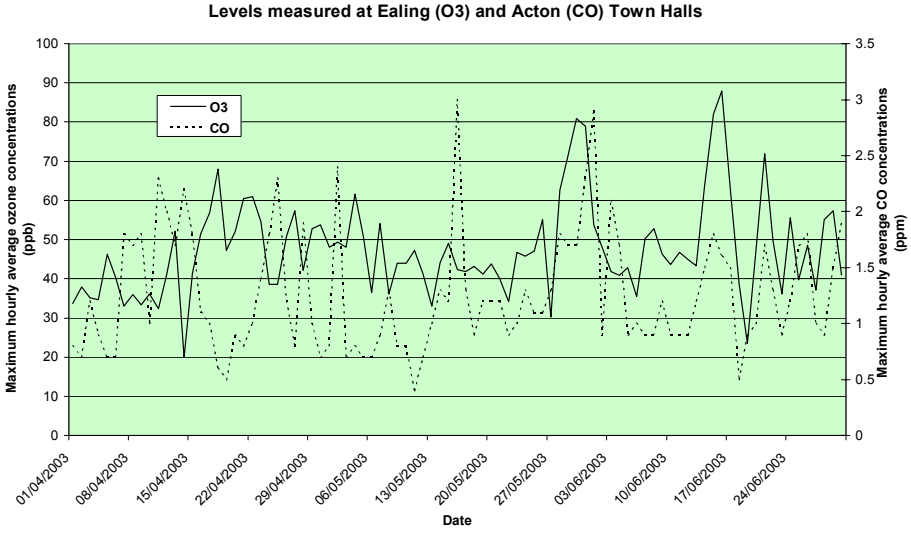
Air Quality Management. June 2003. Issue number 90.

Djingova et al. 2003. Distribution of platinum group elements and other traffic related elements among different plants along some highways in Germany. The Science of the Total Environment, Vol 308 issues 1-3, June 2003. pp235-246.

Air Pollution Results Apr to Jun 2003







The unseasonably warm weather and easterly winds continued into the second quarter of this year with sites across London measuring MODERATE PM_{10} and ozone over a significant number of days. The Easter period particularly was characterised by warm sunshine and easterly winds. This led to a build up of local pollution combined with the import of pollution from the continent, which conspired to produce an extended period of elevated pollution levels across the South East region.

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

Due to a spate of vandalism in March, the $PM_{2.5}$ analyser at our Acton Town Hall site is currently out of commission. We hope to have it repaired as soon as possible.

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
CO	<10	10-14	15-19	>20
NO_2	<150	150-299	300-399	>400
PM_{10}	<50	50-74	75-99	>100

Measured as:

Ozone	(O_3)	hourly mean
Carbon monoxide	(CO)	running 8 hour mean
Nitrogen dioxide	(NO_2)	hourly mean
Particulates	(PM_{10})	running 24 hour mean