County Roadside Pollution Increases in 2005

Since Air Quality regulations came into force in 2000, local authorities have to monitor air pollutants to protect health, vegetation and ecosystems. Areas failing to reach targets have to create pollution reduction plans. Since it is unaffected by political boundaries, unconfined to the emission source but is affected by geographical and meteorological conditions, air pollution is hard to control, especially as vehicle use grows.

The importance of good air quality to our lives was recognised by the Deputy Prime Minister when he declared air pollution "a serious problem" (DETR 2000). With 24,000 people reported to die prematurely every year because of its effects, air pollution affects many more people to a lesser degree. There is also an increased awareness that carbon emissions are contributing to climate change.

The components in air need not necessarily be man-made or harmful; for example Ozone (O_3) occurring 19-30 km above the Earth's surface filters out ultraviolet radiation and Nitrogen Oxides exist naturally in the ocean. At other times the same elements may be man-made and/or harmful, i.e. near ground level, Ozone, usually created by chemical reactions from motor vehicles, can impair lung function and cause irritation to the respiratory tract. Nitrogen dioxide (NO_2) is also vehicle-related, causes lung problems and creates Ozone and Smog. Particulates (PM_{10}), are under 10 micrometers in diameter and are also a concern. Matter this size can penetrate deep into the lung, causing greater damage than larger particles that could be filtered out naturally via the respiratory system. The main source of PM_{10}s is from road traffic (25%), especially diesel engines.

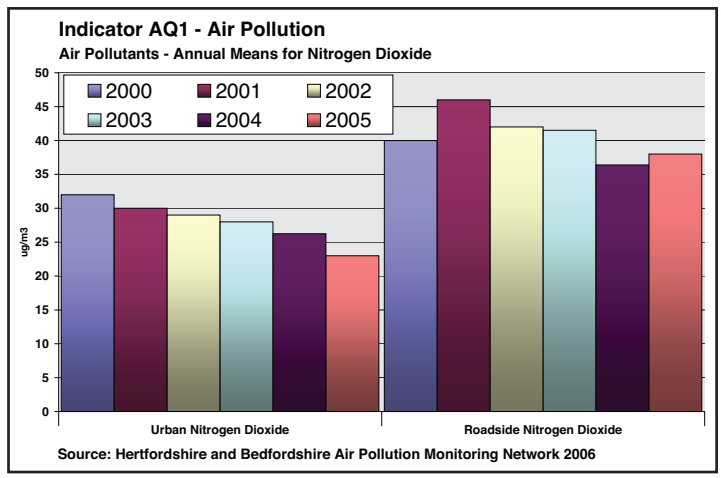
Our ability to directly affect the source of pollution, however, is not always within our immediate reach as the weather may carry it from our neighbours in London and Europe. Weather is also responsible for short-term variations as emissions from traffic and other sources usually take a long time to change; warm, sunny weather causes rural Ozone to rise, as it forms by a chemical reaction in the presence of sunlight, whereas cold, still, weather will cause urban and roadside Ozone to rise.

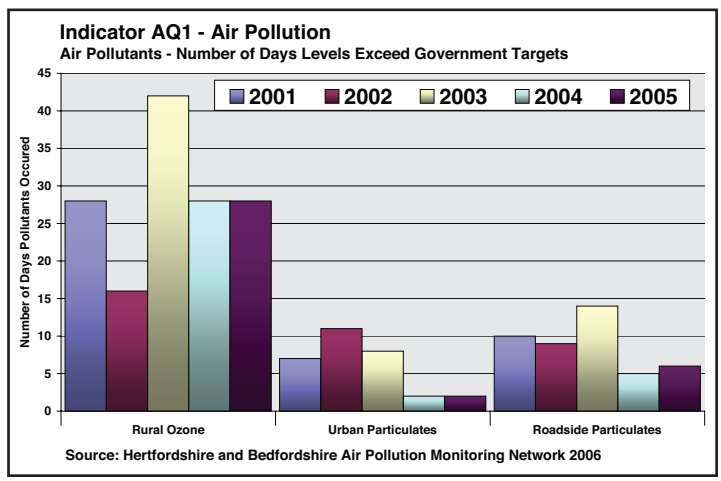
Indicator AQ1 - Air Pollution

This measurement shows whether the county's air quality is getting better or worse against five values:

1. *Number of days when Ozone levels in rural areas exceeded the Government's standard*
2. *Number of days when particulate levels in urban areas exceeded the Government's standard*
3. *Number of days particulate levels close to busy roads exceeded the Government's standard*
4. *Annual mean nitrogen dioxide levels in urban areas*
5. *Annual mean nitrogen dioxide levels close to busy roads*

2005 monitoring showed little difference in air quality to 2004. A rising NO_2 trend was identified at Broxbourne's roadside site, again recording the highest network levels and East Herts' roadside site levels also rose. There was a slight increase in PM_{10} but St Albans and Three Rivers sites remained at similar levels to those at the end of 2004. O_3 was quite stable in 2005 with levels similar to the end of 2004[1].





[1] *Herts & Beds Air Pollution Monitoring Network www.hertsbedsair.org.uk Other useful websites include: www.nsca.org.uk and www.airquality.co.uk - UK Air Quality National Archive*