

Chris Rush, the IAQM Chair, asked me to write a topical opinion piece, for our members. Two weeks ago the ULEZ in London was extended and these are my thoughts:

Sadiq Khan is an unusual politician. As an asthmatic he has long understood the need to clean up London's air. He really cares about air pollution. The first thing he did on becoming the Mayor of London in 2016 was to hold a press conference at Great Ormond Street Hospital, which I attended. The room was packed as he set out what he was going to do to improve air quality. There was perceptible excitement in the room.

In 2017 a £10 toxicity charge was imposed on diesel cars. In April 2019 the ULEZ was introduced in the centre of London, and in 2021 it was expanded to cover the area between the North and South Circular Roads.

The Mayor of London is quoted as saying:

“Tackling London’s lethal air and safeguarding the health of Londoners requires bold action; air pollution is a national crisis and I refuse to stand back as thousands of Londoners breathe in air so filthy that it shortens our life expectancy, harms our lungs, and worsens chronic illness”.

There is evidence that the initial ULEZ improved air quality by a large amount (estimated to be 35 $\mu\text{g}/\text{m}^3$ at roadside locations). However, this study compared the benefits from before the toxicity charge was introduced in 2017, not from 2019 when the ULEZ was introduced. The impact of the expanded ULEZ on NO_2 levels in inner London was much smaller (estimated to be 8 $\mu\text{g}/\text{m}^3$) but still a worthwhile reduction. Another study, using a different methodology, suggested the benefits of the initial ULEZ were much smaller. The benefits on $\text{PM}_{2.5}$ concentrations have been minimal because little of the road traffic PM is emitted from the exhaust. It mainly comes from brake and tyre wear, which is unaffected by the ULEZ.

The vehicle fleet ‘naturally’ gets cleaner, as older and more polluting vehicles get scrapped and new, cleaner vehicles are purchased. Consequently the impact of a low emission zone reduces over time unless the entry requirements are tightened. That has not happened. Petrol vehicles under 17 years old and diesel cars under 8 years old meet the ULEZ entry requirements.

The air quality benefits of the expansion of the ULEZ to cover the whole of Greater London are likely to be smaller as it is

being introduced more than 2 years later than the last change. For people on low incomes, paying the £12.50 daily charge for non-compliant cars will be punitive especially given the recent rises in fuel, housing and food costs. The Mayor has set up a scrappage scheme, but whether it will be enough for those with low incomes to purchase a compliant and reliable vehicle remains to be seen.

The case for the ULEZ has become politicised and the arguments confusing. Pundits confuse NO_2 and $\text{PM}_{2.5}$ with CO_2 and argue that Boris Johnson's Uxbridge and South Ruislip constituency nearly went Labour because of the ULEZ. I doubt it. Surely Boris's behaviour had a larger impact on voters.

There is clear evidence that air quality – particularly roadside NO_2 concentrations – are reducing, and there are likely to be a large number of AQMA revoked in the coming years. Given the improvement in air quality due to other policies, is it the wrong time to extend the ULEZ? No-one could have anticipated the impact of the war in Ukraine and the increase in interest rates, which have changed so much. The problem is that there is a long history of optimistic air quality modelling showing benefits of low emission zones. Even when they are implemented, the benefits may be unclear against a clear trend in reducing air pollution from road transport. All this being said, any politician who champions clean air will get my support. They are so few and far between.

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These IAQM President's Views articles are designed to provide the opinions and analysis of the current IAQM President on topical issues affecting those working in air quality.

About the Institute of Air Quality Management (IAQM)

The IAQM aims to be the authoritative voice for air quality by maintaining, enhancing and promoting the highest standards of working practices in the field and for the professional development of those who undertake this work. Membership of the IAQM is mainly drawn from practising air quality professionals working within the fields of air quality science, air quality assessment and air quality management.

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