

Transport and Environment Committee

10.00am, Friday 11 October 2019

Edinburgh's Low Emission Zones – update

Executive/routine

Wards

Council Commitments [18](#)

1. Recommendations

- 1.1 Note that this report sets out the main findings following consultation on a proposed Low Emission Zone (LEZ) scheme held between May and July 2019.
- 1.2 Note that this report provides a draft Integrated Impact Assessment, a summary report on LEZ impacts on commercial fleets in operation in Edinburgh, and provides an update on transport modelling work.
- 1.3 Note that there is ongoing assessment work as part of the Cleaner Air for Scotland, National Modelling Framework, including analysis of traffic modelling and air quality modelling.
- 1.4 Note that as a result of 1.1 – 1.3 above, additional work is required to develop the propose scheme.
- 1.5 Note that a further report will be prepared for Transport and Environment Committee in February 2020 on the key workstreams underway (including refined impact assessments, transport and air quality modelling and a revised LEZ scheme).

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Edinburgh's Low Emission Zones – update

2. Executive Summary

- 2.1 The City of Edinburgh Council (the Council) is working with Scottish Government to develop and implement LEZ. LEZs are being progressed in Edinburgh, Glasgow, Dundee, and Aberdeen as a tool to address longstanding non-compliance with nitrogen dioxide legal objectives.
- 2.2 Between May and July 2019, the Council publicly consulted on proposals for a LEZ including a city centre zone boundary applying to all vehicle types and a city-wide boundary applying to commercial vehicles (buses, coaches, taxi and private hire, light and heavy goods vehicles). The consultation also set out proposals for when enforcement would start.
- 2.3 Results from the consultation found broad support for the vehicle types to be included in the boundaries, that further refinement of the boundaries (particularly the city centre boundary) should be considered, and that there are mixed views on the length of time proposed before enforcement should commence.
- 2.4 A draft Integrated Impact Assessment has been developed alongside work to establish the impacts of the proposals on commercial fleet operators. The findings of this work highlight the need to ensure operators are well informed and have time to make changes to their fleets and operations in advance of LEZ enforcement.
- 2.5 The next stage of the project is to address the implications of the feedback received from public consultation and the findings from the impact assessment work. This will be incorporated into work underway to model the transport implications of the LEZ and further assess the air quality impacts of the proposals. These workstreams are iterative and will be reported in more detail to February 2020 Transport and Environment Committee, alongside an amended set of LEZ proposals. At this point, the Council expects to have greater certainty about the regulatory regime that will govern LEZs, which is currently progressing through Scottish Parliament.

3. Background

- 3.1 LEZs in Edinburgh have been progressed alongside the development of the local transport strategy (City Mobility Plan (CMP)) and Edinburgh City Centre Transformation (CCT). Together these projects aim to improve placemaking and connectivity in Edinburgh and have a key focus on prioritising sustainable choices and reducing the need for private car use.
- 3.2 A range of initiatives are in place to support the move towards low emission transport. This includes electric vehicles charging infrastructure, the phasing out of older taxi and private hire vehicles, the parking permit diesel surcharge, and continued action in response to Air Quality Management Areas (including working with bus companies to improve fleets).
- 3.3 In [May 2018](#) the Transport and Environment Committee agreed to work with Scottish Government and other partners to take forward a comprehensive approach to establishing LEZ in Edinburgh. The committee has since received the following reports related to air quality and LEZ development:
 - 3.3.1 [August 2018](#) agreeing to joint CMP, LEZ, and CCT consultation through 'Connecting our City, Transforming our Places' including options for a city centre and city-wide LEZ boundary.
 - 3.3.2 [December 2019](#), provided the Council's Annual Air Quality Update and reported a continuing trend towards compliance with legal limits. However, exceedances remain across the city, with the Central AQMA having the highest concentration of sites that exceed legal limits.
 - 3.3.3 [February 2019](#), summarised the findings of Connecting our City, Transforming our Places consultation and sets out how findings would shape the next stages of delivering CMP, LEZ, and ECCT. In February, it was reported that 75 percent of respondents supported the introduction of vehicle access restrictions within the city for the most polluting vehicles.
 - 3.3.4 In [May 2019](#), the Committee agreed to public consultation and stakeholder engagement on LEZ proposals.
- 3.4 A public consultation on LEZ proposals ran between 27 May and 21 July 2019. The consultation sought people's views on a city centre LEZ applying to all vehicles, introduced within a short period of time, to tackle the worst concentrations of air pollution in a densely populated area (with the high number of residents, workers, and visitors); and a city-wide LEZ applying to all commercial vehicles (buses, coaches, HGVs, LGVs, vans, taxis, and private hire cars).
- 3.5 The consultation asked for feedback on the proposed boundaries for the zones, the specific vehicles the zones would apply to, and the amount of time vehicle owners would have before enforcement begins (grace periods). Detail on the specific proposals is set out in Appendix 1 – LEZ boundaries May – July 2019 consultation and Appendix 2 – Approach to phasing of enforcement May – July 2019 consultation.

- 3.6 The Scottish Government's Programme for Government 2017-18 included a commitment to work with local authorities to introduce LEZs to Aberdeen, Dundee, Edinburgh, and Glasgow by 2020. Glasgow was the first city in Scotland to introduce an LEZ and has done so by requesting the Traffic Commissioner for Scotland impose a Traffic Regulation Condition (TRC) controlling emissions from buses.
- 3.7 The Scottish Government is developing legislation (the Transport (Scotland) Bill introduced in Parliament on 8 June 2018) that will set the detail of how LEZs will operate to ensure consistency across the four cities.
- 3.8 The legislation will allow the Scottish Government to set consistent national standards for a number of key aspects including emissions, penalties, exemptions and parameters for grace periods. The Bill will give local authorities powers to create, enforce, operate or revoke a LEZ in their area and to design the shape, size and vehicle scope of individual LEZ.
- 3.9 The Transport Bill completed stage 2 on 26 June 2019 with no significant amendments being made and is expected to be passed before the end of 2019. Transport Scotland is developing regulations that will set out much of the detail informing how LEZs will operate. They have advised that consultation on the content of the Regulations will be underway in the next couple of months, with development of the Regulations continuing into 2020.

4. Main report

- 4.1 This section sets out progress against the key workstreams that inform the development of Edinburgh's LEZ proposals and indicates how the findings will be taken into account to inform an amended scheme that will be considered by Transport and Environment Committee in February 2020.

Public consultation summary

- 4.2 The consultation approach included; an online survey to which 2,793 responses were received, written responses from stakeholder groups and members of the public, four stakeholder workshops, engagement with 60 primary school children, and engagement with neighbouring local authorities in the South East Scotland region.
- 4.3 The consultation invited comment on the proposed boundaries, vehicle types, grace periods and any unintended consequences. The full consultation questions are included in Appendix 3 – Report on findings from public consultation.
- 4.4 The findings show that cleaner air is important to all, but there are mixed views as to how the LEZs should apply in specific detail. General public and commercial respondents have indicated differing priorities, especially in relation to the grace periods proposed.

- 4.5 The broad representation of submissions was generally good with:
- 4.5.1 a wide representation of audiences overall, from the general public to numerous different stakeholder groups who took time to make submissions;
 - 4.5.2 wide coverage from across Edinburgh city and surrounds, noting that 'City West' postcodes account for by far the largest single group of respondents;
 - 4.5.3 a mix of demographics for the general public online survey in terms of age and gender, albeit with a more male bias; and
 - 4.5.4 a mix of private and public transport users.
- 4.6 The consultation analysis noted that public consultation tends to be completed by those with an interest or who want to get their views across and those that are indifferent or happy with the proposals may not have completed the survey. The analysis also highlighted that some respondents caveated their responses with statements indicating further detail was required, with many citing issues that will be determined through the national regime (for example, exemptions, the penalty rates, and financial support packages).
- 4.7 A report setting out the findings from the consultation is attached at Appendix 3 – Report on findings from public consultation. The headline findings of the consultation are set out in the following sections.

Consultation findings on proposed boundaries

- 4.8 The consultation sought views on the specific location of the boundaries, the vehicle types to be included, and the length of time (grace periods) before enforcement.
- 4.9 There is broad agreement on the citywide boundary (with 62 percent of respondents saying they support the citywide boundary). Comments in relation to why respondents did not support the boundary mentioned that it was too big an area overall, and that the LEZ should only cover the city centre, with some comments stating that it should include wider areas of development and the airport.
- 4.10 Feedback on the city centre boundary shows a mixed reaction with 54 percent of respondents indicating they support the boundary, and 46 percent stating they did not support it. There was approximately the same proportion of support from city centre residents, those that work in the city centre, and those that visit for leisure. Business owners were less in favour with only 38 percent supporting the boundary.
- 4.11 The most frequent comments related to the potential impact of increased traffic and pollution in areas directly on the boundaries and concerns over other polluted streets outside the city centre boundary. Similarly, the 532 responses collected by Friends of the Earth stated that whilst they were in support of LEZ overall, the city centre boundary was deemed to be too small and they did not support it.
- 4.12 Feedback highlighted the south boundary's use of East and West Preston Street and whether the boundary potentially increases non-compliant traffic adjacent to Preston Street Primary School.

- 4.13 The issues raised in relation to the boundary are being considered further and work is underway to better understand the air quality impact and options to address any negative impacts. Options could include amending the boundary and considering what wider measures could be implemented to manage emissions. It should be noted that within the city centre there are very few alternative route choices to those that have been proposed for the city centre boundary.

Consultation findings on grace periods

- 4.14 The consultation asked for people's views on proposed grace periods (or length of time before enforcement starts), asking them to indicate if the proposal was 'too short', 'about right', and 'too long'.
- 4.15 Feedback showed a range of views relating to the proposed grace periods with those most directly affected seeking more time. Grace periods are one of the factors that can help to offset some of the greatest negative impacts on people and businesses. Further detail on these impacts is set out in the draft Integrated Impact Assessment. It is stressed that a balance needs to be achieved between addressing the outstanding requirement to meet air quality objectives and allowing vehicle owners time for adjustment.
- 4.16 In the city centre, respondents indicated greater acceptance for one year for buses, coaches, and commercial vehicles (albeit only just over 50 percent and around 30 percent selecting too short). Views are evenly mixed in relation to the private car grace periods.
- 4.17 In response to the citywide proposals, responses were evenly mixed between 'too short', 'about right' and 'too long'. Business owners were most likely to state 'too short' for both vehicle categories at 35 percent for buses and coaches and 42 percent for commercial vehicles.

Consultation findings on vehicle types

- 4.18 The consultation asked for views on the proposed vehicle types restricted by each boundary (all vehicles in the city centre and commercial vehicles citywide). Feedback indicates support for the proposals related to vehicle types.
- 4.19 Around 65 percent of city centre residents support the proposal in relation to cars. However, 47 percent of respondents (including 532 responses from Friends of the Earth) indicated that cars should also be included in the citywide boundary. This view is shared by the Corstorphine Council's submission.
- 4.20 Feedback proposed that exemptions should apply for historic vehicles, motorbikes, and people reliant on personal vehicles for work (such as carers or those unable to access/use public transport such as shift workers). Exemptions provisions are being considered through the national regulations and will be consulted on in the coming months. The Transport Bill indicates that Local Authorities can offer time limited exemptions in certain cases. Depending on the proposals for national exemptions, the option of local exemptions may be explored further in the next stage of work.

4.21 Engagement with the taxi and private hire car sector and has led to further consideration on how the Emissions Policy for Taxi and Private Hire Cars (which sets emissions and age standard through licencing) and LEZs should be incorporated. There are a number of issues to be addressed in aligning the regimes, including the need to ensure continued progress towards improved emissions standards, consideration of how geographic LEZ restrictions could apply to vehicles licenced to operate within the area, how enforcement would be undertaken, and the need to provide a consistent regulatory approach for both sectors of the trade.

Regional engagement

4.22 A programme of engagement on Edinburgh's LEZ proposals with neighbouring authorities and SEStran is underway. Discussions at the [Four Cities Low Emission Zones Leadership Group](#) (made up of member representation) and the Four Cities LEZ Consistency Group (an officer group chaired by Transport Scotland) has highlighted the importance of robust engagement on the development and impacts of LEZs across regions.

4.23 Council officers have been working through a range of forums to facilitate regional discussion on LEZs. Letters to the Chief Executives of all authorities in the South East Scotland region have been sent to formally advise of the consultation and invite ongoing engagement. Submissions to the LEZ consultation have been received from West Lothian Council, Midlothian Council, East Lothian Council, Scottish Borders, Fife Council, and Clackmannanshire Council.

4.24 Discussion on LEZ proposals have included briefings through the Edinburgh and South East Scotland City Region (ESESCR) Deal forums, meetings with individual authorities, and through the SEStran chaired groups. SEStran also sits on Edinburgh's LEZ Delivery Group, alongside SEPA and Transport Scotland.

4.25 Discussion and responses from the regional authorities and SEStran show support for Edinburgh's LEZ proposals in principle. Key issues raised require further discussion are set out below.

4.25.1 Air quality impacts that may arise if higher polluting vehicles are relocated from Edinburgh to neighbouring authorities and exacerbate local air quality issues.

4.25.2 Continued development of infrastructure and services to support cross boundary public transport movement, promote changes to sustainable travel patterns, improve integration of park and ride services and interchange hubs that support active travel.

4.25.3 Ensuring there is not a negative impact on public transport services between neighbouring authorities including the potential of reduced services, services terminating at the boundary, or increased fares due to higher bus operating costs.

4.25.4 Developing support measures for commercial vehicle operators, including interventions such as freight hubs, last mile transport solutions, and low carbon freight support.

4.26 Many of these issues will be managed through the delivery of wider transport measures emerging through the CMP. Continued engagement on LEZ specific issues (such as the impact of fleet redistribution across the region) will continue and inform further development of the scheme.

National Modelling Framework

4.27 A programme of air quality and traffic modelling work is underway to support LEZ development. Air quality modelling has been undertaken to understand the potential benefit of LEZ scenarios and was prepared by SEPA as an [Interim Report](#) in November 2018.

4.28 The baseline traffic input to the air quality model was undertaken in November 2016, and a recount of the traffic data was undertaken in June 2019. The recount provides an updated picture of the vehicle types moving around the city, as well as the specific emissions standard (euro class) of those vehicles.

4.29 Transport modelling is being undertaken to understand the scale and distribution of any traffic displacement. These findings are input to the air quality model to quantify the air quality impacts of any change in traffic. Assessment is currently underway using the 2019 traffic data. Aligning the models in this way is a complex piece of work and has taken considerable time to ensure the methodologies applied are robust.

4.30 Edinburgh is the first city to do this work and a report will be prepared by SEPA as an update to the November 2018 interim report. A high-level update on the transport modelling is provided in Appendix 4 – Edinburgh Low Emission Zone Impacts – Progress report (October 2019).

4.31 Early results of the June 2019 traffic survey are available and indicate an encouraging trend in vehicle emission standards, most notably in LGV fleet, as shown in the table below.

Compliance* of fleet operating in Edinburgh ANPR survey - November 2016/June 2019				
*Compliance is with proposed emission standards of Euro 4 Petrol and Euro 6/VI diesel				
Vehicle type	Cars	LGV	Taxi	All HGV
<i>% Compliant 2016</i>	60.6	6.8	19.1	37.4
<i>% Compliant 2019</i>	68	41.2	43.6	64.4

4.32 The next stage of LEZ development will consider what changes should be made to the scheme taking into account feedback from consultation and the modelling evidence base.

4.33 In addition, street measures will be developed to mitigate any air quality impacts of displaced traffic. This will include a mix of targeted on-street interventions (such as street design, signalling, etc) as well as strategic interventions focussed on reducing the use of private cars. The strategic measures will be delivered through the CCT and CMP programmes of work.

Impact assessments

4.34 A draft Integrated Impact Assessment (IIA) has been undertaken (in line with guidance published by NHS Lothian in 2017) and a summary of the assessment is provided in Appendix 4 – Edinburgh Low Emission Zone Impacts – Progress report (October 2019). This assesses the impacts of the scheme consulted on between May and July 2019. The headline findings of the IIA highlight the potential negative impacts of LEZs on the following groups.

4.34.1 Young people and people vulnerable to poverty should public transport costs increase, or operators pull out of non-profitable routes.

4.34.2 Disabled people that rely on their own private transport which has been fitted with adaptive measures, should they need to upgrade their vehicle.

4.34.3 Late night shift workers on low incomes and reliant on cars to travel to work may be impacted financially.

4.34.4 People accessing places of religion/faith, should travel options not be easily available.

4.34.5 Small and medium enterprises that are reliant on non-compliant vehicles and operate with low profit margins – the cumulative impact on these businesses may be significant for Edinburgh.

4.35 The positive impacts of the introduction of the LEZ scheme are wide ranging in considering the environmental and health, wellbeing and human rights impacts, especially amongst children, elderly, pregnant woman across the city and all users and residents in the city centre.

4.36 The next stage of this work will be to revise the draft IIA in light of any changes to the LEZ proposals and to develop necessary measures to mitigate any significant impacts.

4.37 Work has also been progressing to understand the impact on commercial operators and businesses. A summary report on the findings has been prepared and is attached in Appendix 4 – Edinburgh Low Emission Zone Impacts – Progress report (October 2019) with the headline findings set out in the following points.

4.38 There are on average 15,000 LGVs and 1,700 HGVs that enter Edinburgh City Centre Boundary per day. In response to a Transport Scotland survey on LEZ it was found that 12 percent of businesses across Scotland, travel to Edinburgh's city centre on behalf of their company every day and a further 39 percent travel to Edinburgh's city centre at least once a week.

- 4.39 [In Edinburgh](#) 90 percent (18,045) of businesses are small or medium enterprises. These businesses are more likely to state that increased operating costs due to upgrading to a compliant vehicle would impact (52 percent) them compared to larger companies citing this impact (8 percent). At a Scotland level, 67 percent of businesses reported they do not believe LEZ will have any impact on their business, while 33 percent stated that they believe there will be an (largely negative) impact on their business.
- 4.40 The findings from both the IIA and the commercial work echo what has been provided in the public consultation. The findings from this will be used to further refine the LEZ proposals. Findings are being fed into the CMP to develop measures that support the mobility needs of people and businesses and support the move to sustainable travel. Similarly, findings are being shared with Transport Scotland, as they develop the arrangements for support funding for those most impacted by LEZs.

5. Next Steps

- 5.1 From the information reported to date, further consideration will be given to refining proposed grace periods and boundaries and wider measures required. This will be progressed through the following workstreams with the results being reported in February 2020.
- 5.1.1 Impact assessment work - further analysis of fleets and cost implications, continued IIA assessment work as details of national programme develop, and as Edinburgh's proposals are refined.
 - 5.1.2 Traffic and air quality modelling – continued modelling of boundaries and testing for air quality assessments and appraisal work to develop mitigation measures for remaining hotspot areas.
 - 5.1.3 Communications and public engagement – ongoing engagement and support to keep the public and stakeholders up to date, ensuring communications around further consultation and revised proposals is clear and effective.
 - 5.1.4 Stakeholder engagement – targeted at specific sectors identified through impact assessment work (including bus, coach, small and medium sized enterprises, people with disabilities).
 - 5.1.5 Development of the enforcement system and financial impacts – including options appraisal, design, back office function and interface with other systems, procurement approach, and assessment of financial impacts to the Council. This work will be tied into the CCT operation and management plan development which is due to commence in January 2020.
- 5.2 The LEZ work will also continue its close development with the AMP to ensure scope and timing of measures in the CMP programme align and support LEZs where appropriate.

6. Financial impact

- 6.1 The Scottish Government has made funding available to support the development of LEZs required by the four cities. The Council received £111,800 grant funding from Transport Scotland in 2018/19, and has received £195,000 for 2019/20 which is being used to support the workstreams set out in the next steps section.
- 6.2 The Scottish Government has provided funding for bus engine retrofitting, through the Bus Emission Abatement Retrofit (BEAR) scheme. This is a scheme where bus companies can obtain funding in order to upgrade engines to Euro VI standards. Funding has been made available for three years including £1.6 million in 2017/8, £7.89 million in 2018/19, and £8.857 million is available for 2019/20.
- 6.3 Uptake in 2017/18 enabled 42 retrofitted buses and 2018/19 funding enabled 124 retrofitted buses. Transport Scotland advise that the BEAR scheme offers the maximum funding 'per-bus' that state aid rules permit. The major operators have responded that funding was 'insufficient' for wider adoption of retrofitting. Transport Scotland is currently negotiating with the European Commission to seek an increase in State Aid thresholds.
- 6.4 Transport Scotland is developing a funding package for 2019/20 (and future years), to support businesses and residents affected by LEZs. This will support those with 'greatest difficulty' adapting to LEZs such as lower income households and micro-businesses, providing £10.8 million in grant funding from 2019-2022. Details of this scheme are not yet available.
- 6.5 The main costs to the Council in developing the LEZ scheme will relate to the implementation of the enforcement regime including infrastructure for cameras signage, and back-office administration set-up.
- 6.6 As highlighted in the Next Steps section, work is underway to assess the cost of delivering the infrastructure required to establish and manage Edinburgh's LEZ. This assessment will be carried out prior to finalising the LEZ scheme and delivery plan. The assessment will also take into account any revenue that may be received from the scheme and an analysis of the impact on the Council's fleet will also be undertaken.

7. Stakeholder/Community Impact

- 7.1 The main body of this report sets out the findings from public consultation and the attached draft IIA sets out further detail on impacts.
- 7.2 Consultation has been supported by a series of sessions with key stakeholder including the representatives from the taxi and private hire car sectors, the bus and coach sectors, and with freight sectors through the Council's ECO Stars scheme, as well as with wider general stakeholder groups (including health and environmental,

and wider interest groups, community councils, and residents). Engagement with these groups will continue as the project further refines LEZ proposals.

- 7.3 The primary focus of LEZs is on addressing local air quality issues. However, [recent commitments](#) have been made by central and local government to work towards to zero greenhouse gas emissions. Transport emissions are a part of delivering on these commitments and the Council is working to ensure the two programmes of work are aligned.

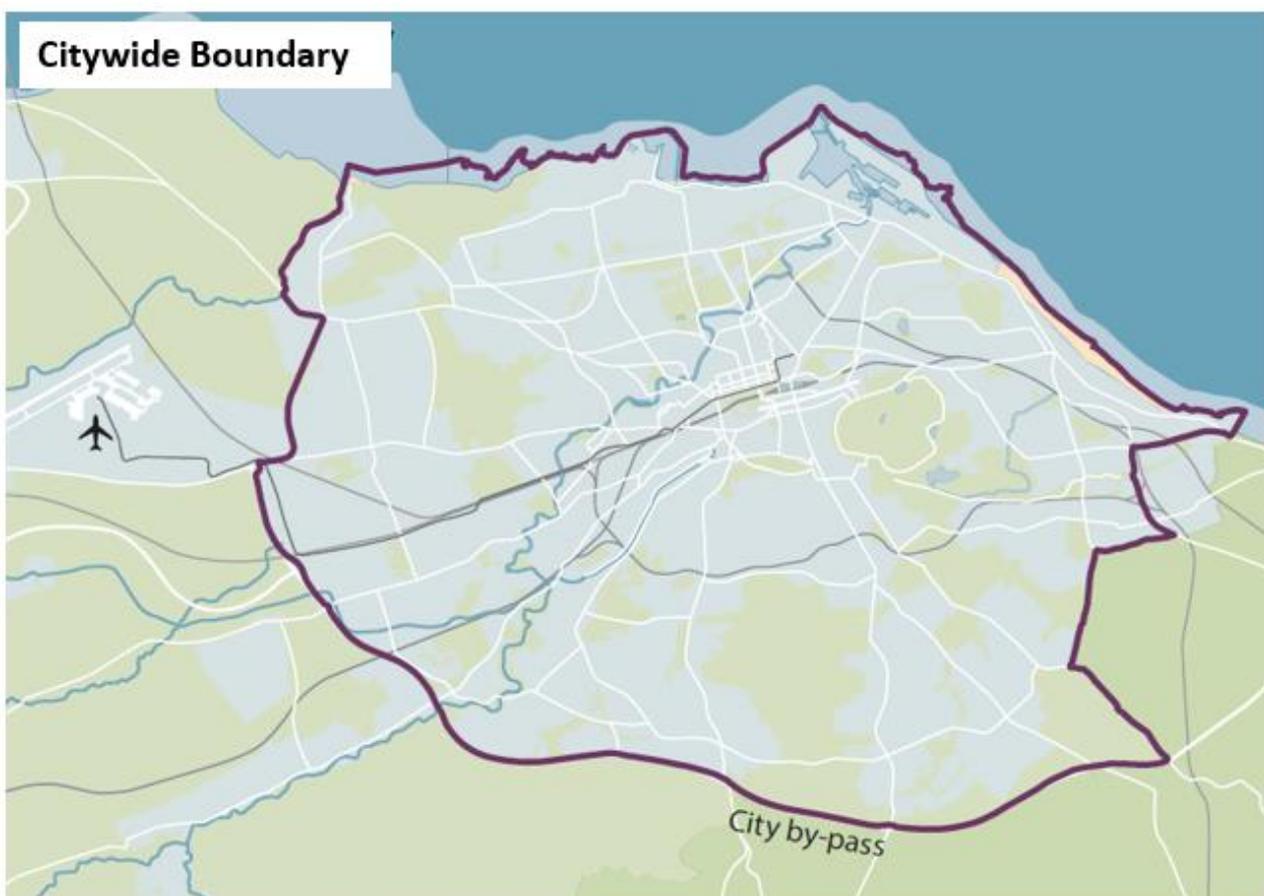
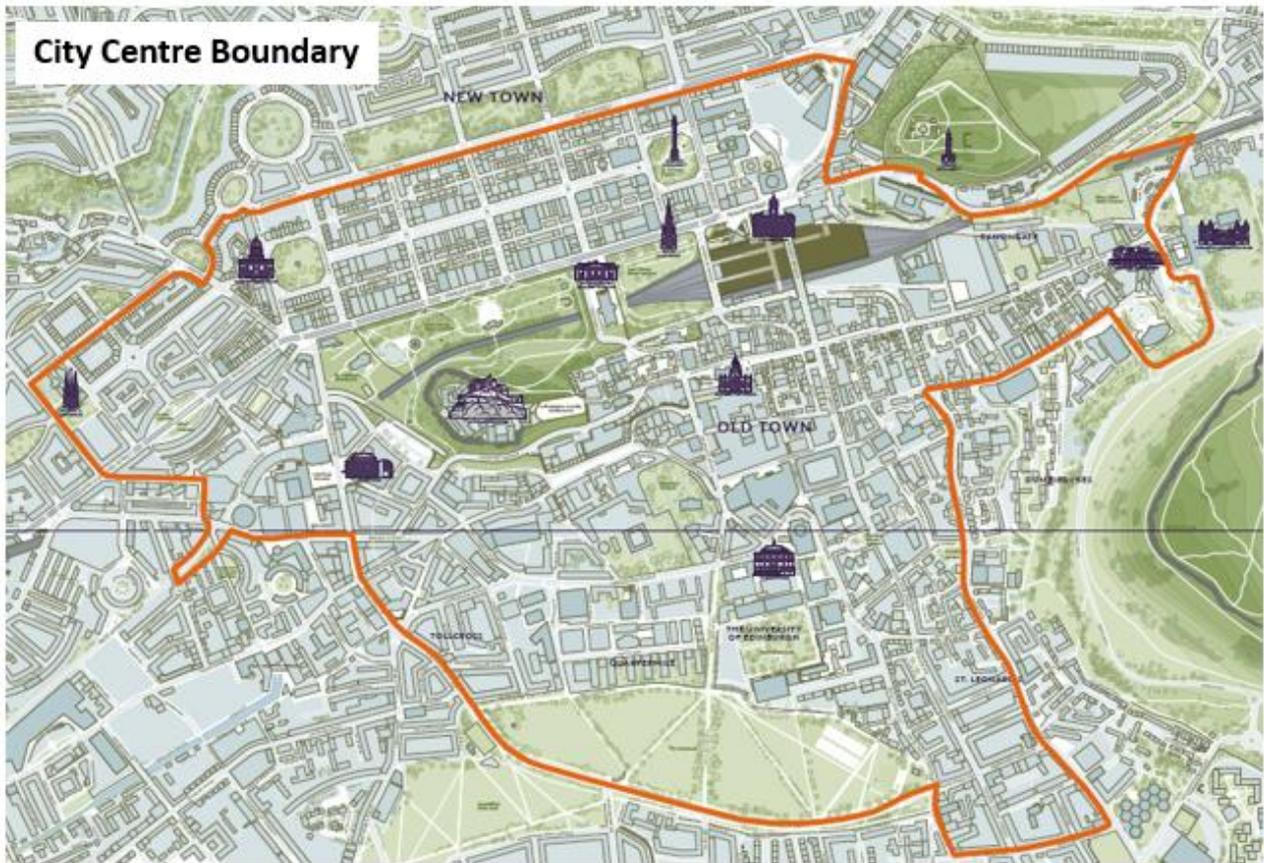
8. Background reading/external references

- 8.1 [Four Cities Low Emission Zones Leadership Group governance arrangements](#)
- 8.2 [Transport and Environment Committee, May 2018, Developing Low Emission Zones in Edinburgh](#)
- 8.3 [Transport and Environment Committee, August 2018, Edinburgh: connecting our city, transforming our places' – public engagement on City Mobility Plan, Low Emission Zone\(s\) and City Centre Transformation](#)
- 8.4 [Edinburgh by Numbers, 2018, City of Edinburgh Council](#)
- 8.5 ['Air Quality Evidence Report - Edinburgh' November 2018, \(SEPA\)](#)
- 8.6 [Transport and Environment Committee, December 2018, Annual Air Quality Update](#)
- 8.7 [Transport and Environment Committee, February 2019 'Edinburgh: Connecting our city, Transforming our places' Findings of Public Engagement and Next Steps](#)
- 8.8 [Transport and Environment Committee, May 2019, Tackling Air Pollution – Low Emission Zones](#)

9. Appendices

- 9.1 Appendix 1 – LEZ boundaries May – July 2019 consultation
- 9.2 Appendix 2 – Approach to phasing of enforcement May – July 2019 consultation
- 9.3 Appendix 3 – Report on findings from public consultation (August 2019)
- 9.4 Appendix 4 – Edinburgh Low Emission Zone Impacts – Progress report (October 2019).

**APPENDIX 1 - LOW EMISSION ZONE BOUNDARIES MAY – JULY 2019
CONSULTATION**



APPENDIX 2 – APPROACH TO PHASING OF ENFORCEMENT MAY – JULY 2019 CONSULTATION

Which 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:

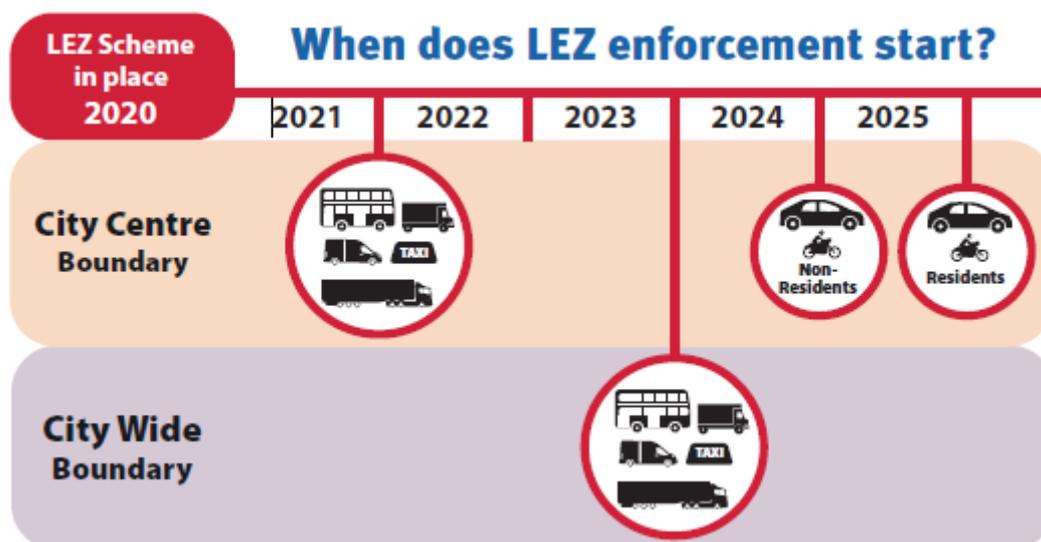
- Euro 4 standard for petrol engines was introduced in January 2005, with any new vehicles sold after January 2006 having to meet this standard.
- Euro 6 standard for diesel cars was introduced in September 2014, with any new vehicle sold after September 2015 having to meet this standard.
- Euro 6/VI 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 LEZ further time to prepare.



Note

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

APPENDIX 3 – REPORT ON FINDINGS FROM PUBLIC CONSULTATION

City of Edinburgh Council (CEC)

Low Emissions Zone (LEZ)
Consultation

Prepared for:
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August 2019

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Executive summary

- The City of Edinburgh Council (CEC) designed and ran a consultation from 27th May to 21st July 2019 regarding the proposed Low Emission Zones (LEZs), including 4 stakeholder workshops, 2,793 online surveys and responses from multiple stakeholder groups. CEC invited comment on the proposed boundaries, vehicle types, grace periods and any unintended consequences. Scott Porter Research have reviewed and summarised the findings.
- Findings show that cleaner air is important to all, but there are mixed views as to the suitability of the LEZ and to its specific aspects. General public and commercial audiences agree, albeit with differing priorities. For all however, vital questions to consider are the cost of LEZ compliance to them; the cost to life in Edinburgh (clean air, goods/services); and looking at a bigger, city and regional picture to tackle underlying issues (traffic flow, public transport, etc).

City Centre LEZ

Boundary	<ul style="list-style-type: none"> ▪ Mixed views: 54% agreed, 46% disagreed with boundary ▪ Most disagreement related to the LEZ overall – desiring a better approach, a better public transport offer, and voicing worries about the financial effect on businesses and individuals. ▪ Main issues included worry about increased traffic and pollution in neighbouring streets/parks; the desire to make the area larger; and to include New Town/up to Ferry Road.
Vehicle types	<ul style="list-style-type: none"> ▪ Most said each vehicle type should be included, comments were mainly about considering exemptions, like: motorbikes/scooters, buses/public transport, private cars, deliveries/ tradesmen
Grace periods	<ul style="list-style-type: none"> ▪ Mixed views, with more acceptance for 1 year for buses and coaches and commercial vehicles, albeit only just over 50% saying 'about right' and evenly mixed views for 4 years for private cars and 5 years for city centre residents with cars.
Action taken	<ul style="list-style-type: none"> ▪ 34% said their vehicle would comply, so no action was needed ▪ The Top 5 most mentioned actions as a result of the LEZ were: 30% use public transport more; 24% walk more; 20% bike more; 18% upgrade vehicle; and 16% change route.

City-wide LEZ

Boundary	<ul style="list-style-type: none"> ▪ More in favour: 62% agreed, 37% disagreed with boundary ▪ Again, most comment regarding disagreement related to the LEZ and that it will negatively affect business/trade/deliveries. ▪ Main issues cited were that it should be smaller, should only be the City Centre, and should include the airport.
Vehicle types	<ul style="list-style-type: none"> ▪ Comments reflected the same exemptions as City Centre, but more felt all private cars should be included, 9% (v. 3% exempt)
Grace periods	<ul style="list-style-type: none"> ▪ Again, mixed views with an evenly mixed response for both 3 year periods between 'too short', 'about right' and 'too long'.

- 63% saw unintended consequences, nearly all negative, with 5 main areas of negative impact cited: on locations outwith LEZs (26%); on finances (24%); for specific groups (15%); forced migration from the city (10%); and increased costs (travel, goods, services) (10%).
- LEZ effectiveness should be reviewed 1 year after full implementation.

1. Background to this report

1.1 The consultation and Scott Porter's role

The City of Edinburgh Council (CEC) has completed a consultation exercise to understand public and stakeholder views on its proposals for Low Emission Zones (LEZ) within the city. There was a need to analyse the findings from the consultation to help inform the next stage of the LEZ development in Edinburgh. Scott Porter Research & Marketing Ltd were asked to conduct this work as a fully independent market research agency.

1.2 Data included within analysis

The feedback included in the analysis takes data from the following sources:

- Online survey – 2,793 responses
 - The questionnaire was designed, scripted and hosted as an online survey by CEC and it was live from 27th May until 21st July 2019.
- Stakeholder workshops
 - 4 workshops were completed with between 4 and 19 participants, each lasting around 2.5 hours and moderated by CEC:
 - 3 general stakeholder workshops: 4th, 9th and 15th July
 - 1 freight and commercial fleet groups: 17th July.
- Engagement with primary school children
 - Data was gathered from activities at the Clean Air Day 2019 event, including a tally of support for the scheme.
- Written responses
 - Specific submissions were included from 18 different organisations.
 - Pertinent comments were also reviewed from the Edinburgh City Centre Transformation (CCT) consultation feedback that related to LEZs.

1.3 Analysis process and data protection

The data processing and analysis for the online survey was as follows:

- the analysis requirements were discussed at a briefing meeting between CEC and Scott Porter, then following closure of the survey the anonymised raw data was compiled into a dataset and sent by secure means to Scott Porter
- data processing included quality and sense checks to review where possible if there were duplicate responses and assess how many surveys were complete
- the data was cleaned and checked and final sample size determined, data tables run and an initial set reviewed prior to full analysis, with further data mining and cross tabulation completed as determined by the results.

The data processing and analysis for all the qualitative data was as follows:

- all the qualitative data was delivered by secure means and a Scott Porter researcher attended one of the workshops (17th July) as an observer
- qualitative analysis was then completed by the researchers who:
 - read all the responses to gain an overall sense and pull out main themes
 - drew up code frames for online open-ended responses from a proportion of the responses and used these to code and tabulate the remainder
 - reviewed and summarised the data by sample group so that each individual sample group's responses were considered.

The analysis of all the quantitative and qualitative findings included a review of respondents' levels of support for and views of:

- the **specific boundaries as described in the survey**
- the **vehicles types** to which the LEZ boundaries should apply
- the **grace periods** for various vehicles types
- potential **unintended consequences** that may arise from the LEZ
- likely **impacts/challenges specific sectors** may face with LEZs.

In terms of data protection, Scott Porter abides by the Market Research Society Code of Conduct and Data Protection/GDPR rules. All data was screened and passed on to Scott Porter by CEC in a format that complies with GDPR and CEC policies. The online survey included personal data, but this was anonymised by CEC prior to analysis, with name, organisation and email being removed and only the non-specific first half of the postcode included. This ensured the dataset for analysis had no identifiable personal data (i.e. responses such as age, gender, physical/mental health could not be traced back to an individual).

1.4 Limitations to the findings

Having reviewed and analysed the findings there are some limitations that need to be considered when reviewing the consultation data.

The online survey was not designed to take respondents through via specific question routing: they were not prompted to answer before they could move on. Whilst this allows the respondent to complete as they will, it also means open responses can be completed by all. The analysis therefore had to review whether responses were in direct response to the pertinent question, to other questions, or to more general issues. The online survey also allowed respondents to interpret what was being asked for the open responses, again making it harder in some instances to decipher what the response was alluding to, thereby potentially losing some of the quality in the data collected. Open completion also meant some questions were not answered, although this was limited, perhaps highlighting a high level of engagement for those taking part.

Also, given there was no question asking about overall support of the LEZs, the analysis was unable to be specific as to the level of support for the scheme. This is an important point to note when reviewing the data from the consultation. It must be remembered that support for the boundaries or the grace periods may still be shown even though the individual does not support the LEZ overall. The two are not mutually exclusive in that the boundary, or grace period might be deemed to be the 'best' one in the circumstance, but the LEZ scheme itself is not supported. It should therefore NOT be assumed that support for boundaries OR grace periods indicates positive support of the LEZ overall, or vice versa.

With regards to the other data supplied for review it should be noted that feedback from some of the events and workshop sessions was limited in its scope and depth. The notes made in this summary report are only informed from the data as passed on from CEC to Scott Porter. As such there may be specific issues that were discussed, but are not mentioned here. Likewise, in order to bring together the overall picture on the feelings about the LEZs, some of the very specific details from individual submissions are not detailed within this summary of findings.

2. Authors' thoughts on the findings

2.1 Thoughts on the findings

Reviewing the data it can be seen that, not surprisingly, responses reflect the respondent's own situation and their background views on environmental issues. Aligned to this is the fact that self-completion formats, such as the online survey, that are used for public consultation tend to be completed by those with an interest, or those who want to get their views across. This is likely to mean that those who have reviewed the LEZs and are happy with them will not have felt the need to comment and therefore not completed the survey. This can, of course, colour the tone of the findings and must be taken into account when interpreting the findings.

In terms of the respondents for the consultation:

- there was a wide representation of audiences overall, from the general public to numerous different stakeholder groups who took time to make submissions
- there was also a wide coverage from across Edinburgh city and surrounds, albeit noteworthy that 'City West' postcodes account for by far the largest single group of respondents
- there was a good mix of demographics for the general public online survey in terms of age and gender, albeit with a more male bias
- across the sample multiple modes of private and public transport were used.

All of the above suggests that the data from the consultation can be taken as a robust view of many different sample groups in and around Edinburgh (with the associated caveats about self-completion methods already mentioned).

Looking at the data there was a general view that improving air quality was a positive aim, and an important one that should be addressed by ECE and indeed at an overall national level by the Scottish Government. For the vast majority therefore, the rationale behind clean air was therefore not in question.

However, views differed with regards to how this is done. The LEZs on their own appeared to only be a part of what is considered necessary to tackle this subject and many of the comments related to improvements in, for example, public transport provision and infrastructure generally to aid the public in being able to, as they see it, 'realistically' move from using their private cars to using public transport. Comments about the LEZs also, and perhaps not surprisingly showed a direct correlation to where the respondent lives and to what their status is (resident, worker, or leisure visitor). Commercial respondents gave similar views, asking for infrastructure changes across the whole region to aid their move to LEZs, whilst also pointing out that at present the associated costs of compliance could prohibit or limit business within the area.

All in all, the main questions that it would seem need to be addressed in moving forward with the LEZ scheme appear to relate to the following:

Boundaries

- Issues pertaining to the 'edges' of the City Centre boundary and ensuring that these areas do not become more congested and more polluted as a result.
- Reviewing where the most polluted areas are in Edinburgh and assessing how they specifically can be addressed, especially as many lie outwith the stricter confines of the proposed City Centre boundary.

Vehicle types

- Considering the merits of exemptions – from historic vehicles and motorbikes, to those who use their personal vehicles for work (such as carers), or those who work at times outwith the public transport being usefully available.

Grace periods

- Issues pertaining to private individuals needing to upgrade their vehicles to comply, especially for City Centre residents. It is not clear from the information given or the findings what proportion of cars registered within this zone might be affected thus, nor how people might be incentivised, or helped to do this (especially with reference to older vehicles, their trade-in value and therefore consequential ability to pay for a newer vehicle).
- Aligned to this are the issues pertaining to commercial vehicles of all types with regards to the potential costs associated with needing to retrofit and/or buy new vehicles, whether this is at all feasible (cost and availability) and by when and how this might be achieved.

Other issues

- The LEZ scheme is felt to increase inequalities within the city by penalising those who cannot afford to comply in terms of their own vehicles and also affecting people (be they residents, workers or visitors) in terms of potentially increasing costs for goods, services and deliveries within the city, passed on by suppliers. These issues will need to be considered.
- The perceived and real overlaps between the LEZ, the City Mobility Plan and the Edinburgh City Centre Transformation Plan need to be considered and reviewed to ensure all are implemented efficiently and optimally.

2.2 Thoughts on the consultation process

In terms of the consultation process the authors would suggest that the survey, the experience for the respondent and therefore the quality of the data could have been enhanced for the online survey by:

- including a question about overall agreement with the LEZ, thereby moving responses relating to this out of questions regarding the scheme specifics and increasing the likelihood that specific information is considered at this point as respondents feel they have been able to give their overall view elsewhere
- in this vein, being more specific in questions as to what the question is designed to find out or elicit from the respondent
- designing the survey overall to allow the respondent to give their views, be they positive or negative without fear of having to 'shoehorn', or find a space to give a response 'somewhere'
- providing a general comments section at the end of the survey.

The authors also suggest a more robust method is used to save and summarise the findings from workshop sessions and events, including making audio recordings and transcribing these for analysis. This would help ensure that attendees' views are recorded and given sufficient note.

3. Main findings

This section of the report details the main findings from the consultation. It starts with the background of those who took part and then reviews the main areas as detailed in the online survey:

- the **specific boundaries as described**
- the **vehicles types** to which the LEZ boundaries should apply
- the **grace periods** for various vehicles types
- potential **unintended consequences** that may arise from the LEZ.

Alongside these findings, the report also highlights the views from individual stakeholder groups pertaining to their specific areas, as well as looking at any potential or likely **impacts or challenges that specific sectors may face** with regards to LEZs.

The tables for the main open-ended responses for the online survey can be found in a separate PDF document. More inclusive tables can also be found in Appendix 1, including responses that only achieved between 0% and 2% each.

The following definitions should be noted when reviewing findings:

- '0%' shows something is mentioned, but by insufficient numbers to reach 1% of the pertinent sample
- '-' indicates that no one gave this response
- 'other' refers to responses not of specific note – often individual mentions
- figures are rounded up to the next percentage, i.e. when x.5% and above
- 'dk' indicates a 'don't know' response
- 'nfs' is a generic response that has been 'not further specified'.

3.1 Respondent background

The first section of the report highlights those who took part in the consultation, looking at the online survey demographics as well as the stakeholder groups.

3.1.1 Online survey: Resident status

A total of 2,793 respondents completed the online survey. Of these 45% stated they were city centre residents, 45% that they worked in the city centre, 50% visited for leisure and 5% (136) said they own a business within the city centre. Further it can be seen that the Residents accounted for 45% of the sample in total, those coming to the city centre for Work/business or Leisure making up around a quarter each of the remaining respondents (Table 1).

Table 1: Resident / Work / Leisure

	Total n=2,793	
Resident	24%	All Residents: 45%
Resident & Work/Business	7%	
Resident & Leisure	3%	
Resident & Work/Business & Leisure	10%	
Work/Business	17%	All Workers: 29%
Work/Business & Leisure	12%	
Leisure	25%	All Leisure: 25%
Not stated	1%	1% (n=33)

Source: Q1. Which of the following describe you?

3.1.2 Online survey: Postcode

According to postcodes, respondents came primarily from the city (79%) and near suburbs (16%). 3% (91) gave postcodes from other parts of Scotland and 1% (14) the rest of the UK (Table 2 overleaf).

Looking at the City postcodes it is of note that City West has by far the most responses for a single group at 28% of the overall total for the online survey, compared to, City Centre and City North with only 9% each.

Table 2: Postcode

	Total n=2,793	%
EH City	2,211	79%
City Centre <i>Incl.: Old Town, New Town, Princes St, Queen St, West End, Tollcross</i>	249	9%
City North <i>Incl.: Granton, Leith, Newhaven</i>	262	9%
City South <i>Incl.: Bruntsfield, Morningside, Southside, Marchmont, Grange, Colinton, Oxgangs</i>	492	18%
City East <i>Incl.: Portobello, Duddingston, Liberton, Niddrie, Craigmillar, Gilmerton, Mortonhall, Restalrig, Craigtinny</i>	427	15%
City West <i>Incl.: Gorgie, Sighthill, Barnton, Murrayfield, Corstorphine, Slateford to Balerno, Dean Village, Ravelston</i>	781	28%
EH Suburbs	460	16%
South <i>Incl.: Lasswade, Bonnyrigg, Loanhead, Dalkeith, Gorebridge, Rosewell, Roslin, Penicuik, Walkernburn, Innerleithen, Peebles, West Linton</i>	92	3%
East <i>Incl.: Musselburgh, Gullane, Prestonpans, Tranent, Humble, Pathhead, Heriot, North Berwick, East Linton, Haddington, Dunbar</i>	123	4%
West <i>Incl.: Kirknewton, Newbridge/Ratho, Kirkliston, South Queensferry, Bathgate, Linlithgow, Bo'ness, Broxburn, Livingston, West Calder</i>	245	9%
Rest Scotland <i>Incl.: Aberdeen, Dundee, D&G, Falkirk, Glasgow, Kilmarnock, Kirkcaldy, Motherwell, Paisley, Perth, Borders, Orkney, Shetland</i>	91	3%
Rest UK <i>Incl.: Bolton, Bristol, Carlisle, Cambridge, Gloucester, Newcastle-upon-Tyne, London, Watford</i>	14	1%
'EH' not further specified	12	0%
Not stated	5	0%

Source: Q16. What is your postcode?

3.1.3 Online survey: Demographics – age, gender, physical/mental conditions

The demographics of the online survey respondents show:

- A very even mix in age (Q17 Age) between:
 - under 45 years old: 51% (under 25: 6%, 25-34: 19%, 35-44: 26%)
 - and over 45 years: 46% (45-54: 22%, 55-64: 16%, 65+: 8%)
 - 2% not stated.
- More male than female respondents (Q18 Gender):
 - 63% male
 - 32% female
 - 1% other gender identity
 - 4% not stated.
- 15% said they had a physical or mental health condition or illness lasting or expected to last 12 months or more (Q19), 81% did not, 4% not stated.

3.1.4 Online survey: Use of transport and when travel in the city centre

Respondents were asked about their usual forms of transport to travel to, from or around the city centre. Firstly, looking overall at what is used it can be seen that buses, walking and the car lead the way, for all sample groups (Table 3).

Table 3: Modes of transport used to travel to, from or around the city centre

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
Bus or coach	85%	89%	81%	88%	71%
Walk	84%	94%	83%	84%	84%
Car	81%	79%	82%	81%	86%
Taxi/private hire car	64%	74%	65%	63%	69%
Train	54%	61%	56%	54%	47%
Tram	47%	54%	47%	50%	38%
Bike	39%	48%	42%	38%	39%
Light goods vehicle	6%	6%	8%	5%	32%
Heavy goods vehicle	1%	1%	1%	1%	6%
Not stated	0%	0%	0%	0%	-

Source: Q2. How often do you use each of these forms of transport to travel to, from or around the city centre?

Looking at this by the frequency the mode of transport is used (Table 4) shows some modes used more regularly than others. Not surprisingly Residents tend to say they walk the most frequently – 62% every day compared to those who Work in the centre 46%, Business owners 40% and those visiting for Leisure 28%. Use of cars on the other hand is most frequent for Business owners and then those who Work in the city centre – 37% Business owners citing every day compared to 23% for those Working in the city centre, 19% for Residents and 13% for those visiting for Leisure. Interestingly for the trams, the frequency is much lower, with only 1% saying they use them every day (31 people from 2,793 in total).

Table 4: Frequency of using modes of transport for city centre travel

Total n=2,793	Never	Less than once a month	At least once a month	At least once a week	Every day	Not stated
Bus or coach	11%	20%	26%	28%	10%	4%
Walk	11%	10%	13%	22%	40%	5%
Car	16%	19%	16%	28%	18%	3%
Taxi/private hire car	29%	39%	19%	5%	2%	7%
Train	38%	33%	15%	5%	2%	8%
Tram	45%	31%	11%	4%	1%	8%
Bike	52%	10%	7%	11%	10%	9%
Light goods vehicle	85%	2%	1%	1%	2%	9%
Heavy goods vehicle	89%	0%	0%	0%	1%	10%

Source: Q2. How often do you use each of these forms of transport to travel to, from or around the city centre?

Respondents were asked when they usually travel to, from or around the city centre, from Monday to Friday or at weekends. Overall 90% said they travelled to, from or around the city centre Monday to Friday and 70% on Saturday and Sunday. Breaking this down a little more to understand how many are only travelling on weekdays or weekend shows the majority of all main sample groups are in the city centre across the week and weekend.

Table 5: When normally travel to, from or around the city centre

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
Only Monday to Friday	30%	21%	40%	24%	24%
Only Saturday & Sunday	10%	4%	0%	16%	1%
Both Monday to Friday and Saturday & Sunday	60%	75%	59%	60%	74%
Not stated	0%	0%	0%	0%	-

Source: Q3. When do you normally travel to, from or around the city centre?

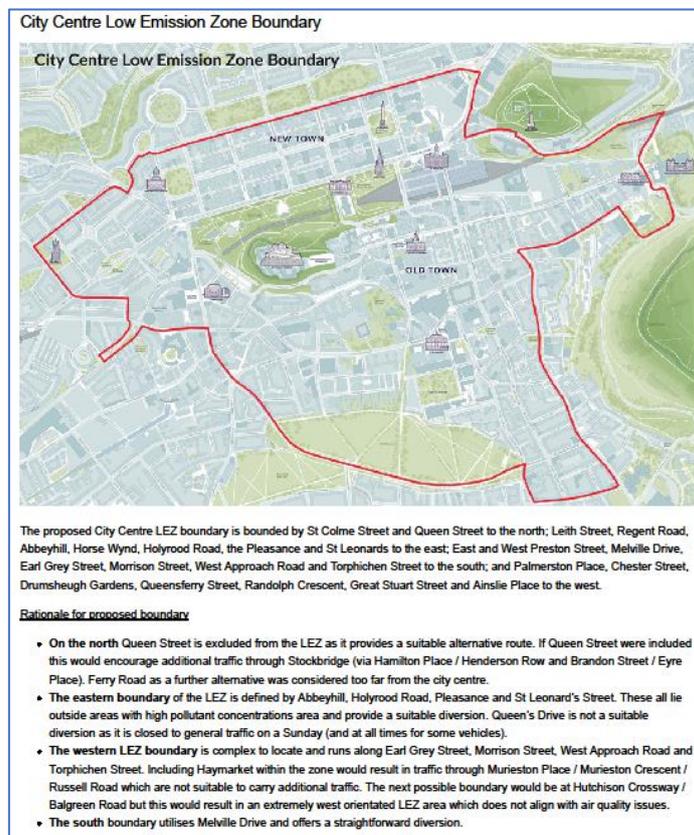
3.1.5 Stakeholder groups

The stakeholder groups that provided submissions to the consultation were:

- CoMoUK (including The Scotland Car Club)
- Corstorphine Community Council
- CPT – 6 members
- European Cities Fund (Omni Centre)
- Enterprise Holdings
- Friends of the Earth
- Hire Car Consultation Group
- Lothian Buses
- New Town & Broughton Community Council
- Scottish Wholesale Association
- South East of Scotland Transport Partnership (SEStran)
- Spokes
- SWECO, for Nuveen (St James Centre)
- The Federation of British Historic Vehicle Clubs
- The University of Edinburgh
- The Vintage Motorcycle Club
- Uber
- UPS

3.2 City Centre LEZ Boundary

The online survey contained the information shown in the visual below about the City Centre LEZ boundary (the full print version of the online survey can be seen in Appendix 2).



3.2.1 Levels of support for the City Centre LEZ boundary shown

Based on the information given in the online survey respondents were asked to state whether they agreed with the boundary for the City Centre LEZ.

Results show a mixed reaction with:

- **54% saying they supported** the boundary for the City Centre LEZ (yes)
- and **46% saying they did not support it** (no).

These figures were mirrored across Residents (53% yes, 47% no), those who Work in the city centre (54% yes, 46% no) and Leisure visitors (57% yes, 43% no), but the Business owners were less in favour with 38% supporting the boundary and 63% not supporting it.

Alongside the 46% who did not support the City Centre boundary, the 532 responses collected by Friends of the Earth stated that whilst they were in support of low emission zones overall, the City Centre boundary was deemed to be too small and they did not support it.

3.2.2 Reasons why do not agree with City Centre LEZ boundary

All online respondents were then asked to give comments if they disagreed with the proposed boundaries and given space to write in their own responses. These open responses have been distilled and the main themes drawn together for analysis. Of the 1,276 who did not support the boundary, it can be seen in Table 6 overleaf that only 35% of the comments given were about the boundary specifically, compared to 59% of the comments that were about an issue or disagreement with the LEZ overall.

In terms of the boundary comments, many regarded inclusions or exclusions near the respondent's own specific location. However, by far the most frequent comments were those made around the worry of increased traffic and pollution in the streets and also parks directly on the boundaries. From the comments it was clear that respondents were concerned that the areas just outside the boundary will become the streets where drivers will default to, thereby increasing the number of vehicles on these streets as 'rat runs', as they are often described, are sought and used to avoid the LEZ.

These thoughts are mirrored by the Friends of the Earth responses who stated that the City Centre zone is too small and must be big enough to ensure people are not able to drive around the perimeter of the zone to avoid it, thereby pushing the traffic into neighbouring residential areas.

Those who commented on the LEZ in general tended not to agree with the principle of the scheme, some feeling that it simply was not needed and others highlighting their concerns in different ways.

Some felt the scheme did not tackle the issue of pollution sufficiently and wanted CEC to review Edinburgh in a more holistic way, tackling pollution by, for example, enabling more public transport journeys to be completed – by extending the current network, improving it and also making it more affordable. Indeed better and more accessible public transport was mentioned often as the real answer to the issue, for residents and also for commuters. Further to this were worries that the scheme will impact on businesses in the area, in terms of vehicles they may own, but also in terms of getting deliveries into the area.

Cost was also highlighted for the general public, both from the point of people being forced to upgrade their vehicles and also in the fines that may be incurred for being in the LEZ with the wrong vehicle. Comments also covered those who felt they could not go about their daily business without the use of a car, thereby forcing them to find a solution if they were within the scheme. Some felt that 'avoiding' the zone by using an alternative route would again add costs in terms of their time, fuel bills and overall more pollution.

The LEZ was seen as discriminatory by the perception that it will potentially force various groups to either spend money or alternatively find alternatives to travel that may not be suitable, or perhaps not travel at all. Indeed, some felt it was simply too restricting and risked stopping people from considering going to the City Centre if a car was their most suitable means of travel. These groups included residents living in the area, those less well-off and disabled people.

Table 6: Reasons for not supporting the proposed City Centre LEZ boundary

	Disagree n=1,276
City-centre Boundary specific comment	35%
Worry about increased traffic/pollution in nearest streets/parks	12%
Boundary should be larger	8%
Include New Town/up to Ferry, Queensferry Rd	3%
Make it one large zone - the City	2%
Should be a smaller area	2%
Do not make Preston St School be on the boundary	2%
Issues with/do not support LEZ generally	59%
Need a better approach overall instead	9%
Need better public transport instead	8%
Will badly affect shops and businesses	7%
Can't afford to buy a new vehicle	7%
Stealth tax/attempt to create revenue	6%
Will affect commuters/public transport not sufficient/suitable	6%
Must use a car – unavoidable	5%
All alternative routes cost time/money/more pollution	4%
LEZ doesn't consider residents and their needs sufficiently	4%
LEZ not needed	3%
Council policy to charge the poor is unfair	3%
Discriminatory for disabled people	2%
Too restricting, stop people going to city centre	2%
Don't know	9%

Source: Q4. If you disagree, please explain why

3.3 City Centre LEZ Vehicle Types

Having reviewed the boundary for the City Centre LEZ the online survey then looked at the vehicle types to be included in the City Centre zone, the survey showing respondents the following information:

City centre vehicle types

The proposed City Centre LEZ applies to all vehicle types <<https://www.vehicle-certificationagency.gov.uk/vehicletype/index.asp>> (i.e. buses, coaches, taxis, HGV, LGV, vans, motorbikes and cars), that do not meet the required standard?

Emission Standards

The proposed emission standards are:

- Euro 4 standard for petrol vehicles generally vehicles registered from 2005
- Euro 6 standard for diesel vehicles generally vehicles registered from 2014
- Euro VI standard for heavy diesel vehicles (including retrofitted engines which would be improved to operate as Euro VI).

3.3.1 Vehicles types City Centre LEZ should apply to

The next question asked respondents to tick all the vehicle types they thought the City Centre LEZ should apply to and the results can be seen in Table 7. Views seem to be quite consistent across the main sample groups, apart from the Business owners, with overall fewer of them thinking it should apply to HGV/LGV/vans, taxi/private hire cars, cars and motorbikes than the other groups. The 532 Friends of the Earth respondents all felt that all the vehicle types listed should be included.

Table 7: Vehicle types the City Centre LEZ should apply to

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
Buses/coaches	78%	79%	77%	78%	76%
HGVs/LGV/vans	85%	87%	85%	86%	74%
Taxi/private hire cars	73%	76%	72%	74%	63%
Cars	62%	65%	60%	64%	48%
Motorbikes	57%	61%	55%	58%	43%
Not stated	10%	8%	10%	10%	12%

Source: Q5. Please tick vehicle types you think the City Centre LEZ should apply to.

3.3.2 Thoughts on vehicle types

Respondents were asked to write thoughts on the vehicle types to be included. Overall 678 of 2,793 gave a comment, 24% of the total sample (see Table 8 overleaf). Of these the most frequently mentioned response was that no vehicles should be included as the respondent did not agree with the LEZ in principle. The remaining comments made included a variety of different views, but the most frequently mentioned focused on exemptions they would like to see from the scheme, notably motorbikes/scooters (10%) and buses/public transport (8%). Comments then noted where it should apply, buses receiving most comment at 7%, followed by HGVs at 5% and indeed all vehicles at 4%.

Table 8: Thoughts on vehicle types included in City Centre LEZ

		All who commented n=678
	None to be included – don't agree with LEZ	18%
Desired exemptions	▪ Motorbikes/scooters should be exempt	10%
	▪ Buses/public transport should be exempt	8%
	▪ Private cars should be exempt	6%
	▪ Deliveries/tradesmen visits need to be allowed	6%
	▪ Diesel should be exempt, Govt. encouraged	4%
	▪ Disabled vehicles should be exempt	3%
	▪ Classic/vintage vehicles should be exempt	3%
	▪ Residents	2%
Apply to	▪ Apply to buses	7%
	▪ Apply to HGVs	5%
	▪ Apply to all vehicles – no exemptions	4%
	▪ Apply to commercial vehicles	4%
	▪ Apply to taxis	4%
	▪ Apply to tour buses/coaches	4%
	▪ Apply to private cars	2%
	▪ Apply to private hire cars	2%
Other thoughts	▪ Many can't afford to buy new car/penalises people	9%
	▪ Businesses suffer/increased costs/less customers	5%
	▪ Grace period should be longer	4%
	▪ Use actual emissions from MOT test – be specific	3%
	▪ Just a tax, money making exercise	3%
	▪ Displacing problem/traffic into residential areas	2%
	▪ Compensation paid/scrappage/incentive to change	2%
	▪ Access limited to certain times for certain vehicles	2%
▪ Electric charging infrastructure not in place	2%	
	Other	9%

Source: Q5. If you disagree, please explain why

3.4 City Centre LEZ Grace Periods

The online survey gave the following information regarding grace periods:

Proposed Grace Periods – Allowing time for vehicle owners to prepare 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 of vehicles time to prepare. Preparation may occur through altering the vehicles or fleet, through retrofitting (mostly buses), by planning the purchase of a new vehicle or through considering other forms of transport.

Reducing emissions from the commercial fleet (buses, coaches, HGV, LGV, taxi/ private hire) will have the biggest impact on improving air quality in the city centre. Accordingly, we are proposing a one-year grace period for these vehicles, with enforcement commencing at the end of 2021.

For cars, the grace period is four years meaning enforcement would start at the end of 2024. An additional year would be allowed for residents living within the proposed City Centre LEZ boundary. Enforcement would start at the end of 2025. This allows car owners a longer timeframe to change the way they travel or to upgrade their vehicles.

The survey highlighted the different grace periods for the different vehicle categories and respondents could consider if these were ‘too short’, ‘about right’, ‘too long’, or that they ‘don’t know’.

Overall views were mixed, suggesting the grace periods shown are not immediately perceived to be right by many of the respondents. The ‘about right’ category is picked by around half for buses and coaches and commercial vehicles, with most of the remaining responses going to ‘too short’. Indeed, perhaps unsurprisingly the Business Owners were most likely to state ‘too short’ for commercial vehicles at 46% compared to 31% overall. However, for the private cars and residents with cars the results show a very even split across ‘too short’, ‘about right’ and ‘too long’, showing no consistency of opinion. Table 9 shows these different views by vehicle category.

Table 9: Grace periods

Total n=2,793	Too short	About right	Too long	Don’t know	Not stated
1 year for buses and coaches	28%	55%	11%	5%	2%
1 year for commercial vehicles	31%	52%	11%	4%	1%
4 years for private cars	30%	31%	36%	2%	1%
5 years for city centre residents with cars	32%	30%	34%	3%	2%

Source: Q6. For the City Centre LEZ, what do you think about the proposed grace periods for the following vehicle categories ...?

The 532 Friends of the Earth submissions generally reflected this as all stated that 1 year for buses and coaches and for commercial vehicles was ‘about right’. However they were also definite in their views that the 4 years for private cars and 5 years for city centre residents with cars were both ‘too long’ a time period.

3.5 City Centre LEZ – Action if implemented

Assuming the City Centre LEZ was implemented as proposed, respondents were asked what, if anything, they would do differently as a result of it coming into force. A third of respondents said their vehicle would comply, so they would do nothing. However, this drops to 21% for Business owners. Perhaps not surprisingly, Business owner's most frequently mentioned action would be to upgrade their vehicle, with 26% stating this. However, otherwise the most frequently mentioned actions were to use more public transport, walk or bike more, alongside upgrading the vehicle.

The main point to note here however is that the myriad of responses and the fact that none are mentioned by more than around a third of respondents would indicate that there is not an 'obvious' solution to the implementation of the LEZ for those whose vehicles would not comply.

Table 10: Action if implemented

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
<i>Nothing, vehicle complies</i>	34%	33%	34%	33%	21%
Use public transport more	30%	29%	28%	35%	18%
Walk more	24%	30%	24%	24%	15%
Bike more	20%	24%	22%	21%	15%
Upgrade my vehicle	18%	21%	20%	18%	26%
Change my route	16%	14%	16%	19%	11%
Choose alternative destination	12%	6%	10%	16%	12%
Use taxi/private hire more	6%	8%	6%	6%	6%
Use more park and ride	6%	3%	6%	8%	3%
Give up my vehicle	5%	7%	6%	5%	8%
Join a car club	5%	8%	6%	4%	4%
Don't travel through city centre	4%	4%	3%	5%	4%
Move away/ leave Edinburgh	4%	6%	4%	3%	10%
Avoid city centre/ Edinburgh	4%	1%	4%	5%	6%
No car/ don't commute	3%	5%	4%	4%	2%
Not stated	4%	5%	4%	3%	11%

Source: Q7. What would you do differently if the City Centre LEZ was implemented as proposed? Tick all that apply.

3.6 City-wide LEZ Boundary

The online survey contained the information in the visual below about the City-wide LEZ boundary (see full online survey in Appendix 2).

To address pollution in areas beyond the city centre (in particular Air Quality Management Areas <http://www.edinburgh.gov.uk/downloads/download/305/air_quality_management_areas>) we are proposing a city-wide LEZ applying to all commercial vehicles (buses, coaches, HGVs, LGVs, vans, taxis, and private hire cars).

Commercial vehicles contribute more to overall emissions per vehicle, as they have large engines and repeat more trips across an area. Across the city, commercial vehicles make up one quarter of trips but are responsible for two thirds of the pollution.

Diesel cars also make a significant contribution to pollution across the city. However, through the LEZ proposals, we expect that we will be able to effectively reduce emissions without affecting all cars. Complementary measures being progressed through the City Mobility Plan <http://www.edinburgh.gov.uk/CET/info/7/about_the_city_mobility_plan/17/about_the_city_mobility_plan> (Edinburgh's strategic direction for transport) and Edinburgh City Centre Transformation <<http://www.edinburgh.gov.uk/CET/info/5/about/13/about>> (a strategy setting out interventions to radically reshape the city centre) will focus on reducing the need for people to rely on their cars for travel into and around Edinburgh.

City-wide Low Emission Zone Boundary



A City-wide LEZ would be defined by the City Bypass, Maybury Road, Cramond Brig, Old Dalkeith Road, The Wisp, the A1 and Milton Road East. It would exclude the city's rural western settlements and Edinburgh International Airport. Cars will not be affected by the city-wide boundary.

3.6.1 Levels of support for the boundary shown

Again, based on the information given respondents were asked to state whether they agreed with the boundary for the City-wide LEZ.

Results show a slightly more favourable reaction than for the City Centre LEZ boundary, with:

- **62% saying yes, they supported the boundary for the City-wide LEZ,**
- **and 37% saying no, they did not support it.**

These figures were mirrored across Residents (69% yes, 30% no), those who Work in the city centre (62% yes, 37% no) and Leisure visitors (64% yes, 35% no). In addition, all the 532 Friends of the Earth responses stated that they were in support of this boundary. However, again the Business owners were less in favour with 51% supporting the boundary and 48% not supporting it.

3.6.2 Reasons why do not agree with City-wide boundary

Respondents were asked to say why they disagreed with the boundary. Of the 1,027 who did not support the boundary, it can be seen in Table 11 below that 35% either gave no comment, or commented on the City Centre LEZ instead, leaving 671 (65%) of those who disagreed giving a comment. Of these again only 26% of the comments were about the boundary specifically, compared to 74% of comments being about an issue or disagreement with the LEZ overall.

In terms of the boundary, the most frequently mentioned aspect was that it is too big an area overall, with around as many saying the LEZ should only be in the City Centre. Other comments include many different views on areas that should be included, most comments being to include the airport. Those who mention the LEZ in general again tended not to agree with the scheme, concentrating for the City-wide area on the negative impact this is likely to have on businesses.

Table 11: Reasons for not supporting the proposed City-wide LEZ boundary

All who disagree:	n=1,027
Comment not applicable – repeat of/about City Centre boundary	18%
No comment given / Don't know / Don't know enough to comment	17%
Comments made	65%
Of those who made comments (65%):	n=671
City-wide Boundary specific comment	26%
Should be smaller – too big	10%
Include airport	5%
Should only be the City Centre	4%
Do not include bypass	2%
Include all council tax postcodes	2%
Issues with/do not support LEZ generally	74%
Don't agree with LEZ	30%
Will negatively affect business/trade/deliveries	11%
Other issues need tackled first	7%
Public transport/P&R insufficient – need better	7%
Money making scheme	5%
Cost to business vehicles prohibitive	5%
Negative impact on residents	5%
Include cars too	3%

Source: Q8. If you disagree, please explain why

3.7 City-wide LEZ Vehicle Types

Having reviewed the boundary for the City-wide LEZ the online survey then looked at the vehicle types to be included in the City-wide zone, showing respondents the following information:

City-wide LEZ vehicle types

The Council proposes that the city-wide LEZ apply to all commercial vehicle types <<https://www.vehicle-certificationagency.gov.uk/vehicletype/index.asp>> (i.e. buses, coaches, taxis, HGV, LGV, and vans), that do not meet the required standard. The Council proposes that the city-wide LEZ does not apply to cars.

Emission Standards

The proposed emission standards are:

- Euro 4 standard for petrol vehicles – generally vehicles registered from 2005
- Euro 6 standard for diesel vehicles – generally vehicles registered from 2014
- Euro VI standard for heavy diesel vehicles (including retrofitted engines which would be improved to operate as Euro VI).

3.7.1 Vehicles types City-wide LEZ should apply to

Respondents were again asked to tick all the vehicle types they thought the City-wide LEZ should apply to. The results can be seen in Table 12.

Views seem to be quite consistent across the main sample groups, apart from the Business owners, who again differ in views, with fewer of them thinking it should apply across the board. All 532 Friends of the Earth responses stated that the LEZ should apply to all vehicle types.

Table 12: Vehicle types the City-wide LEZ should apply to

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
Buses/coaches	78%	81%	77%	78%	73%
HGVs/LGV/Vans	81%	84%	81%	82%	71%
Taxi/private hire cars	71%	73%	71%	72%	57%
Cars	47%	53%	45%	45%	41%
Motorbikes	45%	52%	43%	44%	34%
Not stated	13%	11%	15%	13%	21%

Source: Q9. Please tick vehicle types you think the City-wide LEZ should apply to.

3.7.2 Thoughts on vehicle types

573 of 2,793 respondents, 21% of the total sample, (Table 13) gave a comment on the vehicle types to be included. Of these the most frequently mentioned response was again that no vehicles should be included as the respondent did not agree with the LEZ in principle. The remaining comments included a variety of different views, looking at exemptions and inclusions primarily in line with those as detailed for the City Centre LEZ.

Table 13: Thoughts on vehicle types to be included in City-wide LEZ

	All who commented n=573
None to be included – don't agree with LEZ	29%
Desired exemptions...	
▪ Motorbikes/scooters should be exempt	4%
▪ Private cars should be exempt	3%
▪ Deliveries/tradesmen visits need to be allowed	3%
Apply to...	
▪ Apply to private cars	9%
▪ Apply to all vehicles (no exemptions)	6%
Other thoughts...	
▪ Many can't afford to buy a new car/penalises poor people	7%
▪ Business will suffer/increased costs/less customers	5%
▪ Grace period should be longer	4%
▪ Infrastructure needs to be in place first	4%
Other	8%

Source: Q9. If you disagree, please explain why

3.8 City-wide LEZ Grace Periods

Grace periods were also asked for the City-wide zone, asking respondents to comment for the 2 different vehicle categories if these were 'too short', 'about right', 'too long', or that they 'don't know'.

Again, overall the views are mixed, suggesting that the grace periods shown were not immediately perceived to be right by many of the respondents. Again, Business Owners were most likely to state 'too short' for both vehicle categories at 35% for buses and coaches and 42% for commercial vehicles compared to 26% and 29% overall. Table 14 shows these views by vehicle category.

Table 14: Grace periods

Total n=2,793	Too short	About right	Too long	Don't know	Not stated
3 years for buses and coaches	26%	37%	30%	5%	2%
3 years for commercial vehicles	29%	35%	29%	5%	2%

Source: Q10. For the City-wide LEZ, what do you think about the proposed grace period?

3.9 LEZ Unintended consequences

Having reviewed the information respondents were asked to note if they anticipated any unintended consequences from Edinburgh's LEZ proposals.

Table 15: Are unintended consequences anticipated?

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
Yes	63%	61%	64%	62%	76%
No	35%	37%	34%	34%	21%
Not stated	3%	2%	2%	3%	2%

Source: Q11. Do you anticipate any unintended consequences from Edinburgh's LEZ proposals?

Of the 1,750 (63%) who said there were unintended consequences many more responses relate to negative impacts that the LEZ may have than positive ones (positive only accounting for 6% of responses). The consequences have been grouped into more general areas where applicable to show the themes that emerge for this question – see Table 16 overleaf and full table in Appendix 1.

The main group of consequences mentioned come under the heading of **negative impacts on locations outwith the LEZs, amounting to 26% of mentions.**

Within this were comments that the LEZs:

- move the problem elsewhere
- increase traffics/congestion elsewhere
- displace pollution and emissions elsewhere
- create parking problems
- create road safety issues with increased traffic
- spoil residential areas
- and worsen road conditions even further.

An equally large number of consequences mentioned come under the heading of **negative financial impacts (24%)**. Within this were comments that there are likely to be negative financial implications:

- ... on Edinburgh's economy generally
- ... on trade/business/commerce/business closures
- ... on the High Street/shop closures/empty shops
- ... on small businesses/start-ups
- ... on consumer spending
- ... on leisure/tourism/visitor income
- ... on bus/taxi, small commercial vehicle companies (upgrading)
- ... on those providing trade services
- ... on people's earnings/finding a job/needing to move jobs.

In terms of negative consequences for specific groups (15%), the people mentioned here included:

- ... for low income/most disadvantaged groups
- ... vulnerable groups
- ... people with disabilities/mobility issues/their carers
- ... shift workers needing to work within LEZs
- ... buses/taxis/businesses using small commercial vehicles (upgrades).
- ... and people generally(!)

Forced migration from the city (10%) included the feeling that both residents and businesses will be forced to move out of the city, especially those on lower incomes, thereby creating increased inequality within the city.

The last of the main groups of negative responses was that of increased costs (10%), covering those passed on to customers/residents, additional travel and mileage, increased costs for taxis/Ubers and public transport, and residents 'paying premium' for good and services.

The positives (6% of mentions) included that there would be increased electric vehicle and public transport uptake; journey times would be better; that there should be improvements to bus routes, cycle paths and walking paths; an improved air quality and environment in the city and therefore the health of residents and visitors to the city; and finally, this would also benefit the out of town retail parks.

Table 16: Unintended consequences

	Yes n=1,750
Negative impact on locations outwith LEZs	26%
Negative financial impacts	24%
Problems for specific groups (taxed/penalised/can't afford upgrade)	15%
Forced migration from the city centre	10%
Increased costs	10%
Consequences on public transport	6%
<i>A positive impact</i>	6%
Complaints/anger/civil unrest/protests (residents, businesses, etc.)	5%
Less people/locals visiting the city centre	5%
Good shortages/ services disrupted/ affects in city centre	4%
Other	3%
No comment	5%
Don't know	6%

Source: Q11. If yes, please explain what consequences you anticipate

3.10 Effectiveness reviews

Finally, respondents were informed of the following and asked how soon after full implementation the LEZ scheme should be reviewed:

The Council has a legal duty to report annually <http://www.edinburgh.gov.uk/downloads/download/117/local_air_quality_management_reports> on air quality monitoring data and any progress made to improve air quality, especially in the existing Air Quality Management Areas <http://www.edinburgh.gov.uk/info/20268/pollution/314/local_air_quality_management>. Improvements made to air quality from the implementation of the LEZ scheme, will be captured with this work. However, the effectiveness of the scheme itself will also need to be reviewed following full implementation, in 2025.

6 in 10 felt the scheme should be reviewed annually (Table 17), but here the 532 respondents from Friends of the Earth all stated that the scheme should be reviewed every 2 years after implementation.

Table 17: How soon after full implementation should the scheme be reviewed

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
Every year	59%	59%	59%	59%	58%
Every two years	23%	24%	23%	25%	15%
Every four years	7%	7%	8%	6%	9%
Don't know	10%	9%	9%	10%	13%
Not stated	1%	1%	1%	0%	5%

Source: Q12. How soon after full implementation of the scheme should the LEZ scheme be reviewed?

3.11 Specific issues for stakeholder groups

The individual submissions from stakeholder groups show very specific thoughts and worries pertaining to each group and as such are detailed separately. It should be noted that not all submissions specifically reviewed the boundaries, grace periods and vehicle types. As such their thoughts are detailed here as a summary of their views, including highlights of where they support the LEZ scheme and any potential issues they foresee or would like considered.

Car Clubs

- *CoMoUK (The Scotland Car Club)*
 - Boundaries: support them, but question why Sheriffhall Park & Ride is inside the boundary and therefore subject to penalties when used.
 - Vehicles: queries were raised about the process for future changes to eligibility and the impact on lower income families or small businesses that cannot afford to upgrade; and to consider/review use of shared transport.
 - Grace periods: support the timelines, with the caveat that advice is given to encourage long term behaviour change away from private vehicles.
 - Final thoughts were to use synergy between the LEZ scheme, the City Mobility Plan and the City Transformation Plan to aid the success of all 3.
- *Enterprise Holdings*
 - Enterprise Holdings represent companies such as Enterprise Rent-a-car, National, Alamo, Enterprise Flex-e-rent, and Enterprise Car Club.
 - They feel it is essential to begin to look differently at transport policies and integrate a wide range of transport modes to meet consumer needs and reduce dependency on private cars, for example shared mobility assets at key transport terminals, and fiscal incentives to encourage modal shift.

Children: Clean Air Day Primary Schools Learning Event

- Held on 20th June 2019 with 12 P6 pupils from Preston Street Primary School, 20 P5 pupils from Royal Mile Primary School, and 30 P6 pupils from Sciennes Primary School. Group activities reviewed the LEZs, looking at zone maps and considering where polluting and less polluting vehicles should be by placing grey (polluting) and white (less polluting) vehicle cards on the map. Images of the maps showed the majority of the cards (but not all) placed the more polluting vehicles outside of the zones, less polluting inside.
- The majority of the pupils were in support of the LEZs, 46 of 65 (71%) saying it was a good idea. 2 said they were not in favour. 17 (26%) said they were undecided; 2 from Royal Mile Primary who were concerned about visiting family living within the area, and 15 from Sciennes Primary who discussed the potential adverse impacts for people who are reliant on using their cars and businesses that need to use lorries/trucks, and so on.

Community councils

- *Corstorphine Community Council*
 - City Centre LEZ
 - boundary: too small, there should be one zone for all Edinburgh
 - grace periods: 1 year for buses, coaches and commercial vehicles 'about right'; 4 years for private cars/5 for city centre residents 'too long'
 - City-wide LEZ
 - boundary: should include developments to the west (Cammo, West Craigs, Garden District, Crosswinds, etc.)
 - grace periods: 3 years for buses and coaches and commercial vehicles 'too long'
 - all grace periods should be as short as possible
 - Vehicles: all vehicles should be included (private cars as well)
 - Review: every year after full implementation.

- *New Town & Broughton Community Council*
 - Support the initiative, but would aim for more.
 - Boundaries: City Centre should extend north to include the northern New Town (to the Water of Leith), Broughton and eastern New Town (London Road, Picardy Place, Regent Road), and include Queen Street and York Place so they do not become 'alternate routes' and increase pollution.
 - Vehicles: bring diesel cars into the scheme overall.
 - Grace periods: use an extended grace period for diesel cars to mitigate financial consequences for owners and shorten the period for buses and commercial vehicles in City-wide to same as City Centre.
 - Reviews: these should be annual.

Confederation of Passenger Transport UK (CPT)

- The CPT provided submissions from 6 organisations responding to questions about their fleets, eligibility for the LEZ and their views on the scheme overall.
- *Retrofitting for Euro 6*: views seem to suggest this is very uncertain, both in terms of whether anything is available for all their vehicles (for example it is not possible for coaches) and also whether retrofitting is feasible in terms of justifying the costs incurred against the business gained and also in terms of when this might be done given the large number of vehicles going through this process in the UK (retrofit delivery times are becoming very extended).
- *Constraints for eligibility*: not surprisingly comments here mirror the above, constraints being the cost of retrofit and indeed its availability compared to the purchase of new vehicles, linking this to the likely business achieved from the vehicle, as well as the time it takes to plan this in and get it done.
- *Timelines*: estimates of how much of fleet will be compliant by 2020 range from 0%, to 23% buses/0% coaches, 33%, 40%, and 60%. No one felt they would be 100% compliant. 2 of the 6 organisations estimated full compliance could happen by 2024, the remaining 4 being unable to say.
- *LEZ boundaries*: most comment it makes little difference which boundary is reviewed as their vehicles use the city centre. One said that there should be a bus station outwith the City Centre zone; another that as they are based within the city this will mean they have a serious competitive disadvantage; and one mentions the need for better coach parking within the centre, the lack of which currently leads to drop off and parking being separate locations which therefore incurs more cost and pollution.
- *LEZ vehicle types*: the feeling is everyone should be treated the same – at a minimum all types of commercial vehicles, or all private cars as well.

- *Support measures* mentioned included:
 - priority measures for buses and coaches for all approaches into Edinburgh from the East and West, e.g. a busway from the A89 to the airport
 - improvements to regional infrastructure and a greater focus on public transport – for example park and ride facilities in Fife/A90/M90
 - more park and ride, north, south, east and west of the city
 - smart technologies to allow bus lane priorities and other initiatives like this/ clever use of bus lanes to improve flow through the city
 - address parking for buses and coaches and also their flow through the city when there are roadworks, such as lane priority changes
 - improve public transport, encourage people to use it, increasing business for bus/coach operators and enabling retrofitting to be commercially viable
 - consider exemptions for Euro 5 vehicles for x number of days a year.

Deliveries

- *Scottish Wholesale Association*
 - With wholesalers coming from a wide variety of business sizes, including different sized delivery vehicles the Scottish Wholesale Association does not agree with the introduction, at this time, of any Edinburgh LEZ. The short time period for its introduction is one reason, especially where Edinburgh is not in keeping with the timelines of other LEZs, such as Glasgow. Also, members do not differentiate their delivery routes based on City Centre and City-wide boundaries and the prohibitions this would place on members to operate their businesses efficiently alongside the competition would mean that members would be facing punitive financial penalties.
- *UPS*
 - UPS supports the proposals to improve air quality in Edinburgh.
 - Grace periods: timelines are supported, whilst asking for as much notice as possible to put this into procurement planning and allow for exemption if compliant vehicles are ordered, but not delivered due to delayed delivery.
 - Boundary: City-wide is large when considering the use of electric vehicles so again time is requested, coming into force at the end of 2023, or 2024.
 - UPS ask that CEC and the Scottish Government put aside funding to assist commercial fleet operators with necessary changes. Also, that the level of daily penalty is no more than £50, as in other cities such as Birmingham. They also ask that Edinburgh liaises with other cities so that administration is similar across LEZs, looking at intercity charging and a centralised payment system to assist national operators.

Friends of the Earth

- A total of 532 responses were collected by Friends of the Earth.
- Their findings can be seen throughout the report, but in summary:
 - Whilst in support of low emission zones, they did not support the City Centre boundary and said it was too small, with the danger people would drive around to avoid it, pushing traffic into neighbouring residential areas. All types of vehicles should be included, and they felt a 1 year grace period was 'about right' for buses and coaches and commercial vehicles, but 4 years for private cars and 5 for city centre residents were both 'too long'.
 - They were in favour of the proposed City-wide boundary, with again all vehicles types included.
 - The scheme should be reviewed every 2 years after implementation.

Lothian Buses

- A major concern is that LEZs will have a substantial financial impact by restricting access to non-compliant buses in the city centre and the wider city zone or placing unaffordable and possible undeliverable targets which will ultimately result in unintended consequences for the network and customers.
- Boundaries: the City Centre will encourage cars to circumvent it, making new traffic hot spots, and the tram extension will cause increased congestion and pollution and the City-wide zone does not take in the airport.
- Vehicles: disappointing that buses and coaches are prioritised, ignoring the benefit that one bus replaces 75-90 car journeys and that since 2016 huge investment and improvement has been made – a bigger reduction in pollution would be made if all cars were included in both areas.
- Grace periods: even with major improvements underway it would be no earlier than 2023 before Lothian could be 100% compliant – so implementing the 1 year limit proposed would have consequences for bus users as services would need to be reduced or removed to accommodate – the Glasgow LEZ is noted for its 'better' timings, leading to 2023, a 4 year grace period.

Private hire cars

- *Hire Car Consultation Group*
 - Whilst supporting the LEZ, there was a concern all licensed, public hire taxis must be able to enter the LEZ without fear of penalty. For taxis the LEZ must be aligned with the Age and Emission restrictions for taxis and private hire cars policy (Licensing Committee). The trade will not support another change if replacement dates are brought forward again, the belief being that if the requirement remains for all taxis to be Euro 6 by 2021 the trade may collapse due to the drop in vehicle and business values.
- *Uber*
 - Whilst supportive, Uber are concerned the current proposals may not deliver the sustainable, long term improvement desired.
 - Boundary: the City Centre boundary may mean adjacent routes become more polluted due to traffic avoiding the LEZ and this should be avoided.
 - Vehicles: private cars should also be included in the City-wide LEZ.
 - Grace periods: for private hire vehicles they are too short to give sufficient time for renewal and should be moved by 1 year to the end of 2022.
 - There should also be work to move private car use to more sustainable modes of transport. The council should investigate schemes to encourage people to give up private vehicles and use other modes of transport.

Retail: European Cities Fund (Omni Centre) and SWECO, for Nuveen (St James Centre)

- Both share the same views and feel their parking supports the CEC vision for transforming the city, to reduce the negative impact of on-street parking.
- Boundary: including Leith Street is felt to be against CEC objectives to reduce on-street parking, with maybe the opposite effect if people park on-street instead and move pollution into neighbouring areas – consider excluding Elder Street and Leith Street (make the boundary at St Andrew's Square)
- Grace periods: commercial vehicles should have 3 years for both LEZs to allow retailers and suppliers to make necessary fleet and infrastructure changes (e.g. layout and operation of service yards if retailers use smaller, less-polluting vehicles that could result in increased servicing frequencies).

Stakeholder workshops

- 4 workshops were conducted in total, with a mix of different stakeholders, including some of the above groups who also submitted specific responses.
- A summary of their thoughts shows:
 - Boundary: generally agree, with some queries:
 - consideration needed of routes that might be taken to avoid zones, and to include hot spots outside city centre (e.g. St John's Road)
 - implications need to be considered for access for various groups, such as carers, community groups, NHS deliveries, other deliveries, exemptions for workers using private vehicles, etc.
 - there is a need to incentivise and encourage public transport
 - Sheriffhall Park & Ride – all park and ride should be outside the zone
 - why is the airport not included
 - Leith St, St James, Omni centres – how will this all work
 - Vehicles: agree with inclusions, but question how some groups will be managed (taxis, private hire cars, tourist coaches, construction traffic), request potential exemptions (motorbikes, blue badge holders) and some it is feel unfair on City Centre residents who MUST comply
 - Grace periods: mixed views, either too short or too long with queries and thoughts on how some will be able to achieve compliance:
 - awareness campaigns and help will be needed
 - some say businesses need longer; others that the time period for cars should be shorter; some disagree on the difference between residents and non-residents, saying both should be the same; others that for buses the City Centre and City-wide should be the same, etc

The University of Edinburgh

- The University of Edinburgh is supportive but feels the LEZ proposal should be aligned with the City Mobility and the City Centre Transformation plan. Alignment with the Mobility Plan may help alleviate the potential issue of increased pollution around the edges of the City Centre zone. Also, it is felt that the implications for commercial vehicles in the City Centre may impact on major building projects being undertaken by the University and others and urges consultation on the practicalities and implications of the proposal.

Transport bodies

- *South East of Scotland Transport Partnership (SEStran)*
 - Supportive, but feel it must be linked to a regional strategy to mitigate the impact, provide appropriate alternative travel solutions, review how this will affect public transport providers, ensure no user is impacted significantly more than another, and review how this will be affected by national policy.
- *Spokes*
 - City Centre LEZ
 - boundary: too small, encouraging use of alternative routes but not changing behaviour, not covering high pollution areas like St John's Road
 - grace periods: 1 year for buses, coaches and commercial vehicles 'about right'; 4 years for private cars/5 for city centre residents 'too long'
 - City-wide LEZ
 - boundary: support but 3 year grace periods for buses and coaches and commercial vehicles is too long – bring in line with 1 year for City Centre
 - Vehicles: all vehicles should be included (private cars as well).

Vintage vehicles

- *The Federation of British Historic Vehicle Clubs*
 - The Federation does not question the need for a LEZ but say it could mean potential consequences for the owners of historic vehicles. In contrast to England, the proposal is to have exclusion, not charging zones, rendering use of the vehicle improper and it would be expected that detailed provision would be sought for creating special penalties for repeat offenders. To avoid this, exemptions are desired, to enable occasional historic vehicle users to use their vehicles without becoming repeat offenders.
- *The Vintage Motorcycle Club (VMCC)*
 - The VMCC is keen to stress the benefits that motorcycles have in helping to reduce pollution and state this has been recognised in the majority of LEZs within the UK with exemption being given to ALL motorcycles. They hope that Edinburgh will follow this lead. Historic vehicles should also be exempt. They are concerned about the penalty basis for the scheme and would also question whether a financial impact assessment has been carried out in respect of the proposals so that they do not become a tax on the low paid, forcing people to buy more expensive, newer cars.

APPENDIX

1. Tables used in the report including minor responses (2%, 1%, 0%)
Note: full tables can be found in a separate PDF document
2. Online survey (print version)

Appendix 1 – tables including minor responses (2%, 1%, 0%)

Table 6: Reasons for not supporting the proposed City Centre LEZ boundary

	Disagree n=1,276
City-centre Boundary specific comment	35%
Worry about increased traffic/pollution in nearest streets/parks	12%
Boundary should be larger	8%
Include New Town/up to Ferry, Queensferry Rd	3%
Make it one large zone - the City	2%
Should be a smaller area	2%
Do not make Preston St School be on the boundary	2%
<ul style="list-style-type: none"> ▪ Include: Queen St; Queens Drive/Calton Hill/Holyrood Park; St Johns Rd; Melville Drive/Meadows; Haymarket/Morrison St; Leith St/Leith Walk; all QMA area; arterial routes ▪ Reconsider south/west boundaries; South goes too far south 	Each 1%
<ul style="list-style-type: none"> ▪ Include: Brunstfield/Morningside/Marchmont; London Rd; Tollcross/Lothian Rd; All along Randolph Crescent; Fountain Bridge/Gorgie; South down to Lauriston Place; Cover West and North ▪ Do not include Leith St/North Bridge ▪ Review west edge; west/north/south corridor; east west line at A700 	Each under 1% (n=2-6)
<ul style="list-style-type: none"> ▪ Include: to Elm Row; Hope Park Terrace; Easter Road; Holyrood/Pleasance; St Andrews House and Scottish Parliament; Edinburgh Park/Sighthill/South Gyle; South to Grange Road ▪ Not: Clerk St/Calton Rd; major routes Lothian Rd, Leith St, North Bridge; Tollcross to Eye Pavilion; Scottish Parliament ▪ Insufficient direct routes; Travel impeded RIE to WGH 	Individual mentions
Issues with/do not support LEZ generally	59%
Need a better approach overall instead	9%
Need better public transport instead	8%
Will badly affect shops and businesses	7%
Can't afford to buy a new vehicle	7%
Stealth tax/attempt to create revenue	6%
Will affect commuters/public transport not sufficient/suitable	6%
Must use a car - unavoidable	5%
All alternative routes cost time/money/more pollution	4%
LEZ doesn't consider residents and their needs sufficiently	4%
LEZ not needed	3%
Council policy to charge the poor is unfair	3%
Discriminatory for disabled people	2%
Too restricting, stop people going to city centre	2%
Be unable to work in city centre; Congestion charge by another name; What about vintage vehicles?; Diesel issue – being penalised unduly; Only if motorcycles excluded; Should be enough if a car passes emissions test; Live on boundary, unfair; Should be no exemptions	1% or less
Don't know	9%

Source: Q4. If you disagree, please explain why

Table 8: Thoughts on vehicle types included in City Centre LEZ

	Of all who commented n=678
None to be included – don't agree with LEZ	18%
Desired exemptions...	
▪ Motorbikes/scooters should be exempt	10%
▪ Buses/public transport should be exempt	8%
▪ Private cars should be exempt	6%
▪ Deliveries/tradesmen visits need to be allowed	6%
▪ Diesel engines should be exempt, Govt. encouraged	4%
▪ Disabled vehicles should be exempt	3%
▪ Classic/vintage vehicles should be exempt	3%
▪ Residents	2%
▪ Exempt: Electric/hybrid cars / Taxis / LGVs	1% or fewer
Apply to...	
▪ Apply to buses	7%
▪ Apply to HGVs	5%
▪ Apply to all vehicles – no exemptions	4%
▪ Apply to commercial vehicles	4%
▪ Apply to taxis	4%
▪ Apply to tour buses/coaches	4%
▪ Apply to private cars	2%
▪ Apply to private hire cars	2%
▪ Apply to: 4x4/gas guzzlers; LGV/Vans; diesel engines; Euro 6 should apply to petrol engines as well; trains	1% or fewer
Other thoughts...	
▪ Many can't afford to buy a new car/penalises people	9%
▪ Businesses suffer/increased costs/less customers, etc.	5%
▪ Grace period should be longer	4%
▪ Use actual emissions from MOT test – be specific	3%
▪ Just a tax, money making exercise	3%
▪ Displacing problem/sending traffic into residential areas	2%
▪ Compensation paid/scrappage/incentive to change	2%
▪ Access limited to certain times for certain vehicles	2%
▪ Electric charging infrastructure not in place	2%
▪ Better traffic management would be more effective; More environmentally damaging to scrap good vehicles; Euro 6 for diesel is too high; Allow occasional access/by number visits over a period; Pedestrianize the city centre; Larger vehicles only come with diesel engines; Congestion charge would be better; Infrastructure needs to be in place first	1% or fewer
Other	9%

Source: Q5. If you disagree, please explain why

Table 10: Action if implemented

	Total n=2,793	Residents n=1,246	Work in centre n=1,261	Visit for leisure n=1,408	Business owner n=136
<i>Nothing, vehicle complies</i>	34%	33%	34%	33%	21%
Use public transport more	30%	29%	28%	35%	18%
Walk more	24%	30%	24%	24%	15%
Bike more	20%	24%	22%	21%	15%
Upgrade my vehicle	18%	21%	20%	18%	26%
Change my route	16%	14%	16%	19%	11%
Choose alternative destination	12%	6%	10%	16%	12%
Use taxi/private hire more	6%	8%	6%	6%	6%
Use more park and ride	6%	3%	6%	8%	3%
Give up my vehicle	5%	7%	6%	5%	8%
Join a car club	5%	8%	6%	4%	4%
Don't travel through city centre	4%	4%	3%	5%	4%
Move away/ leave Edinburgh	4%	6%	4%	3%	10%
Avoid city centre/ Edinburgh	4%	1%	4%	5%	6%
No car/ don't commute	3%	5%	4%	4%	2%
Car share, compliant vehicle	2%	2%	2%	2%	1%
Nothing/ ignore/ carry on	2%	2%	3%	2%	2%
Change job/ give up working	2%	1%	3%	1%	6%
Campaign against/ vote out council	2%	2%	1%	1%	-
Public transport needs improvement	1%	1%	1%	1%	1%
Enjoy clean air/ visit city more	1%	1%	1%	1%	-
Cycling needs to be safer	0%	1%	0%	0%	-
Use a motorbike	0%	0%	0%	0%	1%
Pay the fine	0%	0%	0%	-	-
Pass cost on to customers	0%	-	0%	0%	1%
Need more info	0%	-	0%	0%	-
Other	2%	2%	2%	2%	7%
Not stated	4%	5%	4%	3%	11%

Source: Q7. What would you do differently if the City Centre LEZ was implemented as proposed? Tick all that apply.

Table 11: Reasons for not supporting the proposed City-wide LEZ boundary

	All who disagree:	n=1,027
Comment not applicable – repeat of/about City Centre boundary		18%
No comment given / Don't know / Don't know enough to comment		17%
Comments made		65%
	Of those who made comments (65%):	n=671
City-wide Boundary specific comment		26%
Should be smaller – too big		10%
Include airport		5%
Should only be the City Centre		4%
Do not include bypass		2%
Include all council tax postcodes		2%
Include: South Queensferry, Currie, Balerno, more to south, Cammo/Cragiehill, should be larger		Each 1%
Include: Ratho, Newbridge, Kirkliston, RBS Gogarburn, more to west, bypass, Musselburgh, A8/M8/M90/Queensferry Crossing, Juniper Green Includes farmland – how will that work?		Each 0%
Include: more to east, all roads near densely populated areas, Baberton, Brunstane/Newcraighall, Danderhall/Millerhill Do not include: hospitals, shopping centres, Edinburgh Park, A1/Milton Road Only include badly polluted areas		Individual mentions
Issues with/do not support LEZ generally		74%
Don't agree with LEZ		30%
Will negatively affect business/trade/deliveries		11%
Other issues need tackled first		7%
Public transport/P&R insufficient – need better		7%
Money making scheme		5%
Cost to business vehicles prohibitive		5%
Negative impact on residents		5%
Include cars too		3%
Tax on the poor; Drive up cost of public transport; Cars will be next!; Negative impact on Edinburgh as a whole		1% each
Give enough time to comply; Disadvantages residents just outside; Wait and see how City Centre turns out; Whole area should be as City Centre; Bypass won't cope with extra load (if not included); Exclude vintage vehicles; Exclude taxis; Disadvantages club/activities vehicles; Access to work sites impossible; Be stricter overall		0% each

Source: Q8. If you disagree, please explain why

Table 13: Thoughts on vehicle types to be included in City-wide LEZ

	Of all who commented n=573
None to be included – don't agree with LEZ	29%
Desired exemptions...	
▪ Motorbikes/scooters should be exempt	4%
▪ Private cars should be exempt	3%
▪ Deliveries/tradesmen visits need to be allowed	3%
▪ Exempt: Buses/public transport; Classic/vintage vehicles; Electric/hybrid cars; Residents; LGVs; Disabled vehicles; Taxis; Euro 6 for diesel is too high; Diesel engines as Govt. encouraged	2% or fewer each
Apply to...	
▪ Apply to private cars	9%
▪ Apply to all vehicles (no exemptions)	6%
▪ Apply to buses; commercial vehicles	2% each
▪ Apply to: tour buses/coaches; private hire cars; LGV/Vans; HGVs; taxis; 4x4/gas guzzlers; diesel engines; trains; Euro 6 should apply to petrol engines as well; vehicles commuting into the city	1% or fewer each
Other thoughts...	
▪ Many can't afford to buy a new car/penalises poor people	7%
▪ Business will suffer/increased costs/less customers	5%
▪ Grace period should be longer	4%
▪ Infrastructure needs to be in place first	4%
▪ Displacing the problem into residential areas ▪ Better traffic management would be more effective ▪ These are the worst polluters ▪ Use actual emissions from MOT test ▪ Compensation/scrappage/incentive to change ▪ Just a tax/money making exercise ▪ Small businesses will suffer/can't afford to replace vehicles	2% each
▪ Area too wide; Lack of electric charging points; Larger vehicles only have diesel; Unfair if only use vehicles on trips out of city; Allow occasional access/go by number of visits; Access limited to certain times for certain vehicles; City will die/won't function; All areas deserve clean air; Congestion charge be better; Two-tier system wrong; Costs passed on to customers; What are the alternatives?; Confusing/biased questions; Need more information; Idling should be discouraged; More environmentally damaging to scrap good vehicles; Promote car sharing; Council should be bold/ urgent action required; Council a dictatorship; Decide at national level	1% or fewer each
Other	8%

Source: Q9. If you disagree, please explain why

Table 16: Unintended consequences

	Yes n=1,750
Negative impact on locations outwith LEZs	26%
Negative financial impacts	24%
Problems for specific groups (taxed/penalised/can't afford upgrade)	15%
Forced migration from the city centre	10%
Increased costs	10%
Consequences on public transport	6%
<i>A positive impact</i>	6%
Complaints/anger/civil unrest/protests (residents, businesses, etc.)	5%
Less people/locals visiting the city centre	5%
Good shortages/ services disrupted/ affects in city centre	4%
<ul style="list-style-type: none"> ▪ People being forced to purchase complaint vehicle ▪ Inefficiencies with perfectly good cars going to waste/scrap ▪ Problems selling polluting vehicles at, low cost/then trying to buy compliant one (with limited money from sale) ▪ Strain caused by limited electric charging points in/around city centre 	2% each
<ul style="list-style-type: none"> ▪ Negative impact on Edinburgh's public image / ...as an attractive trade destination / ...investment less likely ▪ People being forced to give up car / ...if can't afford to replace ▪ Negative environmental impact/more Euro4/5 petrol cars/more CO2/idling in traffic ▪ Restricted freedom of movement/ability to traverse the city ▪ Increase in crime/vehicle cloning/growth of black economy ▪ It won't result in less pollution ▪ Loss of revenue to Council/reduced parking fees ▪ House prices may be affected (up inside zone and down outwith) ▪ Increased number of cyclists may cause problems/accidents ▪ Policing it may be difficult/impossible to enforce/like the 20mph zone ▪ Outsiders may inadvertently fall foul of the law/how will they know? ▪ May end up costing a lot of money to implement ▪ Won't reduce congestion, just replacing one vehicle with another ▪ Residents will be most inconvenienced 	1% each
<ul style="list-style-type: none"> ▪ Possible privacy issues/people's data being kept ▪ Health related/medical visits may be affected ▪ Children's activities may be affected ▪ Music/arts venues may be affected/difficulties transporting equipment ▪ Proposals complicated/public needs to be educated how this will work ▪ Possible skills shortages/more difficult for employers to recruit workers ▪ Sports clubs/community groups may be adversely affected ▪ Metered parking zones may be extended outward ▪ Key workers (health/care) may be affected/need to be made exempt 	0% each
Other	3%
No comment	5%
Don't know	6%

Source: Q11. If yes, please explain what consequences you anticipate

Appendix 2 – the online survey (print version)

18/06/2019

Print Survey - City of Edinburgh Council - Citizen Space

Edinburgh Low Emissions Zone

Overview

In 2018, the Council carried out one of its largest ever consultation programmes, 'Connecting Our City, Transforming Our Places' <http://www.edinburgh.gov.uk/CET/downloads/file/1/edinburgh_connecting_our_city_transforming_our_places_-_survey_findings>. Of those responding to the consultation, 75% agreed that restricting access for the most polluting vehicles to the city centre and wider city should be considered as one way to control and improve air quality.

The City of Edinburgh Council is consulting on proposals to introduce a Low Emission Zone (LEZ) to reduce pollution from traffic. It is estimated that around 80% of nitrogen oxide (NOx) concentrations are directly attributed to traffic emissions. Pollutants caused by vehicle emissions are largely invisible, but these gases and particulates can be hazardous to human health.

There is a growing body of scientific evidence that has established links between air pollution with **ill health** <<https://www2.gov.scot/Resource/0048/00488493.pdf>>. Reducing pollution will help improve the health and wellbeing of people who live, work or visit the city, particularly those vulnerable to pollution such as children, older people and those with health conditions.

Edinburgh has a number of **Air Quality Management Areas** <http://www.edinburgh.gov.uk/downloads/download/308/air_quality_management_areas> due to traffic related air pollution. The proposals include a LEZ which applies both to the city centre for all vehicles, and city wide for only commercial vehicles (buses, coaches, heavy goods vehicles, light goods vehicles, vans, taxis, and private hire cars).

Edinburgh's LEZ will be one of four in Scotland as part of the Scottish Government's national **Low Emission Zones programme** <<https://www.lowemissionzones.scot/>>, alongside Glasgow, Aberdeen and Dundee. LEZs reduce pollution caused by vehicles by restricting access for polluting vehicles that fail to meet minimum emission standards (which are set nationally).

In line with Scottish Government Commitments, Edinburgh is planning for its LEZ scheme to be in place at the end of 2020. Owners of the different types of vehicles will have a grace period before enforcement starts. This is to allow owners time to make suitable alternative arrangements.

Why we are consulting

Scottish Government is **developing legislation** <<https://www.parliament.scot/parliamentarybusiness/Bills/108683.aspx>> setting out the detail of how LEZs will operate, to ensure consistency across LEZs in Scotland. This <<https://www.lowemissionzones.scot/>> **framework** <<https://www.lowemissionzones.scot/>> will cover issues such as the emissions standards for vehicles, penalty rates, exemptions for specific vehicles, and enforcement.

To inform how we should implement the proposed LEZ in Edinburgh, City of Edinburgh Council is seeking your view on key aspects including: the proposed boundaries, the types of vehicles affected, grace periods (how long different vehicle types should have to comply), and wider views on how the LEZ might impact upon your transport choices.

Survey Overview

This survey includes questions for you to indicate whether you agree or disagree with certain proposals and free-text questions for you provide further detail.

The survey is structured three parts

- Part 1 - LEZ proposals relating to city centre including the boundary, vehicles included, and grace periods (questions 1 to 6).
- Part 2 - LEZ proposals relating city wide including the boundary, vehicles included, and grace periods (questions 7 to 9).
- Part 3 - General questions about LEZs and questions about you (questions 10 to 18).

https://consultationhub.edinburgh.gov.uk/sfc/edinburghlez/consultation/print_survey

1/9

Part 1 - City Centre LEZ

1 Which of the following describe you? (Please tick all that apply).

Please select all that apply

- City centre resident
 Work in the city centre
 Visit the city centre for leisure
 Own a business within the city centre

2 How often do you use each of these forms of transport to travel to, from or around the city centre?

	Never	Less than once a month	At least once a month	At least once a week	Every day
Walk <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bike <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus or coach <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Car <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tram <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taxi or private hire car <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Light goods vehicle <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heavy goods vehicle <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3 When do you normally travel to, from or around the city centre? (Please tick all that apply)

Please select all that apply

- Monday to Friday
 Saturday and Sunday

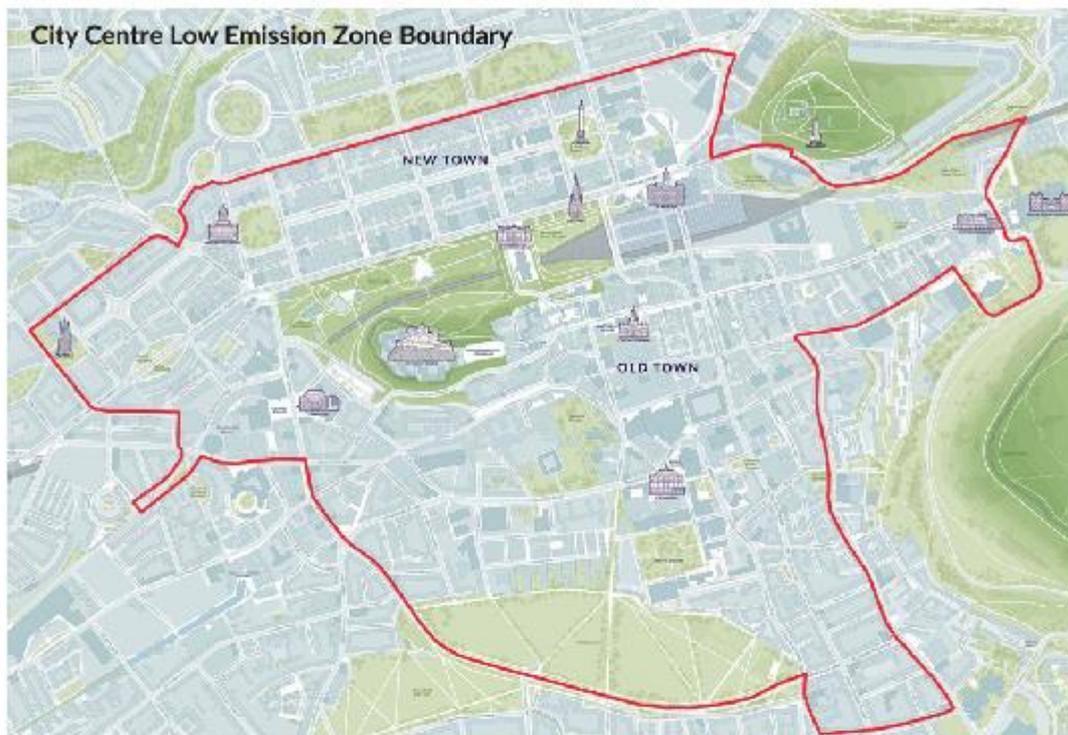
Air Quality in the City Centre

A city centre LEZ applying to all vehicles, introduced within a short period of time, would tackle the worst concentrations of air pollution in a densely populated area, with the highest number of workers and visitors.

The proposed boundary includes the most polluted streets within the city centre, whilst allowing non-compliant vehicles to be able to take an alternative route. The effect of the city centre LEZ will mean cleaner vehicles operating across the whole of the city.

The proposed City Centre LEZ boundary would apply to all vehicles: buses, coaches, taxis, HGV, LGV, vans, motorbikes, and cars.

City Centre Low Emission Zone Boundary



The proposed City Centre LEZ boundary is bounded by St Colme Street and Queen Street to the north; Leith Street, Regent Road, Abbeyhill, Horse Wynd, Holyrood Road, the Pleasance and St Leonards to the east; East and West Preston Street, Melville Drive, Earl Grey Street, Morrison Street, West Approach Road and Torphichen Street to the south; and Palmerston Place, Chester Street, Drumsheugh Gardens, Queensferry Street, Randolph Crescent, Great Stuart Street and Ainslie Place to the west.

Rationale for proposed boundary

- On the north Queen Street is excluded from the LEZ as it provides a suitable alternative route. If Queen Street were included this would encourage additional traffic through Stockbridge (via Hamilton Place / Henderson Row and Brandon Street / Eyre Place). Ferry Road as a further alternative was considered too far from the city centre.
- The eastern boundary of the LEZ is defined by Abbeyhill, Holyrood Road, Pleasance and St Leonard's Street. These all lie outside areas with high pollutant concentrations area and provide a suitable diversion. Queen's Drive is not a suitable diversion as it is closed to general traffic on a Sunday (and at all times for some vehicles).
- The western LEZ boundary is complex to locate and runs along Earl Grey Street, Morrison Street, West Approach Road and Torphichen Street. Including Haymarket within the zone would result in traffic through Murieston Place / Murieston Crescent / Russell Road which are not suitable to carry additional traffic. The next possible boundary would be at Hutchison Crossway / Balgreen Road but this would result in an extremely west orientated LEZ area which does not align with air quality issues.
- The south boundary utilises Melville Drive and offers a straightforward diversion.

4 Do you support the proposed boundary for the City Centre LEZ?

Please select only one item

Yes No

If you disagree, please explain why

City centre vehicle types

The proposed City Centre LEZ applies to all vehicle types <<https://www.vehicle-certification-agency.gov.uk/vehicletype/index.asp>> (i.e. buses, coaches, taxis, HGV, LGV, vans, motorbikes and cars), that do not meet the required standard?

Emission Standards

The proposed emission standards are:

- Euro 4 standard for petrol vehicles – generally vehicles registered from 2005
- Euro 6 standard for diesel vehicles – generally vehicles registered from 2014
- Euro VI standard for heavy diesel vehicles (including retrofitted engines which would be improved to operate as Euro VI).

5 Please tick vehicle types you think the City Centre LEZ should apply to

Please select all that apply

Buses/coaches HGVs/LGV/Vans Taxi/private hire cars Cars Motorbikes

If you disagree, please explain why

Proposed Grace Periods – Allowing time for vehicle owners to prepare

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 of vehicles time to prepare. Preparation may occur through altering the vehicles or fleet, through retrofitting (mostly buses), by planning the purchase of a new vehicle or through considering other forms of transport.

Reducing emissions from the commercial fleet (buses, coaches, HGV, LGV, taxi/private hire) will have the biggest impact on improving air quality in the city centre. Accordingly, we are proposing a one-year grace period for these vehicles, with enforcement commencing at the end of 2021.

For cars, the grace period is four years meaning enforcement would start at the end of 2024. An additional year would be allowed for residents living within the proposed City Centre LEZ boundary. Enforcement would start at the end of 2025. This allows car owners a longer timeframe to change the way they travel or to upgrade their vehicles.

6 For the City Centre LEZ, what do you think about the proposed grace periods for the following vehicle categories?

	Too short	About right	Too long	Don't know
1 year for buses and coaches <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1 year for commercial vehicles <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 years for private cars <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 years for city centre residents with cars <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7 What would you do differently if the City Centre LEZ was implemented as proposed? Please tick all that apply

Please select all that apply

- Nothing - my vehicle complies with the proposed emissions standards
 Upgrade my vehicle
 Give up my vehicle
 Join a car club
 Car share in a compliant vehicle
 Change my route
 Choose an alternative destination
 Walk more
 Bike more
 Use public transport more (buses, coaches, tram, train)
 Use taxis/private hire cars more
 Use more park and ride – combination of driving and public transport
 I don't travel through the city centre

Other

Part 2 – City-wide LEZ

To address pollution in areas beyond the city centre (in particular **Air Quality Management Areas** <http://www.edinburgh.gov.uk/downloads/download/308/air_quality_management_areas>) we are proposing a **city-wide LEZ** applying to all **commercial vehicles** (buses, coaches, HGVs, LGVs, vans, taxis, and private hire cars).

Commercial vehicles contribute more to overall emissions per vehicle, as they have large engines and repeat more trips across an area. Across the city, commercial vehicles make up one quarter of trips but are responsible for two thirds of the pollution.

Diesel cars also make a significant contribution to pollution across the city. However, through the LEZ proposals, we expect that we will be able to effectively reduce emissions without affecting all cars. Complementary measures being progressed through the **City Mobility Plan** <http://www.edinburgh.gov.uk/CET/info/7/about_the_city_mobility_plan/17/about_the_city_mobility_plan> (Edinburgh's strategic direction for transport) and **Edinburgh City Centre Transformation** <<http://www.edinburgh.gov.uk/CET/info/6/about/12/about>> (a strategy setting out interventions to radically reshape the city centre) will focus on reducing the need for people to rely on their cars for travel into and around Edinburgh.

City-wide Low Emission Zone Boundary



A City-wide LEZ would be defined by the City Bypass, Maybury Road, Cramond Brig, Old Dalkeith Road, The Wisp, the A1 and Milton Road East. It would exclude the city's rural western settlements and Edinburgh International Airport. Cars will not be affected by the city-wide boundary.

8 Do you agree with the proposed boundary for the City-wide LEZ?*Please select only one item* Yes No

If you disagree, please explain why

City-wide LEZ vehicle types

The Council proposes that the city-wide LEZ apply to all commercial [vehicle types](https://www.vehicle-certification-agency.gov.uk/vehicletype/index.asp) (i.e. buses, coaches, taxis, HGV, LGV, and vans), that do not meet the required standard. The Council proposes that the city-wide LEZ does not apply to cars.

Emission Standards

The proposed emission standards are:

- Euro 4 standard for petrol vehicles – generally vehicles registered from 2005
- Euro 6 standard for diesel vehicles – generally vehicles registered from 2014
- Euro VI standard for heavy diesel vehicles (including retrofitted engines which would be improved to operate as Euro VI).

9 Please tick vehicle types you think the city-wide LEZ should apply to*Please select all that apply*
 Buses/coaches HGVs/LGV/Vans Taxi/private hire cars Cars Motorbikes

If you disagree, please explain why

10 For the City-wide LEZ, what do you think about the proposed grace period?

	Too short	About right	Too long	Don't know
3 years for buses and coaches <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 years for commercial vehicles <i>Please select only one item</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part 3 - General questions about LEZs and questions about yourself

11 Do you anticipate any unintended consequences from Edinburgh's LEZ proposals?

Please select only one item

Yes No

If yes, please explain what consequences you anticipate

Reviewing the effectiveness of LEZs in Edinburgh

The Council has a legal duty to report annually

http://www.edinburgh.gov.uk/downloads/download/117/local_air_quality_management_reports on air quality monitoring data and any progress made to improve air quality, especially in the existing **Air Quality Management Areas**

http://www.edinburgh.gov.uk/info/20268/pollution/314/local_air_quality_management . Improvements made to air quality from the implementation of the LEZ scheme, will be captured with this work. However, the effectiveness of the scheme itself will also need to be reviewed following full implementation, in 2025.

12 How soon after the full implementation of the scheme should the LEZ scheme be reviewed?

Please select only one item

Every year after full implementation Every two years after full implementation
 Every four years after full implementation Don't know

About you

13 What is your name?

What is your name?

14 If you are responding on behalf of an organisation, please can you tell us the name of the organisation?**15 What is your email address?**

16 What is your postcode?

post code (first part is sufficient) (Required)

17 What is your age?

Please select only one item

- Under 16 16 - 24 25 - 34 35 - 44 45 - 54 55 - 64 65 - 74 75 and over

18 What is your gender?

Please select only one item

- Male Female Other Gender Identity

19 Do you have a physical or mental health condition or illness lasting or expected to last 12 months or more?

Please select only one item

- Yes No



**Edinburgh Low Emissions Zone Impacts -
Progress Report**

October 2019

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1. Introduction

In 2015, the Scottish Government made a commitment to significantly improve Scotland’s air quality through the Cleaner Air for Scotland strategy; alongside this, the Programme for Government 2017-18 committed¹ to introduce LEZs in Aberdeen, Dundee, Edinburgh and Glasgow by 2020. In addition, the City of Edinburgh Council (CEC) committed² to improving the city’s air quality and health through the introduction of a LEZ.

The Scottish Government and Local Authorities must reduce NO₂ concentrations to below annual average NO₂ of 40 µgm-3, in order to comply with the legislation.³⁴ Edinburgh has five Air Quality Management Areas declared for exceedance of legal limits due to road traffic. A LEZ restricts entry to an area by setting an emission standard as a requirement, this means the LEZ can achieve a reduction in NO₂ concentrations by improving the Euro emission standard of vehicles that enter the area.

The Transport (Scotland) Bill was introduced to the Scottish Parliament in June 2018 and is currently progressing through the Parliamentary process. This will provide legislation that enables the creation and civil enforcement of LEZs. The Bill will allow the Scottish Government to set (through regulations) consistent national standards for key aspects of LEZs including emissions, penalties, certain exemptions and parameters for grace periods. Local Authorities will then have the powers to create, enforce, operate or revoke a LEZ, and to design the boundary and vehicle scope of their LEZ.⁵

The emission standards for Scotland LEZs are to be set through regulation, and are expected to be Euro 6/VI for diesel vehicles and Euro 4 for petrol vehicles. This is consistent with other cities such as London, Manchester, and Birmingham.

Between May and July 2019, the Council publicly consulted on LEZ proposals in Edinburgh including a city centre zone boundary applying to all vehicle types and a city-wide boundary applying to commercial vehicles (buses, coaches, taxi and private hire, light and heavy goods vehicles). The consultation also set out proposals for when enforcement would start, as set out in Table 1 below.

Table 1: Edinburgh LEZ implementation timeline

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

The analysis sets out the impacts arising from the introduction of a LEZ as proposed for public consultation in 2019. The findings will inform further development of LEZ proposals in Edinburgh and wider mitigation measures.

¹ Scottish Government, 2017, <https://www.gov.scot/publications/nation-ambition-governments-programme-scotland-2017-18/>

² City of Edinburgh Council, 2018, http://www.edinburgh.gov.uk/info/20141/council_pledges/694/deliver_a_sustainable_future

³ Department for Environment, Food & Rural Affairs, 2011, *Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Local Air Quality Management*, <https://www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1>

⁴ Scottish Government, 2010, *The Air Quality Standards (Scotland) Regulations 2010*, <http://www.legislation.gov.uk/ssi/2010/204/schedule/2>

⁵ <https://www.lowemissionzones.scot/development>

2. Approach to identifying the wider impacts of introducing a LEZ

A range of skills and expertise including transport modellers, economists, and integrated impact assessors have contributed to the identification of wider impacts of introducing a LEZ in Edinburgh. A number of data sets and analytical approaches have been used to identify the impacts set out in this report:

- Datasets
 - This was especially relevant for understanding the levels of compliance with emission standards, vehicle types, and numbers of vehicles which would be affected by the LEZ. Analysis used traffic data collected in November 2016 and June 2019 (collected as inputs to Edinburgh's Air Quality Model) for City Centre Boundary, DVLA data from 2018 for the City Wide Boundary.
- Modelling
 - Edinburgh-specific air quality model (run for CEC by the Scottish Environmental Protection Agency (SEPA)), in line with the National Modelling Framework⁶
 - Edinburgh specific transport modelling was carried out using CEC's strategic VISUM model suite of the city centre using a 2016 base year and two forecast years for 2022 and 2032. These have been generated from planning forecasts, agreed with CEC, and were last updated in summer 2017.
- Frameworks and guidance
 - Scottish Government's National Low Emission Framework⁷ (NLEF), UK Government's Joint Air Quality Unit (JAQU) guidance⁸, NHS Lothian's integrated impact assessment (IIA) guidance⁹.
- Knowledge from similar projects across the UK
 - Experience from analysts' previous work on London, Manchester and Birmingham air quality interventions in identifying impacts Edinburgh's LEZ may have.
- Case studies
 - Discussing LEZs with businesses, care providers, residents and other organisations e.g. trade organisations provided insight into the potential impacts to be explored.

⁶ *Air Quality Evidence Report – November 2018 (SEPA)*
http://www.edinburgh.gov.uk/CET/downloads/file/3/air_quality_evidence_report_%E2%80%933_edinburgh

⁷ Scottish Government, 2019, *National Low Emission Framework*,
<https://www.gov.scot/publications/national-low-emission-framework/>

⁸ JAQU, 2017, *Clean Air Zone Framework*,
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/612592/clean-air-zone-framework.pdf

⁹ NHS Lothian, 2017, *Integrated Impact Assessment Guidance*,
<https://www.nhslothian.scot.nhs.uk/YourRights/EqualityDiversity/IADocuments/IntegratedImpactAssessmentGuidance.pdf>

- Surveys
 - Survey of Edinburgh City Centre Business Improvement District Members – To ascertain awareness and preparedness of businesses for a possible LEZ.
 - Analysis of Transport Scotland's LEZ survey and consultation – including response to the 2017 public consultation on LEZ which sought to ascertain views on a number of aspects (including transport, emissions, and potential LEZ designs) from a variety of stakeholders¹⁰ and survey work undertaken in 2019 to understand awareness and opinion of low emission zones.

3. Integrated Impact Assessment

A draft IIA has been carried out with a primary focus on equality and human rights objectives. Stages 1 to 4 of the 7-stage process of assessment have been undertaken in accordance with NHS Lothian guidance¹¹ (Flow chart provided in Appendix A). Table 2: IIA summary provides a summary of the findings.

Key messages and findings from case studies, including the London Ultra Low Emissions Zone; stakeholder engagement workshop and targeted Community Transport Providers surveys were all used to assess potential impact of LEZ proposals. The IIA also has identified need for further work that is indicated in bold italics in Table 2. Further work on the IIA will be undertaken as the proposals are refined and to further understand the impact against the IIA objectives and the affected population groups¹².

Table 2: IIA summary

Item no	Objective: Equality and human rights	Affected population
	Positive	
1	The LEZ policy is likely to discourage the most polluting vehicles from entering the LEZ. This will reduce emissions and improve air quality and in turn have a positive effect on health of those most at risk of respiratory illness including the elderly and children, including unborn children.	Children, pregnant women and elderly – <i>affected under both city wide and city centre LEZ boundaries.</i>
2	The LEZ is likely to encourage a modal shift from cars to public transport and active travel which will have a positive impact on health.	
	Negative	
3	Bus operators may increase the price of bus tickets as a result of the increased costs to their operations arising from the need to replace or upgrade buses, so they are compliant with the	Young people in low paid jobs – <i>affected under both</i>

¹⁰ Transport Scotland, 2017, *Building Scotland's Low Emission Zones*, <https://www.transport.gov.scot/media/39673/low-emission-zones-consultation.pdf>

¹¹ NHS Lothian Integrated Impact Assessment Guidance, 2017 <https://www.nhslothian.scot.nhs.uk/YourRights/EqualityDiversity/IADocuments/IntegratedImpactAssessmentGuidance.pdf>

¹² Affected populations: people with protected characteristics, those vulnerable to falling into poverty, staff, and geographical communities.

	<p>LEZ. For some bus passenger groups the increase in price may make the journey unaffordable and result in them foregoing their journey. This may affect people's ability to engage in activities. or will struggle to reallocate their resources which in turn will affect their wellbeing/ social activity. This effect will not be applicable to the elderly and disabled free travel pass holders.</p>	<p><i>city wide and city centre LEZ boundaries.</i></p>
4	<p>Bus operators may remove non-profitable routes in response to LEZ related costs to upgrade fleet.</p> <p>Further work/mitigation: <i>To understand this potential impact, CEC should continue engagement with bus operators to determine their proposed reactions to the LEZ. If buses are going to raise their fares, the impact could be mitigated by designing a programme to support young people, those on benefits and accompanying adults (for disabled and elderly passengers) whose mobility may be impacted.</i></p>	<p>Elderly, disabled, carers, pregnant women- <i>affected under both city wide and city centre LEZ boundaries.</i></p>
5	<p>Impacts due to low awareness of LEZ being in place on people from low income households with a non-compliant car who are also non-English speaking to enter LEZ by mistake and enter into financial difficulty due to fine incurred and unable to pay.</p> <p>Mitigation: <i>Impact could be mitigated by providing clear communications around the LEZ implementation across different media and in a range of languages used in Edinburgh.</i></p>	<p>Low income householders, people of ethnic origin that is not white – <i>affected under the city centre boundary.</i></p>
6	<p>People with a disability who do not use public transport (due to the nature of their disability) but own a LEZ non-compliant vehicle and cannot afford to upgrade, may choose to forego their journey into the City Centre. This will potentially adversely affecting their opportunity to access community, leisure facilities and have a negative impact on their social activity.</p>	<p>Disabled people- <i>affected under the city centre boundary.</i></p>
7	<p>People who use their own cars that are fitted with adaptive features (such as swivel chairs) to access community and leisure facilities within the City Centre may not be able to afford the cost of transferring the adaptive features onto LEZ compliant cars as the costs range between £500 to £30,000. This in turn potentially can adversely affect their social activity/ day to day activity.</p> <p>Mitigation: <i>Impact may be mitigated through funding to support transfer of adaptive features onto LEZ compliant cars for those most affected.</i></p>	
8	<p>Community Transport Providers whose fleet renewal period typically runs between seven and ten years and are not aware of the funding options that are available to upgrade their non-compliant fleet may shift services to areas outside LEZ This has the potential to affect elderly, disabled and children who</p>	<p>Elderly, Children and disabled children- <i>affected under the City centre and City wide boundaries</i></p>

	<p>are dependent on their service to undertake social activities related travel.</p> <p>Mitigation: Any identified source of funding for vehicle upgrades or retrofitting should be clearly communicated to Community Transport Providers: such as the Energy Savings Trust's Scottish Bus Abatement Retrofit Programme¹³ and Electric Vehicle Loans¹⁴. Electric Vehicle infrastructure will also benefit from funds such as Switched on Towns and Cities Challenge Fund and the Local Authority Installation Programme¹⁵.,. CEC should also engage with Community Transport Providers to effectively communicate LEZ proposals and on potential impact to help them prepare better for the change.</p>	
9	<p>Private Hire Vehicle and Taxi/ Black cab owners on the H2S (Home to School) contract with City of Edinburgh Council to transport school children with a non compliant LEZ vehicle may not be able to afford to upgrade their vehicle. This may impact on the H2S services offered by the council and potentially affect school children.</p> <p>CEC have an existing licensing regime to improve emissions standards of PHV and Taxi/Black cab which may help reduce the impact¹⁷ but a residual negative impact on children is possible. CEC must ensure this regime is aligned with the LEZ correctly to ensure mitigation of potential impacts.</p> <p>Further work: Analysis is required to capture and identify how LEZ may impose additional or compounding impacts on this sector and if required develop programme to offset impacts on specific populations.</p>	Children and disabled children- affected under the City centre and City wide boundaries.
10	<p>Community groups that engage with children, for example Beavers and Brownies, may use LGVs (such as minibuses) to transport children for various activities city wide and/ or to access a Scout Centre in the City Centre. Where these vehicles are owned or on a long-term lease there is a potential that activities provided by these groups are restricted until vehicle is changed.</p>	Children- affected under the City wide and City centre boundaries.

¹³ Energy Savings Trust, 2019, Scottish Bus Abatement Retrofit Programme
<https://www.energysavingtrust.org.uk/scotland/businesses-organisations/transport/scottish-bus-emissions-abatement-retrofit-programme>

¹⁴ Energy Savings Trust, 2019, Electric Vehicle Loan,
<https://www.energysavingtrust.org.uk/scotland/grants-loans/electric-vehicle-loan>

¹⁵ Transport Scotland, 2019, Over £20 million to support electric vehicles across Scotland
<https://www.transport.gov.scot/news/over-20-million-to-support-electric-vehicles-across-scotland/>

¹⁶ City of Edinburgh Council, October 2018, Electric Vehicle Infrastructure Plan
http://www.edinburgh.gov.uk/news/article/2556/edinburgh_blazes_green_trail_with_new_electric_vehicle_infrastructure_plan

¹⁷ http://www.edinburgh.gov.uk/downloads/download/285/taxiprivate_hire_car_licence

	Further work: Analysis is required to identify the number of community groups that may be affected by the LEZ scheme and identify suitable mitigation measures.	
11	<p>There is a potential for people who currently use their own cars to access leisure facilities/night life to be negatively affected if they perceive there to be personal security concerns with public transport. As a result, passengers may forego their journey into the City Centre, particularly at night time.</p> <p>Further work: This impact could be mitigated by understanding specific concerns and developing targeted measures that support specific population groups to feel safe using it.</p>	Minority ethnic groups, disabled, Non-binary, Transgender, people with different religious belief/ faith- affected under the City Centre boundary.
12	<p>There are around 25 locations for religious congregation and places of worship that are located within the City Centre. If most of the visitors live outside City Centre and are reliant on cars (for example travel from rural areas), their activity may be adversely affected if they forego their journey.</p> <p>Further work: Analysis is required to identify the population groups (such as religious groups) that may be affected by the LEZ scheme through observing behaviours such as vehicle usage and thereafter to identify suitable mitigation measures.</p>	People with different religious belief/ faith- affected under the City Centre boundary.th different religious belief/ faith- affected under the City Centre boundary.
13	<p>Users of the Travellers site and Travelling Showman site in Edinburgh are likely to own non-compliant vehicles and therefore will face fines when entering the LEZ.</p> <p>Mitigation: This may be mitigated if the Scottish Government decide to include showman's vehicles within the national exemption of the LEZ implementation. Ensure sufficient targeted engagement with the affected community.</p>	Gypsy/Travellers- City wide boundary
	Objective: Environment and sustainability	Affected populations
	Positive	
14	Implementing LEZ will improve vehicle standards which in turn will bring air quality improvements and health & wellbeing improvements.	Children, elderly and pregnant women – both city centre and city wide
15	Interventions that reduce local air pollution (NO ₂ and PM _{2.5} /PM ₁₀) are also likely generate a positive effect on reducing factors contributing to climate change through reduced greenhouse gas emissions (measured in CO ₂ equivalent tonnes).	Children, elderly and pregnant women – both city centre and city wide
16	LEZ is likely to promote sustainable forms of transport via modal shift from cars to buses, shared cars, bicycles or walking, which in turn will have positive impact on air quality. Dependent on what modes people shift to there may be	Children, elderly and pregnant women – both city centre and city wide

	positive effects on the health and well-being of people due to physical activity (cycling/ walking) and exposure to outdoor spaces.	
17	Improvements to air quality can be directly linked to improvements to physical environment and to places.	Children, elderly and pregnant women – <i>both city centre and city wide</i>
	Negative	
18	Depending on displacement of traffic there may be locations outside of the LEZ boundaries where air quality is made poorer by a change in the quantity and types of vehicles passing through. Initial transport modelling shows that roads outside the LEZ boundary are likely to see an increase in traffic volumes. <i>Further work: Analysis is required to determine the scale of these impacts on areas that see increases in traffic and the affected populations; appropriately designed mitigation will require similar investigation.</i>	Children, elderly and pregnant women – <i>both city centre and city wide</i>
	Objective: Economic	Affected Populations
	Positive	
19	Increased economic activity for a number of sectors: second hand car traders, vehicle scrappage, vehicle leasing operators, active-travel distributors/repairers, and public transport operators through increased patronage.	Businesses community
20	Decreased traffic and cleaner atmosphere in the city may lead to higher quality of public spaces in the city. This could lead to more opportunities for businesses as more people are attracted to the city/city centre.	Business community. People that work and visit areas within the LEZ boundaries
	Negative	
21	People from low income households who use cars to enter the City centre for work on a regular basis may face financial difficulty to upgrade their vehicle. Income inequality may increase as those on low incomes may take on credit to pay for vehicle changes that they would not otherwise have purchased. This increases the debt obligation for those on low incomes and decreases their disposable income. Those on higher incomes may have capital that allows them to access further capital at lower rates of interest. This effect will also be felt by small business owners who have relocated further from the city centre due to increasing prices but rely on the city centre for business as they may not be able to find the finance required to change their vehicles.	Lower income households and lower income businesses

	<p>Mitigation: Impact may be mitigated by identifying funding mechanisms that help households with low income to afford an upgrade to a compliant vehicle.</p> <p>This impact could be mitigated by understanding specific concerns and developing targeted measures to address concerns for small businesses.</p> <p>Impact could be mitigated by providing clear communications around the LEZ implementation across different media to raise awareness and ensure people and businesses have sufficient time to prepare. The timing of LEZ introduction, operation, and grace periods for different vehicle types and residents may also mitigate some of the impacts on lower income households and businesses.</p>	
22	<p>Vehicle users, especially LGV, bus, and HGV, have relatively long turnover periods, requiring users to change earlier than anticipated. The need to purchase compliant vehicles and sell/scrap their non-compliant vehicle means that the users will incur additional financial cost.</p> <p>Further work: Analysis required to determine the scale of these impacts on small businesses and an appropriately designed mitigation.</p>	<p>Lower income community Groups</p> <p>Business communities</p> <p>Low income groups</p>
23	<p>Shift workers and those who are employed in the evening and late-night economy may not be able to travel using public transport and have to use private vehicle transport. They will be forced to change non-compliant vehicles to maintain employment and may have limited access to affordable finance to replace their non-compliant vehicle as they are more likely to be on lower incomes. A potential reduction in those who are willing to work in these sectors may in turn, affect the availability of these services.</p>	<p>Shift workers</p> <p>Lower income groups</p>
24	<p>The issue of low income/low capital reserves applies to community/charitable organisations that use non-compliant minibuses. These organisations provide services for the elderly and others who may not otherwise be able to make the journey.</p>	<p>Lower income community Groups</p>
25	<p>Decrease in access to services as the LEZ restricts the ability of businesses to travel and bring services to the customer. For example, a plumber using a non-compliant van may no longer be able to operate in the city centre if the LEZ restricts LGVs from entering the area. If such service providers are unable to afford to change to a compliant vehicle this would potentially lead to a decrease in access to such services and/or an increase in the cost of providing these services.</p> <p>Further work: Analysis is required to determine the scale of these impacts and an appropriately designed mitigation.</p>	<p>Business communities</p>

26	<p>The LEZ will negatively impact local businesses that use commercial vehicles. DVLA data indicates that at the end of 2018, 83% of LGVs in the Edinburgh Unitary Authority¹⁸ are non-compliant and require replacing if they want to continue to be used. Local businesses may be negatively impacted by the introduction of a LEZ due to the increased cost of having to change their fleet to maintain operations within the city which will be essential to maintain the operations of their business. Businesses need to be able to access lines of credit to replace their fleet. It may decrease employment opportunities for those that cannot afford to change their vehicle to a compliant one.</p> <p>Further work: Analysis is required to determine the scale of these impacts on small businesses and an appropriately designed mitigation.</p>	Business communities
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4. Transport Modelling of the LEZ Scheme

4.1 CEC Strategic Model

A series of transport modelling tests have been undertaken to assess the impact of the LEZ on travel patterns across the city. Outputs have been provided to SEPA who have then undertaken supporting air quality impact analysis.

This section of the report summarises the first phase of transport modelling. Further analysis is underway incorporating the feedback from public consultation undertaken and revised baseline fleet composition survey data collected in June 2019. The updated data highlights the change in actual fleet composition since 2016 and shows an increase in vehicle compliance with proposed LEZ standards.

All transport modelling has been undertaken using The City of Edinburgh Council's (CEC) strategic VISUM model suite. This was previously updated and recalibrated in spring 2017 to support the Edinburgh Tram Outline and Final Business cases. Models have a 2016 base year and include city centre count data previously collected on behalf of SEPA/CEC. Two forecast years are currently available for the years 2022 and 2032. These have been generated from planning forecasts, agreed with CEC, and were last updated in summer 2017.

For the purposes of this analysis, the 2022 model forecast has been used as a proxy for a 2023 assessment year, the year for which future Department for Transport (DfT) vehicle compliance estimates are available.

All LEZ model runs have been undertaken using VISUM Version 18 software.

¹⁸ Edinburgh Unitary Authority was defined in the DVLA dataset. This outline can be viewed here:

<https://www.ordnancesurvey.co.uk/business-government/products/boundaryline>

List of Scottish Unitary Authorities here: https://www.lhc.gov.uk/globalassets/buyer-profile-docs/scottish-unitary-authoritiesjuly_15.pdf

Further explanation here:

<https://www.ons.gov.uk/methodology/geography/ukgeographies/administrativegeography/scotland>

4.2 LEZ Boundary

The proposed LEZ boundary has been developed based on a detailed understanding of the air quality issues in Edinburgh from the air quality model. In addition, a key consideration has been the need to provide a clear, logical, and readily signposted diversion route for non-compliant vehicles.

Rationale for proposed boundary

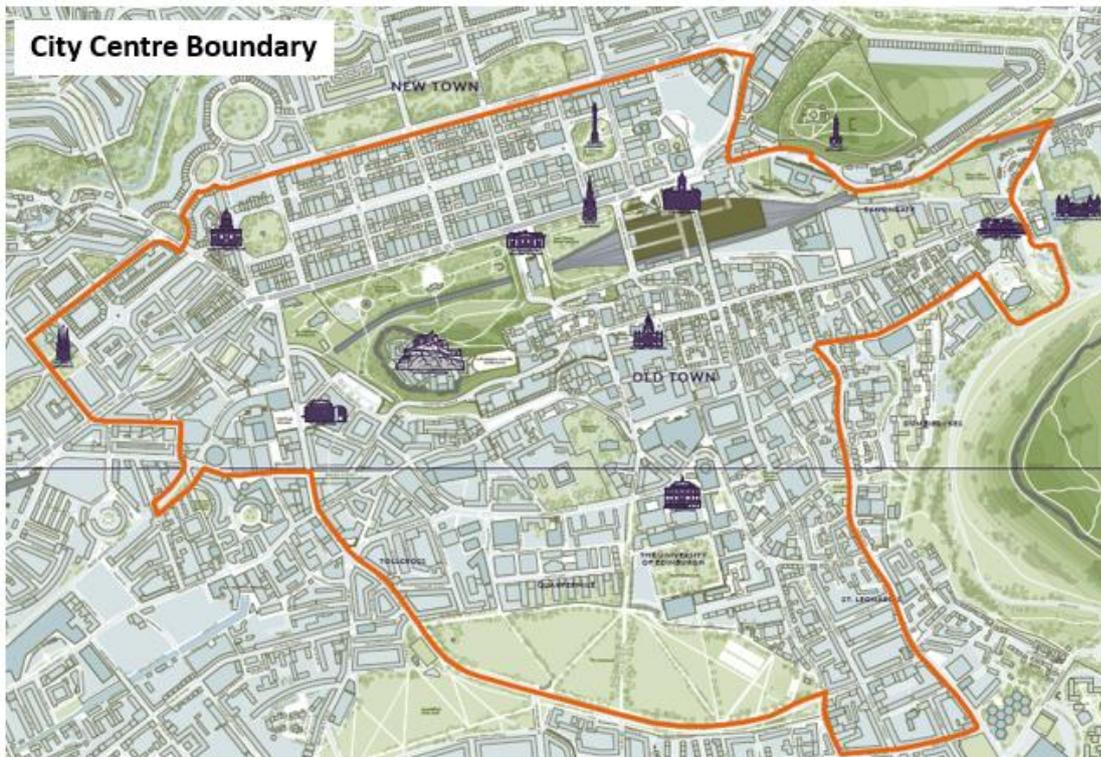
To the north, Queen Street is proposed to be excluded from the LEZ as it provides a suitable alternative route. If Queen Street were included this would encourage additional traffic through Stockbridge (via Hamilton Place / Henderson Row and Brandon Street / Eyre Place). Ferry Road as a further alternative was considered too far from the city centre.

The proposed eastern boundary of the LEZ is defined by Abbeyhill, Holyrood Road, Pleasance and St Leonard's Street. These all lie outside areas with high pollutant concentrations area and provide a suitable diversion. Queen's Drive is not an acceptable diversion as it is closed to general traffic on a Sunday (and at all times for some vehicles).

The proposed western LEZ boundary is complex to define and runs along Earl Grey Street, Morrison Street, West Approach Road and Torphichen Street. Including Haymarket within the zone would result in non-compliant traffic routing via Murieston Place / Murieston Crescent / Russell Road – these narrow residential streets are not a suitable alternative. The next possible boundary would be at Hutchison Crossway / Balgreen Road and was considered to extend too far into the west.

The proposed southern boundary utilises East and West Preston Street and Melville Drive. This provides a relatively straightforward diversion, avoiding the city centre.

Figure 1: City Centre LEZ boundary



4.3 Model Scenarios and Options

A core scenario has been defined for the LEZ, with three options tested within this. The principal assumption is that, upon implementation of the Edinburgh city centre LEZ, all cars, light goods vehicles (LGVs) and heavy goods vehicles (HGVs) which start or end within the city centre LEZ boundary will be compliant with the scheme. This means that there is no reduction in travel demand as a result of the scheme.

The three Options considered are:

- Option 1 – no LEZ in place and Bank Street open (representing the Base situation);
- Option 2 – no LEZ in place and Bank Street closed; and
- Option 3 – LEZ in place and Bank Street closed

Options 2 and 3 reflect the assumption that the Meadows to George St scheme, including the Bank St closure, will be in place before the LEZ scheme is implemented. This is a core element of the City Centre Transformation (CCT) Project and the most significant closure to general traffic. Further modelling will include phased elements of the recently approved CCT Strategy.

All models have been assigned for morning peak, interpeak and evening peak time periods for 2016 Base and 2022 forecast years. Time periods are:

- AM – 07:00-09:00
- IP – 10:00-12:00
- PM – 16:00-18:00

4.4 Model Enhancements

A number of enhancements have been made to the VISUM models in order to assess the impact of the proposed LEZ options. Most importantly, Car, LGV and HGV demand has been disaggregated into compliant and non-compliant vehicle types for base and forecast years. Model attributes and procedures have been updated to reflect this change.

Compliant and non-compliant fleet composition data has been provided by the Scottish Environment Protection Agency (SEPA). Base year compliance is from 2016 ANPR surveys undertaken in Edinburgh, forecast year values are based on 2023 DfT estimates¹⁹.

Given the binary nature of the model, no non-compliant vehicles will enter the LEZ area. This potentially represents a worst-case scenario (in terms of impact on diversion routes) although, in practice, the proposed plan for high-deterrent penalties is likely to result in few non-compliant vehicles deliberately entering the city centre.

4.5 Model Results

Only the model results for Option 1 (Base) and Option 3 have been reported as they are most relevant to key LEZ development decisions at this stage.

In the 2016 Base model, approximately 60% of cars are assumed to be compliant across all links, based on the fleet compositions provided. Only around 7% and 50% of LGVs and HGVs respectively are compliant. In this model, total vehicle compliance varies from approximately 45% on York Place to 55% on Queen's Drive (where HGVs are prohibited).

¹⁹ Department for Transport estimates obtained by SEPA and sent to Jacobs via A. McDonald 18/12/18

In the 2016 Option 3 model, with the LEZ in place, the percentage of modelled compliance is nearly 100% within the city centre but non-compliant vehicles now use the diversion route around the boundary.

As shown in the Figure 2 and 3 below, a number of streets are particularly affected including Palmerston Place, Chester Street, Randolph Crescent and St Colme Street. Dalry Road is also impacted as the Western Approach Road lies within the LEZ boundary, east of Morrison Link meaning some traffic diverts into the Gorgie / Dalry area in order to avoid the restriction. It should be noted that not all roads outside the boundary are affected by increased traffic volumes and some remain consistent or decrease.

The number of non-compliant vehicles is lower in the 2022 model forecast than in the Base model, across all links analysed. This includes links just outside the proposed LEZ boundary, where non-compliant vehicle numbers are highest. By the future model forecast year of 2022, a cleaner fleet means that the number of vehicles which do not meet the LEZ requirements is lower than in the Base year. This is shown in model outputs where an improvement is seen across all modelled links including links outside the boundary where non-compliant vehicles numbers are the highest (as shown in Figure 2 and Figure 3 below).

Despite a general improvement in compliance, displaced traffic into some areas of the city remains a concern and supporting air quality analysis will quantify the air quality impact and guide further decisions on the proposed boundary. Further mitigation may be required.

Figures 2 and 3 below summarise total vehicle demand and compliance in morning and evening peaks, under baseline and LEZ scenarios. They show how the number of compliant vehicles varies and the overall improvement over time.

4.6 Further Work

The above modelling was undertaken using Base 2016 Observed and 2023 DfT Forecast compliance levels. All further work will be undertaken using recently surveyed 2019 Edinburgh fleet data and will be used to inform updated future compliance forecasts.

Existing analysis has focused on the implementation end point of 2024; further work will take into account the phasing of LEZ proposals. The implications of the city-wide LEZ boundary will also be considered as part of the next stage.

Figure 2: AM comparison of compliant and non-compliant vehicles by diversion route street and assessment year

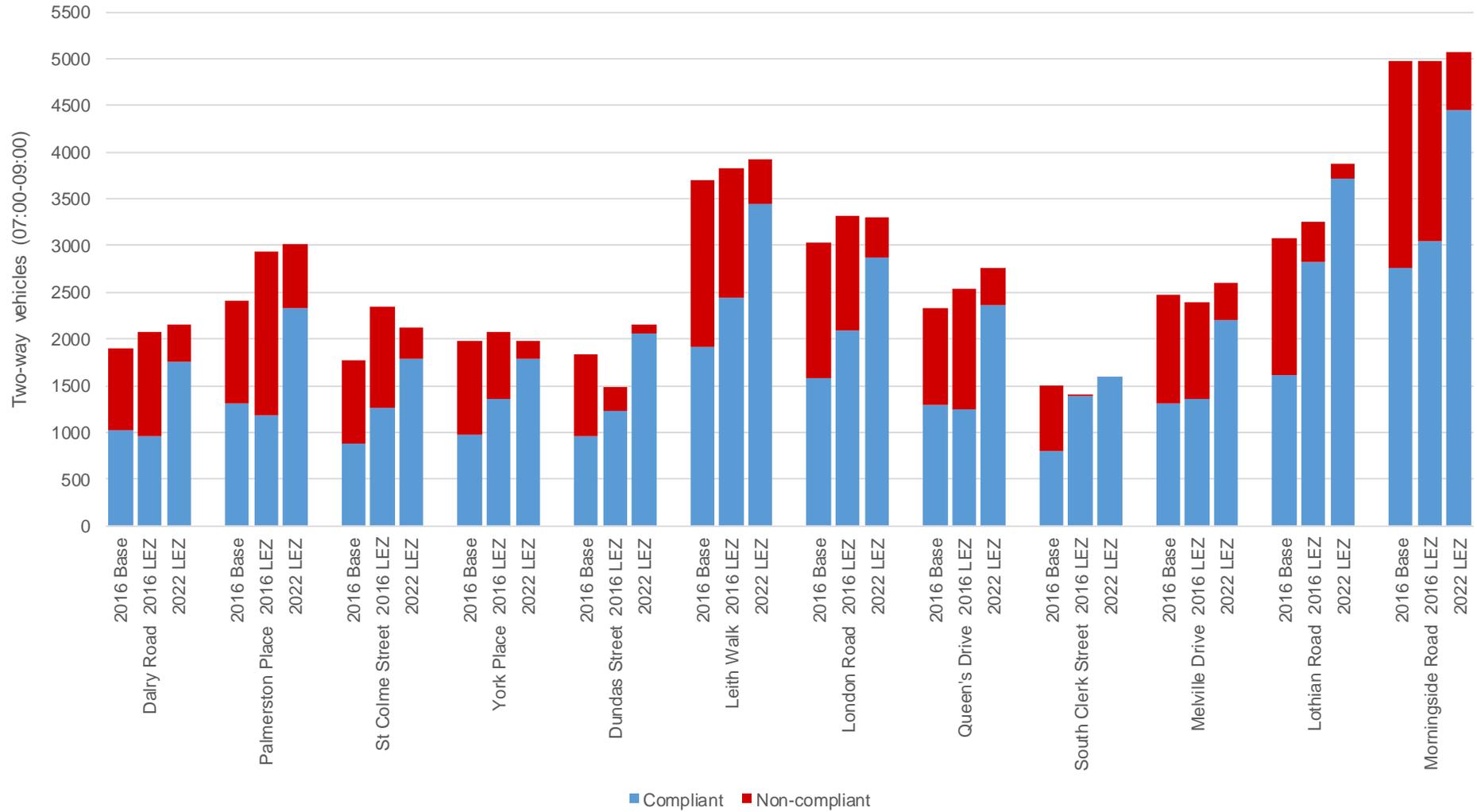
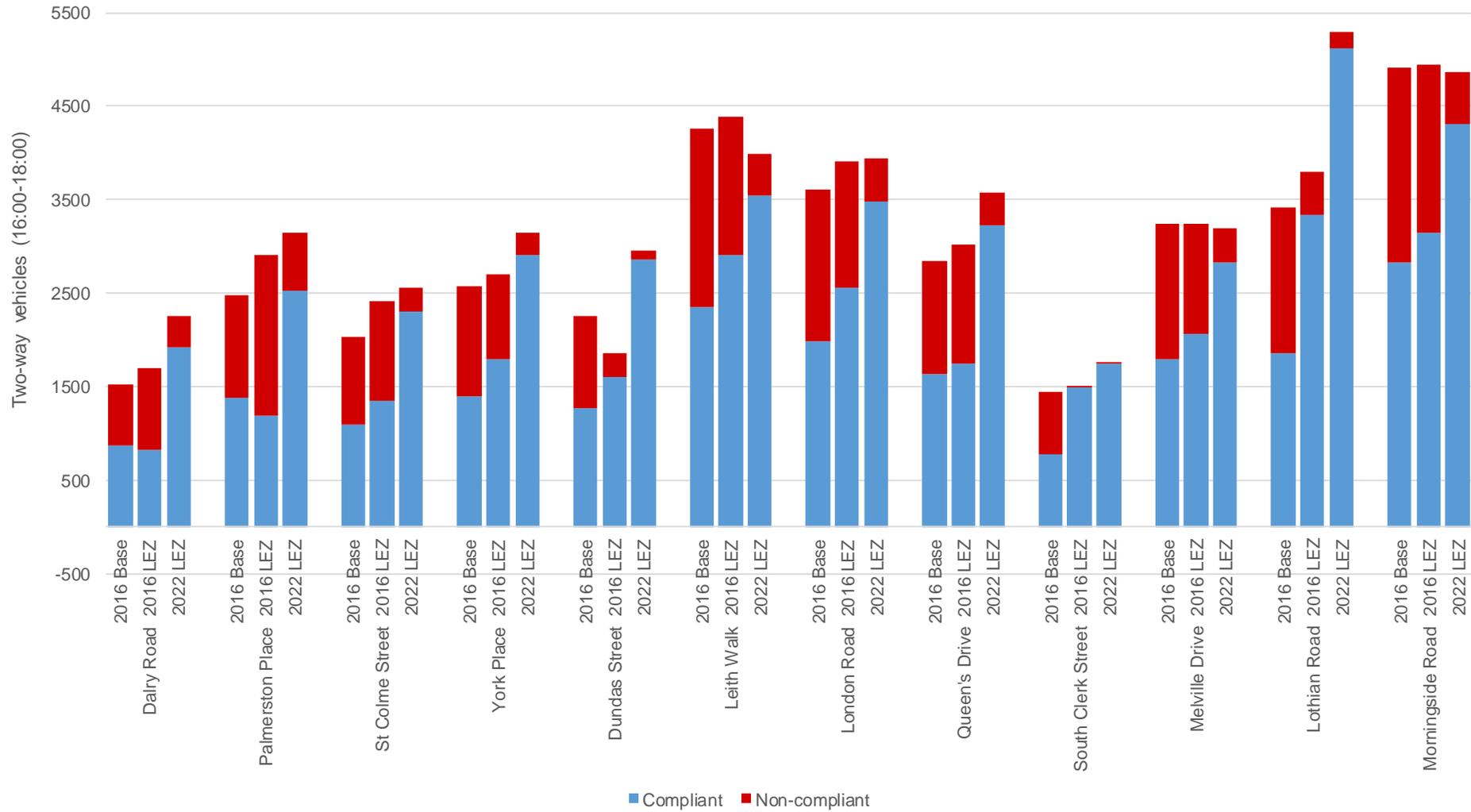


Figure 3: PM comparison of compliant and non-compliant vehicles by diversion route street and assessment year



5. Impacts

This analysis presents impacts in four different sections: number of vehicles affected, businesses, people & communities, and costs of vehicle replacement. Mitigation has also been highlighted throughout the impact analysis and in the final “Recommendations and mitigation” section. These impacts are discussed in this section briefly as for this interim stage of analysis it was key to focus on the areas where impacts would be significant, such as businesses and people & communities.

5.1 Number of vehicles affected

By showing the number of trips taken into the city centre and city wide by different types of vehicles and how compliant they are with the proposed emission standard, the number of trips that would no longer be permitted and where individuals and businesses need to make some sort of change can be observed. This change could be altering a route, cancelling the trip, changing mode of transport, or upgrading vehicle. The Scottish Government LEZ will be penalty based²⁰ which will contribute to a higher compliance rate than other cities in the UK but foregoes the possibility of ongoing revenues being generated from the LEZ.

The table below presents a summary of compliance rates for both LEZ boundaries. This is based on the November 2016 traffic data survey for the city centre boundary and DVLA vehicle registration data from 2018 for the city wide boundary.

Table 3: Number of non-compliant vehicles as a percentage of each vehicle type, by LEZ boundary

LEZ boundary	HGV	LGV	Car
City centre (2016)	62.1%	93.4%	39.5%
City wide (2018)	62.9%	83.3%	33.7%

5.2 Businesses

Businesses are one of the main groups affected by the LEZ and some sectors will be affected more than others due to differing levels of reliance on transport and ability to replace vehicles: for example, a painter/decorator that operates as a sole trader will be heavily reliant on their LGV to collect and store materials and travel to a client.

Small businesses will be less able to replace a non-compliant second hand LGV purchased recently with a compliant vehicle than a larger business that has access to cheaper finance and more able to alter plans to upgrade earlier than expected. Some businesses will be able to invest in new vehicles or adapt to a LEZ to continue operations but others may be no longer be able to operate therefore reducing economic activity. Given that 91% of businesses in Edinburgh are micro/small²¹, their role within the economy and society is significant. Transport Scotland’s LEZ survey results, case studies, and discussions with industry bodies confirmed that businesses are concerned by the LEZ for a number of reasons: increase in costs, maintaining operations, replacing/retrofitting vehicles, and staff travel at atypical times.

Edinburgh’s role as an economic hub is also highlighted by the fact that 51 percent of businesses that responded to Transport Scotland’s LEZ survey visit Edinburgh’s city centre at least once a week. There are a range of opportunities for mitigation of negative impact on small business activity through effective communications and awareness raising, providing links to programmes that can assist

²⁰ The Transport Bill indicates that driving in contravention of the LEZ’s emission standards will incur a penalty charge: 1 (2)

[https://www.parliament.scot/S5_Bills/Transport%20\(Scotland\)%20Bill/SPBill33AS052019.pdf](https://www.parliament.scot/S5_Bills/Transport%20(Scotland)%20Bill/SPBill33AS052019.pdf)

²¹ City of Edinburgh Council, 2019, *Edinburgh by Number 2018*,

http://www.edinburgh.gov.uk/info/20247/edinburgh_by_numbers/1012/edinburgh_by_numbers

businesses to change their vehicles through rental, lease or electric vehicles, as well as the provision of financial support.

Delays to retrofitting vehicles and the availability of compliant vehicles are concerns for commercial fleet operators (LGV, HGV, bus and coach) in a number of sectors: public transport provision, freight, waste collection, and construction. The Scottish Government is providing certification of approved retrofit and increasing capacity of retrofit, but to date only covers a limited range of vehicles. According to key stakeholders in the sector, there is opportunity for market expansion in the vehicle rental and lease business which would also present a solution to both businesses and people alike.

5.3 People & Communities

When a LEZ is introduced, individuals who have a non-compliant vehicle need to make a decision: shift to a different mode of travel, change their vehicle, change the trip destination or cancel the trip. Similar to businesses, for some people this will not be an issue and they will change their behaviour without significant impact on their daily lives. Certain groups will be disproportionately affected by a LEZ because of their characteristics, for example, if they are mobility impaired. This is addressed in more detail in section 3 of this report.

The LEZ will have positive impacts on people's health through improved air quality. This is currently being assessed with further benefits from the LEZ including increases in active travel and improvements to the quality of public space as traffic and noise pollution decrease.

5.4 Cost of vehicle replacement

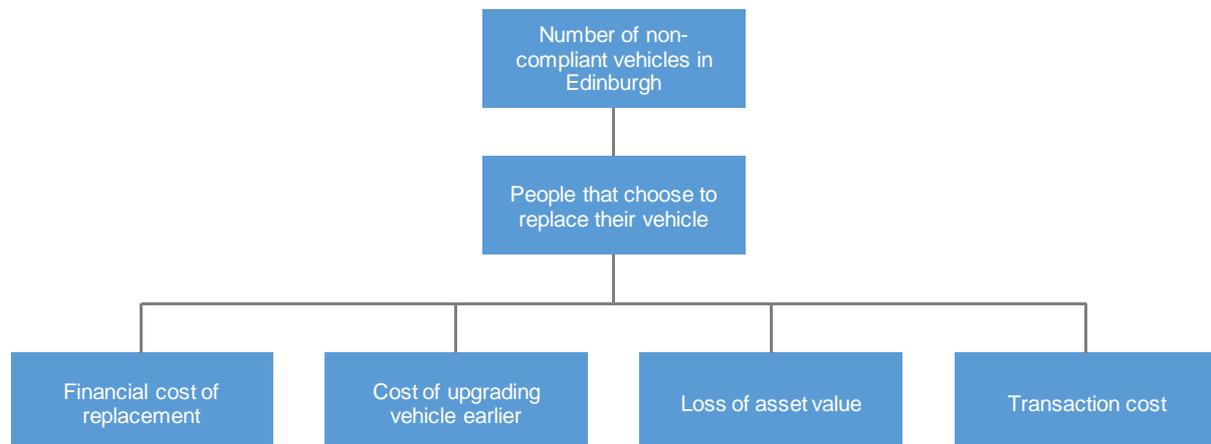
This section sets out the financial and economic cost associated with replacing non-compliant vehicles as a result of implementing a LEZ.

At the heart of the LEZ implementation is a desire for people to be driving cleaner vehicles. LEZs in Edinburgh have been developed and will be implemented alongside a range of wider policy interventions that work to change people's behaviours and encourage the use of sustainable travel modes and where vehicles are used, for them to be as low emission as possible. These policy interventions include the City Centre Transformation and the City Mobility Plan, Electric Vehicle Action Plan, and parking policies.

However, as a result of LEZ implementation, it will mean that for some businesses and people, money will be spent on changing vehicles that otherwise would not have been spent (but would be spent in future years when existing vehicles come to the end of the use). Vehicles will be replaced earlier than expected meaning its operational life is cut short and an asset value is reduced or lost, and people will have to spent time and effort changing their vehicles.

Figure 4 below summarises the different costs of replacing non-compliant vehicles as part of the ongoing analysis.

Figure 4: Cost of replacing non-compliant vehicles



6. Mitigation options

This section of the report sets out options to mitigate the negative impacts of the LEZ and work towards an improved outcome.

6.1 Communications

Interviews, case studies, and surveys conducted in relation to the LEZ highlight the need for communications about the LEZ scheme to be widespread and easily understood. CEC should ensure it has a substantial awareness campaign to ensure that people and organisations are prepared for the LEZ. This will prevent people from being caught out by the LEZ and their usual routines being negatively disrupted.

Communications must be accessible to all including non-English speaking communities, groups that have a low awareness of LEZs, people that are most likely to be impacted (such as those identified as affected populations through the IIA). Communications will need to extend regionally and link in with wider Scottish Government Communication to ensure comprehensive and consistent messaging.

6.2 Hardship fund for SMEs and specific households

The IIA shows that certain groups within society should be protected from the negative effects of a LEZ because they are being disproportionately affected by it and have limited ability to avoid the impacts. CEC and the SG should work together to ensure effective delivery of available funding to support these groups.

6.3 Extension of grace periods

In the current draft of legislation²², grace periods are currently defined as being between 1-4 years. Grace periods are one of the factors that can help to offset some of the greatest negative impacts on people and businesses. CEC could consider applying longer grace periods to help offset the impacts of LEZs.

²² Scottish Government, 2019, *Transport (Scotland) Bill*, [https://www.parliament.scot/S5_Bills/Transport%20\(Scotland\)%20Bill/SPBill33AS052019.pdf](https://www.parliament.scot/S5_Bills/Transport%20(Scotland)%20Bill/SPBill33AS052019.pdf)

6.4 Changing the operational time of the LEZ

While the proposals are for CEC to run the LEZ 24 hours a day, 7 days a week, Section 13 (1) of the Transport Bill²³ allows the scheme to run at different hours of the day.

Issues have been raised in relation to vehicle availability and retrofit capacity. One way to offset the impact on operations affected by this constraint may be to consider whether there is a case to consider varied hours of operation.

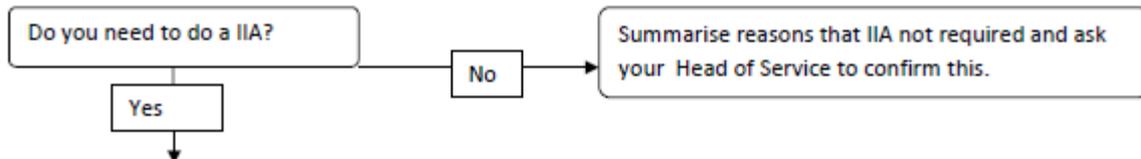
6.5 Further research

Analysis the 2019 fleet data and further transport and air quality testing will allow more robust conclusions to be reached about the impact of the LEZ. Modelling of the implementation and operational costs of the LEZ will also feed into the design and enforcement of the LEZ and will be informed as the rest of the regulatory regime is developed by Scottish Government.

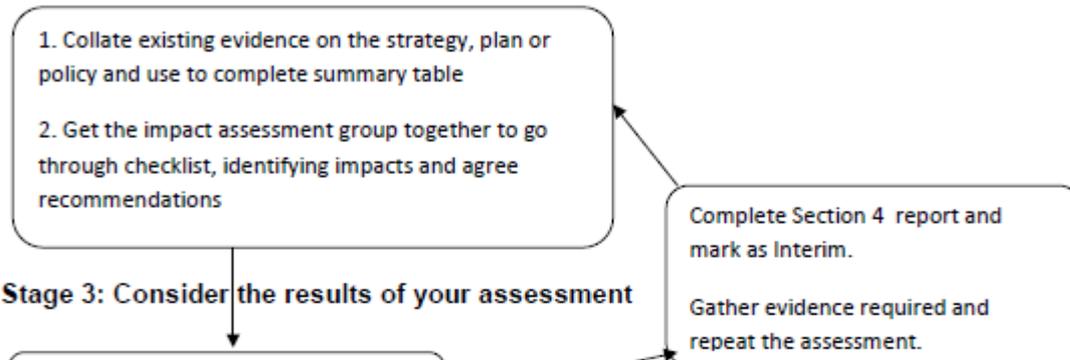
²³ See section 13 (1) of [https://www.parliament.scot/S5_Bills/Transport%20\(Scotland\)%20Bill/SPBill33AS052019.pdf](https://www.parliament.scot/S5_Bills/Transport%20(Scotland)%20Bill/SPBill33AS052019.pdf)

Appendix A NHS Lothian Integrated Impacts Assessment Flow Chart

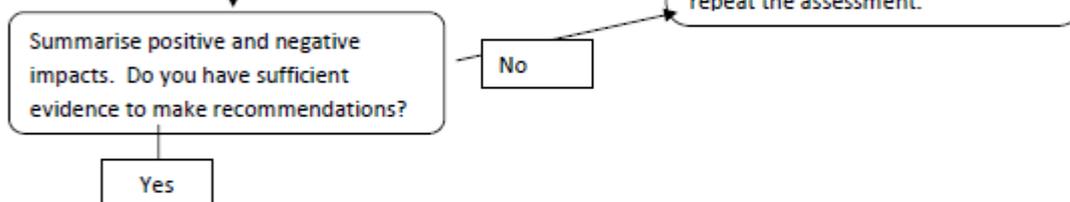
Stage 1: Identify if an Integrated Impact Assessment is needed



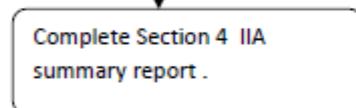
Stage 2: Undertake Integrated Impact Assessment



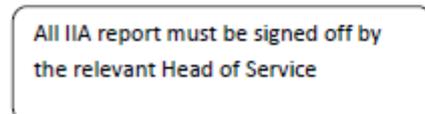
Stage 3: Consider the results of your assessment



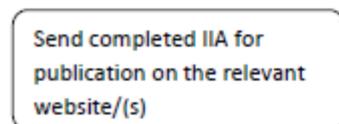
Stage 4: Report the IIA findings



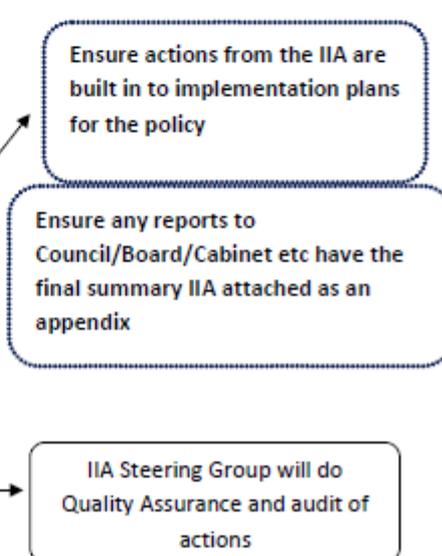
Stage 5: Sign Off



Stage 6: Publication



Stage 7: Act on the IIA



Source: NHS Lothian Integrated Impact Assessment Guidance, November 2017