

# Friends of the Earth Scotland response to “Building Scotland’s Low Emission Zones: A Consultation”



**Friends of  
the Earth  
Scotland**

**November 2017**

Friends of the Earth Scotland welcomes the opportunity to feed into this consultation. We have been campaigning for urgent action on harmful air pollution in Scotland since 2013. We co-represent Scottish Environment Link on the Cleaner Air for Scotland Governance Group.

Air pollution continues to be killing people early in Scotland and is the single biggest environmental health threat in Scotland today. Because children, unborn babies, people living in poverty and people with disabilities are disproportionately impacted by pollution, it worsens social and health inequalities in our society.<sup>1</sup>

Scotland’s illegal pollution concentrations are predominantly from transport. Transport is also the largest contributor to Scotland’s climate change emissions.

Therefore we are campaigning for cleaner, and fairer transport.

## **1 Do you support the principle of LEZs to help improve Scottish air quality? Please be as specific as possible in your reasoning.**

We fully support the principle of LEZs to help improve Scottish air quality and have been campaigning actively for their introduction since 2013.

But for LEZs to be a success in Scotland:

- The Government needs to restrict buses, vans, and lorries from the outset, followed by cars and taxis.
- The Government needs to provide funding for infrastructure to be installed, buses to be scrapped/retrofitted, and for councils to run strong communications campaigns to support the delivery of LEZs.
- LEZs need to be enforced using ANPR technology to create a legacy that can be built upon so cities can be fit to phase out diesel and petrol vehicles altogether.
- The bus sector should be re-regulated to allow for Councils to have the chance to exert greater controls over bus emission standards and prices (and we are responding to the consultation on local bus services in parallel to this consultation).

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<sup>1</sup> See, for example, Royal College of Physicians, “Every breath we take: the lifelong impact of air pollution” (February 2016)

- LEZs need to be introduced in tandem with measures to support modal shift away from the car and to walking, cycling, and using public transport.

LEZs will play an increasingly important role in the delivery of the Scottish Government's ambition to phase out the need for petrol and diesel by 2032.<sup>2</sup> They have been identified as the single most effective method of improving air quality quickly.<sup>3</sup> But they are one of several measures which need to be introduced to tackle the unsafe levels of air pollution that persist across many parts of Scotland which the Government is under a legal duty to deal with as soon as possible.<sup>4</sup>

Road traffic is responsible for 80% of NOx concentrations at roadside on average across the UK.<sup>5</sup>

Last year in Scotland, cars account for 76% of all traffic and single occupancy journeys accounted for over two thirds of all car journeys.<sup>6</sup> **So even where source apportionment is pointing the blame for pollution on buses, the car is still the key culprit for pollution, because it clogs our streets and causes buses to be stuck in traffic.**

Therefore, **the Scottish Government needs to introduce measures which will not only improve emissions standards, but reduce the need for the private car altogether by improving access to and the quality of more sustainable modes.** This also important because new research is showing that a lot of our urban pollution from vehicles does not just come from exhaust pipes, but is also from brake and tyre wear (see for example, Chair of the Committee on the Medical Effects of Air Pollution, Professor Kelly's warning that electric cars are not the answer to air pollution.<sup>7</sup>)

Reducing reliance on the private car will create more space efficiency on our roads and improve air quality as well as making transport - and therefore access to basic services - fairer for the 29% of households in Scotland who do not have access to a car (NB this is 48.6% of households in Glasgow, 38.9% in Edinburgh, 44.8% in Dundee, and 31.5% in Aberdeen).<sup>8</sup> In Q15, we set out interventions that would reduce reliance on the private car: congestion charging, premises parking levies, improvements to walking and cycling infrastructure, and improved bus services through re-regulation of the sector.

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<sup>2</sup> The First Minister stated in announcing the 2017 Programme for Government: "Our aim is for new petrol and diesel cars and vans to be phased out in Scotland by 2032 - the end of the period covered by our new Climate Change Plan and eight years ahead of the target set by the UK government."

<sup>3</sup> Defra, "UK Plan for tackling roadside nitrogen dioxide concentrations Technical Report," July 2017

<sup>4</sup> ClientEarth (2) v Defra [2016] EWHC 2740

<sup>5</sup> Defra, "UK plan for tackling roadside nitrogen dioxide concentrations: Detailed Plan," July 2017, Figure 3

<sup>6</sup> Transport and Travel in Scotland 2016, (26 September 2017)

<sup>7</sup> The Guardian Online, "Electric cars are not the answer to air pollution, says top UK adviser" 4 August 2017

<sup>8</sup> Transport and Travel in Scotland 2016 (26 September 2017)

In order to secure clean air over the long term, planning policy also needs to be strengthened to ensure that new developments do not exacerbate air pollution.

## **2 Do you agree that the primary objective of LEZs should be to support the achievement of Scottish Air Quality Objectives? If not, why not?**

We believe that LEZs should not only secure compliance with, but should go beyond, both European air quality legal limits and Scottish air quality standards, aiming for full compliance with WHO air quality guidelines in all areas.

They should aim for compliance with EU air quality limits as soon as possible because the Scottish Government is under a legally binding duty to secure compliance with the European legal limit for Nitrogen Dioxide (annual mean) as soon as possible. For the purposes of EU law Scotland is split into 6 zones, and is in breach of the NO<sub>2</sub> limit in respect of 4 zones.<sup>9</sup> The original deadline for compliance was 2010 (a five-year extension was granted to Edinburgh Urban Area, North East Scotland, and Central Scotland - but this has now passed too).

They should also aim for compliance with Scottish air quality standards because local authorities are under a duty to as far as possible aim for the achievement of Scottish air quality standards, which are being broken in a total of 38 Air Quality Management Areas spanning fourteen local councils, for a combination of mainly breaches of the PM<sub>10</sub> standard and the NO<sub>2</sub> standard. These standards were due to have been achieved by 2010 and 2005 respectively<sup>10</sup> and it is unacceptable that a generation of young children are growing up with air that is harming their development and therefore their prospects in life.

The LEZs should go even further than the Scottish air quality standards and aim to reduce air pollution as much as possible, and ensure that kerbside air quality monitors are brought to levels which are within WHO guidelines, and that WHO guidelines are met in all areas, not just at residential areas. This is because it is well established that air pollution harms health not just at residential locations, and that any level of exposure is harmful to health. The WHO states, “no threshold [of particulate matter] has been identified below which no damage to health is observed.”<sup>11</sup>

## **3a Do you agree with the proposed minimum mandatory Euro emission criteria for Scottish LEZs?**

Firstly, we agree with the proposed minimum mandatory Euro emission standards but they are meaningless without timeframes attached. The LEZs

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<sup>9</sup> Defra, “UK Plan for tackling roadside nitrogen dioxide concentrations Technical Report,” July 2017, Figure 2.3 on p 28

<sup>10</sup> Scottish Air Quality Website, “Air Quality Standards and Objectives”

<sup>11</sup> WHO Factsheet, “Ambient (outdoor) air quality and health” (2016)

need to provide for clean air **as soon as possible**. In our view, a fair approach would be as follows:

- Buses, coaches, minibuses, HGVs, large vans & small vans should be included in LEZs by 2018 in Glasgow (2020 for the other cities)
- Taxi & PHVs should be included in LEZs by 2020 in all cities
- Cars, motorcycles, and mopeds should be included in LEZs by 2020 in Glasgow, and 2022 in other cities.

Enforcement should happen on these dates with possible sunset periods for residents and vehicles used by people with disabilities (see q7a).

These timeframes are necessary, in our view, not only to protect public health, but also to deliver on the Scottish Government's outstanding legal duties under the Ambient Air Quality Directive. The Scottish Government is under a legal obligation to comply with EU air quality limits for NO<sub>2</sub> (annual mean) **as soon as possible** following a breach of the original 2010 deadline. This is an absolute obligation with little margin for discretion. In *ClientEarth 2 v Defra*, the High Court interpreted the nature of the obligation on Member States as follows:

“Whilst the Member State can determine the measures it is to adopt it must select measures *which will be effective in achieving the object in view*. That means, inevitably, that they must be scientifically feasible, but effective...

“... I reject any suggestion that the state can have any regard to cost in fixing the target date for compliance or in determining the route by which the compliance can be achieved where one route produces results quicker than another. In those respects *the determining consideration has to be the efficacy of the measure in question and not their cost*. That, it seems to me, flows inevitably from the requirements in the Article to keep the *exceedance period as short as possible*.”<sup>12</sup>

Secondly, it is becoming increasingly clear after the Scottish Government's Programme for Government that LEZs have the potential to play a crucial role in phasing out the need for diesel and petrol cars and vans by 2032.

The Scottish Government will need to think creatively to deliver on its 2032 aim. If it were to ban diesel and petrol cars and vans from city centres, which it could enforce and monitor using LEZ ANPR technology, the boundaries, and the TRO enforcement mechanisms, then this would certainly help to drive the phase out of petrol and diesel vehicles across the country, because many drivers would seek to be able to use their vehicles in city centres.

Plenty of other cities are well ahead of Scottish cities in this respect:

- In **London**, from 1 January 2018, all taxis licensed for the first time must be zero emission capable, while new diesel taxis will not be allowed in London.<sup>13</sup>
- Last year, city leaders in **Paris, Mexico City, Madrid and Athens** all pledged to phase out the use of all diesel cars and trucks by 2025.<sup>14</sup>

<sup>12</sup> ClientEarth (2) v Defra [2016] EWHC 2740, paragraphs 49 & 50 (emphases added)

<sup>13</sup> Transport for London, “Mayor and TfL finalise ULEZ requirements for taxi and minicab trades” (2015)

- This October, the mayors of **London, Paris, Los Angeles, Copenhagen, Barcelona, Quito, Vancouver, Mexico City, Milan, Seattle, Auckland & Cape Town** committed to procure only zero-emission buses from 2025 and ensure that major areas of their city are zero emission by 2030.<sup>15</sup>
- This October, **Oxford** City Council and Oxfordshire County Council jointly proposed the establishment of a Zero Emission Zone in Oxford City by banning petrol and diesel vehicles ban from parts of the city centre.<sup>16</sup>
- **Oslo** plans to ban cars from the city centre by 2019.<sup>17</sup>

The Scottish Government and city councils should therefore set out a vision for the phase out of fossil fuelled vehicles within the LEZs.

We are disappointed that Table 1 of this Consultation document is not an accurate representation of the LEZs in place in Europe. It underrepresents the current level of ambition and scope and risks affecting Scotland's level of ambition as a result. For example, Sweden's LEZs apply restrictions to buses as well as HGVs, and Stockholm & Gothenburg also has a congestion charge which applies to all vehicles. Denmark has 5 LEZs which affect large vans, campervans, and all vehicles above 3.5 tonnes.

**3b Do you agree with the proposal to use the NMF modelling in tandem with the NLEF appraisal to identify the vehicle types for inclusion within a LEZ?**

We agree with the need for NMF modelling, but it needs to include all available transport modes, which has not been the case to date.

We remain highly sceptical of the NLEF appraisal process as, nearly two years on from the launch of CAFS, it has yet to be finalised and appears to risk making an overly complicated and unnecessary process and therefore risks slowing down the advancement of LEZs and action on air pollution in general.

**3c Should emission sources from construction machinery and/or large or small van refrigerated units be included in the LEZ scope, and if so should their inclusion be immediate or after a period of time?**

Yes, they should be included as quickly as possible (i.e. from the outset)

**4 What are your views on adopting a national road access restriction scheme for LEZs across different classes of vehicles?**

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<sup>14</sup> BBC News, "Four major cities move to ban diesel vehicles by 2025" (2 December 2016)

<sup>15</sup> C40 Cities Press Release, "Mayors of 12 Pioneering Cities Commit to Create Green and Healthy Streets" (23 October 2017)

<sup>16</sup> Climate Action Programme, "Oxford to set up world's first zero emissions zone" (13 October 2017)

<sup>17</sup> The Guardian, "Oslo moves to ban cars from city centre within four years" (19 October 2015)

We support the Government's view that LEZs should be set up as a Road Access Restriction Scheme i.e. so that "where vehicles that do not meet LEZ Euro emission standards (and do not meet any LEZ exemptions) are not allowed to enter a LEZ, and are subject to a penalty if they enter the LEZ, where the penalty is proportionally higher than a daily charge as noted above to incentivise compliance with the LEZ."

The fine should provide a very significant disincentive to repeated breaches, otherwise bus or lorry operators, or wealthy car drivers may decide paying the fine is just the cost of doing business with their non-compliant vehicle.

As set out above, LEZs should apply restrictions to all vehicle classes, not just buses.

We would also be supportive of congestion charging.

**5 What are your views on the proposed LEZ hours of operation, in particular whether local authorities should be able to decide on LEZ hours of operation for their own LEZs?**

Low Emission Zones should operate 24 hours a day every day of the year, and this should be mandatory for Glasgow, Edinburgh, Aberdeen, and Dundee. Any other arrangement will lead to major driver confusion.

**6 What are your views on Automatic Number Plate Recognition enforcement of LEZs?**

In our view, ANPR enforcement of LEZs is crucial to the success and potential strong legacy of LEZs. Firstly, it will very significantly increase levels of compliance over any other enforcement method. Secondly, as set out below in qs 14 & 15, by having camera technology in place, it will be able to be put to use for other kinds of traffic controls including congestion charging.

The London example is a good blueprint to follow for ANPR enforcement.<sup>18</sup> Privacy considerations of using ANPR technology are dealt with in q 19.

**7a What exemptions should be applied to allow LEZs to operate robustly? Please be as specific as possible in your reasoning.**

Emergency vehicles should be exempt, with encouragement to comply on a voluntary basis.

Blue badge holders, and vehicles that have a disabled or disabled passenger vehicle tax class, and people living within LEZs should be allowed a longer time to comply than other car & van owners (see detail in q 8)

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<sup>18</sup> See <https://tfl.gov.uk/corporate/privacy-and-cookies/road-user-charging> for details

**7b Should exemptions be consistent across all Scottish local authorities?**

Yes

**8 What are your views on LEZ lead-in times and sunset periods for vehicle types shown in Table 2?**

Figure 4 is extremely confusing and unclear, as it suggests that LEZs may only be enforceable at some point after 2019 which would erode any ambition or urgency around LEZ implementation. The terms “lead in time” and “sunset period” are overlapping but not exactly the same, which is confusing - we suggest doing away with the term “lead in time” as we have already been leading into LEZs since the launch of CAFS.

The Scottish Government should not declare that an LEZ is operational unless it is enforced.

The Glasgow LEZ should have enforceable restrictions against buses, lorries, and vans by the end of 2018, and cars and taxis by 2020.

Other cities should have enforceable restrictions against buses, lorries, and vans by the end of 2020, and cars and taxis by 2022.

Blue badge holders/ vehicles that have a disabled or disabled passenger vehicle tax class, and people who are residents within LEZ boundaries should be allowed an additional 3 years to comply (i.e. 2023 in Glasgow, and 2025 elsewhere). These extra three years could be referred to as a “sunset period”.

There is clearly no case at all to give fleet operators (bus, lorry, van, taxi) any extra time to comply. When an LEZ includes them, they should have to comply from day one.

**9 What are your views about retrofitting technology and an Engine Retrofitting Centre to upgrade commercial vehicles to cleaner engines, in order to meet the minimum mandatory Euro emission criteria for Scottish LEZs?**

We are supportive of the concept of Engine Retrofitting Centre for environmental reasons, cost reasons, and reasons of creating jobs and services in an emerging clean carbon transport sector.

**10 How can the Scottish Government best target any funding to support implementation?**

The Scottish Government must commit new funding to help local authorities with the costs of setting up LEZs, including camera installation and developing communications campaigns.

Over an appropriate period, the Scottish Government should target money from the Green Bus Fund to ensure that priority is being given to applications coming in from bus companies whose fleets will be affected by LEZ proposals. But moreover, it should increase the size of the fund so that it can cover the costs for bus retrofits to successful applicants.

We believe that the findings from the costings report, as set out in the Jacobs report, potentially have overestimated the cost of retrofitting/scraping buses for a number of reasons. Firstly, the report takes the unjustified assumption that all Euro III buses would need to be scrapped, not retrofitted - and retrofitting is substantially cheaper. Secondly, that report takes Glasgow as a benchmark city from which costs have been drawn up for the other cities - but in Edinburgh, the costs of upgrading the bus fleet would be much lower because Lothian Buses has a much higher proportion of Euro VI and better buses.

### **11 What criteria should the Scottish Government use to measure and assess LEZ effectiveness?**

- **Air Quality improvements across all regulated pollutants**, as monitored by Scottish Government and local authorities' automatic monitoring and diffusion tube networks: compliance with Scottish air quality standards must be achieved as soon as possible in every diffusion tube and automatic monitoring location across Scotland. Together with this criterion, monitoring needs to be strengthened across the country at all sensitive locations. We note, for example, that no monitoring currently takes place in Livingston in West Lothian. We note as well, that the PM<sub>2.5</sub> monitoring network needs to be strengthened across Scotland.
- **Modal shift** from car usage to public transport, in particular to bus, walking, and cycling.
- **Drop in overall motorised traffic levels**

### **12 What information should the Scottish Government provide to vehicle owners before a LEZ is put in place, during a lead-in time and once LEZ enforcement starts?**

The Scottish Government needs a much better, more ambitious communications strategy around LEZs. The strategy must include strong messaging about how dangerous air pollution is, including basic facts that tens of thousands of us are exposed to unsafe levels of air pollution on a daily basis, that children and babies' health and futures are jeopardised by dirty air, and the fact that transport is the biggest single source of pollution. For too long, the Scottish Government's stance has been to shy away from these facts, which will only make it harder for the Government to galvanize public acceptance of and support for LEZs.

Defra produced a communications toolkit in 2013-2014 which gives advice to Directors of Public Health and other about the importance of, and how to, communicate the harmful effects of air pollution.<sup>19</sup>

There has been confusion about what the LEZs will look like and this has opened the door to speculative and sensationalist headlines, which create more problems in terms of galvanising public support (e.g. the Scotsman ran a piece “Three Quarters of Scotland’s diesel cars face city centres ban” which gave the impression that a ban was imminent).

Sadiq Khan’s twitter feed and press releases page are fantastic examples of how a civic leader can issue strong, positive messaging around vehicle controls (e.g. “London’s toxic air is a health crisis. The new T-Charge will help to cut pollution by taking older, more polluting cars off our streets”, “The T-Charge brings London one step closer to cleaning up the polluted air we've been forced to breathe for too long” etc).

### **13 What actions should local or central government consider in tandem with LEZs to address air pollution?**

The Government must design Low Emission Zones in tandem with enabling modal shift away from the private car and towards more space efficient and sustainable modes, and reducing the need to travel. Not only would modal shift be one of the most effective ways of improving air quality quickly, it would also:

- Ensure that more people have access to a range of transport modes.
- Reduce inequality in society: it is currently the more affluent in society who travel more by car, and the more deprived who suffer the most from air pollution and from difficulties in accessing basic services.
- Reduce congestion.
- Improve our physical activity and Scotland’s health.

For modal shift to occur local and central governments must introduce measures to (a) encourage the greater uptake of travelling by bus (b) encourage the greater uptake of travelling on foot or by bike and (c) discourage unnecessary car use.

Measures to achieve this include:

1. Re-regulating the bus sector

In the last five years across Scotland, passenger numbers have dropped 5%, the number of kilometres driven by the bus sector has dropped 5%, and bus fleet sizes have decreased by 11%.

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<sup>19</sup> Defra, Science and Research Projects, “Developing communication methods for localised air quality and health impact information - AQ1010”

As a result, people are being cut off from being able to access basic services, or people are being forced into car ownership. Congestion is a key factor in the decline of the sector, and another is that often bus services are poorly designed, and highly priced. Re-regulation of the bus sector, by allowing councils to own bus operators or run highly regulated franchises (where transport authorities can specify the terms of the agreement including bus routes, frequency of service, fares, smart ticketing, emission standards, livery etc), would allow councils and communities to have greater control over how, when, and where services operate and would make it more likely that buses could work in the public interest. If contracts were designed correctly, this *could* yield good results.

A good example of a publicly run bus service is Lothian Buses, which has the cleanest bus fleet in Scotland and has bucked the national trend of decline.

A good example of highly regulated franchising not working at first and then changing to become a success, is Jersey.<sup>20</sup> For a long time, the States of Jersey has been able to have control over its bus services. It first regulated its bus service in 2002, with not very successful results, but started a new contract in 2013. As a result of switching the contract in 2013, passenger ridership increased by 32%, levels of subsidy have reduced by £800k per year, five new routes were been introduced, and 57% of people who use the bus in peak time have access to a car but choose not to use it. Key to the success of the Jersey bus model is that the States of Jersey was able to specify what sort of service it wanted as part of the tendering process. The bus operator that won the contract is a social enterprise operator which reinvests its profits into other transport services or into the community.

## 2. Creation of segregated cycle paths in urban centres and investment of 10% of transport budgets into active travel

For years now, Scotland's cycling rates have been stalled at around 1%. According to Transport Scotland statistics, many of the barriers to cycling are to do with concerns about traffic, safety, and infrastructure.<sup>21</sup> Cycling has a potentially transformative role to play in tackling air pollution. In Seville, for example, cycling infrastructure was rapidly rolled out (about 110km from 2007-2012) leading to an increase in modal share of cycling in the city from 0.5% in 2006 to 7% in 2013. NO<sub>2</sub> mean concentrations more than halved in the period between 2000 and 2012 (from 52 µg/m<sup>3</sup> to 25 µg/m<sup>3</sup>). Cycling was one of a set of measures introduced to reduce traffic volumes by promoting non-motorised transport.<sup>22</sup>

The Government's needs to build on its doubling of the active travel budget and continue to reallocate transport spending away from new roads and

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<sup>20</sup> <http://hctgroup.org/uploaded/Practical%20bus%20franchising%20-%20the%20Jersey%20model.pdf>

<sup>21</sup> Transport Scotland, "Transport and Travel in Scotland", Table 26, Reasons why do not travel to work.

<sup>22</sup> European Cyclists Federation: "Cycling and Urban Air Quality A study of European Experiences"

motorways and towards segregated cycle paths and pedestrian areas. We, along with Stop Climate Chaos Scotland, and We Walk, We Cycle, We Vote, are urging the Scottish Government and all local councils to allocate 10% of its transport budget to active travel.

### 3. Congestion charging

As well as introducing vehicle emission requirements, ANPR technology for LEZ enforcement could be used to require that at certain times of the day, vehicles entering the Zone pay an entry fee. Exemptions would apply for emergency vehicles and blue badge holders.

The CCC has recommended that the Scottish Government consider the use of congestion charging to tackle transport CO<sub>2</sub> emissions.<sup>23</sup>

The London Congestion Charge was introduced in 2003. By 2006, the congestion charging zone had reduced congestion in central London by 26% from its 2002 levels. There was a 37% increase in the number of passengers entering the zone by bus during charging hours in the first year. The scheme generated £122 million net in 2005/2006.<sup>24</sup>

### 4. Premises Parking Levies

If it is harder to park, people are less likely to drive.

The Scottish Government should give Councils powers to introduce premises parking levies for large car parks. Nottingham City Council, for example, introduced a Workplace Parking Levy in 2012. Employers who provide 11 or more parking spaces have to pay a Levy of £387 per parking space. Employers, rather than employees, are responsible for paying any WPL charge, although employers can choose to reclaim part or all of the cost of the WPL from their employees. The results are becoming apparent: Public transport use is now above 40% of journeys in the city. Concerns over job losses have not borne out: employment is on the rise, and congestion is down.<sup>25</sup>

Scotland should go further than the rest of the UK and enable councils to apply levies to **all private large car parks**, including shopping centres, leisure centres, cinemas, not just workplace parking.

## **14 How can LEZs help to tackle climate change, by reducing CO<sub>2</sub> emissions in tandem with air pollution emissions?**

LEZs have the potential to reduce CO<sub>2</sub> emissions in three key ways:

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<sup>23</sup> Committee on Climate Change, "Reducing emissions in Scotland: 2016 progress report" (Sept 2016)

<sup>24</sup> Centre for Public Impact, "London's congestion charge"

<sup>25</sup> City Metric, "Why other cities should copy Nottingham's revolutionary parking levy" (Aug 24 2016)

1. Euro standards apply increasingly stringent CO<sub>2</sub> emission limits as well as PM and NO<sub>2</sub> limits. Therefore, a switch to more stringent Euro standards means an automatic reduction in CO<sub>2</sub> emissions from transport, insofar as vehicles' compliance with Euro standards can be verified.
2. Over time, LEZs should require motorised vehicles entering to be zero-carbon, i.e. electric, as set out in our answer to q 3a. This supports the Scottish Government to deliver on its recent pledge to phase out the need for diesel and petrol cars and vans by 2032.
3. As mentioned above, once the ANPR infrastructure is in place to support LEZ enforcement, it could be used, at some stage, to apply a congestion charge which would reduce the volume of traffic entering a LEZ and therefore associated CO<sub>2</sub> emissions.

### **15 What measures (including LEZs) would make a difference in addressing both road congestion and air pollution emissions at the same time?**

As cities and populations grow, there will always be density, and therefore congestion. The question should be, what kind of congestion do we want to see on our spaces? In our view, we want transport models to carry the **largest volume of people** possible, from **the most diverse range** of socioeconomic, ethnic, cultural, gender, and other backgrounds as possible, with the **lowest possible carbon/pollutant emissions per person**.

And the way achieve that is by allocating road space to the modes of transport which are more space efficient, less polluting per person, and cheapest per person.

City Planner Brent Toderian talks about "Getting density done well, emphasising walking biking and transit, emphasising a high quality of urban design, and emphasising a high level of amenity which will make the density not only liveable but lovable."<sup>26</sup>

Private cars are an inefficient use of space compared with walking, cycling, buses and other public transport modes. A full double decker bus, for example, can carry the equivalent of 75 cars. Up to ten cyclists can fit in the same space as one car. Recently published statistics show that last year, average car occupancy was 1.5 people per car. Single occupancy journeys accounted for 67 % of car journeys in 2016, an increase from 62 % in 2007.<sup>27</sup>

Therefore, the Scottish Government needs to both disincentivise unnecessary car usage, and make it easier for more space efficient modes to be chosen, by introducing the measures that we have set out in our answer to q 13.

We firmly assert that increasing road capacity is a **false solution** to tackling congestion and easing pollution. It has long been established that new roads

<sup>26</sup> Youtube Video: "Brent Toderian on sustainable mobility"

<sup>27</sup> Transport and Travel in Scotland 2016 (26 September 2017)

create new traffic, usually far more than forecast through traditional transport models in an effect known as “induced demand” or “generated traffic”<sup>28</sup> (In 1988, for example, the M25 exceeded its long term forecast traffic growth within months of opening.) Large trunk roads and associated generated traffic can lead to urban sprawl, increased pollution, and communities poorly connected to amenities and services. Litman states, “Ignoring generated traffic results in self-fulfilling predict and provide planning: Planners extrapolate traffic growth rates to predict that congestion will reach gridlock unless capacity expands. Adding capacity generates traffic, which leads to renewed congestion with higher traffic volumes, and more automobile oriented transport and land use patterns.”<sup>29</sup> City planner Jeff Speck calls induced demand “the great intellectual black hole in city planning, the one professional certainty that everyone thoughtful seems to acknowledge, yet almost no one is willing to act upon.”<sup>30</sup>

The opposite effect – of disappearing car traffic, where road space has been reallocated from being for cars and to pedestrians and cyclists – has also been observed. Cairns et al examined 70 case studies of roadspace reallocation from 11 countries and found “predictions of traffic problems are often unnecessarily alarmist, and ... given appropriate local circumstances, significant reductions in overall traffic levels can occur, with people making a far wider range of behavioural responses than has traditionally been assumed.”<sup>31</sup>

## **16 Do you have any other comments that you would like to add on the Scottish Government’s proposals for LEZs**

No

## **17 What impacts do you think LEZs may have on particular groups of people, with particular reference to the ‘protected characteristics’ listed in paragraph 5.2? Please be as specific as possible in your reasoning.**

Low Emission Zones, *if implemented correctly*, i.e. with adequate funding for and control of the bus sector, and if coupled with action to enable modal shift and thereby reduce congestion, will lead to a more equal Scotland.

This is particularly the case for the protected characteristics of disability, pregnancy and maternity, and the very young and the very old:

1. Disability

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<sup>28</sup> See, for example, the UK Department of Transport report, “Trunk Roads And The Generation Of Traffic” (1994)

<sup>29</sup> T Litman, “Generated Traffic and Induced Travel: Implications for Transport Planning” ITE Journal, Vol. 71, No. 4, Institute of Transportation Engineers (www.ite.org), April 2001, pp. 38-47.

<sup>30</sup> J Speck, “Walkable City”

<sup>31</sup> Cairns et al. "Disappearing traffic? The story so far" (2002). Municipal Engineer. 151 (1): 13–22.

- a. Where disability relates to respiratory health, cardiovascular health, diabetes, obesity, and dementia, these are all health conditions that are exacerbated by air pollution, and therefore cleaner air will remove an additional stressor on people who already suffer from these conditions.
- b. Where disability relates to mobility problems, if Low Emission Zones are designed to achieve modal shift, it will ease congestion for those who need to rely on private cars. We note that in our view, blue badge holders should be allowed an additional three-year sunset period to comply with LEZ requirements.

## 2. Pregnancy, maternity, and the very young

It is well established that exposure to air pollution during pregnancy can lead to pre-term birth, low birthweight, stillbirth, and organ damage.<sup>32</sup> Air pollution can lead to children's lungs not growing to their full potential.<sup>33</sup> Improvements in air quality will give children a much better start in life.

## 3. The very old

Older people are at risk from air pollution. The Royal College of Physicians state:

“Older people, and adults with long-term conditions, are also vulnerable to the effects of air pollution. Improving air quality will help them to stay independent and well, benefiting individuals and easing the pressure on our NHS and social services.”<sup>34</sup>

### **18 Do you think the LEZ proposals contained in this consultation are likely to increase or reduce the costs and burdens placed on any sector? Please be as specific as possible in your reasoning.**

There will be initial set-up costs for the Scottish Government and local authorities to install the ANPR cameras, to fund communications campaigns around LEZs, and to provide financial assistance to bus operators to scrap or retrofit their fleets in order to comply with LEZs.

However, there is a legal obligation on the Scottish Government to ensure compliance with EU air quality limits regardless of the cost of introducing measures.

Moreover, there are likely to be enormous financial savings if air quality is improved across a number of sectors:

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<sup>32</sup> Pedersen et al, 15 October 2013: Ambient air pollution and low birthweight: a European cohort study (ESCAPE), *The Lancet Respiratory Medicine*, Volume 1, Issue 9. [http://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(13\)70192-9/abstract](http://www.thelancet.com/journals/lanres/article/PIIS2213-2600(13)70192-9/abstract)

<sup>33</sup> Royal College of Physicians, “Every breath we take: the lifelong impact of air pollution” (February 2016)

<sup>34</sup> Royal College of Physicians, “Every breath we take: the lifelong impact of air pollution” (February 2016)

- Air pollution costs the Scottish economy £1.1 billion every year in days lost at work and costs to the NHS.<sup>35</sup>
- Physical inactivity costs Scotland £94 million per year. Low Emission Zones, if introduced in ways which enable modal shift, will lead to healthier lifestyles and this will reduce the burden on the NHS.<sup>36</sup>
- Pedestrianised areas, and car free areas, can lead to huge benefits to local businesses and can help our urban centres thrive. Living Streets' research, published in "Pedestrian Pound" found: "Investing in better streets and spaces for walking can provide a competitive return compared to other transport projects; walking and cycling projects can increase retail sales by 30%."<sup>37</sup> If Low Emission Zones are coupled with measures which make it easier and more pleasant for people to spend recreational time in our urban centres, this will yield huge benefits to local economies.

**19 What impacts do you think LEZs may have on the privacy of individuals? Please be as specific as possible in your reasoning.**

There are of course privacy considerations to be taken into account through ANPR enforcement, but we believe that these can be dealt with and that privacy can be preserved to prevent concerns.

Protections need to be written into LEZ plans. In London, personal details are held for the minimum length of time possible: ANPR data and images are automatically deleted after payment of the charge or if the vehicle is registered for a discount or exemption (for customers who pay automatically by being registered with TfL, data is retained until the account has been settled which is usually two months). This approach in Scotland would prevent Police Scotland (or local authorities, in the event of decriminalisation of LEZ offences) from being able to harvest data about people's activities or building any sort of profile of people's travel patterns.

We would add that the London congestion charging ANPR system has been in place for nearly fifteen years and whilst there were some initial concerns over privacy, the system has worked well.

**20 Are there any likely impacts the proposals contained in this consultation may have upon the environment? Please be as specific as possible in your reasoning.**

We are hopeful that if delivered correctly, i.e.

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<sup>35</sup> Extrapolated from a Defra assessment that air pollution costs the UK economy as a whole £16bn per year, based on 29,000 UK- wide deaths from air pollution – Defra, 10 May 2013, *Impact pathway guidance for valuing changes in air quality*.

<https://www.gov.uk/government/publications/air-quality-impact-pathway-guidance>

<sup>36</sup> Sustrans, "Physical activity and health - facts and figures"

<sup>37</sup> Living Streets, "The pedestrian pound: The business case for better streets and places" (2008)

- As quickly as possible
- With funding for the bus sector
- Coupled with local measures to deliver modal shift
- With a vision for fully decarbonising the transport sector

Then low emission zones will deliver enormous benefits for the environment. They have the potential to deliver cleaner air, which will benefit all of our health but especially the health of some of the most vulnerable groups in our society: people living in poverty, people with disabilities, children, and the elderly. Cleaner air will of course also benefit our natural environment, reducing the prevalence and intensity of acid rains and the impacts that acidification is having on Scotland's flora, as well as reducing the formation of ground-level ozone.

Low Emission Zones have the potential to deliver carbon reductions in the transport sector which will make it more likely for Scotland to deliver its fair share in order to tackle the global climate crisis.