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Pollution Control Team

The Borough Air Quality Bulletin

A Local Agenda 21/Environment Group Initiative

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IN THIS ISSUE

Ealing Borough Air Quality Bulletin

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Environmental Health and Trading Standards
London Borough of Ealing
Perceval House
14/16 Uxbridge Road
London W5 2HL

Edited by Richard Ward
Tel: 020 8825 6633
Fax: 020 8825 7732
E-mail: wardr@ealing.gov.uk

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

Switch Off!

Ealing Council is considering introducing new powers to encourage drivers to switch their engines off when parked. The Road Traffic (Vehicle Emission) Regulations which came into force in July 2002, enables local authorities to instruct motorists to switch off their engines while their vehicles are parked and to issue Fixed Penalty Notices to those who refuse. Previously such powers could only be enforced by the police.

Emissions from stationary vehicles are only a small contributor to borough wide levels of air pollution but at the local level they can be a very significant source. Not only can it be an unpleasant and noisy activity, but such emissions can cause discomfort to people in the immediate vicinity, particularly in sensitive areas. High levels of localised pollution can also trigger the symptoms of asthma and other respiratory diseases in vulnerable people.

The new powers are designed to encourage all motorists to have due regard to the local environment when parking. The powers simply give local authorities the opportunity to request that a vehicle engine be switched off when run unnecessarily. The issue of a fixed penalty notice would occur only where a driver subsequently refuses to co-operate. The amount of this fixed penalty would be £20, increasing to £40 if not paid within 28 days of issue. Action will be purely advisory in the vast majority of cases. In reality, very few notices should need to be issued.

At the moment, the Council is looking at the possibility of giving these powers to parking attendants, who already carry out enforcement duties. It is also yet to be decided whether or not the powers should be carried out continually or in blitzes, focussing on known hotspots. It is hoped that such questions will be answered by the spring.

Action Plan Consultation

The Council's Air Quality Action Plan is currently out to public consultation and we would like to hear your views on its contents. Parts of Ealing are expected to fail to meet nationally set air quality objectives. The Action Plan contains 59 measures designed to improve air quality in the borough. They are a mixture of ongoing policies already in place and new ones introduced as a direct result of the Air Quality Strategy and the London Mayor's strategies.

Copies of the Action Plan can be found at local Libraries within the borough and are available from the Environment Group reception, 1st floor, Perceval House. The full document can be downloaded from the Pollution Control web site, as can a brief summary of the Action Plan contents. Alternatively, If you would like a copy of the draft Action Plan then please contact the Pollution Control Team

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.

NO_2 diffusion tube survey

The results from the first year of the Council's borough wide nitrogen dioxide diffusion tube survey have been analysed and are now available. The survey consists of 100 monitoring tubes located at 83 sites around the borough. The aim of the study is to monitor the effectiveness of measures put in place to improve air quality over the 5-year period. The main conclusions from the first years results are:

- 20% of roadside sites fail the annual mean NO_2 air quality objective for 2005. Only one intermediate site fails and no background sites fail. Applying the re-adjustment factor means that all the roadside sites fail the annual mean NO_2 air quality objective, a third of the intermediate sites fail and 4 background sites fail the objective.

- Maps of NO_2 levels across the borough show an increase in concentrations towards the eastern part of the borough.

- Results from the existing long-term sites show some evidence of NO_2 levels dropping slightly over the past five years. However, weather conditions over this period may account for this decrease.

- This the first year of the survey and more data will be needed to assess long-term trends across the borough. Even 100 tubes will not give a complete picture of what is happening across Ealing.

- Roadside locations consistently show higher results than either intermediate or background sites. Long-term trends seem to indicate a reduction in the contribution of NO_2 from road traffic.

For a copy of the results so far please contact the Pollution Control Team

Roadside Vehicle Emissions Testing

Ealing and other London boroughs has been successful in obtaining funding from the Department for Transport towards the cost of a London wide roadside vehicle emissions testing programme. New Vehicle Emissions Testing Regulations mean that local authorities with Air Quality Management Areas (AQMAs) can now apply to adopt the powers for roadside emissions testing. This would involve stopping vehicles and testing their exhaust emissions to ensure they meet the required standards. Those failing could be subject to a fine if they fail to correct their emissions after a reasonable length of time. The newly acquired funding allows for about 18 days of emission testing in Ealing with police officer support (required to stop vehicles on the highway). It is hoped that the testing programme will be able to start by mid-2003.

Use Cars? Be Greener!

The council has teamed up with 6 other councils and with operators, Smartmoves, to set up the London City Car Club. Car clubs are a great way of enjoying the flexibility of a car without owning one and the plan is to launch the borough's first Car Club in central Acton this spring. Others will follow wherever there is a demand from enough people to make them viable.

City car clubs are about shared use of a pool of vehicles. Neighbourhood-based car stations provide short-term access to cars for periods as brief as one hour. Car clubs can also operate at car stations at the workplace where they reduce demand for parking space as staff can use a club car if they need to drive at work.

So what are the environmental benefits? Schemes elsewhere show that car club members walk, cycle and use public transport more, and cars less, than car owners – which is better both for the environment and for their fitness and health. People who own their cars tend to use them a lot to justify the high costs of buying, taxing and insuring them. With City Car Clubs you pay as you go and only use a car when you really need to.

You can help spread the message about car clubs and encourage people near you to register interest in becoming members. For more information on car clubs, or if you want to know how to be a car club 'champion' or become a member, contact:
Mark Hillyer on 0870 765 1984
or email: londonnw@smartmoves.co.uk

Travel Awareness

Plans are underway to develop a year long programme of travel awareness initiatives. The aim is to encourage people to leave their cars at home and find alternative methods of transport.

The programme will compliment the national initiatives listed below, but wants to focus on local action. We are interested in hearing from organisations and individuals who would like to take part in activities or have ideas to contribute.

Mon 19 - Fri 23 May
Summer National Walk to School Week
(www.walktoschool.org.uk)

Sat 7 – Sun 15 June
Green Transport Week
(www.eta.co.uk)

Sat 14 – Sun 22 June
Bike Week and Bike2Work Week
(www.bikeweek.org.uk)

Tues 16th – Mon 22 Sept
European Mobility Week
(www.mobilityweek-europe.org)

Mon 22nd September
European Car Free Day
(www.22september.org)

Mon 6th – Fri 10th Oct
Autumn National Walk To School Week
(www.walktoschool.org.uk)

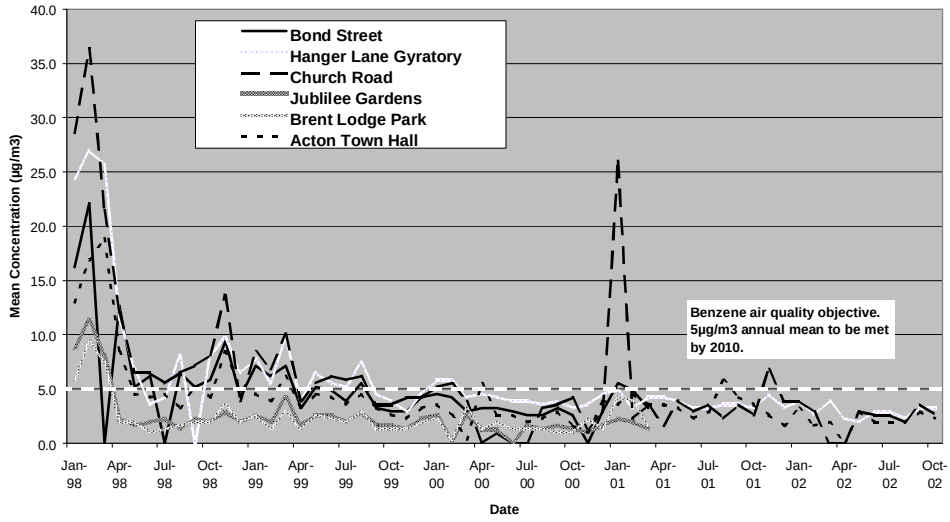
Please contact the council's Local Agenda 21 Team with your ideas on how to raise awareness of transport issues and encourage local people to make the link between their travel habits, their health, the environment and their quality of life. Tel 020 8825 6621 or email: la21@ealing.gov.uk.

New Targets for pollutants

The Department for Environment, Food and Rural Affairs has announced new targets to cut levels of four key air pollutants in England. It means tougher objectives over those presently used in the National Air Quality Strategy for particles (PM10), benzene, carbon monoxide, and for the first time a target for polycyclic aromatic hydrocarbons (PAHs) has been set. For Particulates, London has a less stringent objective to meet than the rest of the country, with a 24 hour objective of 50 µg/m^3 not to be exceeded more than 10 days a year and an annual objective of 23 µg/m^3, both to be achieved by 2010. There is also a long-term aspirational objective annual target of 20 µg/m^3 to be achieved by 2015, where cost effective and proportionate local action can be identified. The new objective for carbon dioxide is 10mg/m^3 (8.6ppm) as a running 8-hour mean to be met by the end of 2003 and for PAHs, 0.25ng/m^3 as an annual average mean to be met by the end of 2010.

Ealing does not currently monitor for PAHs so it is likely that a monitoring strategy will need to be implemented in the near future. The new benzene objective of 5 µg/m3 as annual mean to be met by the end of 2010 is three times stricter than the current objective. The Council has been monitoring benzene levels in Ealing since 1996 and as the graph below shows, levels in the borough fall well within the new objective.

Monthly average benzene results Jan 98 to Oct 02



Research Latest

Europe's air still choking

Public health across Europe is still hugely affected by air pollution a new report reveals. The research comes from Apheis (Air Pollution and Health: A European Information System), which was set up to provide European decision-makers, environmental health professionals, the public and the media with an up-to-date, easy to use information source concerning air pollution and public health. The report entitled "A Health Impact Assessment of Air Pollution in 26 European Cities", says: "Air pollution continues to pose a significant threat to public health in urban environments in Europe, despite tighter emission standards, closer monitoring of air pollution, and decreasing levels... of certain types of air pollutants." The report goes on to demonstrate that reducing the levels of pollution, even by a small amount, could result in significant benefits to public health. It goes on to say that 2,653 premature deaths (or 9 deaths per 100 000 inhabitants) could be prevented every year if long-term exposure to annual average PM_{10} levels were cut to 40 mg/m3 in the 19 cities that measured these particles. This is the standard at which the National Air Quality Strategy Objective is set at. If the more ambitious limit of 20 mg/m3 set for 2010 in the UK (2015 for London) were met then this would prevent 11,855 premature deaths (or 43 deaths per 100 000 inhabitants) annually. And even a modest reduction of 5 mg/m3 in long-term exposure to outdoor concentrations of PM_{10} would avoid an annual 5,547 early deaths. That saving would mean the elimination of 19 premature deaths for every 100,000 inhabitants. To put this in perspective, that figure is almost four times the annual death rate from Aids in the countries Apheis investigated, 2.6 times the leukaemia rate, and 1.5 times the annual rate of traffic fatalities. The report notes that individuals have little control over their exposure to pollution of this sort, but have more with other risk factors such as diet and cigarette smoking.

Kirby A. 2002. Europe's dirty air 'still a killer'**. BBC News Online.** http://news.bbc.co.uk/1/hi/world/europe/2377319.stm**.** 31 October, 2002
Air Quality Management. December 2002. Issue number 84.

Cutting pollution saves lives

Several recent studies have shown that cutting air pollution reduces the number of deaths from lung and heart disease. In one study, Researchers from the Universities of London and Hong Kong tried to gauge the impact of the introduction of regulations to reduce sulphur emissions from cars in Hong Kong. They found that on average, every resident gained weeks of extra life expectancy for every year the regulations were in place. Women gained just over 20 days on average per year - and men 41 days. Deaths from respiratory disease fell by 5% each year from the introduction of the measure, and heart disease by 2% each year. The study concludes, "The outcome of the Hong Kong intervention provides direct evidence that control of this pollution has immediate - and long-term - health benefits."

A similar study found that death rates in Dublin from heart and lung diseases fell dramatically after a 1990 coal ban in the city. Irish researchers found that the average concentrations of black smoke decreased by 70% after the ban on coal sales. Deaths from respiratory diseases decreased by around 15%, and by cardiovascular diseases by around 10% - equivalent to 116 fewer respiratory deaths and 243 fewer cardiovascular deaths every year after the ban. The researchers state that their findings "suggest that control of particulate air pollution in Dublin led to an immediate reduction in cardiovascular and respiratory deaths. These data lend support to a relation between cause and the reported increase in acute mortality associated with daily particulate air pollution".

Finally a Dutch study has concluded that people living near a main road were twice as likely to die from heart and lung diseases than those that didn't. The research from Utrecht University investigated a random selection of 5000 people aged 55-69, from 1986 to 1994. Long-term exposure to traffic-related air pollutants (black smoke and nitrogen dioxide) was estimated for each persons home address. During the eight-year period, 11% of the people died. The study found that those living near a main road were around twice as likely to die from heart and lung disease, and 1.4 times more likely to die from any cause.

Hedley, J. et al. 2002. Cardiorespiratory and all-cause mortality after restrictions on sulphur content of fuel in Hong Kong: an intervention study. The Lancet. Vol. 360. 1646-52.
Clancy L. et al. 2002. Effect of air-pollution control on death rates in Dublin, Ireland: an intervention study. The Lancet. Vol. 360. 1210-14.
Hoek G. et al. 2002. Association between mortality and indicators of traffic-related air pollution in the Netherlands: a cohort study. The Lancet. Vol. 360. 1203-09

Pollution effects passed on

Researchers at a Canadian University have linked exposure to air pollution, from coal burning, to gene defects in sperm cells which are being passed down to future generations. They found gene defects in

herring gulls exposed to aromatic chemicals produced by coal power stations. Similar genetic damage has also been detected in mice exposed to poor air quality.
Environmental Health News. 10th January 2003. Vol 18. No 1. P5.

Traffic pollution affects babies

New research seems to implicate traffic pollution in having an affect on the health of young babies. Scientists in Germany looked at nearly 2000 children under the age of 2 and used their home addresses to estimate their exposure to traffic pollution. Those children living in areas of higher pollution were found to be about 40% more likely to develop coughs, especially in the first year.
Air Quality Management. November 2002. Issue number 83.

Particles affect lung growth

Austrian researchers have found that particles in the air can affect the growth of lung function in schoolchildren. 1000 children from eight communities in lower Austria were studied over a number of years to assess the effects of pollution on them. Lung function tests were carried out on them twice a year. The children found to be living in communities with higher summer PM_{10} levels were found to have lower lung growth than those living in cleaner communities. Decreased growth was also found in association with nitrogen dioxide and ozone. The researchers point out the importance of these findings "early impairment of lung function growth could lead to impairment of lower lung function parameters in adulthood, predisposing to chronic pulmonary diseases".
Air Quality Management. October 2002. Issue number 82.

Urban air 'worsens asthma'

Air which passes US air quality standards can still cause breathing problems in children with asthma, research from the US suggests. The study focused on 846 asthmatic children, aged between 4 and 9 years old. Researchers compared their reports of asthma symptoms with levels of the air pollutants ozone, sulphur dioxide, nitrogen dioxide and fine particles (PM_{10}). They found that rises in each pollutant were associated with an increased incidence of breathing problems in the morning. Rises in nitrogen dioxide was associated with an almost 50% increase in morning symptoms, whilst rises in sulphur dioxide increased the incidence of asthma symptoms by a third. The researchers concluded that "Summertime air pollution is associated with increased asthma morbidity and decreased pulmonary function among inner-city children with asthma". "Adverse respiratory effects were observed in all cities, at levels below current USA air quality standards."
Anon. 2002. Urban air 'worsens asthma'. BBC News Online. http://news.bbc.co.uk/1/low/health/1897646.stm 1 April, 2002
Air Quality Management. September 2002. Issue number 81.

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

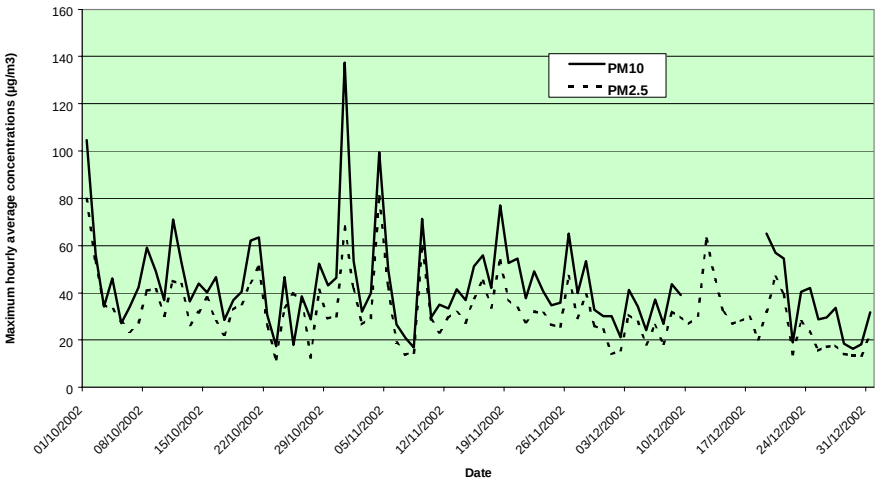
Local Agenda 21 Pollution and Public Health Project Group
www.LA21.org

OMNI - Ealing Council's new 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

Air Pollution Results Oct to Dec 2002

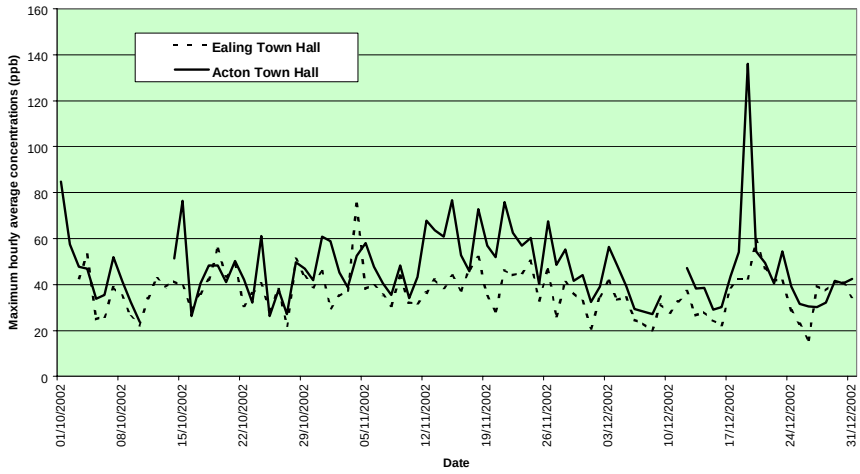
Particulate concentrations measured at Acton Town Hall



The annual bonfire celebrations failed to produce its usual high levels of particle pollution this year. The Acton Town Hall site monitored a maximum peak of 137 µg/m3 on the 31st October but generally remained in the low to moderate bandings. The unsettled weather conditions over that bonfire period ensured that pollutants were able to disperse easily.

Other pollutant levels remained LOW for the three month period.

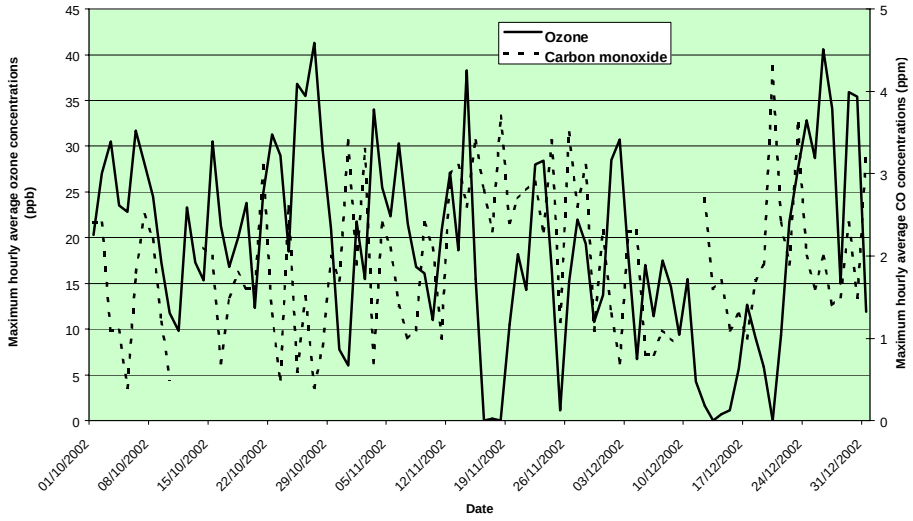
Nitrogen dioxide (NO2) levels measured in Ealing



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.

Levels measured at Ealing (O3) and Acton (CO) Town Halls



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