



VIEWPOINT

Air quality action plans aren't delivering their promises – but don't blame councils

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The recognition of transport as a major source of air pollution grew steadily during the 1970s and 80s but the real changes started around 20 years ago. In 1992, guidance on the assessment of the air quality impacts of road schemes was introduced as part of the *Design Manual for Roads and Bridges* (DMRB). The Highways Agency was formed in 1994 and took forward DMRB assessments of new road schemes. New Euro emission standards were introduced for new vehicles from 1993, with catalytic converters required to limit emissions from new petrol cars; there were few diesel cars in those days.

Understanding the health effects of air pollutants also developed during the early 1990s. A seminal study by Dockery and Pope and co-workers in the US in 1993, known as the Six City Study, provided convincing evidence that long-term exposure to fine airborne particles could lead to a large number of premature deaths. Around 29,000 deaths each year in the UK are now attributed to air pollution.

A rapid legislative response to these developments followed. The Environment Act introduced in 1995, led to the first National Air Quality Strategy in 1997. The strategy included air quality objectives for a range of pollutants that became enshrined in air quality legislation. It also introduced Local Air Quality Management (LAQM), which required local authori-

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ties to assess air quality in their area. If exceedences of the objectives were identified they had to declare an Air Quality Management Area (AQMA) and develop an action plan.

The LAQM regime soon identified traffic in urban areas as a key source of poor air quality; air quality assessments up until this time had generally been for major highways, often in rural areas.

When the LAQM regime was instituted in the late 1990s it was expected that ever more stringent emissions standards for new vehicles would ensure that air quality problems would be limited to a few hotspots, and that these hotspots would be most efficiently dealt with by local measures. This has not, however, been the case; 232 local authorities (57%) have declared AQMAs for nitrogen dioxide, a number that has increased over the last decade, with no sign of an imminent decrease. Furthermore, the UK Government is being challenged in the courts for failing to meet the EU Directive limit values for nitrogen dioxide. How has this come about?

The failure to deliver the expected reduction in concentrations of nitrogen dioxide over the last 15 years is due principally to the failure of legislation to ensure that emission standards for new vehicles (the 'Euro' standards) deliver real-world reductions in emissions. This caught everyone by surprise, as the legislation that introduced catalytic converters for petrol cars in the early 1990s did deliver substantial reductions. On-road emissions from diesel cars, on the other hand, have not declined; clearly the motor vehicle manufacturers have found ways around the intention of the testing regime, as the vehicles have passed the tests but not delivered real reductions on the road. This has been coupled with a rapid growth in diesel cars over the last 20 years, such that they represented just over 50% of new car sales in 2012. Buses and lorries have also not delivered the expected reductions.

The Euro VI standards for lorries and buses and Euro 6 for cars and light vans apply to new vehicles from 2013-15. It is to be hoped that a new testing regime being developed will ensure that these new standards deliver real reductions. The DfT should be applying pressure on the European Commission to ensure appropriate tests are instituted.

One consequence of the failure to deliver real improvements in emissions is that the 'official' emission factors used to predict air quality impacts of road traffic have not been reliable. Air quality assessments have had to take account of this uncertainty by presenting two views of the future, one optimistic (using 'official' factors) and one pessimistic, assuming no reduction in vehicle emissions. It is to be hoped that more realistic factors will soon become available to render assessments more straightforward.

Another consequence of the failure to deliver real improvements in emissions is that many of the air quality action plans developed by local authorities have been discredited because they have not delivered. For example, some action plans involved negotiating the replacement of older Euro I, II and III buses with Euro IV buses. This should have improved air quality, but this did not happen in practice because Euro standards have not delivered. Local authorities are not to blame; they have shown they can negotiate real changes and should be encouraged to continue, but only when the new Euro standards are shown to work.

Another challenge is to ensure that climate change and air pollution are not in conflict. Mention has already been made of the growth in diesel car sales, which is a real plus for reducing carbon dioxide emissions, but has been negative for air pollution. The Government's drive to meet the carbon reduction targets through the widespread adoption of ultra-low emission vehicles should help both climate change and air quality, but can the change happen fast enough? The growth in vehicle-kilometres travelled will also negate the reductions in emissions per vehicle: the National Transport Model is now predicting a 43% growth in traffic in England between 2010 and 2040 – a growth that will make it harder to deliver air quality and climate change targets.

Road transport has been a dominant source of air pollution over the last 20 years and looks set to be so for some time to come. **LTT**

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Professor Duncan Laxen and **Stephen Moorcroft** are directors of Air Quality Consultants Ltd (www.aqconsultants.co.uk), which is celebrating its 20th anniversary.

In Passing

LTT Airports Commission chairman Sir Howard Davies faces an enormous challenge in coming up with a set of proposals capable of ending decades of political battles over where to allow new runway construction in the South East. It's a tall order but we're confident that his formidable intellectual powers will see him through. Or at least we were, until we heard this in his speech on the Commission's provisional thinking last week: "Of course forecasting is always difficult, especially about the future." Thankfully Sir Howard still has a year-and-a-half to craft his final recommendations.

LTT Heathrow Airport executives hoping that the latest ministerial merry-go-round would see some MPs sympathetic to a third runway touching down in Marsham Street will be sorely disappointed by the result. In Baroness Kramer and Robert Goodwill they've ended up with a

couple of staunch adversaries. As a former south-west London MP Kramer has vociferously opposed Heathrow's expansion on noise grounds. Goodwill, meanwhile, held a bizarre twinning ceremony between his North Yorkshire farm and Sipson, the village that was originally going to be flattened to make way for the extra runway, even inviting a group of Greenpeace activists to the event!

LTT In our last issue we reported a couple of jolly transport anecdotes from *Power Trip*, the autobiography of Gordon Brown's controversial spin doctor, Damian McBride (known to friends and foes alike as 'the Dog'). Well, we've finished the book now and what a cracking read it was! One further transport story concerns the episode when then shadow chancellor, George Osborne, announced plans for a maglev ultra-high-speed train

while on a visit to Japan. "Osborne hadn't taken a press entourage to Japan, and had instead just given an overnight exclusive to *The Financial Times* that he wanted to build a UK version of Japan's ultra-high-speed magnetic levitating train," McBride recalls. "He and his team may have gone to bed eight hours ahead in Tokyo thinking the *FT* story was a job well done but I was just waking up with a whole day in front of me to kill it. And I did: I spent the morning online researching and distributing to journalists the history of accidents and fires on maglev trains, and established the fact that it wouldn't even have time to get up to top speed on the route Osborne was proposing. One journalist told me that Osborne texted him and said: 'What's going on with this story? Why has everyone got so down on it?' The journalist replied: 'You've just met the Dog.'"