

Low Emission Zones Consultation

1. INTRODUCTION

- 1.1** In November 2015, the Scottish Government published the Cleaner Air for Scotland (CAFS) Strategy¹. CAFS is a national strategy which sets out how the Scottish Government and its partner organisations propose to reduce air pollution to fulfil Scotland's ambitious carbon reduction targets. Amongst the policy areas that are outlined within CAFS, the National Low Emissions Framework² (NLEF) is cited as an important initiative, alongside the National Modelling Framework, adoption of World Health Organisation Guidelines, and proposals for a National Air Quality Awareness Campaign
- 1.2** CAFS also describes how the Scottish Government would enable local authorities to appraise, justify the business case for, and implement a range of air quality improvement options related to transport and associated land use. In addition, the Scottish Government's "A Plan for Scotland 2016 -17"³ is committed to, with the help of local authorities, identifying and putting in place the first Low Emission Zone(LEZ) by 2018. The concept of LEZs has been established for some years. An LEZ involves a city or local authority setting vehicle emissions limits in defined areas where poor air quality is an issue. Any vehicles which do not meet the required LEZ standard are restricted or deterred from entering the area concerned, either by exclusion (full or partial) or by charging.
- 1.3** Much work has already taken place on building the evidence for Low Emission Zones, with detailed work on the new National Modelling Framework (NMF) to provide key evidence, and strong progress on developing the NLEF, to deliver guidance on business case development and delivery. In addition, a wide range of consultation and engagement with key stakeholders on the delivery challenges of LEZs has taken place. Due to the complex nature of delivering LEZs, and some of the concerns that were raised by stakeholders in relation to this, Transport Scotland are taking forward a consultation to support the early adopters in their work, and to finalise a guidance document.

2. CONSULTATION

¹ <http://www.gov.scot/Resource/0048/00488493.pdf> - Cleaner Air for Scotland (CAFS)

² <http://www.gov.scot/Publications/2015/01/3287/10> - Low Emissions Framework

³ <http://www.gov.scot/Resource/0050/00505210.pdf> - A Plan for Scotland

- 2.1 The CAFS Strategy has seen the establishment of a Governance Group with wide ranging representation, to oversee its progress. The group consists of several subgroups focusing on specific topics, and now wishes to receive further input from other Stakeholders.
- 2.2 The 'Building Scotland's Low Emission Zones' consultation⁴ was launched on the 6th of September, and invites views on how the Scottish Government can, with the help of local authorities, identify and put in place the first new LEZ by 2018, creating a legacy upon which other areas can build.
- 2.3 With Local Authorities, the Scottish Government has committed to introduce LEZs into Scotland's four biggest cities between 2018 and 2020 and into all other Air Quality Management Areas by 2023

3. SESTRAN RESPONSE SUMMARY

- 3.1 SEStran supports the principle of implementing LEZs, if they are delivered as part of a wider local or Regional Transport Strategy. LEZs should not be viewed in isolation but be implemented alongside complementary measures that encourage the uptake of Active Travel and reduce the number of single occupancy vehicles. SEStran projects such as Tripshare and Surflough have been referenced as examples of such measures that could complement the introduction of LEZs.
- 3.2 SEStran recognises that the short timescales proposed for introduction of LEZs will be challenging and may lead fleet and bus operators to retrofit vehicles, rather than pursue a programmed purchase of newer cleaner vehicles once current vehicles are time expired. This, in the long run, could lead to extending the life of older, more polluting vehicles, rather than new low emission vehicles.
- 3.3 Any LEZ introduced would need to be supported financially by the Scottish Government, including the set-up costs, additional infrastructure (direct and indirect), enforcement regime and on-going running costs. Given the ongoing pressures on the Local Government settlement and the prioritisation of non-transport related services, and whilst SEStran recognises the positive impacts on local health outcomes, there is not currently no allowance for funding this from LG budgets. Additionally, expert personnel support, either through consultants or the provision of additional funding to employ staff, is required to support the development of a Business Case and other associated elements of the National Low Emission Framework process.

⁴ https://consult.scotland.gov.uk/transport-scotland/building-scotlands-low-emission-zones/user_uploads/low-emission-zones-consultation-2.pdf - Building Scotland's Low Emission Zones Consultation

- 3.4** It should be noted that although a LEZ is likely to be implemented within one local authority area, it will have influence on the population of a wider catchment, regionally and nationally, for private car drivers and commercial vehicles as well as bus operators. This development should therefore be informed by joint working with Regional Transport Partnerships.
- 3.5** Bus operators will also require significant financial assistance for low emission vehicles and additional/increased funding support and incentives, along the lines of the Green Bus Fund. This will be required from Government to encourage the early and increased uptake of cleaner private and commercial vehicles. The maintenance of existing levels of bus based accessibility to LEZ areas will be vital to address the concerns raised around socio-economic disadvantage.
- 3.6** LEZs are likely to have beneficial health effects on people who reside within LEZ zones, particularly the young and old benefiting from better air quality. However, there is concern that LEZs will impact disproportionately on the less affluent in society, as those more affluent are able to afford vehicles which meet LEZ Euro engine standards. Lower socio-economic groups may not be able to afford LEZ compliant vehicles and will therefore need alternative transport arrangements to access employment, health, social and leisure requirements. In general, in urban areas, buses provide this alternative. However, in many rural hinterlands, people who rely on access to cities do not have access (availability, frequency and possibly financial) to a suitable bus service to provide alternative transport and could therefore be excluded from accessing employment, training, health, social, leisure and other opportunities. Other measures such as park & ride/choose may need to be introduced and funded. This highlights the need to consider the wider geographical impacts of any urban focussed LEZ.

4. RECOMMENDATIONS

- 4.1** Due to the extension provided by Transport Scotland, Members are invited to discuss the contents of this paper.
- 4.2** SEStran Officers will submit the response by 5pm, 8th December 2017.

Lisa Freeman
Strategy and Projects Officer
17th November 2017

Appendix 1 – SEStran Response to ‘Building Scotland’s Low Emission Zones’ Consultation

Policy Implications	In line with the delivery of RTS policies. Including the reduction of single occupancy vehicle journeys, behaviour change and air quality improvements.
Financial Implications	There could be significant financial costs involved in the introduction of LEZs which could be offset by significant reductions in reactive spending on poor public health as a result of air quality impacts.
Equalities Implications	Some socio-economic groups may not be able to afford LEZ compliant vehicles and will therefore need alternative transport arrangements to access employment, health, social and leisure. However, certain groups may also benefit from improved air quality in their residential and transit areas.
Climate Change Implications	LEZs to be implemented in Scotland's four largest cities by 2020 and into all other air quality management areas by 2023

Appendix 1 – SEStran Response to ‘Building Scotland’s Low Emission Zones’ Consultation

Consultation Questions:

Number	Consultation Question
1	<p>Do you support the principle of LEZs to help improve Scottish air quality? Please be as specific as possible in your reasoning.</p>
	<p>SEStran supports the principle of implementing LEZs, if they are delivered as part of a wider local or regional sustainable transport strategy. However, LEZs should not be viewed in isolation, and be implemented alongside complementary measures that encourage the uptake of active travel and reduce the number of single occupancy vehicles. The Regional Transport Strategy (RTS) recognises that transport must play its part in the reduction of emissions and improvement of local air quality. Many of RTS measures are aimed at reducing car single occupancy travel, and encouraging sustainable travel behaviours.</p> <p>It is recognised that the timescale for introducing LEZ’s into Scotland’s four biggest cities by 2020 and into all other AQMAs by 2023 is extremely challenging given the requirements of National Modelling Framework (NMF) and associated National Low Emission Framework (NLEF), combined with regulatory/legislative requirements, funding needs and stakeholder involvement. It is important that due consideration is given to a realistic timescale for effective implementation, including consideration of the costs and impacts upon the bus industry and other providers of more sustainable transport options.</p> <p>The socio-economic duty asks particular public authorities to do more to tackle the inequalities of outcome caused by socio-economic disadvantage. The main outcome that the Scottish Government is looking for from the introduction of the duty is improved decision-making that genuinely leads to better outcomes for those experiencing disadvantage. This aligns with SEStran RTS policies on accessibility. SEStran seeks to support communities with poor access to employment by public transport and low car ownership/high deprivation and peripheral areas less well served by public transport</p> <p>As Prof Anable presented to the STEP Summer seminar. It was enlightening to see the most affluent commuters drive into Edinburgh and pollute those households living in poverty with lower levels of car ownership. The work of her colleague Dr Morton from Leeds University to the STAR conference this year went on to observe that LEZs may restrict the access of cars which are not compliant to certain emission</p>

	<p>standards form entering specified districts. If the owners of non-compliant cars tend to be from specific social cohorts, then the restrictions imposed by the LEZs may generate outcomes that are unevenly distributed across society. The challenge of the duty will be to back that up with assessment of impact around the use of this new policy measure.</p> <p>At the STEP Scotland Summer 2017 Seminar the work of Barnes and Chadderton was referenced regarding poverty and air quality. They conclude their paper by saying “This paper demonstrates that social inequalities with respect to air pollution are clearer and stronger than identified over a decade ago. It is uncertain the extent to which this is a reflection on the improved accuracy and relevance of the data we have used or whether the patterns of inequality have strengthened over the intervening decade. However, the fact that the environmental justice problems of a decade ago are still extant and potentially worsening should be of significant concern. This is particularly the case, with regards to greater exposure of very young children who are the most susceptible to health impacts from air pollution. Younger generations and those in poverty have less control over where they live, and whilst this may partially be the cause of the inequalities identified, it should not be the case that this is just taken to be a fact of life.”</p>
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?
	The overall objective needs to balance several demands to deliver sustainable better “places” across Scotland. As per previous question the primary objective of any policy objective will need to demonstrate compliance and due regard to a number of statutory duties.
3a	Do you agree with the proposed minimum mandatory Euro emission criteria for Scottish LEZs?
	SEStran agrees that a minimum mandatory Euro emission criteria and that it should be applied consistently across all Scottish LEZs. However, it would also be acceptable for phased approach to the criteria and its implementation.
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?
	In principle, there would be value in the NMF being used by all Local Authorities, as this would ensure a standard approach by all. However, as with any modelling, its purpose is to provide the decision makers with

	<p>enough information to make an informed decision. Therefore, although it is agreed that NMF modelling and NLEF appraisal should be used, there will be other factors that also need to be considered. Presumably there will need to be as per Question 1 a socio-economic impact assessment on the introduction of an LEZ in terms of the analysis of the vehicle stock for a regional area commuting to and from a smaller urban focussed LEZ.</p>
3c	<p>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?</p>
	<p>Recognising the importance of these types of vehicles in supporting economic growth and activity they should be exempt initially and phased in over time, where a need to do so has been identified. There may also be difficulties in enforcing these emission sources. This would give time to deliver “last mile” logistic hubs in tandem with LEZs as they develop.</p> <p>As an example, SEStran is currently addressing the issue of last mile logistics within the European funded project ‘SURFLOUGH’. SURFLOUGH aims to improve the role of logistics hubs in the network of urban logistics in the North Sea Region. As part of the project, SEStran will be trialling a last mile delivery solution in the Region either through electric vans or cargo delivery bikes.</p>
4	<p>What are your views on adopting a national road access restriction scheme for LEZs across different classes of vehicles?</p>
	<p>SEStran would initially agree that a national scheme for LEZs is consistent across all LEZs in Scotland should be introduced. However, it is also understood that local democracy may dictate the need for higher levels over time to fund schemes maintenance and to deter driver behaviour in certain areas of affluence.</p> <p>Care will need to be taken to ensure the driving public are aware of the need for an LEZ, to ensure the penalty scheme is not seen as another “road user tax”. This will require a consistent marketing campaign or campaign materials across Scotland ahead of implementation.</p>
5	<p>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?</p>
	<p>SEStran agrees with the Scottish Government’s preference for LEZs to operate continuously, 24 hours a day, seven days a week, all year round, throughout all Scottish LEZs for general consistency and public/road user familiarity. However, SEStran recognises that this might be subject to</p>

	challenge if it is deemed unreasonable on the basis of evidence for lack of emissions during certain parts of the day.
6	What are your views on Automatic Number Plate Recognition enforcement of LEZs?
	As ANPR is already used by a number of local authorities for enforcement of bus lanes, SEStran agrees with the Scottish Government preference for ANPR, as this will provide the most complete enforcement. However, there are cost implications in setting up and maintaining this facility that will require to be fully funded to relevant transport authorities. Other benefits in terms of traffic data collection could assist with the business case for such equipment.
7a	What exemptions should be applied to allow LEZ to operate robustly? Please be as specific as possible in your reasoning.
	<p>SEStran agrees that exemptions of the type identified within the document could be merited and will need careful consideration and only allowed where there is good reason and where it does not undermine the LEZ objectives.</p> <p>Mention is made of consideration of equality and socio-economic factors to ensure that LEZs do not create unintended consequences for society. One of the exemption examples regarding shift working states evidence will be required from the vehicle owner that no alternative public transport options exist. There is significant risk to equality in this regard not just for shift workers. In general, within city/urban areas, public transport is available, but in rural areas there is very often inadequate or no public transport option. Many rural hinterland areas surrounding cities have populations which have lower socio-economic demographics, but rely on access to the city to provide employment and other essential services and social needs. People, particularly those suffering from transport poverty, in these areas could suffer disproportionately as they may not be able to afford vehicles with the required Euro engine standard to access a LEZ, and there may be no public transport alternative available. Consideration would need to be given as to whether public transport options can be made available, for example Park & Ride/Choose, prior to a LEZ being introduced, with funding implications an additional consideration. Or whether existing “trip-sharing” social car schemes could be promoted to maintain accessibility without the occurrence of additional costs for certain workers.</p> <p>SEStran currently operates Tripshare (TripshareSEStran.com), South East Scotland’s Regional Car Share Portal. Set up in 2006, the scheme</p>

	<p>now hosts over 8,000 car share members. The scheme is comprised of SEStran's eight constituent Local Authorities and four Health Board areas. Car sharing and other form of shared mobility (such as bike share schemes and Car Clubs) have great potential to address issues of forced car ownership and reducing emissions within AQMAs. Since its launch, Tripshare has saved over 2,438.00 tonnes of CO2 and 12,408,751 miles driven (taken from historic savings recorded by Liftshare UK since May 2007).</p>
7b	Should exemptions be consistent across all Scottish local authorities?
	Exemptions should be consistent across all Scottish Local Authorities for general consistency and public/road user understanding and familiarity.
8	What are your views on LEZ lead-in times and sunset periods for vehicle types shown in Table 2?
	SEStran is supportive of LEZ lead-in times and sunset periods. As outlined within the document, Belgium and France as well as other UK LEZ's have adopted a 4 year lead in time. Given this experience Scotland should adopt a similar timeframe unless socio-economic impact assessment or other duties suggest that there would be specific issues identified for certain groups of society.
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?
	<p>The short timescales proposed for introduction of LEZs will be challenging and lead fleet and bus operators to retrofit vehicles, rather than pursue a programmed purchase of newer cleaner vehicles once current vehicles are time expired. This in the long run could lead to extending the life of older, more polluting vehicles, rather than new low emission vehicles.</p> <p>The views and compliance capacity of fleet (freight and passenger transport) and local bus operators, regarding cost and timing of LEZ introduction and compliance, in both the short and longer-term, should be sought and considered before implementation.</p>
10	How can the Scottish Government best target any funding to support LEZ implementation?
	Any LEZ introduced would need to be fully funded by the Scottish Government, including the set-up costs, additional infrastructure (direct

	<p>and indirect), enforcement regime and on-going running costs. Given the ongoing pressures on the Local Government settlement and the prioritisation of non-transport related services. Whilst we recognise the positive impacts on local health outcomes, there is not currently a preventative form of funding this from LG budgets. Additionally, expert personnel support, either through consultants or the provision of additional funding to employ staff, is required to support the development of a Business Case and other associated elements of the National Low Emission Framework process.</p> <p>It should be noted that although a LEZ is likely to be implemented within one local authority area, it will have influence on the population of a wider catchment, regionally and nationally, for private car drivers and commercial vehicles as well as bus operators. This development should therefore be informed by joint working with the relevant Regional Transport Partnership.</p> <p>Bus operators will also require significant financial assistance for low emission vehicles and additional/increased funding support and incentives, along the lines of the Green Bus Fund, are likely to be required from Government to encourage the early and increased uptake of cleaner private and commercial vehicles. The maintenance of existing levels of bus based accessibility to LEZ areas will be vital to address the concerns raised in Question 1 around socio-economic disadvantage.</p>
11	What criteria should the Scottish Government use to measure and assess LEZ effectiveness?
	<p>SEStran agrees with the Scottish Government proposal to utilise the existing network of air quality sensors and diffusion tubes, in tandem with NMF model data points, to evaluate the effectiveness of LEZ actions.</p> <p>In addition, it is assumed that ANPR enforcement could provide valuable information on number of vehicles, vehicle km and vehicle types entering and moving within LEZ zones. This would allow further correlation between vehicle trips and air quality, to assess whether the LEZ is having the desired outcome or whether there are factors other than traffic emissions affecting air quality.</p> <p>There may also be a need to assess impact on city centre economic performance (either positive or negative) as part of this assessment.</p>
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?

	<p>SEStran is supportive of the Scottish Government proposal to use the Scottish Air Quality website as the central repository for information related to LEZ, with clear links to local authority and RTP websites.</p> <p>In addition to clear information on the LEZ locations and geographical boundaries, hours of operation, vehicles' applicability, etc., during lead-in times clear information on the objectives of LEZ, the alternatives considered and the full package of measures being put in place will be required to ensure buy-in and supportive compliance from the public.</p> <p>Once LEZ's are in place, vehicle owners must have very clear information as to whether their vehicle is suitable to enter the LEZ or if not, what the alternatives are. Again, clear links to local authority and RTP websites would be beneficial as they provide advice and information on sustainable and active travel and alternatives to car use and single occupancy car travel. As one of SEStran's policies state, the RTS will prioritise interventions in all types of area (city, town, local community) that promote the use of more sustainable modes of transport, in particular non-motorised modes for shorter journeys.</p>
13	What actions should local or central government consider in tandem with LEZs to address air pollution?
	<p>SEStran agrees that LEZs should operate in a complementary manner with existing and future transport and placemaking policies and action plans, in order to support delivery of the CAFS 2020 compliance target and achievement of other national, regional and local strategy/plan objectives and outcomes.</p> <p>This holistic approach will ensure the need for LEZs are considered alongside complementary measures such as freight consolidation centres, traffic management, parking policy, park & ride/choose, active travel, promotion of public transport etc. These need to be consistent with the relevant National, Regional and Local Transport Strategies, as well as Local and Strategic Development Plans, Economic and Health & Wellbeing Strategies etc.</p>
14	How can LEZs help to tackle climate change, by reducing CO2 emissions in tandem with air pollution emissions?
	<p>Within the RTS, SEStran policies outline support for measures that assist in the achievement of air quality targets. SEStran recognises that LEZs will also contribute towards reducing greenhouse gas emissions. However, there is a concern that by specifying a higher Euro engine standard for diesel compared to petrol engines, this may result in a</p>

	<p>greater number of lower standard petrol engines vehicles being driven with consequences on greenhouse gas emissions. It is understood that although diesel engines have a more detrimental effect on air quality, petrol engines are more damaging to CO2 greenhouse gas. It is suggested that a more “equal” minimum standard of diesel and petrol engines, which recognise and reflect the relative climate change and air quality impacts of petrol and diesel engines should be set.</p>
15	<p>What measures (including LEZs) would make a difference in addressing both road congestion and air pollution emissions at the same time?</p>
	<p>SEStran welcomes the Scottish Government’s proposal to incorporate congestion management into all stages of LEZ design and operation. As outlined in the document this encompasses technology solutions such as low carbon vehicles and demand management measures: road-user charging and workplace parking charges; to reduce congestion and increase urban traffic speeds. Promotion of public transport, active travel, reducing the need to travel, travel planning, car clubs and providing information on alternative to private car use all have a contribution to reducing emissions.</p> <p>The combination of alternative modes and promotion will be key to success. As an example of this, SEStran is a partner within ‘SocialCar’. The ‘SocialCar’ project (funded through Horizon 2020) aims to integrate public transport information, car-pooling and crowd sourced data to provide a single source of information for the traveller to compare multiple options/services. The project seeks to provide a ‘one-stop shop’ for planning multimodal and multi-service journeys, via web and a mobile app. The project responds to the challenge of matching travel requests with the integrated public-private transport supply. The SocialCar innovation incorporates two elements: technological (the potential of open data and Global Navigational Satellite Systems) and economic (new mobility service models, public-private partnerships in the passenger transport domain). As a site leader for the project, SEStran will be hosting three separate test phases of this research project.</p>
16	<p>Do you have any other comments that you would like to add on the Scottish Government’s proposals for LEZs</p>
	<p>As part of monitoring LEZs it would be useful if research could be undertaken on the economic and social impact of introducing a LEZ. For example, for a city centre LEZ, will it be seen as an impediment to accessing the city centre or will the placemaking benefits of improved air</p>

	<p>quality be seen as an attraction? This relates to the issues raised in Question 1 around the links to socio-economic duty.</p>
17	<p>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.</p>
	<p>LEZs are likely to have beneficial health effects on people who reside within LEZ zones, particularly the young and old benefiting from better air quality. However, there is concern that LEZs will impact disproportionately on the less affluent in society, as those more affluent are able to afford vehicles which meet LEZ Euro engine standards.</p> <p>Lower socio-economic groups may not be able to afford LEZ compliant vehicles and will therefore need alternative transport arrangements to access employment, health, social and leisure requirements. In general, in urban areas buses provide this alternative. However, in many rural hinterlands, people who rely on access to cities do not have access (availability, frequency and possibly financial) to a suitable bus service to provide alternative transport and could therefore be excluded from accessing employment, training, health, social, leisure and other opportunities. Other measures such as park & ride/choose may need to be introduced and funded. This highlights the need to consider the wider geographical impacts of any urban focussed LEZ.</p> <p>There has been recent evidence from the Glasgow Centre for Population Health of “forced car ownership” amongst lower socio-economic groups and suggests in our discussions with them about this issue existing in other urban areas http://www.sciencedirect.com/science/article/pii/S0967070X17300100</p>
18	<p>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.</p>
	<p>The proposals have the potential to increase cost burdens on bus operators, fleet owners and the general public by requirement for upgraded vehicles. There is a concern that additional cost burdens on bus operators must not lead to the “unintended consequence” of contraction/withdrawals in the overall bus network, with wider socio-economic and environmental impacts in communities which are directly and indirectly affected/covered by LEZs.</p>

	There will be an additional and ongoing cost burden on Local and Scottish Government for implementation, maintenance and enforcement of LEZs, including the introduction and maintenance of complementary measures such as ongoing monitoring and delivery and ongoing operation of measures such as park and ride/choose.
19	What impacts do you think LEZs may have on the privacy of individuals? Please be as specific as possible in your reasoning.
	There could be concerns expressed to local authorities over the number plate based recognition enforcement and there will needed to be proactively addressed.
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.
	There may be pollution, noise and road safety implications in areas surrounding LEZs as a result of traffic and parking displacement.