

# Transport and Environment Committee

10.00am, Thursday, 16 May 2019

## Tackling Air Pollution – Low Emission Zones

Executive/routine

Wards

Council Commitments [18](#)

### 1. Recommendations

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1.1 It is recommended that Committee:

1.1.1 notes that 75% of respondents to 'Connecting Our City, Transforming Our Places' consultation, agree that restricting access to the most polluting vehicles to the city centre and wider city is one way to control and improve air quality;

1.1.2 notes that the final shape of a Low Emission Zone (LEZ) and the timing of its implementation will be subject to the content and timing of the Transport (Scotland) Bill and any secondary legislation and guidance;

1.1.3 agrees public consultation and stakeholder engagement on the outline proposals set out in this report including:

1.1.3.1 a city centre boundary for all vehicles, extending to a city-wide boundary for selected vehicles;

1.1.3.2 the different types of vehicles to be included in the LEZ scheme; and

1.1.3.3 grace periods for different vehicle types and phasing in arrangements these allow time for vehicle owners to prepare for the LEZ prior to enforcement.

1.2 notes the contribution of other measures to reduce air pollution including the extension of the tram to Newhaven, the expansion of electric vehicle charging infrastructure, higher emission standards for taxis and ongoing actions associated with Air Quality Management Areas (AQMA) as well as targeted environmental enhancements that can have a beneficial local impact.

**Paul Lawrence**

Executive Director of Place

Contact: Will Garrett, Spatial Policy Manager

E-mail: [will.garrett@edinburgh.gov.uk](mailto:will.garrett@edinburgh.gov.uk) | Tel: 0131 469 3636

## Tackling Air Pollution - Low Emission Zones

### 2. Executive Summary

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- 2.1 This report sets out proposals for the introduction of a LEZ in Edinburgh. They will be subject to public consultation and further engagement with stakeholders.
- 2.2 The purpose of an LEZ is to improve the health and well-being of people, who live, work or visit the city, particularly those who are particularly vulnerable, the very young, the elderly and those with pre-existing health conditions.
- 2.3 LEZs reduce pollution caused by damaging emissions from buses, commercial vehicles, cars and vans by restricting access to those vehicles that fail to meet minimum emission standards. Vehicles that do not meet those standards, or are not otherwise exempt, are liable for a penalty if they enter the zone.
- 2.4 The proposals set out in the report include options for a city centre and a city-wide LEZ. They describe approaches to phasing including grace periods which would allow owners of polluting vehicles time to adapt existing vehicles or replace them with cleaner vehicles prior to the commencement of enforcement.
- 2.5 The Scottish Government envisages that an LEZ would be implemented by December 2020.
- 2.6 The results of the public consultation and stakeholder engagement will inform a report on next steps to Transport and Environment Committee by the end of 2019.

### 3. Background

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#### LEZs in Europe and UK

- 3.1 LEZs were first introduced to tackle air pollution in Sweden in 1996. There are now 250 LEZs in cities across 15 European countries.
- 3.2 An LEZ was introduced in London in 2008. A phased implementation of tighter emissions standards, affecting different vehicle types and different geographical areas followed. An Ultra-Low Emission Zone (ULEZ) was introduced in April 2019. This currently applies in the central London area with plans to extend the zone to cover London suburbs by 2021. The ULEZ covers buses, commercial vehicles, vans and cars that do not meet minimum standards. A poll by YouGov in April 2019 found that 72% of Londoners support emission charging to reduce pollution and

congestion. It should be noted that the Scottish regime will be enforced through a penalty notice rather than a charging mechanism.

- 3.3 The UK Government has announced ambitions to end sales of new conventional petrol and diesel cars and vans by 2040 as part of efforts to tackle climate change and air pollution. The Scottish Government is aiming to end the sale of petrol and diesel vehicles by 2032 and has set out plans to introduce low emission zones in Scotland's four largest cities by 2020.
- 3.4 In December 2018, Glasgow introduced an LEZ covering the city centre restricting buses that do not meet emission standards. All vehicles entering the zone will need to be fully compliant by December 2022.

### **Edinburgh LEZ Progress**

- 3.5 On [17 May 2018](#) the Transport and Environment Committee agreed to work with Scottish Government and other partners to take forward a comprehensive approach to establishing low emission zones in Edinburgh. Committee noted that options included a city centre zone and a city-wide zone.
- 3.6 In autumn 2018, the Council undertook wide ranging public engagement on the prospectus Connecting our City, Transforming our Places. More than 5,000 people and organisations contributed their views, the largest Council engagement of 2018. The prospectus set out a number of ideas for improving the city including the introduction of a city centre and city-wide LEZ.
- 3.7 When asked about the principle of an LEZ in Edinburgh, 75% of survey respondents agreed that restricting access to the most polluting vehicles to the city centre and wider city is one way to control and improve air quality. 15% of respondents disagreed. During workshops run during the autumn 2018 consultation, participants recognised in equal measure the health benefits for the public but also the risk of traffic displacement and the financial implications for those unable to afford to replace or upgrade their vehicles in order to comply with an LEZ.
- 3.8 In June 2018, the Scottish Government introduced a Transport Bill to the Scottish Parliament. The Bill sets out provisions to enable the introduction of LEZs in Scotland's four largest cities. The Bill enables the creation and civil enforcement of LEZs by local authorities, and will allow the Scottish Government to set consistent national standards for a number of key aspects including, but not limited to, vehicle emissions, penalties, certain exemptions and parameters for grace periods for low emission zones.
- 3.9 The Transport (Scotland) Bill is currently going through Parliament. It is anticipated that the Bill and associated regulations will be finalised early in 2020.
- 3.10 On-going work will continue to inform the detail of low emission zone proposals including: air quality modelling as part of the National Modelling Framework (with SEPA), transport modelling, integrated impact assessment work, commercial fleet analysis and further engagement with key stakeholder groups such as Lothian Buses.

## 4. Main report

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### **Connecting Our City, Transforming Our Places**

- 4.1 The development of an LEZ is one of a number of linked strategies which aim to improve placemaking and connectivity in the city that have been set out in Connecting Our City, Transforming Our Places. They include the Edinburgh City Centre Transformation project and the development of the local transport strategy, the City Mobility Plan.
- 4.2 Initiatives including the extension of the tram network to Newhaven, the expansion of electric vehicle charging infrastructure, the introduction of higher emission standards and the phasing out of older taxis, and the continued actions associated with the AQMAs also complement the LEZ approach.

### **Health Risks and Air Pollution**

- 4.3 Pollutants caused by vehicle emissions are largely invisible, but these gases and particulates can be hazardous to human health.
- 4.4 There is a growing body of scientific evidence that has established links between air pollution with ill health. Particularly at risk are the very young, the elderly and those with pre-existing health conditions. These conditions include lung-related illnesses e.g. asthma or chronic obstructive pulmonary disease, or circulation problems (angina, strokes, heart attacks). There is also evidence of links to a wider range of health impacts, such as poor birth outcomes (pre-term birth, low birth weight), diabetes and neurological problems (dementia).
- 4.5 It is estimated that man-made pollution can lead to:
  - 4.5.1 1,700 early deaths per year in Scotland (2016);
  - 4.5.2 a seven to eight month reduction in life expectancy; and
  - 4.5.3 a cost of around £15 billion a year across the UK.
- 4.6 It is estimated that around 80% of nitrogen oxide (NO<sub>x</sub>) concentrations are directly attributed to traffic emissions.

### **Emissions Data Baseline**

- 4.7 Working with Council officers, SEPA has developed a baseline model to help identify the emissions levels that different types of vehicles contribute across Edinburgh. This has been documented by SEPA in the November 2018 'Air Quality Evidence Report - Edinburgh'.
- 4.8 The most extensive area of roadside traffic pollution is in and around the city centre, where concentrations of NO<sub>2</sub> are at their highest, when compared to other areas of the City. To meet the NO<sub>2</sub> objective levels at roadside locations in the city, emission reductions of between 50 and 75% are required.
- 4.9 While different vehicle types have different impacts in different parts of the city, overall emissions from diesel cars are the single biggest source of NO<sub>x</sub> across the city, followed by Light Goods Vehicles (LGVs). Buses are a large source of NO<sub>x</sub> particularly within the city centre area. Non-bus commercial vehicles (LGVs, Rigid

HGVs, Taxis, and Artic) contribute proportionally more to NO<sub>x</sub> concentrations, per vehicle, than cars.

- 4.10 Consequently, tackling higher emission vehicle types such as buses, coaches, and commercial fleets are a priority and will be the most effective way of bringing down NO<sub>2</sub> levels.
- 4.11 All local authorities have a statutory duty to review and assess air quality in their areas against national objectives. A considerable amount of work has taken place in Edinburgh over recent years resulting in an overall downward trend of NO<sub>2</sub> concentrations. However, legal objectives continue to be breached and Edinburgh still has five Air Quality Management Areas related predominantly to traffic pollution. The development of a low emission zone is the most effective way of addressing this problem.

### **What is an LEZ?**

- 4.12 An LEZ is a geographical area within which polluting vehicles are not permitted. Unless otherwise exempt, polluting vehicles that enter the area are subject to a penalty. Enforcement will utilise Automatic Number Plate Recognition (ANPR) cameras, linked to a national vehicle licencing database, to detect vehicles entering an LEZ which do not comply with the minimum standards.
- 4.13 Local authorities will design each LEZ based on their specific, local requirements. The Transport Bill will give local authorities the powers to create, enforce, operate or revoke an LEZ in their area and to design the shape, size and vehicle scope of individual LEZs.

### **City Centre and City-Wide Boundaries**

- 4.14 Committee have previously considered potential options, a city centre boundary and a city-wide boundary, which individually or jointly would reduce the number of polluting vehicles affecting the health of city residents. Early consideration was given to taking a pollution 'hot-spot' based approach with multiple LEZs across the City. This option has not been progressed as it would have significant traffic displacement issues and does not fit with Edinburgh's comprehensive and strategic approach to LEZ development.
- 4.15 Edinburgh's proposed phasing approach to LEZ implementation is similar to that adopted in many other cities. The proposed boundaries of each zone are set out in Appendix 1 and have been informed by analysis of the baseline model produced by SEPA.
- 4.16 A city centre LEZ applying to all vehicles, introduced over a short period of time, would have the benefit of tackling the worst concentrations of air pollution in a densely populated area, with the highest number of workers and visitors.
- 4.17 There is a risk that a the city centre boundary alone may displace polluting vehicles to other areas of the city and exacerbate existing air quality problems. This would also apply to future bus routes where retrofitting or adaptations of vehicles take time.

- 4.18 A city-wide boundary phased in over a period of time would help deliver further reductions in pollution across the city. Appendix 1 shows the city wide boundary based on the by-pass (A720). Alternatively it could be drawn around the Council's administrative area.
- 4.19 A city wide boundary would provide incentive for commercial and passenger transport fleet operators to adapt or renew their fleets and significant investment in commercial freight hubs may be required. There is a risk that the boundary would also create traffic displacement.
- 4.20 Complementary measures and actions through the Edinburgh City Centre Transformation project and the City Mobility Plan will need to be considered in order to ensure a successful LEZ implementation. Edinburgh's proposals are one of the most ambitious approaches to LEZs anywhere in Europe, particularly considering the strict enforcement regime.

#### **Vehicles Affected – Buses, Commercial Vehicles, Vans, Cars and Motorcycles**

- 4.21 All polluting vehicles would be affected and entry into an LEZ would incur a penalty. The Transport Bill proposes that LEZ entry will still be based on the Euro emission engine classification standards – the proposed minimum criteria is:
  - 4.21.1 Euro 6 for diesel cars;
  - 4.21.2 Euro 4 for petrol cars; and
  - 4.21.3 Euro VI for heavy diesel vehicles (including retrofitted engines which would be improved to operate as Euro VI).

#### **Phasing and Grace Periods**

- 4.22 Grace periods are designed to allow commercial fleet operators and private vehicles owners time to prepare for the LEZ. Preparation may occur through altering their vehicles or fleet, through retrofitting, by planning the purchase of a new vehicle as part of a replacement cycle or through modal shift to another form of transport.
- 4.23 In effect, the grace period prevents penalties from becoming payable for a breach of the road access restriction until that period ends. An extended grace period allows registered residents who live in the LEZ further time to prepare.
- 4.24 During the autumn 2018 consultation the feedback on grace periods (previously called lead-in times) was:
  - 4.24.1 19% suggested one year;
  - 4.24.2 19.5% two years;
  - 4.24.3 16.5% three years;
  - 4.24.4 11% four years; and
  - 4.24.5 23% considered that a period of more than four years was required.
- 4.25 A lead-in of more than four years was also the top preference of those respondents identifying as having a disability, whilst individual responses received through Friends of the Earth's survey link, sought a lead-in period of just six months.

- 4.26 The bus and commercial sector have expressed some initial concern regarding the timescale, particularly around the practicalities of vehicle engine retrofitting and fleet replacement. The consultation phase will provide further opportunity to consider these implications in full.
- 4.27 Appendix 2 sets out a proposed approach to grace periods as they would apply in a phased introduction of the different vehicle types in the city centre, then selected vehicles city wide. This would ensure a scheme is implemented in 2020 and the first enforcement would commence from 2021.
- 4.28 The approach means that commercial and passenger vehicles would be affected first, on the proviso that tackling these higher emitting vehicle types will be the most effective way of bringing down NO<sub>2</sub> levels.

### **Exemptions**

- 4.29 General exemptions will be set out in regulations but are likely to include, for example, emergency and health service vehicles and historic vehicles. Other types of vehicles are harder to define, such as transport services that fulfil a social purpose and community benefit, e.g. vehicles carrying out social care work. The difficulties in enforcing this sector make it unlikely they will be exempt. Transport Scotland is continuing to consider what exemptions to incorporate into regulations and are currently engaging with stakeholders on a national basis. Workshops are being held in Glasgow, Dundee, and Aberdeen in May 2019.
- 4.30 It is also anticipated that the Council may be able to make provision for time-limited exemptions for vehicles not covered by the blanket exemption but there are particular circumstances in which it ought to be exempt for a limited period e.g. a fire engine.

### **Penalties**

- 4.31 There will be different levels of penalty charge depending on, for example, the class of vehicle or whether there are repeated contraventions. In addition, it is likely that there will be provisions for discounts for early payment, or surcharges for non-payment. The charges will be defined by regulations and they are expected to be set at such a level so as to deter non-compliance.
- 4.32 The default principle is that an LEZ will operate continuously, 24 hours a day, seven days a week, all year around, but the Council can vary the hours taking account of local circumstances. Guidance will be issued by Transport Scotland on when it may be appropriate for hours of operation to be varied by a local authority. However, what is proposed for implementation in Edinburgh from 2020 is a 24 hour LEZ.

### **Consultation and engagement**

- 4.33 Edinburgh's LEZ proposals will be available for public consultation from 20 May 2019 and the views of residents will form an important part of the final LEZ scheme. A wide range of stakeholders are affected by these proposals including the public, transport services, commercial freight companies, small businesses and public services. Appendix 3 sets out an outline of the engagement strategy to gather the views of residents and stakeholders.

## 5. Next Steps

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- 5.1 In May 2019, the Council will undertake a traffic data collection survey to update the data and analysis in the baseline air quality model.
- 5.2 Public consultation and stakeholder engagement will take place between May and July 2019 and will be reported to Committee in October 2019 along with proposals for agreement for an LEZ scheme for the city.
- 5.3 This consultation will be coordinated with the Edinburgh City Centre Transformation project and City Mobility Plan programmes of work.

## 6 Financial impact

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- 6.1 The Scottish Government has set aside funding to support the development of LEZs required by the four cities. They recognise that adapting or replacing polluting vehicles will have an impact on low income households and small business in particular, as well as local authorities and commercial companies.
- 6.2 The Scottish Government has provided funding of approximately £8million in 2018/19 and anticipates a similar amount for 2019/20 for bus engine retrofitting. This is a scheme where bus companies can obtain funding in order to upgrade engines to Euro VI standards. Consideration is being given as to what level of support can be provided for businesses and residents affected by an LEZ.
- 6.3 The Council has made use of grant funding provided by Transport Scotland in 2018/19 to deliver transport modelling, integrated impact assessments, and communications work. Ongoing financial support for this type of work is anticipated for the future years.
- 6.4 The main cost to the local authority of developing a scheme will relate to the implementation of the enforcement regime including infrastructure for cameras etc and back-office administration set-up.
- 6.5 An assessment of the cost of delivering the infrastructure required to establish and manage Edinburgh's LEZ will be carried out prior to finalising the LEZ scheme and delivery plan. An analysis of the impact on the Council's fleet will also be undertaken.
- 6.6 Any income received by a local authority from penalty charges must be used to further the achievement of the LEZ scheme's aims (either directly or indirectly) or to repay grants made by Scottish Ministers to support the development of the scheme. Scottish Ministers may make regulations governing LEZ accounts. Local authorities will be required to submit an annual report on the operation of each LEZ scheme to Scottish Ministers.

## 7 Stakeholder/Community Impact

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- 7.1 Engagement and discussion with Scottish Ministers has been undertaken via the 4-cities Leadership Group which help maintains a regional and national perspective on

the developing regulations, communication, and impact assessment work. 4-cities Consistency Groups also convene to ensure consistency across the country.

- 7.2 An integrated impact assessment (IIA) has been commissioned by the Council and will continue as LEZ options are finalised. The findings of the IIA to date highlight that there will be a significant impact on the commercial vehicles sector. Similarly, residents reliant on private cars and social care providers with less financial ability to upgrade their vehicles may be impacted in the short term.
- 7.3 The IIA needs to be considered in line with funding provided by Transport Scotland, the provision of alternative modes of transport, and the critical need for LEZs to reduce Edinburgh's pollution. Ongoing IIA work will provide further clarity on these impacts.
- 7.4 The Strategic Environmental Assessment screening has highlighted the need for the LEZ implication to be assessed as a part of the wider Edinburgh City Centre Transformation programme and City Mobility Plan work.
- 7.5 It is intended that the consultation on the proposed LEZ will provide an opportunity for the public and stakeholders to engage with the Council.

## **8 Background reading/external references**

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- 8.1 [CEC Air Quality Annual Progress Report, 2018](#)
- 8.2 [Air Quality Evidence Report – Edinburgh, SEPA \(November, 2018\)](#)
- 8.3 [Transport and Environment Committee, February 2019, Connecting Our City, Transforming our Places report](#)

## **9 Appendices**

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Appendix 1 – Low Emission Zone Proposed Boundaries

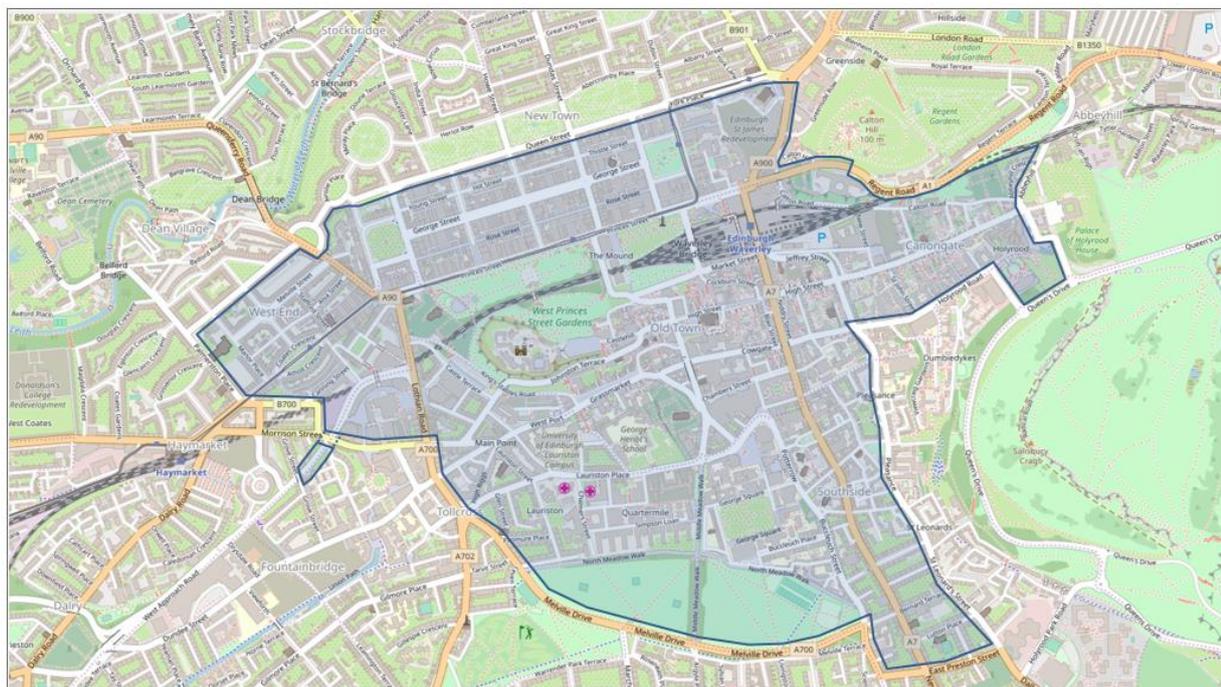
Appendix 2 – Approach to Phasing and Grace Periods

Appendix 3 – Public Consultation and Engagement

# APPENDIX 1 – LOW EMISSION ZONE PROPOSED BOUNDARIES

## What are the geographical areas for LEZs in Edinburgh?

Map 1 – City Centre Low Emission Zone Boundary



Map 2 – City-wide Low Emission Zone Boundary



## APPENDIX 2 – APPROACH TO PHASING AND GRACE PERIODS

### What Vehicles will be affected by the LEZ?

Only vehicles with certain emission standards can enter the LEZ without penalty (except exempted vehicles). These standards, or Euro classifications, are for different vehicle types and fuels.

The current proxy for Euro standards is to use vehicle age as a guide to the corresponding Euro classification, as follows:

- Euro 4 standard for petrol engines was introduced in January 2005, with any new vehicles sold after January 2006 having to meet this standard,
- Euro 6 standard for diesel cars was introduced in September 2014, with any new vehicle sold after September 2015 having to meet this standard.
- Euro 6/VI emission standards for heavy diesel vehicles - generally those registered with the DVLA after 2014.

### What are the grace periods associated with the LEZ?

Edinburgh's LEZ scheme will be implemented at the end of 2020, however, owners of the different types of vehicles will have a grace period prior to enforcement of the scheme. This is to allow owners to make suitable alternative arrangements.

An extended grace period allows registered residents who live in the low emission zone further time to prepare.

Edinburgh LEZ Scheme Implemented by end of 2020		
City centre boundary		
Vehicle type	Grace Period	Extended Grace Period
Bus / coaches	1 year (End of 2021)	
Commercial vehicles	1 year (End of 2021)	
Cars	4 years (End of 2024)	1 year (End 2025)
City wide boundary		
Vehicle type	Grace Period	Extended Grace Period
Bus / coaches	3 years (End of 2023)	
Commercial vehicles	3 years (End of 2023)	

#### Note

Commercial vehicles include Light Goods Vehicles (LGVs), Heavy Goods Vehicles (HGVs) and taxis.

## APPENDIX 3 – PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT

This appendix provides a summary of the communications and stakeholder engagement plan to support Edinburgh’s public consultation on LEZ proposals.

### Purpose of communications and engagement strategy

- 1.1 The communication and engagement strategy sets out a plan for communicating the purpose of LEZs and how reducing pollution aims to have a positive impact on the health and well-being of people. The consultation offers an opportunity for residents, stakeholders, and people affected by LEZs to provide their views on the proposals for Edinburgh.
- 1.2 The strategy will be part of a holistic approach to incentivise people to make choices about their travel, aligning with the City Mobility Plan and the Edinburgh City Centre Transformation project. This will be addressed by identifying target audience groups and tailoring key messages and communication channels to meet their respective needs. Similarly, key stakeholders and potential influencers will be identified to support the campaign.

### Key audiences

- 1.3 Communications will take a two-pronged approach with one aspect focusing on raising awareness across as broad an audience as possible in Edinburgh and regionally. The other aspect will be focussed on specific groups of stakeholders, as noted below

Target stakeholder groups	
<b>Partners</b>	Transport Scotland, SEPA, British Heart Foundation, NHS Lothian, British Lung foundation
<b>Transport</b>	Taxi firms, Confederation of Public Transport (bus and coach companies), delivery firms, Transport for Edinburgh, the regional Transport Authority (SESTran), ECO Stars’ members, and other Federations such as the Road Hauliers Association, Freight Transport Association
<b>Businesses</b>	Chamber of Commerce, Federation of Small Businesses, Essential Edinburgh
<b>Residents</b>	Councillors, MSPs, community councils, community groups
<b>Third sector</b>	Third Sector Interface (a collaboration between EVOC, Volunteer Edinburgh, and Edinburgh Social Enterprise), home help and community care organisations, Salvation Army, Edinburgh Access Panel

### Communications channels

- 1.4 Edinburgh’s media outlets are crucial tools to reaching target audiences. Given that the LEZ programme will impact on the wider region, local media outlets in respective neighbouring local authority areas will also be targeted.
- 1.5 In alignment with the mainstream media communications campaign, a supporting social media approach will be implemented. This will coordinate with wider CEC

social media activity and will be monitored and reviewed to ensure to ensure it reflects and is responsive to day-to-day events and reactions.

- 1.6 Stakeholder briefings will be held to provide targeted information and enable detailed discussions with Council staff. This activity would be supported by specific briefing packs including high-level information about the LEZ proposals.
- 1.7 Public information events will be held in CEC locality areas – South East, South West, North West and North East, and a city-wide. Events will be supported by displays of LEZ plans to stimulate interest and briefing packs with further information will be available.
- 1.8 A consultation hub survey on the Council’s website will be developed to enable a single point of consistent feedback. Consultation questions will be developed to elicit views on the boundaries proposed, the types of vehicles LEZs will apply to, how long vehicle types must comply, and views on the wider implications.
- 1.9 In support of all communications channels, website material will be provided including a bank of FAQs and myth busters for briefing purposes to ensure accurate information is communicated consistently. Visual presentation (maps, infographics, interactive tools) that clearly communicate the LEZ proposals will be developed. LEZ visuals will align with the Edinburgh City Centre Transformation and City Mobility Plan material to reinforce the comprehensive strategic approach being taken.
- 1.10 Where appropriate, stakeholders such as business people, community groups, politicians and high-profile names, who may proactively support the LEZ programme will be utilised to support all communications channels.

### Timing

1.11 The table below sets out the milestones for the LEZ constualtion period.

Milestone	Date
Transport and environment committee –seeking agreement to consultation	Thursday 16 May
Information goes live, including: <ul style="list-style-type: none"> <li>• Consultation hub survey (for an 8-week period)</li> <li>• Supporting website material</li> <li>• Invites and notification of events and meetings</li> </ul>	Friday 17 May
Media/social media activity	Commencing Monday 20 May 2019 (ongoing)
Public events and stakeholder meetings	Commencing Monday 3 June (ongoing)
Consultation closes	Friday 12 July