

Spokes Response to “Building Scotland’s Low Emission Zones: A Consultation”ⁱ

November 2017

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 improve Scottish air quality. With most urban areas in Scotland suffering illegal levels of air pollution, killing thousands of people prematurely, it remains the largest environmental health threat to the Scottish population today apart from climate change. The Scottish government has a moral responsibility to take strong action to reduce this deadly threat, particularly since the impacts are worse for children, unborn babies, people with disabilities and those living in poverty. ⁱⁱ

This also presents a huge opportunity for the government to dovetail the introduction of LEZs with infrastructure, policies and campaigns to shift people to public and active transit. It is imperative that this opportunity is not missed. If the Scottish Government introduces measures which improve emissions standards and also reduce the need for private car use by improving public transport and active travel infrastructure not only will there be increased health outcomes due to reduced air pollution, there will be further health benefits from travelling actively, with the added bonus of less congested and safer streets. The evidence is very clear on this and it has been demonstrated that an increase in active travel and less use of motor vehicles has larger health benefits than from the increased use of lower emission motor vehicles alone. *‘Policies to increase the acceptability, appeal, and safety of active urban travel, and discourage travel in private motor vehicles would provide larger health benefits than would policies that focus solely on lower-emission motor vehicles.’*ⁱⁱⁱ This would also support the creation of a more equitable society, as 29% of households in Scotland do not have access to a car and many that do may not be able to afford to replace their cars.

Politicians need to strengthen their resolve to make cities healthier and more people friendly as the evidence that this is what the majority of the population want is plentiful. From the Sustrans *Bike Life* report, which stated that more than three quarters of the population support measures that create protected spaces for cycling ^{iv} to recent surveys which found that a growing number of Scots want tougher action on climate change.^v However, it is important to stress that effective public communication is one of the key elements in ensuring policy acceptability.

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 feel that this may be a reasonable starting point but given how ambitious Scotland’s Greenhouse Gas emissions reduction targets are, LEZs should seek to go beyond both European air quality legal limits and Scottish air quality standards. This is an opportunity to go beyond legal requirements and become exemplars as the WHO has stated, *‘no threshold (of particulate matter) has been identified below which no damage to health is observed.’*^{vi}

Whilst the primary goal may initially be to reach Scottish Air Quality Objectives, LEZs should go further and aim to reduce air pollution as much as possible to levels which are within WHO guidelines and these guidelines should be met in all areas, not just residential areas.

Again, Spokes stresses that LEZs provide a huge opportunity to support modal shift to bicycles and public transport. These secondary objectives should be central to the introduction of LEZs. This point is stressed in the World Resources Institute working paper looking at international practices for low emissions zones and congestion charging.^{vii} It is stated that, *‘A complete set of complementary measures that offer viable alternative travel options and mitigate potentially unwelcome impacts of the (LEZ) scheme should be developed before implementation.’*

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

Yes, but there need to be time constraints attached. The LEZs need to ensure the provision of clean air as soon as possible. This is necessary not only to protect public health but also to fulfil the Scottish Government's legal obligation to comply with EU air quality limits for NO₂ as soon as possible following a breach of the 2010 deadline.

We recommend that the government thinks ahead and uses the LEZ ANPR (automated number plate recognition) technology as a means to support the phasing out of all diesel and petrol cars and vans by 2032. Banning such vehicles in city centres would be an effective starting point to help drive the phase out of petrol and diesel vehicles across the country.

b) 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?

In theory, yes, air quality needs to be measured and modelled but this needs to include all available transport modes, which has not been the case to date.

It is impossible to comment on the National Low Emission Framework (NLEF) without further details. It will be based on the principles of STAG and what is clear with STAG is that it has been used to perpetuate the need for cars by largely valuing journey saving time. The output is essentially determined before the modelling is even done. The success of the NLEF will be hugely dependent on the way the model is constructed and what outputs are valued. We would be need to see the details of this before commenting further.

c) 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, as soon as possible.

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

We support the view that LEZs should be set up as a road access restriction scheme whereby *'vehicles that that do not meet LEZ Euro emission standards are not allowed to enter a LEZ and are subject to a penalty if they do.'*^{viii} This should be a large enough penalty to ensure that drivers comply with the LEZ. The money gained from these fines should be invested into better, cleaner public transport and active travel provision.

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?

We agree with the Scottish Government's preference that LEZs should operate continuously, 24 hours a day, 7 days a week, all year round, as this will maximise air quality improvement. We think that this should not be at the discretion of local authorities and that it should be mandated by the Scottish government across all regions.

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

We feel that ANPR enforcement of LEZs has several advantages over manual detection and is crucial to the success of the scheme. Firstly, ANPR is much more efficient, cost-effective and reliable, secondly there is potential for this technology to be used in the future for other traffic controls such as congestion charging.

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

We feel that exemptions should be applied to emergency service vehicles, blue badge holders, specialist vehicles such as snow ploughs or breakdown and recovery vehicles. These are vital services and may take longer to comply and it is important that their services are not compromised as a result of this.

There is also a case to be made for an 'out of hours' and 'hardship exemption' initially but these should be short term measures just at the beginning of the implementation of LEZs.

b) 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?

It is difficult to comment on specific time periods. Whilst it is imperative to reduce air pollution as quickly as possible it is also very important that LEZs are implemented properly with a view to instigate effective change.

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 support retrofitting technology and idea of an Engine Retrofitting Centre. This will be an excellent way to support vehicles to upgrade to higher Euro emissions standards in a cost-effective manner.

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

The Scottish Government needs to provide local authorities with funding to help them set up their LEZs and upgrade their commercial fleet. Particular attention should be paid to supporting buses to be retrofitted, with scrappage a last resort as half the CO2 emissions in the lifetime of a vehicle are created in the manufacture. Funding will need to be available for awareness raising and communication strategies as well as for the new camera installations.

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

- The existing networks of air quality sensors and diffusion tubes should be used to monitor air quality improvements across all regulated pollutants. Consideration should be given to increasing the number of locations where these monitoring stations are placed as with urban spread there are many satellite areas becoming more congested and polluted. It should be noted for example, that no monitoring currently takes place in Livingston. We are in favour of measuring emissions per passenger-kilometre as opposed to vehicle-kilometre.
- Modal shift should be an indicator of success. How many people have shifted from using cars to public transport, cycling or walking?
- Decrease in usage of motorised vehicles.
- Decrease in congestion.

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 to get people on board with the scheme. They need to pre-empt negative responses with the positive aims of the scheme. It needs to be constant, every day new facts released on Twitter, Facebook, etc. about the impacts of air pollution, the underlying costs to our health and economy. What our new, cleaner cities will be able to offer. Where to get support and advice. Whilst the Scottish Air Quality Website may be a central repository, it is not a website anyone visits. The messages must be spread far and wide. It is also very important to get the press on board.

Good public communication was one of the key reasons for the success of congestion charging (another way of restricting vehicles) in Singapore. The principles underpinning public communication in Singapore:

- Establish a good public image – emphasise that the purpose of the scheme is to reduce pollution and congestion and improve public health. The main beneficiaries of the scheme are the public.
- Emphasise fairness – everyone entering a LEZ will be subject to the emissions standards. As a significant proportion of the population don't own cars, yet are still exposed to the pollution from these vehicles it is fairer for them. In particular children, babies and the elderly are vulnerable to the impacts of air pollution. This demographic in particular needs to be protected.
- Disclose information – how will the zones work? Who will be impacted? What support will be provided? What are the positive changes we can expect?
- Conduct outreach activities with the public through various media channels -promote two-way communication, and emphasise interaction and public participation.
- Show responsiveness – listen to the opinions of the public and provide feedback and solutions promptly.
- Provide a variety of solutions.

Look for other examples of successful implementation of LEZs and good practice. Sadiq Khan has been an excellent ambassador for reducing air pollution in London – we need an influential figure to do the same in Scotland using social media and a strong presence in the traditional media

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

We are pleased to note that the Scottish Government is seeking to work in tandem with transport policies to increase low emission vehicle uptake and modal shift to active travel and cycling. As well as looking at bus policy funding streams, local development plans, climate change mitigating policies and placemaking policies. The Scottish Government has some excellent policies and documents to support them but it often struggles with the implementation. The Cycling Action Plan for Scotland (CAPS), and its 2020 'vision' of 10% of all trips being by bike, being a key example. This must not be the case with LEZs - government must work to ensure modal shift by encouraging greater use of public transport, providing safe active travel facilities and discouraging unnecessary car use.

Possible measures to achieve this:

- Improve bus services by re-regulating the bus sector.
- Create segregated cycle paths in town centres and key commuting routes from satellite areas into cities.
- Look into congestion charging using the ANPR technology that will already be established for LEZs.
- Give local authorities powers to introduce Premises Parking levies, i.e. Levies on all premises with over a specified number of parking places - including for superstores, leisure centres, etc., not solely workplace parking.
- Policies and actions to promote shift to EVs should be replaced by 'E-mobility' policies and actions, in which members of the public and businesses are shown the opportunity of changing to e-bike and/or cargo-bike and car-club, rather than the present policies and actions which present the public with the EV option only. See this paper^{ix}, which was prepared for Edinburgh City Council and has also been submitted to Transport Scotland.

14. How can LEZs help to tackle climate change, by reducing CO2 emissions in tandem with air pollution emissions?

It is clear that integrating climate change and air quality policies will lead to greater health, environmental and economic benefits. Euro standards apply stringent CO2 limits as well as PM and NO2 limits so LEZs that implement these standards should automatically reduce CO2 emissions.

LEZs also encourage vehicles that have low carbon emissions such as electric cars and bicycles and zero CO2 vehicles such as bicycles with bicycles providing significant economic payback by improving health outcomes. However, note the need for 'e-mobility' rather than just 'EV' policy and actions, as in Q13 above.

It is also important to note that the construction and maintenance costs of an e-bike/cargo-bike are far lower than for an EV, and this itself represents a major CO2 and resources saving where applicable. Additionally, a significant proportion of particulate pollution from motor traffic comes from tyre and brake wear, and from road dust, factors which apply to EVs as much as to fossil vehicles.

ANPR technology could also support congestion charging to reduce the number of vehicles in central areas and decrease CO2 emissions.

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

There are two key ways to reduce congestion:

- 1.) **Supply** – supply the public with real transport alternatives in order to decrease the number of vehicles, in particular single occupant cars, on the roads. The best way to do this is to tap into the 'reluctant car drivers.' These are about 40% of the car driving population that feel guilty driving but feel they have no alternative. By providing safe, separate bicycle lanes and a means for these people to make bicycle journeys, this proportion of the population would happily switch from their cars to bicycles. *'The Travelling Citizen: Emergent Discourses of Moral Mobility in a Study of Cycling in London'* suggests that car-dominated automobility has been significantly fractured. Londoners apologised for using their cars and one participant stated, *'driving – it's the new smoking.'* People want to make the right transport decision for their health and the environment but they cannot do this easily on our car dominated streets. Public transport also has a key role to play, as well as integrating cycling and public transport. The government should look into much improved bike carriage on buses and trains.
- 2.) **Demand** – demand management measures that reduce the need to take journeys. Supporting remote working, providing safe cycle routes to school so parents don't need to drive their children. Looking at the way new houses are built - a large proportion in remote locations with local amenities only accessible by car. Other demand management tools include parking restrictions, premises parking levies (13 above) and congestion charging.

- 3.) It is worth stating here that the idea that building new roads as a solution to congestion is fantastical. This is apparent in our day to day lives where it's clear that over 50 years of road building has not reduced congestion. A 2009 study by Gilles Duranton and Matthew Turner, two Economics researchers compared driving data from cities that invested in new roads from 1980 to 2000 with cities that didn't. The data "*suggested a 'fundamental law of road congestion' where the extension of most major roads is met with a proportional increase in traffic.*" Not just a close correlation, but for every one mile of road built, vehicle miles travelled increased by one mile. In fact, a new study has shown a similar correlation but reversed, when roads are closed a phenomenon known as 'traffic evaporation' occurs, where overall traffic decreases over several months.^x

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

We can't afford to get this wrong, this is an opportunity for real social and environmental change. The Scottish Government needs to be clear in their aims and make sure they are achieved. The current car dominated society we live in is not working, let's look at creating a people, place dominated society to support happier and healthier communities.

There must be strong clear aims and these need to be adhered to and not watered down so that the full potential of LEZs can be reached. There will be opposition but we need strong leadership with clear aims, to stress that LEZs are about saving lives and helping people to live in healthier environments that support both physical and mental wellbeing.

The study conducted by the World Resources Institute stated, '*Based on the experiences of these three cities, (London, Singapore and Stockholm), we conclude that the key factors in successful implementation of congestion and emissions control policies include: some form of legal safeguard from national government; strong policy objectives on the part of local government; a comprehensive feasibility study; equity and transparency during policy implementation; reliable technologies; effective public communication; and sound complementary measurements.*'

We feel that the government needs to get the most polluting vehicles retrofitted or off the road as soon as possible. They should also adhere to the above recommendations, in particular establishing clear, effective public communication and good alternatives to car travel. Don't fail to prepare. The groundwork has to be done properly to gain public support and ensure all the aims of LEZs are achieved.

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.

Car ownership is a huge financial drain, many fall into debt running cars and many just can't afford them. If at the same time as implementing LEZs, the government provides funding for the bus sector as well as regulating it to ensure adequate services are provided, coupled with car clubs and widespread action to enable modal shift, the result will be a more equitable Scotland. As well as supporting those from lower income brackets by making mobility easier without car ownership it will also advance equality opportunity between people who share a protected characteristic and those who do not.

1. Disability

Disabilities relating to respiratory health, cardiovascular health, diabetes, obesity and dementia are all exacerbated by air pollution. Cleaner air will reduce an additional stressor and allow for a better quality of life. If there is a modal shift to bicycles or electric bikes (see 'e-mobility' in 13 above) this will further improve the health outcomes of those suffering from these conditions. LEZs should also reduce congestion, making it easier for those who are more dependent on private or shared cars to get around.

2. Expectant mothers and the very young

It has been well documented that exposure to air pollution during pregnancy can lead to pre-term birth, low birthweight, stillbirth and organ damage. Air pollution can also stunt the growth of children's lungs resulting in respiratory problems in later life.

3. Older people

The Royal College of Physicians states, '*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.*'^{xxi}

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 and the government will need to fund communications campaigns. However these costs should be offset by having a healthier population, with air pollution costing the Scottish economy £1.1 billion per year in lost work days and the cost to the NHS.

The spending on cycling infrastructure should be ramped up in LEZs as well as developing key cycling commuter routes into Low Emission Zones. It should be noted that the money invested in cycling would deliver huge returns:

- Cycling schemes can achieve more for less, with benefit-to-cost ratios in the range of 5:1 to 19:1 – some as high as 35.5:1
- A typical “cycling city” could be worth £377 million to the NHS in healthcare cost savings, in 2011 prices
- Investment is effective in increasing usage^{xii}

Whilst buses can have very polluting diesel engines, bus companies should be supported to retrofit or, if necessary, scrap diesel buses so that LEZs don't impact the cost of buses, nor do they result in fewer bus services being provided.

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

There may be concerns over privacy regarding ANPR enforcement. This can be dealt with fairly easily by restricting the amount of time that personal details are held and deleting the data automatically after this period or after the fine has been paid. There are many cities in the world that have used this technology successfully without breaching the privacy of individuals.

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.

It is our hope that LEZs will deliver huge environmental benefits. This will be achievable if they are delivered quickly and support modal shifts by funding the bus sector, car clubs and active travel networks. This will be an enormous step towards decarbonising the transport sector.

**Michaela Jackson
for Spokes**

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- i <https://consult.gov.scot/transport-scotland/building-scotlands-low-emission-zones/>
 - ii Royal College of Physicians, *‘Every breath we take: the lifelong impact of air pollution’* (February 2016)
 - iii The Lancet *‘Public health benefits of strategies to reduce greenhouse-gas emissions:urban land transport’* (2009)
 - iv <https://www.sustrans.org.uk/news/people-cities-want-protected-space-cycling>
 - v <https://www.wwf.org.uk/updates/poll-growing-number-scots-want-stronger-action-climate-change>
 - vi WHO Factsheet, *‘Ambient (outdoor) air quality and health’* (2016)
 - vii World Resources Institute, *‘Study on International Practices for Low Emission Zone and Congestion Charging,’* (2017)
 - viii https://consult.gov.scot/transport-scotland/building-scotlands-low-emission-zones/user_uploads/low-emission-zones-consultation-2.pdf
 - ix <http://www.spokes.org.uk/wp-content/uploads/2009/03/1708-CEC-EV-FRAMEWORK-spokes-response.pdf>
 - x <http://h2020-flow.eu/news/news-detail/when-roads-are-closed-where-does-the-traffic-go-it-evaporates-say-studies/>
 - xi Royal College of Physicians, *‘Every breath we take: the lifelong impact of air pollution’* (February 2016)
 - xii Department for Transport (UK), *‘The Value of Cycling’* (2016)

Respondent Information Form

Please Note this form must be returned with your response.

Are you responding as an individual or an organisation? ~~Individual~~

Organisation

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The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

Publish response with name

~~Publish response only (anonymous)~~

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We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

Yes ~~No~~