



# Consultation response: DEFRA - Draft Clean Air Zone Framework for England

The British Lung Foundation is pleased to submit a response to DEFRA's consultation on its draft Clean Air Zone Framework for England.

Our response addresses each of the questions asked by DEFRA in its consultation form. These can be found below.

## Question 1: Are the right measures set out in Section 2?

Within section 2.2, the framework should establish minimum criteria for the location and size of clean air zones. This should ensure that each clean air zone is able to reach compliance with legal limits as soon as possible, and is designed in a manner which minimises human exposure to pollution. We believe that clean air zones which are too small could simply displace air pollution, rather than alleviating it.

### Supporting local growth and ambition (decoupling growth and pollution)

#### **Campaigns**

We agree that local authorities should undertake campaigns to help highlight the health and environmental benefits of clean air zones. This should involve joint working between public health and transport directorates within local authorities, as well as work with national bodies such as Public Health England and Defra.

Campaigns should aim to highlight the link between air pollution and poor health, particularly respiratory health. Around one in five people in the UK live with a diagnosed lung disease,<sup>1</sup> and air pollution presents a substantial threat to their wellbeing.

Adults with chronic pulmonary obstructive disease (COPD) and asthma face worsening symptoms and exacerbations,<sup>2</sup> with greater risk of hospital admission and premature mortality.<sup>3</sup> Diesel is a WHO classified carcinogen,<sup>4</sup> and is linked with higher lung cancer incidence.<sup>5</sup> Air pollution is linked with poor adult lung function,<sup>6</sup> and accelerated decline.<sup>7</sup>

Children's lungs are particularly placed at risk. Air pollution exposure during pregnancy is linked with low birth weight and premature birth, which impacts on children's lungs.<sup>8</sup> Children exposed to severe air pollution are five times more likely to have poor lung development,<sup>9</sup> and increased infection susceptibility.<sup>10</sup> Children's height negatively affects their roadside NO<sub>2</sub> intake (as they are closer to exhaust level),<sup>11</sup> with everyday pollution linked to increased airway inflammation.<sup>12</sup>

Campaigns must be targeted at all audiences, particularly vulnerable groups who may be harder to reach and/or less likely to engage. This includes people who have lung conditions, who may be also disproportionately affected due to reduced mobility. Efforts to engage with vulnerable people must consider those with an ‘invisible’ illness and also may not consider themselves to be disabled.

Information shared as part of these campaigns must be written in simple and straightforward language, outlining how people with different conditions - including lung conditions - will be affected, with appropriate provisions for navigating clean air zones. This should include information on eligibility for exemptions, as well as alternative travel routes for those who may not be exempt. This should also include robust health advice on how people can protect themselves from air pollution. Local authorities should also issue health alerts during episodes of high pollution, through a variety of mechanisms - including social media, text messages, email alerts, local radio and television etc. - to reach the largest number of people possible.

Defra should also work with other government departments to ensure that vehicle users across the UK are made fully aware of the boundaries of clean air zones. The relevant government authorities should also ensure that communication of clean air zones through planned road signage is implemented well in advance of the introduction of the clean air zone. This will ensure that motorists can plan appropriately and avoid unnecessarily entering the clean air zone.

### ***Future land use planning***

Local authorities must factor in the boundaries of clean air zones when planning new services that may involve high numbers of people vulnerable to air pollution, in particular schools, hospitals and care homes. Where possible, these services should be delivered well within the boundaries of clean air zones, with a suitable distance from the border. This is because polluted air from outside the clean air zone may travel inside it due to particular weather conditions, with concentrations highest closer to its border.

Clean air zones must contain ample parking and stopping places to ensure that people with mobility issues are able to embark and disembark from their vehicle on journeys. This is because people with respiratory related mobility issues may be unable to walk even short distances without experiencing fatigue.

## **Accelerating the transition to a low emission economy**

### ***Providing incentives and benefits for the use of ULEVs***

Local authorities should ensure that providing ULEVs with preferential parking bays or access does not negatively impact on people with mobility issues, especially those with ‘invisible’ illnesses including some lung conditions. This cohort of people will need reliable access to parking, with the ability to embark or disembark close to their intended destination. Again, this is because people with respiratory related mobility issues may be unable to walk even short distances without experiencing fatigue.

### ***Ensuring local services complement Clean Air Zone standards***

The public sector bus fleet should be subject to real world monitoring of nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), as a way of ensuring that local services are compliant with clean air zone standards. This is required as some vehicle manufacturers have equipped models with ‘defeat devices’ which diminish the credibility of laboratory testing.<sup>13</sup> This will provide real time data to inform action to ensure that pollution levels do not go above the intended limits.

## **Immediate action to improve air quality and health**

Local authorities should be required to ensure that policies on active travel are compliant with NICE guidelines on physical activity. Local authorities should also work with Public Health England and local public health teams so that these policies tackle key public health goals, including improving lung

health, reducing obesity and addressing health inequalities. Subsequently, this will also help lower pollution and create safer and more active communities.

### ***Encouraging healthy and active travel***

We support school travel planning to tackle emissions from the 'school run'. Defra must work with local authorities to ensure that there is increased monitoring of air pollution outside of schools and an assessment of which roads have lower levels of air pollution. This should be measured at a child's height rather than an adult's height, with paths to schools mapped accordingly. Defra must also work with local authorities to update local air quality management (LAQM) guidance to support and encourage local authorities to carry out this work, and support the implementation of these changes. The assessment of air pollution levels should be conducted on an annual basis, with 'safe' paths updated to accommodate any changes in traffic and pollution levels. Safe travel routes should be communicated to parents through a variety of mediums in a clear manner, with straightforward explanations of what air pollution is, the impact that it has on children, and what they can do to limit their child's exposure.

Local authorities must promote active travel amongst the most deprived communities, as this would yield outcomes in improving public health and reducing health inequalities - important government and NHS priorities. Deprived communities have less to have access to alternative transport infrastructure and green spaces, yet are more likely to be exposed to toxic pollution levels and have a lung condition. For example, people in London's poorest boroughs are twice as likely to have chronic obstructive pulmonary disease (COPD) when compared to people living in London's richest boroughs.<sup>14</sup> Moreover, children in more deprived areas are also likely to be at higher risk: 443 schools in London are located in areas that exceed legal levels of NO<sub>2</sub>, with 83% of these schools considered deprived.<sup>15</sup> A similar situation exists nationwide, with Sir Michael Marmot's review of health inequalities finding that 66% of man-made carcinogens are emitted from the 10% most deprived English city wards.<sup>16</sup> While our 2016 report, *Battle for Breath*, identified outdoor air pollution in more deprived urban areas as a trigger for worsening symptoms of lung disease.<sup>17</sup>

### ***Making active travel safer and easier***

Alternative and active methods of travel must be promoted and incentivised more widely to ensure that people make full use of them. We people to view active travel as a fundamental behaviour regardless of whether there is a clean air zone. We want to see a long-term shift away from car use, in addition to reduced emissions from vehicles. This modal shift will be essential in order to achieve emissions reductions in pollution hotspots.

## **Question 2: Are there additional measures that should be highlighted under each theme? Please give evidence of impact if possible.**

The framework should provide case studies of how each measure can be implemented by local authorities. This would provide illustration of best practice, ensuring clean air zones are as effective as they could be.

## **Question 3: In addition to the draft Framework, are there other positive measures that (a) local or (b) central government could introduce to encourage and support clean air in our cities?**

Yes. We believe that Defra must require local authorities to consider including private cars in their clean air zones for meaningful changes to be made to levels of air pollution, as private cars are often a key source of air pollution across the country. Including private vehicles will, in many of the most polluted areas, be the only way of delivering the intended health improvements.

We also believe that the Government should consider the following measures to encourage and support clean air in our cities:

## Introduce a new clean air act, including a joined up strategy for tackling air pollution

We want the central UK government (as well as governments in Scotland, Wales and Northern Ireland) to introduce individual new clean air acts that bring together existing air quality legislation into a comprehensive legal framework that safeguards public health. We believe each new clean air act should factor in the following principles:

- Retain the current EU air quality targets as a minimum health safeguard.
- Implement new 2020/2030 air pollution reduction targets in line with international law.
- Consolidate domestic, EU and international air pollution laws into one piece of legislation.
- Clarify the responsibilities of UK and devolved governments, local authorities and mayoralities.
- Set a UK framework for clean air zones, transitioning from diesel to zero emission transport.
- Be aligned with key policies and legislation like the Climate Change Act and planning guidance.
- Require local/national data collection on air pollution from a minimum number of air quality monitoring stations, publically distributed through smog warnings and other methods.
- Require national, local and city authorities to reduce exposure to air pollution amongst vulnerable groups such as children, older people and those with pre-existing health conditions.

A clean air act is required to develop a single national framework for improving air quality. It is required to address the fragmented nature of responsibilities for air quality, now split between various government departments and regional and local authorities. It should bring strategic coherence and establish clear lines of accountability for meeting targets.

## Removal of tax incentives for vehicles that pollute harmful gases

We want HM Treasury to review the system of emissions based tax benefits to promote the use of less polluting vehicles. This could involve reforming vehicle excise duty (VED - erroneously known as the 'road tax') to factor in NO<sub>2</sub> and PM emissions when calculating VED vehicle bands, or providing exemptions to fuel duties or the various benefit charges similar to those available for low CO<sub>2</sub> emitters.

This could lead to more purchases of low polluting vehicles over high polluting diesel vehicles. Financial shifts can lead to behaviour change.<sup>18</sup> We do not want all diesel vehicle owners to be financially penalised, as many people bought their cars believing it at the time to be low polluting.<sup>19</sup>

Diesel cars produce more NO<sub>2</sub> and PM<sub>10</sub> than petrol cars, with the extent depending on the emissions standard: Euro 4 (2005) diesel cars produce over three times more NO<sub>2</sub> than petrol cars, with Euro 5 (2009) producing three times as much, and Euro 6 (2004) producing 25% more.<sup>20</sup> In 2014, diesel cars constituted over 50% of all cars sold and 36% of the total car fleet - up from 10% in 1995.<sup>21</sup> Diesel in the light goods vehicle fleet increased from 51% in 1994 to 96% in 2014.<sup>22</sup> Environmental organisations also oppose diesel, suggesting alternative fuels (which can mean less pollution<sup>23</sup>) or active travel.<sup>24</sup>

Diesel cars fit in lower VED bands as diesel releases less CO<sub>2</sub>,<sup>25</sup> despite being more polluting. VED bands are based on engine size, or fuel type and CO<sub>2</sub> emissions, depending on registration date.<sup>26</sup> Models show a near total phase out of diesel cars in inner London would result in nearly all of London complying with legal NO<sub>2</sub> limits, saving 1.4 million life years with economic benefits of up to £800 million.<sup>27</sup>

## Improve pollution monitoring and introduce public health alerts

We want the Government to improve pollution monitoring, and improve public health messaging on air pollution through daily alerts, funded public health campaigns and healthcare engagement. We want:

- Mandatory monitoring of PM2.5 by local authorities across the UK.
- Defra to work with UK-wide health and media bodies to publicise timely air pollution warnings, with easy to understand advice on avoiding or handling high levels of pollution.

- The National Institute for Health and Care Excellence (NICE) to update guidelines for healthcare professionals on relevant conditions to offer advice on managing pollution exposure.

Defra is already legally required to notify vulnerable groups, such as those with lung conditions who facing increased symptoms. However, we believe this system could be improved. Currently, alerts often fail to reach these groups in a timely manner and do not always offer useful health advice.

### Introduce real-world emissions testing for all vehicles

We want UK governments to work with pollution and transport experts to develop new real-world emissions testing for all vehicles. Real world testing typically involves driving a vehicle for around 1.5 hours over a test route on public roads and measuring emissions.<sup>28</sup> This will provide consumers with accurate pollution information. Once standards have been developed, governments should require:

- Local authorities to assess new and existing bus stock using this test, to ensure compliance.
- New cars to be sold with a compulsory energy certificate similar to that for household products.
- Vehicles to clearly display official stickers/signage indicating the pollution rating of each car.

Real world emissions testing is required as laboratory testing is unreliable.<sup>29</sup> Independent reports suggest diesel cars produce higher levels of emissions under real-world driving conditions than their own emissions standards suggests - some breaking their own emission standard by a factor of 10.<sup>30</sup>

## Question 4: Are the operational standards and requirements set out in Section 3 and Annex A of the Framework acceptable?

### Preparing and planning for a charging zone

We believe that where cars are the biggest polluters locally, then local authorities should be required to include them in their plans for a clean air zone. Evidence suggests that the inclusion of cars within a clean air zone can lead to excellent outcomes. For example, a clean air zone in Berlin which included cars led to PM and NO<sub>2</sub> emissions 50% and 20% lower than the predicted trend.<sup>31</sup> Conversely, the exclusion of cars in London's ultra-low emission zone may lead to scarce reductions in air pollution.

We also agree that local authorities must make decisions about the type of vehicles needing to be addressed when developing a clean air zone. However, we want local authorities to be given sufficient resources to make this decision. This could mean easy access to case studies of the impact of vehicle inclusion across different areas. It could also mean the provision of funding to carry out studies and assessments. This will help ensure the most accurate decisions are made.

### Classes of charging Clean Air Zone

The framework must lay down the minimum criteria for class D clean air zones. The criteria for this is currently included in a footnote rather than in the main table in Annex A. It is important that the minimum criteria is established as cars are a key source of road transport NO<sub>x</sub> in most non-compliant zones.<sup>32</sup> The framework must distinguish between diesel cars that meet the Euro 6 emission standard under real driving conditions, and the majority which currently do not.

### Vehicle detection - automatic number plate recognition

Defra must provide further clarification on the operational standards for vehicle detection before we can accurately assess its acceptability.

If vehicles identified through ANPR are being recorded as compliant with Euro 4 or diesel Euro 6/VI standards based on laboratory testing only, then the standards will be difficult to implement as intended. This is because many laboratory tests systematically understate true pollution levels, as highlighted in the Department for Transport's 2016 report on nitrogen dioxide emissions from cars sold in Britain.<sup>33</sup>

These standards should be acceptable if Defra, the Department for Transport and the DVLA cross-reference cars identified through ANPR with data real world emissions, or use cameras or sensors to measure the real world emissions for each car entering the clean air zone. The framework should establish the minimum number and optimal location of cameras, including the need for mobile cameras. Alternatively, these government departments could work with industry partners to ensure that cars are required to have consumer labelling based on real world emissions that local authorities can monitor. These changes will ensure that only low polluting vehicles will be permitted to enter clean air zones.

The framework should also contain criteria for vehicle inspection to ensure compliance with standards, including random roadside testing and remote sensing within clean air zones to highlight and restrict high emitting vehicles.

### Question 5: Do you agree that the requirements in Clean Air Zones for taxis and for private hire vehicles should be equivalent?

Although we agree the requirements for taxis and private hire vehicles should be equivalent, local authorities should be able to offer partial exemptions or reduced rates to vehicles that are designated as wheelchair accessible. This will ensure that individuals or organisations that periodically offer services to people with mobility issues will not be disincentivised from doing so in the future. These disincentives may result in difficulty for people with disabilities to acquire transportation when required.

In the long term, local authorities should work with Defra and the Department for Transport to support charitable organisations which provide vehicle services to people with mobility issues to upgrade their vehicles. These organisations may require this support as they often have limited financial capabilities.

Local authorities, Defra and the Department for Transport should also encourage taxi and private hire vehicle owners to upgrade to cleaner vehicles. This may include direct engagement with organisations such as the Licensed Taxi Drivers Association and private hire organisations to educate their members and employees about clean air zone plans, the health impacts of air pollution, and ways of upgrading to cleaner vehicles.

### Question 6: Do you agree the standards should be updated periodically?

Yes, the standards should be updated periodically. We recommend that a full process and timetable for the long term updating and tightening of standards should be published in draft format for consultation in 2018.

### Question 7: If yes, do you agree that the minimum vehicle standards set out in the Framework should remain in place until at least 2025?

Defra should have the option to update the minimum vehicle standards before this period, should the need arise. In the long term, we want the introduction of clean air zones to not just support reductions in emissions from cars, but also people's behaviour to lead to them using fewer cars. This is important as brake pad and tyre may contribute up over 50% of PM<sub>10</sub> emissions in London.<sup>34</sup>

## Question 8: Do you agree with the approach to Blue Badge holders?

We do not agree that blue badge holders should not generally be exempt from a charge in a clean air zone, whether as a driver or as a passenger. We do not believe that additional admin costs are a valid reason to exclude this cohort. We believe that it may be a breach of the Public Sector Equality Duty under the Equality Act 2010. Defra should therefore require local authorities to exempt all blue badge holders by default.

The current approach means that people with a lifelong mobility issue may be liable to pay a clean air zone charge, even though they are unable to walk even short distances due to their lung condition. This cohort of people with 'invisible illnesses' are also often excluded from exemption from vehicle tax.

Defra must also consider that alternatives to cars are not always feasible for people with lung-related mobility issues. Some modes of transport, such as buses, still require relatively significant amounts of exertion to get to and from stops. These journeys may be even more challenging during the peaks of summer or winter, when outdoor air quality may be diminished due to natural environmental factors.

Failing to exempt blue badge holders may be considered unlawful discrimination, while also failing to advance equality of opportunity for those with mobility issues. Requiring local authorities to decide on whether to offer exemptions could result in variations in equality of access to services between cities.

## Question 9: Is the approach set out suitable to ensure charges are set at an appropriate level?

We believe that the framework should outline a minimum level of charge to ensure that vehicle operators will be encouraged to upgrade their vehicle rather than just pay the charge and maintain using their current vehicle. This minimum level of charge can vary depending on the overall economic demographics of the local authorities implementing the clean air zone.

## Question 10: Do you have any comments on the secondary legislation as drafted?

We believe that Regulation 4 of the secondary legislation must be amended to require local authorities to publish their draft charging scheme on their website, along with an expected timetable of implementation, with interested parties to be notified on publication. This requirement should not impinge on the prerogative of local authorities to launch an inquiry on the draft scheme, should they feel it is necessary. This would provide greater transparency and allow people to informally feedback.

## Question 11: Do you agree with the approach undertaken in the impact assessment? If no, please provide supporting evidence.

We generally agree with the approach in the impact assessment. However, while the impact assessment notes that improvements to air quality resulting from clean air zones will benefit people most vulnerable to air pollution, it does not outline how the practicalities of these zones will impact on these populations - particularly people with mobility issues who do not qualify for exemptions. For example, financial costs resulting from alternative modes of transport, or the social impact in terms of being less able to travel.

## Question 12: Do you agree with the conclusions of the impact assessment? If no, please provide supporting evidence.

We agree that mandatory charging with clean air zones should be the preferred option, as this will ensure legal compliance and deliver the best outcomes.

### Question 13: Are you aware of any additional data that could inform the impact assessment? If yes, please give details.

We do not have any further data.

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  - <sup>8</sup> Pedersen M et al, (2013) *Ambient air pollution and low birthweight: a European cohort study (ESCAPE)*, The Lancet Respiratory Medicine, Volume 1, No. 9, p695-704 p.695
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  - <sup>14</sup> British Lung Foundation (2016) Chronic obstructive pulmonary disease (COPD) statistics. Available at <https://statistics.blf.org.uk/copd>
  - <sup>15</sup> Mayor of London (2016) "Hundreds of London schools exceed legal air quality levels". Available at <https://www.london.gov.uk/press-releases/mayoral/hundreds-of-schools-exceed-air-quality-limits>
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  - <sup>18</sup> Department for Environment, Food and Rural Affairs (2016) *Exploring and appraising proposed measures to tackle air quality: project summary report for contract AQ0959* p.8
  - <sup>19</sup> British Lung Foundation (2015) Air poll survey data (internal)
  - <sup>20</sup> Transport and Environment (2015) *Don't Breath Here* p.47
  - <sup>21</sup> IPPR (2016) *Lethal and illegal: London's air pollution crisis* p.10
  - <sup>22</sup> *ibid*
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