

Quintet of councils take aim to reduce pollution from vehicles

Five cities in England are compelled to introduce Clean Air Zones. Theo Naidoo takes a look at what the measures will mean for motorists and professionals in the sector.

Introduction

Southampton City Council announced plans to address air quality issues last month; the last of five local authorities tasked by the Government to introduce measures to combat pollution due to their breaching legal limits.

The other cities to have already submitted their plans to reduce levels of nitrogen dioxide by 2020 are Birmingham, Derby, Leeds and Nottingham.

Each scheme varies in terms of its size, the vehicles affected, exemptions and ambition. When London introduces its Ultra Low Emission Zone in April and the Scottish Government implements similar schemes in its four biggest cities, the highways and transportation sector will face different legal regimes and challenges throughout the country.

The implications for network management, procurement, delivery and asset management will need to be carefully considered.

Why Clean Air Zones?

Government continues to work towards achieving lower emissions and improving air quality in urban areas. The Department for Environment, Food & Rural Affairs told each of the five areas to create Clean Air Zones to achieve this and publish plans by the end of 2018.

Clean Air Zones – which will have a major impact on transportation and construction – are areas of a city where action is taken to discourage the most polluting vehicles.

They are comparable to London's existing Low Emission Zone and Emissions Surcharge (known as the T-Charge) and have been identified in the Government's Clean Air Strategy as one of the most effective ways of bringing down emissions.

Technical modelling used to inform the strategy found that Clean Air



↑ Greater effort is being taken to tackle emissions

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Zones which impose financial penalties on older vehicles are considered the most likely means of achieving compliance.

However the Government was keen that such measures should only be put in place as a last resort if other measures (such as speed bumps, retiming traffic lights and incentives to use public transport) were shown to be insufficient.

The legal context

Government is under pressure to bring down emissions quickly due to international and European obligations, as well as national legislation.

This was highlighted last February when campaigners won a third High Court victory over the ineffectiveness of Government policy. Mr Justice Garnham said: "The Environment Secretary must ensure that (in a number of areas) steps are taken to achieve compliance as soon as possible, by the quickest route possible and by a means that makes that outcome likely."

Directive 2016/2284/EU of the European Parliament and the council relating to national emission ceilings

for certain atmospheric pollutants oblige the UK to take steps to lower emissions.

However it is unlikely that Britain leaving the European Union will affect these obligations as – while agreed at the European level with British support – they were enshrined into UK law by the Air Quality Standards Regulations 2010 and the National Emission Ceilings Regulations 2018.

Furthermore, the EU obligations stem from the United Nation's Economic Commission for Europe's '1979 Convention on Long Range Transboundary Air Pollution' and its 1999 'Protocol to Abate Acidification, Eutrophication and Ground-level Ozone', revised in 2012 and which the UK Government helped to shape.

A global problem and a global challenge

The World Health Organization estimates that air pollution is responsible for seven million premature deaths each year across the world. In the UK alone, long term exposure to man made air pollution has an annual effect equivalent to between 28,000 and 36,000 deaths;



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caused by strokes, lung cancer, respiratory conditions, cardiovascular disease and possibly dementia.

These negative health effects generate individual suffering and an economic cost to society. Research has estimated that air pollution costs the EU's 28 countries around €140 billion which corresponds to almost 1% of the GDP of the member states.

In cities, where the worst air quality is found, road traffic emissions are the principal source of pollution.

Independent transport consultant Dr Glyn Rhys-Tyler argues that emissions compliance with air quality standards will continue to prove a major challenge for the UK.

The two main air pollutants of current concern from road transport in the UK are nitrogen oxides (NO_x) and particulate matter.

NO_x from vehicle exhausts primarily comprises two components: nitric oxide (NO) and nitrogen dioxide (NO₂). From a health perspective NO₂ is of most concern and diesel vehicles produce the overwhelming majority of nitrogen oxide gases coming from roadside sources.

This is putting pressure on city governments to take action and for the highways and transportation sector to be a part of the solution.

Five authorities required to take forward Clean Air Zones

Birmingham City Council:

Last September Birmingham submitted its preferred business case which included a Clean Air Zone charge in the city centre. This is arguably the most comprehensive of the five schemes and is predicted to achieve "full compliance in 2022".

Measures include parking restrictions and a clampdown on vehicles whose engines are left idling.

Cars, taxis, private hire vehicles and light goods vehicles that do not meet the Euro IV emissions standard for petrol and the Euro VI emissions standard for diesel will pay £8 a day to travel into the city.

Non compliant heavy goods vehicles, coaches and buses will pay £50 a day. In general, petrol cars manufactured since 2006 and diesel cars made since 2015 will be compliant.

Birmingham's zone will largely be bounded by the A4540 ring road and be



↑ Leeds is one of five cities required to introduce a Clean Air Zone

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enforced by automatic number plate recognition. The council estimates it will cost £24M to set up, which will be funded by central Government.

Discussions continue as to the exemptions for people living or working in the zone, those on a lower income, hospital patients and visitors, businesses based or operating inside the area, taxi drivers, community and school transport services and vehicles registered for disabled motorists.

Leeds City Council:

Leeds outlined its plans to reduce air pollution in October, which included a Clean Air Zone charge for motorists. The scheme is estimated to cost around £13M and is set to begin in January 2020.

Fees will only apply to taxis and private hire vehicles (£12.50 a day) and to HGVs, coaches and buses (£50) that do not meet the emission standards. Private vehicles and vans are exempt.

The council recognises that including these would have a positive environmental impact, but estimated that 125,000 cars would have to be upgraded within a year to achieve compliance and was "not considered achievable".

The Leeds zone covers over half the city. Financial support of up to £16,000 is available for hauliers to upgrade non compliant heavy vehicles, which is estimated at costing up to £27M.

Nottingham, Derby and Southampton:

The first of the five authorities to have its air quality plan approved by Government was Nottingham City Council.

It chose to reject a charging Clean Air Zone and focused instead on its 'Go Ultra Low' project which aims to convert buses, taxis and refuse vehicles to low emission models.

Derby and Southampton city councils took longer to produce their plans. Derby rejected a chargeable zone in November and instead proposed a number of traffic management measures on the outer ring of the city centre, a car scrappage scheme, retrofitting of city buses and installing more electric chargers.

Last month Southampton also rejected charging motorists. It is looking to develop shore side power schemes for its port, HGV accreditation and improve bus and taxi licensing to encourage cleaner vehicles.

Conclusion

The risk is that a scatter shot of different schemes and regulatory regimes with different goals and standards make it more difficult for highways professionals, the freight industry and taxi drivers to understand and it may impede economic activity.

However without achieving critical mass, incentives to invest in new and cleaner vehicles will be weak and local authorities will not be able to improve their residents' lives. The highways and transportation sector should consider carefully how it can make a positive contribution to improving air quality.

Acknowledgement

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