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Glasgow City Council

Environment, Sustainability & Carbon
Reduction City Policy Committee

Report by Executive Director of Neighbourhoods and
Sustainability

Contact: Gavin Slater Ext: 78347

Item 5

6th October 2020

**Annual Progress Report on Air Quality and Low Emission Zone (LEZ)
Update**

Purpose of Report:

To advise Committee of the city's 2020 Annual Progress Report on air quality and to update Committee on work to progress the city's Low Emission Zone.

Recommendations:

It is recommended that the Committee notes:

- (a) The content of this report on air quality in the city.
- (b) The progress being made in establishing Glasgow's Low Emission Zone.
- (c) The indicative revised timescale for the introduction of Low Emission Zones in the four Scottish cities.
- (d) The intention to return to Committee at the earliest opportunity for approval of a revised timescale for Low Emission Zone enforcement.
- (e) The intention to return to Committee in May 2021 for approval of a finalised Low Emission Zone scheme to proceed to public consultation.

Ward No(s):

Citywide: ✓

Local member(s) advised: Yes No consulted: Yes No

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1 Background on Annual Progress Report (APR)

- 1.1 This report presents the findings of the Council's Annual Progress Report (APR) on air quality, detailing a comprehensive overview of data and trends for air quality across the city in the 2019 calendar year. Members can access the full report on the Council's website [here](#).
- 1.2 The Environment Act 1995, which implemented EC Directive 96/62, requires that local authorities regularly review and assess the air quality within their area of responsibility. This review and assessment process is the basis of Local Air Quality Management (LAQM). It is intended to compare current and future concentrations of key air pollutants against the objectives detailed in the regulations as part of the national strategy for air quality.
- 1.3 In accordance with the LAQM requirements the APR considers monitoring data available since the last round of review and assessment, as well as assessing the impact from various potential sources of pollution, such as any major new developments.
- 1.4 Previous rounds of the LAQM review and assessment process have seen Glasgow declare Air Quality Management Areas (AQMA). A local authority is required by law to declare an AQMA where air quality objectives are not being met. In Glasgow's case these have been due to elevated levels of the air pollutants nitrogen dioxide (NO₂) and particulate matter (PM₁₀).
- 1.5 The main source of air pollution produced within the city itself is road traffic. Airborne particulate matter is more heavily influenced by non-local effects, such as prevailing wind conditions, over which the city has no control, which can blow in pollutants from elsewhere and indeed from as far away as the Continent. Nitrogen dioxide, however, is more directly attributable to traffic volume and engine type – and in particular to diesel engines, which emit comparatively more nitrogen dioxide than petrol engines.
- 1.6 To date the city has declared four AQMAs, as follows:
 - City Centre (NO₂ and PM₁₀) – declared in 2002.
 - Parkhead Cross (NO₂) – declared in 2007 and revoked in 2020.
 - Byres Road/ Dumbarton Road (NO₂ and PM₁₀) – declared in 2007. Amended in 2020 to remove PM₁₀
 - City-wide (PM₁₀) – declared in 2012 and revoked in 2016.

2 Actions to Improve Air Quality

- 2.1 In response to the implementation of the AQMAs in the city, Glasgow City Council produced Air Quality Action Plans (AQAP) in 2004 and 2009 introducing a range of measures aimed at reducing pollution in the city. The Action Plan considers several measures such as vehicle idling enforcement, vehicle emission testing and initiatives towards cleaner vehicles. Other measures such as a Council workplace travel plan and city car club continue to evolve. Work will commence on a revised Air Quality Action Plan later in 2020.

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- 2.2 A table outlining progress of the Air Quality Action Plan measures which have progressed in 2019 can be found in Table 2.2 of the APR. A summary of the current AQAP is also shown in Appendix D of the APR.
- 2.3 As a result of these combined measures, the Citywide AQMA for PM₁₀ was revoked in 2016 and the Parkhead Cross AQMA for NO₂ was revoked in 2020 following a prolonged period of achieving the relevant air quality objectives. The Byres Rd / Dumbarton Rd AQMA was amended in 2020 to remove the PM₁₀ component. These developments are tangible evidence that improvements in air quality continue to be achieved within Glasgow.

3. Annual Progress Report

- 3.1 Glasgow continues to have good air quality, with the majority of the city meeting all air quality targets. Air quality is a devolved matter and the Council therefore works to measure and achieve hourly, daily and annual maximum levels on pollutants which have been established by the Scottish Government.
- 3.2 The two main pollutants of concern can be summarised as follows:

- Particulate Matter (PM₁₀)

Levels of PM₁₀ recorded across the city in 2019 were satisfactory with both the daily mean and annual mean objectives being met at all monitoring locations. It should be noted that the Scottish objective for this pollutant is set at just under half that of the UK and EU limits. The city is therefore doing relatively well in this area.

- Nitrogen Dioxide (NO₂)

Levels of NO₂ in 2019, while generally improving (see figure 1 below), remained unsatisfactory in parts of the city centre. During 2019, Glasgow City Council measured concentrations of NO₂ above the annual mean objective at one automatic monitoring station within the existing City Centre AQMA and at several locations, measured by diffusion tube, also within the City Centre AQMA. It is worthy of note that the number of diffusion tube exceedences (6) showed a continued reduction from the previous year 2018 (7).

The NO₂ Hourly Mean Objective was not exceeded at any of the automatic monitoring stations.

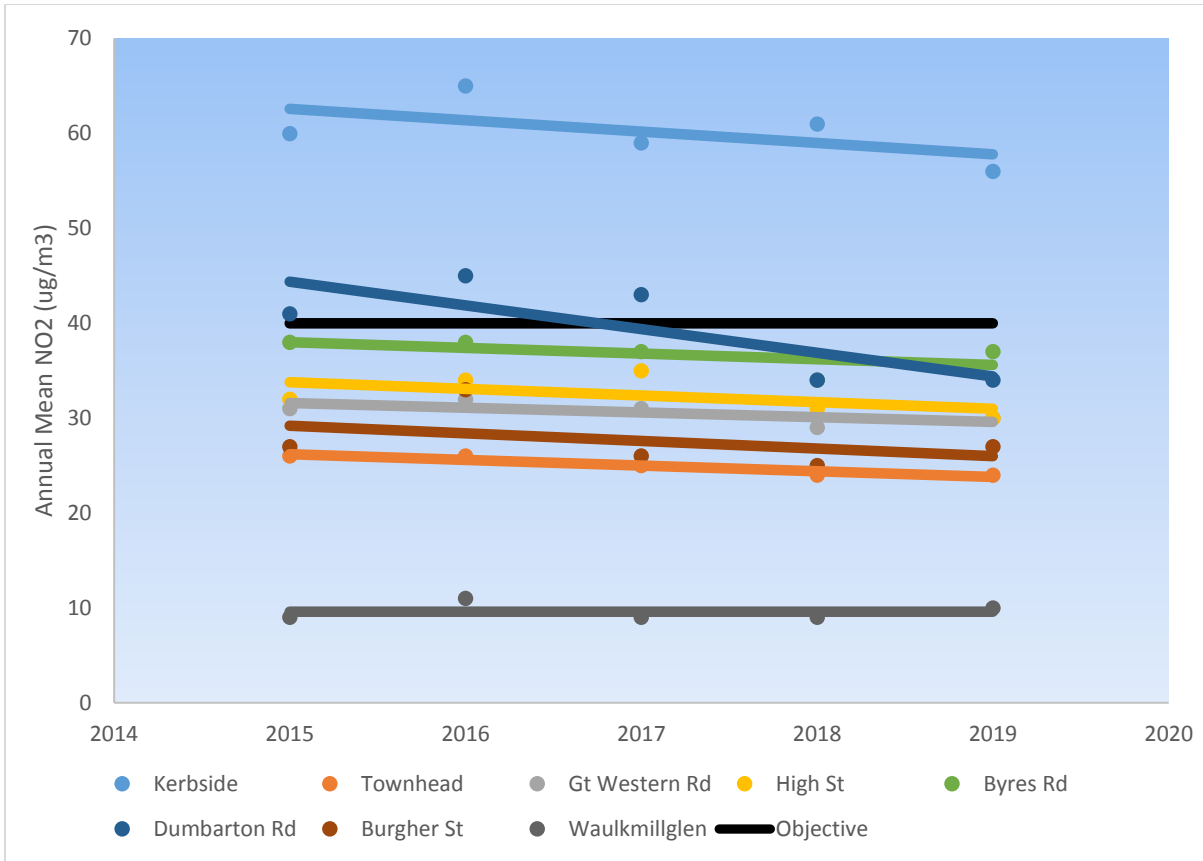


Figure 1: Trends in Annual Mean NO₂ at automatic monitoring stations

3.3 The smaller particle fraction, PM_{2.5}, is also measured at multiple locations across Glasgow. No exceedances of the annual mean objective were recorded in 2019.

3.4 Benzene (C₆H₆) levels are measured at four locations across Glasgow. Levels of this pollutant remain significantly below the relevant objective.

4. Conclusions of the Annual Progress Report

4.1 Air quality in Glasgow continues to improve, with the vast majority of the city meeting all air quality targets. However, there remain areas of the city centre where the canyon effect of the built environment (high rise buildings on narrow streets), combined with the volume of predominantly diesel powered traffic, results in unsatisfactory air quality.

4.2 The APR concluded that no further revocations or amendments were required to the Glasgow AQMAs.

4.3 Work will continue on AQAP actions and work will commence on the production of a new AQAP later this year.

4.4 Actions to improve air quality, and monitoring of pollutant levels, will continue with results published in next year's APR. The impact of the Covid-19 lockdown and recovery and the resultant dramatic effects on traffic and pollution levels

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falls outwith the scope of this APR. Ongoing analysis of the covid-19 impact has been conducted in partnership with Transport Scotland and SEPA and will form part of the 2021 APR.

- 4.5 The APR is subject to independent appraisal and review. On the basis of this, and discussion with the Scottish Environment Protection Agency (SEPA), the Scottish Government has accepted the conclusions of the report for all pollutants.

5 Background on Glasgow's Low Emission Zone (LEZ)

- 5.1 At its meeting on [28 September 2017](#), the City Administration Committee (CAC) agreed to a set of proposals for introducing the LEZ and identified key milestones in Glasgow's journey towards this goal. Since that date, the Environment, Sustainability and Carbon Reduction City Policy Committee has considered updates on the progress of the LEZ detailing the introduction of phase 1 of the LEZ (presented on [20 March 2018](#)) and progress in the development of phase 2 (presented on [11 June 2019](#)).
- 5.2 The LEZ is an intervention directed at protecting and improving public health. This is set in a context where the harmful effects of poor air quality have become a significant global concern, particularly for urban policy. It is also part of a broader approach to enhancing the amenity and attractiveness of the city centre through cleaner air.
- 5.3 The LEZ is intended to accelerate the pace of improvement in Glasgow's air quality and in particular to ensure that air quality levels in the city centre cease to breach EU limits and Scottish objectives for NO₂. The principal cause of emissions and resulting air pollution in the city is road traffic and detailed analysis of air pollution in the city centre has been undertaken to determine source apportionment. This identified that, on the streets with the highest level of pollution, buses (60-75%) and other diesel engine vehicles are the main source of pollution. The initial proposal for Glasgow's LEZ was therefore to improve emissions from the bus fleet in phase 1, with other vehicle types being included within the LEZ in phase 2.
- 5.4 Source apportionment led to authorisation of phase 1 of the LEZ . This was approved subject to the following schedule requiring annual improvements to the bus fleet entering the Low Emission Zone
- 20% of all bus journeys are compliant with a Euro VI standard by the end of 2018
 - 40% of all bus journeys are compliant with a Euro VI standard by the end of 2019
 - 60% of all bus journeys are compliant with a Euro VI standard by the end of 2020.
 - 80% of all bus journeys are compliant with a Euro VI standard by the end of 2021.
 - leading to 100% of all bus journeys through the city centre being by vehicles with Euro VI engines or better by the end of 2022.

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Phase 1 of the LEZ was enacted by the Council through the submission of requests to the Traffic Commissioner to apply Traffic Regulation Conditions (TRC) to the licenses of the operators. To date two requests for TRCs have been submitted and approved. The TRC currently requires that a minimum of 40% of all bus journeys are compliant with the Euro VI standard. The latest figures obtained by SEPA show that 43% of journeys through the LEZ now meet this standard.

- 5.5 Phase 2 of the LEZ is dependant on LEZ legislation within the Transport (Scotland) Act which received Royal Assent on 15 November 2019. Part 2 of the Act conferred new powers on local authorities in relation to the creation, and civil enforcement, of LEZs. The Act allows Scottish Ministers to set out much of the necessary substantive and procedural detail of the regime by way of Regulations.

6. Low Emission Zone Progress

- 6.1 Despite disruption caused by the Covid-19 pandemic and subsequent lockdown, stakeholder engagement has remained an important element in developing Glasgow's plans for phase 2 of the LEZ. To date this engagement has included:

- Public consultation on aspects of the Glasgow LEZ proposals (discussed in section 7).
- Stakeholder information events.
- Engagement with neighbouring local authorities.
- Presentation and discussion with Community Councils.
- Presentation and discussion with Strathclyde Passenger Transport's Regional Transport Group.
- Presentation to the Accenture Electric Vehicle Forum. Held virtually due to lockdown.

- 6.2 Glasgow City Council provided a detailed response to the Transport Scotland consultation on Regulations and Guidance which ran until 24 February. This consultation sought opinions on technical issues that underpin the operation and delivery of LEZs. These technical issues include the substantive issue of emission standards, exemptions and penalty charges. This consultation will be used by Transport Scotland to shape the Regulations which will apply to Scotland's LEZs and the Guidance which will help Local Authorities to form their LEZs.

- 6.3 Transport modelling was undertaken on two boundary options for phase 2 of the LEZ, and this has been used to further inform the air quality modelling of LEZ impacts. It is of note that further modelling will be required due to the uncertainty around Covid-19 recovery and potential impacts on transport flow.

- 6.4 A range of LEZ Public Transport Projects have also been completed with the help of LEZ grant funding. These include the expansion of the Nextbike cycle hire scheme, the complete electrification of the car club vehicles in the city

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centre, optimisation of traffic measurement loops and improvements in traffic signal infrastructure.

- 6.5 The Council has also secured funding for the promotion of action on Clean Air Day. This has been postponed from 25 June 2020 to 8 October 2020 due to Covid-19 and will include an emphasis on online and educational activities.

7 LEZ Public Consultation Summary

- 7.1 The Council undertook an online consultation on the proposals for Phase 2 of Glasgow's LEZ, which ran from 17th February to 29th March 2020. Comment was invited on specific issues including proposed boundary options, emission standards, vehicle types, grace periods and any unintended consequences.
- 7.2 This consultation received 973 online respondents. In addition, more detailed qualitative findings were invited from key city stakeholders at a consultation workshop hosted by the Council on 10 March 2020. Review and analysis has been undertaken on all of these responses, and this analysis report can be viewed in full in Appendix A
- 7.3 Responses were generally supportive of the use of LEZs to improve air quality with 68% supporting them in principle. This was backed up by 62% of respondents who supported the principle of an LEZ in Glasgow. Those respondents who did not support a Glasgow LEZ generally cited issues such as inadequate public transport, adverse effects on business and individuals and number of vehicles remaining on the road as their main reasons for doing so.
- 7.4 Two alternative boundary options were presented for the Glasgow LEZ phase 2, Option A, the slightly larger of the two (and encompassing High St, Clyde St and the Broomielaw) was the most popular. Although neither option achieved majority support. In summary Option A received 37% support, and Option B received 21% support. A map showing the boundary options is shown in Appendix A, section 3.3.
- 7.5 Respondents provided a generally favourable view on the proposed emission standards and vehicle categories, 43% agreeing against 36% disagreeing. Those who disagreed cited thoughts on the emissions standards not being sufficiently stringent, differing thoughts on specific vehicle types/ categories to be included, potential financial hardship, or being opposed to the LEZ in principle.
- 7.6 Responses regarding the proposed grace periods for enforcement of the LEZ were mixed. For buses around a third of responses agreed this was 'about right', with another quarter stating 'too long'. For all other vehicles and resident's vehicles the grace period was considered 'too short' at 33% and 34% respectively, with around a quarter for each citing 'about right'. Business owners were most likely to state 'too short' for all categories.
- 7.7 The LEZ will include national exemptions which were generally supported by respondents. 66% of those surveyed would like to see emergency vehicles

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exempt and nearly 50% wish to see vehicles for disabled persons exempt from the LEZ.

Local exemptions can be decided by each LEZ Local Authority on a temporary basis, and these suggestions were also considered in the consultation. The four most favourable temporary exemptions, were:

- community transport vehicles (37%)
- accident/breakdown recovery vehicles (33%)
- refuse collection vehicles (31%)
- hearses (31%)

Following this, the next most frequently mentioned are:

- out of hours shift workers (24%)
- specialist vehicles (24%)
- health service vehicles (24%)
- low frequency travel vehicles (23%)
- wedding vehicles (21%)

7.8 Assuming Glasgow's LEZ is implemented as proposed, respondents were asked what, if anything, they would do differently as a result of the proposed LEZ.

Responses included:

- A quarter of respondents say their vehicle would comply, so would do nothing.
- Business owners' most frequently mentioned using taxis/private hire cars more, with 22% stating this. Otherwise residents mentioned they would walk more (28%)
- Those who work, study or visit the city centre for leisure would use public transport more (18%, 32% and 25% respectively).

It is of note that public transport features as a frequently mentioned course of action, previous responses indicate that public transport provision is potentially inadequate for the task. It should also be noted that there was no clear majority in this response suggesting there is not an 'obvious' response for those whose vehicles would not comply.

7.9 The end of the online public consultation coincided with the Covid-19 crisis lockdown. Some stakeholder groups, notably the Glasgow Chamber of Commerce, declined to comment on behalf of members, stating their entire focus was on the developing covid-19 emergency and lockdown implications at that time. A further period of statutory public consultation on the final LEZ scheme will be available in 2021, which will assist to accommodate these challenges and allow another opportunity for views to be expressed.

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Other stakeholders felt that a written submission more tailored towards their specific interests was appropriate. These will also be considered in the shaping of the final LEZ scheme.

7.10 All of the consultation responses will serve to inform the final LEZ scheme design.

8 Low Emission Zone Pause and New Indicative Timescale

8.1 On 7 May 2020 the LEZ Leadership Group announced a temporary pause in plans to implement low emission zones in Scotland in response to the Covid-19 outbreak. At a subsequent meeting on 6 August 2020, plans were formally resumed. A new indicative timescale was presented for the LEZs across Scotland that aims to see them introduced between February and May 2022.

8.2 The announcement was accompanied by a more detailed indicative LEZ introduction timetable shown in Table 1 below:

Date	Action
August to mid October 2020	Policy instruction development with SGLD, taking into account COVID-19 related issues and responses Public consultation on Regulations requiring affirmative instruments covering emission standards, penalty charges and exemptions.
August to early October 2020	Impact Assessments completed by Transport Scotland on Regs (to inform policy instructions)
December to mid-January 2021	Regulation text checked and agreed between Transport Scotland and SGLD Finalise and publish LEZ Guidance
22 January 2021	Affirmative Regulations laid in Scottish Parliament subject to (1) engagement with, and support from, the Parliament and Legislation Unit followed by (2) subsequent agreement with the Minister for Parliamentary Business and Veterans in tandem with the Cabinet Secretary to support Parliamentary passage of the LEZ SSI's.
Late May 2021	All LEZ Regulations come into force LEZ plans to be scrutinised by Local Authority committees (prior to their summer recess) in order to clear them for public consultation
June to August 2021	Public consultation by local authorities on final LEZ plans
September to November 2021	Consultation data analysis with final changes to LEZ plans based on consultation feedback
December 2021 to January 2022	LEZ plans to be scrutinised then approved (if appropriate) by Local Authority committees followed by... LEZ plans to be reviewed then approved (if appropriate) by Scottish Ministers

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February 2022	LEZ's introduced by February 2022 within window out to May 2022.
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Table 1: LEZ Introduction Timetable

Due to the unprecedented impact of the COVID-19 outbreak, both now and in the future, the above is not a finalised timetable for introduction. It is a commitment by all partners to work as quickly as they can to introduce LEZs at the earliest juncture.

- 8.3 The indicative timescale stated in Table 1 remains ambitious. All parties will work to meet the individual milestones contained within this national timeframe and introduce LEZs between February and May of 2022.
- 8.4 At the scrutiny and approval stage, Local Authority Committees or Ministers may choose, to refer an LEZ scheme for formal Examination. Should this occur, an Examination process could add in the region of six additional months to the timescale of LEZ scheme introduction.
- 8.5 One key consequence of the new indicative timescale is that it will no longer be possible for Glasgow's LEZ phase 2 enforcement to commence on the previously publicised date of 31 December 2022.
- 8.6 The Transport (Scotland) Act 2019 requires that a mandatory minimum grace period of one year is required between LEZ scheme introduction and enforcement beginning. Therefore the new indicative timescale will result in enforcement of an LEZ in Scotland not being possible until February to May of 2023. Should an LEZ scheme be referred for Examination a significant further delay in the start of enforcement may be required.
- 8.7 LEZ enforcement in Scotland will be undertaken through the use of Fixed Penalty Notices (FPN). The appeal process for an FPN will require the creation of a First-tier Tribunal in the Scottish Courts and Tribunal Service.
- 8.8 New Regulations (outwith the LEZ Regulations) will be required to deliver the First-tier Tribunal. It is likely such Regulations may not be delivered until early to mid-2023. The LEZ appeal process is critical for LEZ scheme enforcement to start (e.g. schemes cannot issue penalties until the appeals process is established). This is a critical part of the pathway and will have an impact on the timeframe for delivery.
- 8.9 Phase 1 of the Glasgow LEZ has also been affected by the Covid-19 situation. The Traffic Commissioner announced that there would be no capacity within her office to consider TRC applications for the rest of 2020 due to the Covid-19 pandemic. Glasgow was reliant on this to achieve the next step in the phase 1 LEZ schedule (relating to 60% vehicle trip compliance by bus operators). This will no longer be possible.
- 8.10 However, a positive response from operators to this year's Bus Emissions Abatement and Retrofit (BEAR) funding saw £9.75M awarded and the fund over-subscribed. It is anticipated that a significant number of vehicles will be

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brought up to the relevant standard. GCC will continue to work with the bus companies, SEPA and TS to maximise the benefits of the existing fleet and retrofitted vehicles. While a TRC requiring 60% compliance may not be feasible, it is hoped that this level of compliance, or higher, can be achieved in practice through this collaborative approach. However, factors such as the timetable for vehicle retrofits to be carried out, operator route choices and Covid-19 related uncertainties may impact on the delivery timetable for achieving these compliance levels.

9. Low Emission Zone - Future Actions

- 9.1 The City Council will continue to work with partner organisations to progress those actions which will inform the finalised LEZ scheme. This includes transport and air quality modelling and integrated impact assessments.
- 9.2 The City Council will work to meet the milestones contained within the national indicative timescale. This will require the proposed LEZ scheme being submitted to Committee for public consultation approval in May 2021.
- 9.3 The City Council will further examine the implications of the national indicative timescale and fixed penalty notice regulations, and any impact on the timescale for LEZ enforcement. Revised proposals for enforcement action dates will be submitted for Committee approval at the earliest opportunity. However, due to the indicative timescale and other legislative factors, enforcement will not be before May 2023.

10 Policy and Resource Implications

Resource Implications:

Financial: Grant funding for air quality monitoring and action plan measures is provided by the Scottish Government.

Grant funding for LEZ projects is provided by the Scottish Government and administered by Transport Scotland.

Legal: Progress of the LEZ scheme is dependent on the production of Regulations in relation to the relevant parts of the Transport (Scotland) Act 2019 and Regulations in relation to fixed penalty notices.

Personnel: The above actions will be undertaken using existing staff resources, partner organisations and consultant support.

Procurement
: Procurement will be undertaken in respect of LEZ projects such as provision of Integrated Impact Assessments.

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Council Strategic Plan:

The recommendations of this report support the following Strategic Plan themes:

- A Vibrant City
- A Healthier City
- A Sustainable and Low Carbon City

The following Strategic Plan outcomes are supported:

- Glaswegians are active and healthier
- Glasgow is healthier
- The city is clean and public spaces are well maintained

The following Strategic Plan Priority is supported:

61. Develop options for the city to introduce Scotland's first low emission zone and work with partners on the introduction of a cleaner fleet of buses and cars – including electric.

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2017-22

Generally supportive of the stated outcomes.

What are the potential equality impacts as a result of this report?

The LEZ is aimed at protecting the health of some of Glasgow's most vulnerable residents. An EQIA screening of the first phase of the LEZ has been undertaken - <https://www.glasgow.gov.uk/CHttpHandler.ashx?id=45428&p=0>

A further EQIA for phase 2 of the LEZ will be undertaken as part of the Integrated Impact Assessment.

Poor air quality differentially impacts on residents with prior health conditions and improvements in air quality should therefore provide benefits.

Please highlight if the

Socio-economic impacts will be considered as part of the Integrated Impact Assessment being undertaken for phase 2 of the LEZ.

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policy/proposal will help address socio economic disadvantage.

Sustainability Impacts:

Environment al: Action to improve air quality supports the Council Plan's key objectives to create a cleaner, more sustainable city and to improve health and wellbeing in Glasgow.

Social, including opportunities under Article 20 of the European Public Procurement Directive: N/A

Economic: Improvements in air quality can help to create a better quality of life and thereby support a more attractive place in which to invest.

Privacy and Data Protection impacts: This report has no immediate impacts upon privacy or data protection. However, data collection as part of LEZ enforcement will be fully considered for compliance with relevant legislation and procedures.

11 Recommendations

11.1 It is recommended that the Committee notes:

- (a) The content of this report on air quality in the city.
- (b) The progress being made in establishing Glasgow's Low Emission Zone.
- (c) The indicative revised timescale for the introduction of Low Emission Zones in the four Scottish cities.
- (d) The intention to return to Committee at the earliest opportunity for approval of a revised timescale for Low Emission Zone enforcement.
- (e) The intention to return to Committee in May 2021 for approval of a finalised Low Emission Zone scheme to proceed to public consultation.

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APPENDIX A: Low Emission Zone Consultation – Summary of Findings

Glasgow City Council (GCC)
Low Emissions Zone (LEZ) Consultation
Summary of findings

Prepared for:
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April 2020

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Executive summary

- Glasgow City Council (GCC) designed and ran a consultation from 17th February to 29th March 2020 regarding the proposed Low Emission Zone (LEZ). GCC invited comment on two proposed boundary options, emission standards, vehicle types, grace periods and any unintended consequences. Scott Porter Research have reviewed and summarised the findings.
- Overall, findings are consistent across the general public and stakeholders, with of course associated detailed examples used to illustrate each specific audience's viewpoint.
- Findings show that there is support for LEZs in principle and the Glasgow LEZ specifically: 68% support LEZs and 62% support Glasgow's LEZ.
- Those who do not support the LEZ primarily give reasons that relate to the perceived negative consequences that may occur as a result, including:
 - potential inadequacies of public transport in and around Glasgow
 - adverse effect on businesses in/travelling to/through the city centre
 - adverse effects on individuals living/working in and using the city centre.
- Boundary Option A receives most positive comment, being chosen as it is the widest area, encompasses the busiest, periphery roads, therefore providing maximum benefit. Option B is chosen by those who feel access to these roads is needed, also as a by-pass, and to allow closer city centre access or drop off.
- Agreement with the emission standards is quite mediocre at 43%, although generally the mix of vehicle types to be included in the LEZ is accepted.
- Agreement with grace periods is evenly mixed between 'just right' and 'too short', however those supporting the LEZ are more likely to say 'just right', those not in favour and businesses to say they are 'too short', for buses, all vehicles and residents vehicles.
- In terms of the Scottish Government's proposed exemptions there is a clear bias towards assistance, with emergency vehicles and vehicles for disabled persons the top choices for exemption. Suggestions for temporary exemption tend to follow this, with most mention for: community transport vehicles, accident/breakdown recovery vehicles, refuse collection vehicles and hearses.
- As a result of the LEZ 25% would do nothing, their vehicle complies, but the 5 actions most mentioned otherwise are: 21% use public transport more; 16% walk more; 12% cycle more; 12% change route; and 11% upgrade vehicle.
- 53% see unintended consequences, and nearly all are negative (94%) across 4 main areas:
 - Businesses: reduced/lost business and increased costs (29%)
 - the city centre: reduced footfall for locals/visitors, loss of retail/shopping, leisure and other amenities (29%)
 - people: costs for vehicles, public transport, loss of livelihood, reduced/limited access to the city centre, potential safety issues (15%)
 - general negatives: moving pollution, traffic and parking issues to other areas, outrage and confusion, potential non-compliance (16%).

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1. Background to this report

1.1 The consultation and Scott Porter's role

Glasgow City Council (GCC) has completed a consultation exercise to understand public and stakeholder views on its proposals for the Low Emission Zone (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 Glasgow. Scott Porter Research and 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 is primarily based on data from the online survey which had 992 responses. Of these responses 19 respondents only completed the first three initial questions and did not respond to any of the pertinent questions regarding the LEZ and it was therefore decided that they would be removed from the data analysis, giving **a total of 973 responses included in the final sample**. The questionnaire was designed, scripted and hosted online by GCC and the survey was live from 17th February until 29th March 2020.

In addition to the online survey, qualitative findings (thoughts and views) are included from a stakeholder workshop with 24 participants hosted by GGC on 10th March 2020. The opinions given were summarised from notes taken at the event and passed to the researchers at Scott Porter to include in the analysis.

1.3 Analysis process and data protection

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

- analysis requirements were discussed in a briefing call between GCC and Scott Porter and 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
- analysis of the qualitative responses was completed by the researchers who:
 - read the open responses to gain an overall sense and pull out main themes
 - drew up code frames for open-ended responses from a proportion of the responses and used these to code and tabulate the remainder
 - reviewed the data by sub-sample groups (e.g. those who support LEZs) to understand if there were any specific issues to consider
- the full data set was then cleaned, 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
- qualitative review was also undertaken of the notes taken at the workshop.

The analysis of the findings included a review of the support for and views of:

- the LEZ and the two options as described in the survey
- the emission standards proposed
- the vehicles types which should be included and excluded
- the grace periods for various vehicles types
- the potential unintended consequences that may arise from the LEZ.

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 GCC in a format that complies with GDPR and GCC

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policies. The online survey data was anonymised by GCC prior to analysis with 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, disability, ethnicity could not be traced back to an individual).

1.4 Limitations to the findings

It should first be noted that the online consultation coincided with the initial weeks of the Coronavirus outbreak and closed after the main UK lockdown came into force on Tuesday 24th March 2020 and as such this may have impacted on the number of people responding to the survey as the general public's focus will have, of course, been primarily on the crisis unfolding across Scotland.

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

The online survey was generally not designed to prompt someone to respond before they could move on. Whilst this allows the respondent to complete the survey as they will, it also means that there are a proportion of 'not answered' responses for each question. As tends to be the case with surveys of this kind the number of 'not answered' responses increases as the survey progresses. The data has been analysed taking these into account. For the sake of consistency, the main sample sizes used and cited are those for the total number of surveys analysed, therefore including 'not answered'. The sample sizes for each question state whether they are of the total (including 'not answered') or if they have also been re-calculated to remove these responses out of the figures, as may be appropriate for the analysis of the question.

With regards to the workshop data supplied for review it should be noted that feedback was somewhat limited in its scope and depth. The notes made in this summary report are informed by the notes recorded and passed on from GGC to Scott Porter. As such there may be specific, individual details or issues that were discussed but are not mentioned here.

Having said this, the responses to the consultation would suggest those taking part did feel able to give their responses generally, so in terms of the consultation process the authors have just a couple of suggestions to consider for future consultations to aim to enhance the quality of the data:

- adding an instruction at the start of the online survey and again at each open response to ask people to be specific in their response and address only the topic of the question (in the knowledge that sufficient open responses are available for participants to be able to elucidate their thoughts on each individual aspect of the consultation – for example, boundary options, emission standards, vehicle types, overall views of an LEZ, etc.)
- using a more robust method to save and summarise findings from workshop sessions, such as making audio recordings and transcribing these fully for analysis, thereby helping ensure that attendees' views are recorded in complete form and given full note.

2. Authors' thoughts on the findings

On reviewing the findings, it can be seen that, not surprisingly, responses tend to reflect each person's situation and their background views on environmental issues. Alongside this is the fact that self-completion formats, such as online surveys used for public consultation, tend to be completed by those with an interest in getting their view across, and often by those who do not support an issue. This is likely to mean it is probable those who do support the LEZ may not have felt the need to complete the online survey and this can, of course, colour the tone of the findings, giving a potential unknown bias towards the negative, and this must be taken into account when interpreting the findings.

In terms of the respondents who did take part in the consultation:

- there is wide coverage from across Glasgow city and surrounds
- there is also a wide representation of audiences, from the general public to the different stakeholder groups who took time to attend the workshop
- there is a good mix of demographics for the general public online survey in terms of age and gender, albeit with a more male bias
- and across the sample users of a variety of different modes of private and public transport are represented.

All of the above, and a total sample size of 973 usable responses suggests the data from the consultation can be taken as a robust view from in and around Glasgow (alongside the mentioned caveats about self-completion methods).

Looking at the data as a whole it appears that there is overall somewhat more support for, than against, LEZs in principle and the Glasgow LEZ specifically. The reasons cited by those NOT in support of the LEZ are not necessarily about the background environmental issue per se, and good air quality and less pollution would appear to be seen as a positive. Comments made against supporting the LEZ instead relate to the perceived negative consequences that may occur as a result and in particular to:

- the perceived inadequacies of the public transport system in and around Glasgow and how the public transport system itself might possibly be affected by the LEZ – for example the feasibility of changing to and using public transport in terms of its availability, the time it takes and overall cost
- the adverse effect it could potentially have on businesses based in and travelling to and through the city centre – for example less footfall for city centre businesses and the costs associated with upgrading vehicles to comply
- the adverse effects on individuals, in terms of using the city centre and also for those who live and work there – for example being able to access the city centre to shop, for leisure activities (particularly in the evening), the ability to work across all shift patterns and the associated costs of any changes.

These thoughts are mirrored across the general public and stakeholders, who also emphasise a little more the need for a clear and targeted communications campaign to accompany any change. Indeed, it would seem prudent that all the issues raised should be considered, and any appropriate mitigating responses put in place and communicated to all in order to help allay and counteract the potential issues raised.

3. Main findings

This section details the main findings from the consultation.

The findings shown are primarily from the online survey (sections 3.1 to 3.8) with a section following these (section 3.9) that specifically highlights the thoughts from the workshop participants.

The main findings therefore start with the background of those who took part in the online survey and then reviews the main areas detailed in the survey: support for LEZs; proposed options; emission standards; vehicle inclusions and exclusions; grace periods; and potential unintended consequences that may arise from the LEZ.

The online survey questionnaire, which also formed the areas of enquiry for the workshop, can be seen in the Appendix of the report and the full data tables for all the questions in the online survey can be found in a separate PDF document.

The following definitions should be noted when reviewing findings:

- 'not answered' indicates the question was left blank on the online survey and no response was given
- a number with a percent sign, e.g. 6%, indicates the percentage of responses, numbers in a bracket, e.g. (6), indicates the actual, absolute, number of responses
- '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
- 'dk' indicates a 'don't know' response
- 'nfs' is a generic response that has been 'not further specified'
- figures are rounded up to the next percentage, i.e. when x.5% and above.

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3.1 Respondent background

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

3.1.1 Use of Glasgow city centre

As mentioned previously a total of 973 respondents completed the online survey sufficiently for meaningful analysis. As can be seen in Table 1 below, 8% (75) state they are city centre residents, 54% that they work in the city centre, 65% visit for shopping/leisure, 4% (37) say they own a business within the city centre and 6% (57) state they study in the city centre. The majority of respondents therefore are travelling in and out of the city for work or shopping/leisure, rather than being city centre residents.

Table 1: Resident / Work / Leisure

	Total n=973
City centre resident	8%
Work in city centre	54%
Visit city centre for shopping/leisure	65%
Own a business in city centre	4%
Study in city centre	6%
Not answered	1%

Source: Q1. Which of the following describe your use of Glasgow city centre (tick all that apply)? (multi code)

3.1.2 Frequency of visiting/using Glasgow city centre

In terms of how often people visit Glasgow city centre the responses match their stated use of the city centre with 24% stating they visit/use the city centre every day, 38% between 3 and 6 times a week, with a further 22% once or twice a week. Only 15% say they visit once a month or less. (Table 2).

Table 2: Frequency of visiting/using Glasgow city centre

	Total n=973
Every day	24%
5-6 times a week	22%
3-4 times a week	16%
1-2 times a week	22%
Once a month	11%
Rarely/occasionally	4%
Not answered	1%

Source: Q2. How often do you visit/use Glasgow city centre? (single code)

3.1.3 Online survey: Postcode

According to postcodes, respondents come primarily from the Glasgow city postcodes outwith the LEZ (48%) and the rest of Scotland, primarily including areas near to Glasgow (23%). 7% (68) give G1, G2 or G3 postcodes, in other words from within the LEZ (Table 3 overleaf).

Removing the 22% who did not answer the question it can be seen that of the 757 who did respond 9% are within the LEZ, 62% within the Glasgow city boundary and 29% within the rest of Scotland.

Table 3: Postcode

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	Total n=973	%
Glasgow, within LEZ = any G1, G2, G3 postcodes	68	7%
Glasgow city council boundary postcodes outwith LEZ = other G postcodes, excluding those below in Rest of Scotland	469	48%
Rest of Scotland = G60, G61, G62, G63, G64, G65, G66, G67, G68, G72, G73, G74, G75, G77, G78, G81, G82, G83, G84 and other Scotland postcodes	219	23%
Rest of UK	1	0%
Not answered	216	22%

Source: Q17. Postcode (single code)

3.1.4 Demographics – age, gender, disability, ethnicity

The demographics of the online survey respondents show the following:

- An even mix in age of those under and over 45 years old (Q18):
 - 38% under 45 years old – under 25: 3%, 25-34: 14%, 35-44: 21%
 - 39% over 45 years – 45-54: 19%, 55-64: 15%, 65+: 5%
 - 3% would not like to say
 - 20% not answered.

- More male than female respondents (Q19):
 - 48% male
 - 27% female
 - 0% (1) in another way
 - 4% would not like to say
 - 20% not answered.

- 8% state they have a long term illness, health problem or disability which limits daily activity or the work they can do (Q20):
 - 4% yes, mobility
 - 4% yes, other
 - 66% no
 - 1% don't know/no opinion
 - 5% would not like to say
 - 20% not answered.

- An ethnic mix with a majority of Scottish respondents (Q21):
 - 57% Scottish
 - 20% British
 - 3% (34) other white background
 - 1% each for: Irish (12), mixed background (6)
 - 0% each for: British Indian/Indian (1), British Pakistani/Pakistan (3)
British Bangladeshi/Bangladeshi (1), British African/African (2), Chinese (2)
 - 4% would not like to say
 - 21% not answered.

3.1.5 Use of transport and when travel in the city centre

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Respondents were asked about their usual forms of transport to travel to or within the city centre. Firstly, looking overall at what modes of transport are used at all, the figures show that cars, trains, walking and taxis lead the way, for all sample groups, but that cars receive most mention overall at 77% (Table 4).

Table 4: Modes of transport used to travel to or within the city centre – any use

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Car	77%	73%	78%	80%	65%	79%
Train	68%	80%	68%	74%	54%	79%
Walk	59%	89%	59%	61%	57%	74%
Taxi/private hire car	53%	67%	59%	52%	65%	54%
Bus or coach	46%	49%	45%	50%	35%	53%
Cycle	22%	48%	22%	24%	19%	32%
Light goods vehicle	6%	9%	5%	5%	14%	5%
Motorbike	4%	5%	4%	4%	-	2%
Heavy goods vehicle	1%	-	1%	1%	5%	2%
None/not answered	1%	3%	1%	1%	-	-

Source: Q3. How often do you use each of these forms of transport to travel to or within Glasgow city centre? (single code for each mode)

Looking at this by the frequency the mode of transport is used (Table 5 below) shows some modes are used more regularly than others.

Not surprisingly Residents tend to say they walk the most frequently – 67% walk ‘every day’ compared to Business owners 38%, those Studying 30%, those who Work in the centre 25%, and those visiting for Leisure 15%.

On the other hand, most frequent use of cars at ‘every day’ is more evenly spread across the sample groups, with only those in the city centre for Leisure less likely to state this: 25% for Residents, 24% for those Working in the city centre, 22% for Business owners and 23% for those Studying in the city centre compared to 11% for those visiting for Leisure.

Table 5: Frequency of using modes of transport for city centre travel

Total n=973	<i>Never</i>	Less than once a month	At least once a month	At least once a week	Every day	Not answered
Car	16%	19%	17%	24%	17%	7%
Train	23%	25%	21%	16%	6%	9%
Walk	30%	9%	11%	20%	19%	11%
Taxi/private hire car	35%	25%	13%	4%	10%	12%
Bus or coach	43%	21%	11%	10%	4%	11%
Cycle	64%	6%	4%	6%	5%	14%
Light goods vehicle	77%	2%	1%	1%	2%	17%
Motorbike	79%	1%	1%	1%	1%	17%
Heavy goods vehicle	81%	-	0%	0%	1%	18%

Source: Q3. How often do you use each of these forms of transport to travel to or within Glasgow city centre? (single response for each mode)

3.2 Support for LEZs – in principle and in Glasgow

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3.2.1 Support for LEZs in principle

The online survey respondents were asked to state whether they support the use of Low Emission Zones (LEZs) in principle.

Results show a positive reaction in support of LEZs in principle from around two thirds of respondents:

- **68% say they support the principle of LEZs (yes)**
- 22% say they do not support LEZs (no)
- 9% don't know/no opinion
- 1% not answered.

This positive view is mirrored across the individual sample groups although overall Residents and those who Study are most in favour, whilst Business owners and those who Work in the city centre are least in favour. It should also be noted for the two groups least in favour that they are also more likely than the other sample groups to express a definite 'no' response, with 26% of those who Work in the city centre and 35% of Business owners stating 'no' they do not support LEZs (Table 6).

Looking at the findings by mode of transport it can be seen that those who cycle are significantly more likely to be in favour of LEZs than those using other modes of transport, with 91% saying they are in support of LEZs overall.

Table 6: Support for LEZs in principle

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Yes, support in principle	68%	79%	66%	72%	62%	75%
No, do not support	22%	16%	26%	19%	35%	16%
Don't know/no opinion	9%	5%	8%	9%	3%	9%
Not answered	1%	-	-	0%	-	-

Source: Q4. LEZs are used in the UK and in cities around the world to reduce air pollution and support sustainable transport. Do you support the use of LEZs in principle? (single code)

3.2.2 Support for a LEZ in Glasgow

The online survey respondents were then asked to state whether they support the use of a LEZ in Glasgow.

Results again show a generally positive reaction:

- **62% say they support a LEZ in Glasgow (yes)**
- 29% say they do not support a LEZ in Glasgow (no)
- 9% don't know/no opinion
- 1% not answered.

As for the support for LEZs in principle, the positive view from the majority of respondents overall is mirrored across the individual sample groups, but generally there is slightly less support and indeed the definite 'no' responses are more frequent as can be seen in Table 7.

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Table 7: Support for a LEZ in Glasgow

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Yes, support in principle	62%	77%	60%	64%	54%	65%
No, do not support	29%	20%	31%	27%	41%	30%
Don't know/no opinion	9%	3%	8%	9%	5%	5%
Not answered	1%	-	-	-	-	-

Source: Q5. Do you support the general principle of a Low Emission Zone in Glasgow? (single code)

Table 7 shows that whilst a similar proportion of Residents are in support of a LEZ for Glasgow as for LEZs in principle, Business owners show less support for a LEZ in Glasgow, with only 54% in support and 41% not in support. Those who Work in the city centre also show less support for a LEZ in Glasgow, with 60% in support and 31% not in support. Indeed, it can be seen in Table 7 that the number of definite 'no' responses has also increased at this point for those who visit for Leisure and those who Study in the city centre (from 19% to 27% for Leisure and from 16% to 30% for Study in the city centre).

Having said this, again, looking at mode of transport used, those who cycle are significantly more likely to be in favour of a LEZ in Glasgow than users of other modes of transport, at 92%.

In addition, those who live in the central Glasgow LEZ postcodes (G1-3) are also significantly more likely to be in favour at 79% compared to those living in the rest of Scotland at 61% (and slightly more than those who live in Glasgow non-LEZ postcodes at 67%).

Respondents who are not in support of a LEZ for Glasgow or who stated 'don't know/no opinion' were then asked to write in their reasons for this view. These open responses have been distilled and the main themes drawn together for analysis. The comments of the 366 respondents who do not support a LEZ in Glasgow can be distilled down into a few main areas of concern or issue with a LEZ in Glasgow (see also Table 8 on the page after next):

- **Inadequate public transport** (23% of mentions): Issues here surround the thought that the public transport system is not sufficient for requirements to transport more people into the city centre. Comments include worries of being able to get to work (especially outside of daytime work hours), disabled access and safety issues for those travelling later in the evening.
- **Adverse impact on business** (20% of mentions): This includes the fear of damage to businesses based within the city centre and worries for those who need to come into the centre to work.
- **Adverse effect on individuals** (16% of mentions): The main worry here is for people being able to afford to comply if they must upgrade a vehicle, as well as a worry over increased costs, for example for using public transport or other methods to get around the city, but also if service industries put up costs (e.g. repair men). There is also mention of potential adverse effects for the disabled and their ability to access to the city and its services.

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- **Vehicles still on the road** (11% of mentions): The issue stated here is that buses, HGVs and taxis are considered the worst offenders in terms of pollution, and for many, that they create the most congestion and the LEZ does not stop, or may even increase their number.
- Other issues mentioned include:
 - not needed, not an issue, emissions reducing anyway (8% of mentions)
 - simply a money making exercise for the council (8% of mentions)
 - resources within Glasgow better placed elsewhere (7% of mentions)
 - moving, not getting rid of pollution (4% of mentions).

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Table 8: Reasons for not supporting a LEZ in Glasgow

	Don't support Don't know n=366
Inadequate public transport – 23% of mentions	
Public transport isn't good enough/no suitable alternative	20%
No infrastructure to support it/electric charging points, etc.	2%
City centre dangerous/wouldn't feel safe on public transport	1%
Adverse impact on business – 20% of mentions	
Will damage business/lead to shop closures, lost revenue, etc	10%
It will drive people away/stop them visiting the city centre	5%
City centre will turn into a ghost town	2%
Unfair on taxi drivers/it will put us out of business	2%
Classic cars should be exempt	1%
Adverse effect on individuals – 16% of mentions	
Poor people adversely affected/who can't afford to upgrade	6%
People with disabilities will suffer/movement restricted, etc	4%
I won't be able to work/get to my work	2%
Will stop kids going to drama classes, etc. in the evening	2%
Will increase costs to individuals	1%
Unfair if followed govt advice/bought compliant vehicles	1%
Vehicles still on the road – 11% of mentions	
Buses are among the worst polluters	7%
Taxis are among the worst polluters	3%
HGVs are among the worst polluters	1%
Money making exercise – 8% of mentions	
Just a moneymaking scheme/a tax on motorists	6%
Just a vanity project/political stunt, etc.	1%
Council are behaving like Nazis	1%
Not needed/not an issue – 8% of mentions	
Not needed/there is no pollution problem/just scaremongering	4%
Make no difference/insignificant compared to emissions in India/China	3%
Vehicles becoming cleaner anyway/will solve the problem	1%
Resources should be placed elsewhere – 7% of mentions	
Waste of money/Council should tackle other problems instead	3%
Higher emissions will result from scrapping perfectly good cars and buying new electric ones	2%
Traffic management real problem/cars idling/held up by bus gates, etc	1%
Better to ban all cars from city centre/more pedestrian areas	1%
Moving, not getting rid of pollution – 4% of mentions	
It's just moving the problem elsewhere/to residential areas	2%
The M8 motorway runs right past it/so what is the point?	2%
Not enough time given to make change/being rushed through	2%
No consultation/our views will not be taken into account	1%
Other	5%
Don't know	33%

Source: Q6. Please give reasons for your opinion on the principle of a LEZ in Glasgow. (open response)

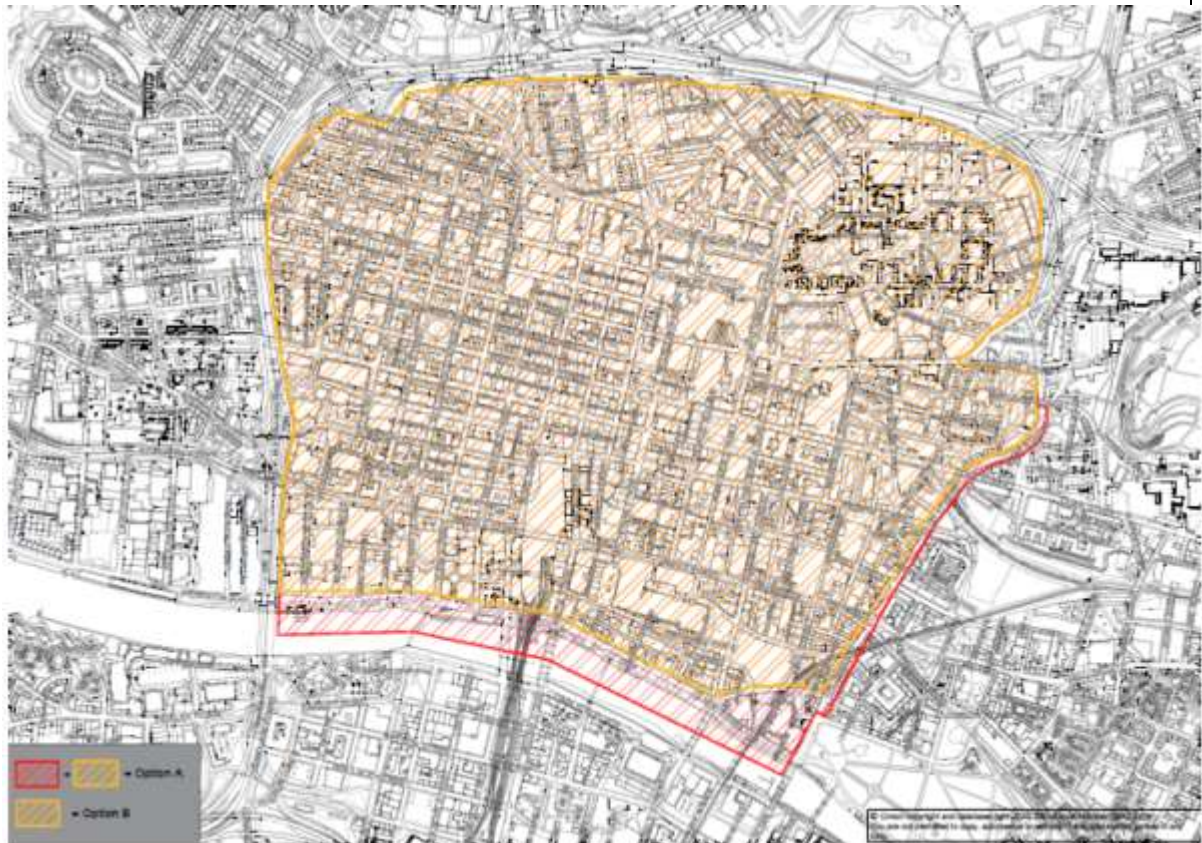
3.3 Proposed boundary options for Glasgow's LEZ

The online survey contained information about the two proposed boundary options for the Glasgow LEZ as follows, as well as providing a link to go online and view the information in more detail should a respondent wish to:

Option A covers the whole of the city centre; bounded generally by the M8 motorway to the North and West, the River Clyde to the South (including the Broomielaw and Clyde St), and Saltmarket, High St and Castle St to the east.

Option B would exclude from the area outlined in Option A; the Broomielaw, Clyde St, Saltmarket, High St and Castle St from the southern and eastern boundaries. This option would permit the use of these roads by vehicles which do not meet the LEZ entry requirements.

The proposed LEZ boundary options are shown in the map below, with Option A represented by the area coloured orange and red and Option B in the area coloured orange only.



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3.3.1 Preference for two LEZ boundary options

Based on the information given in the online survey respondents were asked to state which boundary option for the Glasgow LEZ they preferred.

Results show Option A being chosen by the largest number of respondents, albeit not by a majority, but instead just over a third of the sample:

- **37% prefer Option A for the City Centre LEZ**
- 21% prefer Option B for the City Centre LEZ
- 12% choose neither option
- 21% do not support a LEZ in Glasgow
- 9% not answered.

Looking at this again to assess the strength of feeling for the Options amongst those who actively make a choice (in other words removing those against a LEZ in principle and those who gave no response, 291 of the total 973 respondents), it can be seen that of the 682 respondents who are prepared to make the choice 53% choose Option A, 30% choose Option B and 17% choose Neither.

Both of these figures suggest that Option A (covering the whole of the city centre; bounded generally by the M8 motorway to the North and West, the River Clyde to the South, including the Broomielaw and Clyde St, and Saltmarket, High St and Castle St to the east) is the preferred option.

These figures are mirrored across the sample groups, where Option A is chosen by most in each group: Residents 48%, Leisure visitors 38%, those who Study 37% and those who Work in the city centre 36%. However, again, for the Business owners, whilst 30% of this sample group choose Option A, these respondents appear to be less in favour with 27% saying they don't support a LEZ in Glasgow (the highest proportion for all the main sample groups).

Here too those who cycle are significantly more likely than the users of other modes of transport to prefer Option A at 75%.

In addition, those who say they support the Glasgow LEZ are significantly more likely to choose Option A than those who do not and don't know (59% versus 1% and 6% respectively).

Table 9: Preferred LEZ option

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Option A	37%	48%	36%	38%	30%	37%
Option B	21%	23%	19%	22%	16%	23%
Neither option	12%	3%	15%	11%	22%	7%
Don't support LEZ	21%	16%	21%	20%	27%	21%
Not answered	9%	11%	8%	9%	5%	12%

Source: Q7. Which of the proposals for the city centre LEZ area do you prefer? (single code)

3.3.2 Reasons for preference for LEZ boundary options

All respondents were then asked to give their reasons for their preference of the LEZ boundary proposals and given space to write in their own responses. These open responses have also been distilled and the main themes drawn together for analysis. It can be seen in Table 10 overleaf that only around a third of respondents give a reason for each of the three options (A, B, or neither).

Those choosing Option A mainly feel that the zone needs to encompass the widest area, the whole city centre, in order to incorporate the busiest streets on the periphery and to gain the maximum benefit from the LEZ.

For Option B, in contrast, the primary thoughts stated for choice are to allow access to the periphery roads as they are seen as major routes across the city, as well as allowing closer access to the city centre, some stating these areas could be used as drop-off points.

Those who say neither mainly reiterate the comments made earlier about the perceived inadequacies of public transport and the worry for businesses within and using the city centre as a result of the LEZ being put in place.

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Table 10: Reasons for choice of option for the LEZ boundary

	Those choosing:
Reasons for choosing Option A	n=362
The bigger the better, whole city centre	14%
Need to incorporate the major/busiest streets	11%
The maximum benefit in reducing air pollution	8%
Will make the riverside good for pedestrians/cyclists	3%
But needs good public transport/cycle support	2%
But it should be bigger	2%
Why not South of the river too?; But consider delivery, other access routes	each 1%
Easier to work out the boundary; But consider congestion issues on periphery; Either is ok really; But worry about increased M8 congestion	each 0%
<i>Don't know/no specific reason given</i>	<i>67%</i>
Reasons for choosing Option B	n=203
Need to use the outer roads/links across the city	12%
Access to city centre easier	6%
Less restrictive (could tighten up later)	3%
But needs good public transport/cycle support	3%
Better as borders a deprived area; Able then to use these roads as drop off points; Depends on emission levels; To give access to parking; Hospital access must be allowed; To enable me to get home/see friends; But need affordable parking	each 1%
Allows access towards Hydro/SEC/West End; But need longer lead in times; But need more electric car points; Why not South of the river too?	each 0%
<i>Don't know/no specific reason given</i>	<i>71%</i>
Reasons for choosing neither	n=117
Public transport not good enough/insufficient/can't use	13%
Too much detrimental impact on me (work/home/travel/access)	10%
Both too big	9%
Too much detrimental impact on city centre	5%
Both too small/not enough	5%
Not the right answer to the issue	3%
Not the right time for this	2%
Shouldn't include residents in this	2%
Can't say based on information given	2%
Needs exemption from Bothwell St M8 down to A804; Too much M8 traffic as a result; Hospital access must be allowed	each 1%
<i>Don't know/no specific reason given</i>	<i>56%</i>

Source: Q7. Which of the proposals for the city centre LEZ area do you prefer? Please feel free to give reasons for your preference. (open response)

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3.4 Emission standards and vehicle types for LEZ

Having reviewed the boundary options for the LEZ the online survey then looked at the emission standards and vehicle types to be included, the survey showing respondents the following information:

Glasgow's Low Emission Zone will apply to ALL vehicles except motorcycles, mopeds, motorised tricycles and quadricycles.

The proposed emission standards are:

- Euro 4 standard for petrol vehicles (generally vehicles registered from 2006 onwards)
- Euro 6 standard for diesel vehicles (generally vehicles registered from 2015 onwards)
- Euro VI standard for heavy duty diesel vehicles such as buses/coaches and HGVs (generally vehicles registered from 2015 onwards).

Vehicles which have been appropriately modified or retrofitted to meet or exceed these emission standards will also be permitted entry to the LEZ.

3.4.1 Agreement with proposed emission standards for Glasgow's LEZ

Based on the information above respondents were asked to state whether they agreed with the proposed emission standards as given for Glasgow's LEZ.

Results show slightly more agreement than disagreement, albeit again however, not by a clear majority:

- 43% agreed with the proposed emission standards
- 36% did not agree
- 10% don't know
- 10% not answered.

These figures are mirrored across the main sample groups as can be seen in Table 11.

Here too those who say they support the Glasgow LEZ are significantly more likely to agree with the emission standards (65%) than those who do not support the LEZ (5%) and those who don't know (20%). This is also the case in this instance for those who support LEZs in general at 59% agree, versus 4% for those who do not support them and 24% for don't know.

Table 11: Agreement with proposed emission standards

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Yes	43%	53%	42%	44%	41%	53%
No	36%	31%	38%	33%	46%	26%
Don't know	10%	4%	10%	12%	8%	9%
Not answered	10%	12%	10%	11%	5%	12%

Source: Q8. Do you agree with the proposed emissions standards for Glasgow's LEZ? (single code)

3.4.2 Reasons for agreement with proposed emission standards

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Those who did not agree or who said don't know were then asked to give their reasons for their views and the main themes drawn together for analysis.

Of the 448 who do not agree with the emissions standards as shown, 54% gave a comment across a wide variety of thoughts. Of these there are only a few themes that reach 4% and only one reaching 9%, highlighting the variety of differences in views and indeed that there does not appear to be any one or two specific issues that dominate thoughts in this regard. The comments that are given break down into different themes which include the following and can also be seen in Table 12 overleaf:

- **Thoughts on the emission standards themselves** (ca. 18% of mentions): The most frequently mentioned response in this group by far is the 9% of the view that the emission standards shown are not strict enough and should apply to all vehicles.
- **Thoughts on specific vehicle types** (ca. 9% of mentions): Here comment is made as to the vehicles types that would cause most pollution and examples of those that should be included or made exemptions.
- **Financial hardship for individual and businesses** (ca. 17% of mentions): Perhaps not surprisingly given previous responses, again the issues that may result from the LEZ for individuals and businesses when using the city centre are reiterated at this point.
- **Against LEZ proposal generally** (ca. 9% of mentions): Also reiterating previous views some mention that they do not feel the LEZ is a good idea and that it may not address the right issues.

Table 12: Reasons for disagreement with proposed emission standards

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	Disagree or don't know n=448
Thoughts on the emission standards themselves	
Not strict enough/should apply to all vehicles	9%
Euro 4 too low for petrol/should be Euro 5/6	1%
Should be working towards all electric vehicles only	1%
Euro standards not accurate measure of pollution/no account taken of size of engine, etc	2%
Scrappage of good vehicles will cause more pollution/CO2s	2%
Euro 5 for diesel too severe/relatively new vehicles scrapped	2%
MOT pass from the DVLA should be enough	0%
Little difference between Euro 5 and 6	0%
All vehicles are becoming less polluting, anyway	0%
Thoughts on specific vehicle types	
Buses are among the worst polluters	3%
HGVs are among the worst polluters	1%
Taxis are among the worst polluters	1%
Council vehicles some of the worst polluters/clean up own act	0%
Classic cars should be exempt	2%
Motorbikes should be included	1%
Buses should be exempt/companies can't afford to upgrade fleet	0%
Financial hardship for individuals and businesses	
This will cause financial hardship/can't afford to buy a new car	4%
Poorer people most affected/discriminates against less well off	3%
Unfair on people who bought diesel after govt encouragement	2%
Disabled people will suffer	2%
Businesses will suffer/jobs will be lost	2%
Taxi drivers will suffer/go out of business	2%
Workers won't be able to get to their jobs	1%
This will prevent many people from accessing the city centre	1%
Only use car for short trips/a few times a week/doesn't seem fair	0%
Against LEZ proposal generally	
I'm against these proposals	1%
Just a tax on motorists/moneymaking scheme	1%
A waste of money	1%
Waste of time/Council should be concentrating on other problems	1%
Better to use carrot rather than stick/dictating to people	1%
Won't make a difference/Glasgow insignificant v. China, India, etc	1%
Idling is the real problem/should be wardens stopping this	0%
Not enough time to comply/being rushed through	2%
Just shifts the problem/pollution elsewhere	0%
Should be the whole city/not just the centre	0%
Public transport is inadequate/not a suitable alternative	4%
I don't know enough about it	4%
Other	5%
Don't know	46%

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Source: Q9. Do you agree with the proposed emission standards for Glasgow's LEZ? Please feel free to give a reason for your response. (open response)

3.4.3 Vehicle types Glasgow's LEZ should apply to

The next question asked respondents to tick all the vehicle types they thought the Glasgow's LEZ should apply to and the results can be seen in Table 13. 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 and cars than the other groups. More of this group also state none at 24%.

Table 13: Vehicle types Glasgow's LEZ should apply to

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
HGVs/LGV/vans	70%	72%	71%	71%	54%	61%
Buses/coaches	68%	72%	70%	68%	68%	60%
Taxi/private hire cars	60%	64%	61%	62%	46%	54%
Cars	51%	57%	50%	52%	43%	53%
None	9%	4%	10%	9%	24%	11%
Not answered	14%	16%	13%	15%	5%	19%

Source: Q10. Which vehicles do you think Glasgow's LEZ should apply to? (please tick all that apply) (multi code)

3.4.4 Thoughts on vehicle types

Respondents were asked to write thoughts on the vehicle types they thought should be included.

Table 14 overleaf shows that overall, 27% gave a comment here and of these respondents' comments by far the most frequently mentioned response is to include all vehicles within the LEZ, with no exceptions (11%). Following this 5% of mentions are to review this with a view to excluding those with the highest emissions.

Further to this the comments take the form a list of various desired exemptions and inclusions as seen overleaf.

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Table 14: Thoughts on vehicle types included in Glasgow’s LEZ

		Total n=973
	No comment given	73%
Desired exemptions	▪ Except taxis/private hire cars	1%
	▪ Except commercial vehicles – earning a living	1%
	▪ Need exemptions/assistance for disabled people	1%
	▪ Except cars – don't penalise people	1%
	▪ Except cars – not causing the problem	0%
	▪ Except residents’ cars	0%
	▪ Except shared transport	0%
	▪ Except low emission buses	0%
	▪ Except tour coaches	0%
	▪ Except vintage/historic/classic	0%
	▪ Except HGVs/vans – costs	0%
	▪ Take all but essential vehicles out of the centre	0%
Include	▪ Include all vehicles	11%
	▪ Include all commercial vehicles	2%
	▪ Include all private cars	0%
	▪ Include all diesel engines	0%
	▪ Include motorbikes as well	0%
	▪ Include trains as well	0%
Other thoughts	▪ They have the worst pollution/emissions	5%
	▪ Don't agree with LEZ	2%
	▪ They cause most congestion	1%
	▪ Need better public transport and to encourage use	1%
	▪ Need better technology/more green vehicles	0%
	▪ Everyone should have access to Glasgow centre	0%
	▪ Agree with LEZ and its principles	0%
	▪ To keep people safe/well	0%
	▪ Other	2%

Source: Q10. Which vehicles do you think Glasgow’s LEZ should apply to? (please tick all that apply) Please feel free to give a reason for your response. (open response)

3.5 Grace periods and LEZ enforcement

The online survey gave the following information regarding grace periods and enforcement:

Glasgow’s LEZ is already in effect for scheduled service buses, with full compliance expected by the end of 2022.

The LEZ for all other vehicles will be implemented at the end of 2020. There will however be a grace period of two years to allow the owners of non-compliant vehicles time to prepare. This means enforcement of the LEZ would not start until the end of 2022. An additional one year grace period is proposed for individuals whose vehicle is registered at a **residential property** within the zone, with enforcement for these vehicles starting at the end of 2023.

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 are mixed, suggesting the grace periods shown are not immediately perceived to be right by many of the respondents. For buses the ‘about right’ category is picked by around a third, with another quarter saying ‘too long’. However, for all other vehicles and residents’ vehicles the most frequently stated response is ‘too short’ at 33% and 34% respectively, with around a quarter for each citing ‘about right’. Perhaps unsurprisingly given their previous responses, the Business owners are most likely to state ‘too short’ for all categories. Table 15 shows these different responses by vehicle category.

Other than this, as with agreement elsewhere strength of feeling towards LEZs does make a difference, here those who are NOT in favour of LEZs overall, or the Glasgow LEZ are significantly more likely to say the grace periods are ‘too short’ for all categories. To illustrate this, for buses the figures for ‘too short’ are 12% for those in support of Glasgow’s LEZ, 29% for those not in support and 13% for those who don’t know. For all vehicles the figures for ‘too short’ are 21% for in support, 60% for not in support and 33% for don’t know and for resident vehicles 24%, 58% and 29% respectively.

Table 15: Grace periods

Total n=973	Too short	About right	Too long	Don’t know	Not answered
Buses (phased enforcement with full compliance end of 2022)	17%	34%	24%	7%	19%
All other vehicles (enforcement to begin end of 2022)	33%	27%	16%	5%	19%
LEZ residents’ vehicles (enforcement to begin end of 2023)	34%	25%	14%	7%	20%

Source: Q11. What is your opinion of the proposed grace periods / LEZ enforcement timetable for each of the vehicle categories? (single code)

3.6 LEZ vehicle exemptions

3.6.1 Vehicle types that should be exempt from the LEZ

Vehicle exemptions were then reviewed, with respondents being asked which vehicle categories they would agree should be exempt from LEZs in Scotland, as per the Scottish Government’s proposal.

It can be seen in Table 16 below that two thirds would like to see emergency vehicles exempt and nearly half would like to see vehicles for disabled persons exempt from the LEZ.

Table 16: Agreement with vehicle exemptions

	Total n=973
Emergency vehicles	67%
Vehicles for disabled persons	46%
Historic vehicles (30 years old or more)	33%
Military vehicles	32%
Showman vehicles	11%
Not answered	27%

Source: Q12. The Scottish Government proposes that certain vehicle categories may be exempt from LEZs in Scotland. Please tick all those you agree should be exempt. (multi code)

3.6.2 Vehicle types with temporary exemptions from the LEZ

In addition to LEZ exemptions set nationally by the Scottish Government, Glasgow City Council may also have the power to issue ‘time-limited’ (temporary) exemptions in respect of specific vehicle types/categories. This could mean an exemption period of up to one year which would then require renewal if the exemption were to be continued.

Respondents were asked which vehicle categories should be considered for such time limited, or temporary exemptions and it can be seen in Table 17 overleaf that there is a wide variety of choices made, although many of the most frequent mentions show an emergency and community-led bias to responses.

The four most frequently mentioned for temporary exemption, each by 30% or more, are:

- community transport vehicles (37%)
- accident/breakdown recovery vehicles (33%)
- refuse collection vehicles (31%)
- hearses (31%)

Following this the next most frequently mentioned are:

- out of hours shift workers (24%)
- specialist vehicles (24%)
- health service vehicles (24%)
- low frequency travel vehicles (23%)
- wedding vehicles (21%)

Table 17: Vehicle categories suggested for possible temporary exemption

	Total

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	n=973
Community transport vehicles	37%
Accident/breakdown recovery vehicles	33%
Refuse collection vehicles	31%
Hearses	31%
Out of hours shift workers	24%
Specialist vehicles	24%
Health service vehicles	24%
Low frequency travel vehicles	23%
Wedding vehicles	21%
Emergency voluntary sector organisation	17%
Utility emergency repair vehicles	16%
Diplomatic vehicles	14%
Postal vehicles	14%
Taxi/Hackney cabs	2%
Classic/vintage cars	1%
All vehicles	1%
Other	3%
I prefer no further exemptions	8%
Don't know	8%
Not answered	32%

Source: Q13. Possible vehicle types/categories for temporary exemption are shown below. Please tick any that you think should be considered for exemption (multi code)

All respondents were also asked to give reasons for their response regarding the temporary exemption vehicle categories. This was also an open response and comments have been collated and grouped. The results shown in Table 18 below, which shows only 17% cited a reason for their thoughts at this point. The most frequently mentioned reason is to say there should be no exemptions (7%), whilst 2% note that any exemptions should be temporary, allowing time to people to comply before then being lifted.

Table 18: Reasons for response regarding vehicle categories suggested for possible temporary exemption

	Total n=973
No exemptions, needs to be done	7%
Short term only, to allow time to comply	2%
Disagree with LEZ; Taxis need exemptions; If classic/historic vehicles; Need to allow the city to function; Only voluntary/charity/community; Only emergency vehicles	each 1%
Leads to too many costs – passed on; If only occasionally in the city; Exemptions on case by case basis; No funding available to comply; Disabled blue badges exempt	each 0%
Other	1%
No reason given	86%

Source: Q13. Please feel free to give reasons for your response. (open response)

3.7 Action if LEZ implemented

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Assuming Glasgow’s LEZ is implemented as proposed, respondents were asked what, if anything, they would do differently as a result of this.

A quarter of respondents say their vehicle would comply, so they would do nothing. However, this drops to 19% for Business owners and 14% for those who Study. Business owner’s most frequently mentioned action would be to use taxis/private hire cars more, with 22% stating this. However, otherwise the most frequently mentioned action for Residents is to walk more (28%), and for those who Work, Study or visit the city centre for Leisure it is to use public transport more (18%, 32% and 25% respectively).

One point to note is that whilst public transport is the most frequently mentioned course of action, previous responses indicate that public transport provision is one of the main worries for people with regards to the LEZ in that it is often cited as being potentially inadequate for the task. It should also be noted that none of the many responses are mentioned by more than around a quarter of respondents which could indicate that there is not an ‘obvious’ solution to the implementation of the LEZ for those whose vehicles would not comply.

Table 19: Action if LEZ implemented

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Nothing, my vehicle complies	25%	20%	26%	25%	19%	14%
Use public transport more	21%	17%	18%	25%	16%	32%
Walk more	16%	28%	16%	17%	16%	21%
Cycle more	12%	19%	12%	13%	8%	19%
Change my route or destination	12%	9%	12%	14%	11%	14%
Upgrade my vehicle	11%	11%	14%	10%	14%	12%
Use taxis/private hire cars more	6%	4%	7%	5%	22%	4%
Use more park and ride	6%	3%	6%	6%	8%	2%
Nothing, I don’t travel through the city centre	5%	7%	3%	6%	3%	4%
Give up my vehicle	4%	1%	4%	3%	5%	4%
Avoid the city centre	4%	3%	3%	5%	-	4%
Shop elsewhere	3%	-	2%	3%	-	-
Lose my job/find another job	2%	1%	4%	1%	3%	2%
Go to the city centre less often	1%	3%	1%	1%	1%	-
Nothing, carry on/ignore LEZ	1%	-	0%	1%	-	2%
Nothing, I don’t drive	1%	1%	2%	2%	-	2%
Nothing, I use public transport	1%	-	1%	1%	-	-
Sell the business/stop operating	1%	1%	0%	-	11%	-
Move out of the city	0%	1%	0%	0%	-	-
Go by motorcycle	0%	-	0%	0%	-	-
Other	3%	7%	4%	3%	8%	5%
Not answered	27%	31%	26%	26%	16%	33%

Source: Q14. If Glasgow’s LEZ is implemented as proposed, what, if anything, would you do differently as a result? (please tick all that apply) (multi code)

3.8 Unintended consequences of LEZ

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

Table 20: Are unintended consequences anticipated

	Total n=973	Resident n=75	Work in centre n=521	Visit for leisure n=631	Business owner n=37	Study n=57
Yes	53%	47%	55%	52%	78%	47%
No	14%	21%	14%	14%	14%	12%
Don’t know	15%	12%	13%	16%	3%	14%
Not answered	18%	20%	17%	17%	5%	26%

Source: Q15. Do you believe there will be unintended consequences from Glasgow’s LEZ? (single code)

Of the 515 (53%) who say they feel there will be unintended consequences, many more responses relate to negative impacts that the LEZ may have than positive ones (positive only accounting for 5% of responses). The consequences have been grouped into more general areas where applicable to show the themes that emerge for this question – see below and Table 21 overleaf.

The first group of consequences mentioned is **negative consequences for businesses (29% of mentions)** and includes the following main thoughts:

- reduced business for city centre businesses
- city centre businesses will close
- prohibitive/increased costs for taxi/bus/coach operators
- businesses will suffer.

An equally large number of consequences come under the heading of **negative consequences for the city centre (29% of mentions)**, including:

- reduced city centre foot fall
- shoppers will go out of town instead
- city centre will go into decline/ghost town
- employees impacted/might move elsewhere
- issues for visitors/may choose to go elsewhere.

The **negative consequences for people (20% of mentions)** include:

- financial implications and loss of livelihood
- public transport not good = brings issues (e.g. commuting, disabled access)
- public transport too expensive = penalised/prohibitive
- reduces/limits access, especially disabled (isolation)
- public transport bad in evenings/weekend, safety issues.

The **general negative comments (16%)**, include that it will move pollution to other areas; will increase traffic and parking issues out of the zone; will cause general outrage/confusion; and people won’t comply, or may not be able to.

The **positive outcomes (5%)** include that it will improve the city centre; give better quality of life; better air quality; encourage use of public transport; get more people to cycle and to walk; it ‘just needs doing!’; will improve the view of Glasgow in the world; and decrease the need for city on-street parking.

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Table 21: Unintended consequences

	Yes n=515
Negative consequences for businesses	29%
Reduced business for city centre businesses	12%
City centre businesses will close	8%
Prohibitive/increased costs for taxi/bus/coach operators	4%
Businesses will suffer	3%
Small business will be particularly hit; Reduced business for food outlets; Increased delivery costs	each 1%
Issues if using private car for business; Automotive businesses will suffer; Increased costs for businesses; Classic/vintage vehicle companies will suffer	each 0%
Negative consequences for city centre	29%
Reduced city centre foot fall	16%
Shoppers will go out of town instead	8%
City centre will go into decline/ghost town	7%
Employees impacted/might move elsewhere	4%
Issues for visitors/may choose to go elsewhere	3%
Negative consequences for people	20%
Financial implications and loss of livelihood	8%
Public transport not good = brings issues	6%
Public transport too expensive = penalised/prohibitive	2%
Reduces/limits access, especially disabled (isolation)	2%
Public transport bad evenings/weekend, safety issues	2%
Lack of Park & Ride options; Stop people going out/doing activities; Will need to find work elsewhere	each 1%
Can't park in town	0%
General negative	16%
Just moves pollution to other areas	6%
Traffic and parking issues increase out of the zone	5%
Outrage/confusion	2%
People won't comply/pay fines (or can't!)	2%
Just a money making exercise for the council; Out of town shopping becomes horrendous/busy; Won't impact/reduce emissions greatly; Issues for older cars – dumping, lose value, etc	each 1%
Loss of city revenue as businesses close/move	0%
Positive outcomes	5%
Improve city centre; Better quality of life; Better air quality; More people on public transport; More people cycling; More people walking; Just needs doing!	each 1%
Improve view of Glasgow in the world; Decreased need for city on-street parking	each 0%
Other	2%
Not answered question asked	2%
Don't know	22%

Source: Q16. If yes, please explain what consequences you anticipate (open response)

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3.9 Summary views of workshop participants

The workshop took place on 10th March 2020 and was hosted by Glasgow City Council, who also invited participants to the session. A total of 24 participants took part from the following areas: academia, active/sustainable travel, bus and coach, community groups, disability groups, emergency services, environmental, haulage, health services, SMEs, taxi trade, utilities, vehicle retailers and waste management.

The workshop took the form of discussion amongst all participants and also in 6 breakout groups and followed the same areas of enquiry as the online survey, asking the same questions, but allowing time for discussion of each. Each table was led by a facilitator to guide participants to cover each topic.

Notes were taken and the thoughts taken down from the participants on the day have been summarised here. It should be noted that the general themes very much follow the thoughts of the general public, with, as would be expected some specific comment being made regarding the participants' specific areas of interest or concern.

3.9.1 Support for the use of a LEZ

In terms of the general support for a LEZ in principle, 20 say they support the use of a LEZ, with 4 unsure. The main themes raised at this point are:

Overall views about LEZs

Whilst there is general support and all agree reducing air pollution in principle is a good thing, there is mention that the LEZ is not bold or ambitious enough, that the climate change initiative is important, and air quality and climate change issues are interrelated. Mention is also made of conflicting and weak evidence, that 2022 is only an interim target and that LEZ compliant vehicles will not necessarily help meet the 2030 carbon neutral target. Comments also include that it measures emissions per vehicle rather than passenger numbers; that the LEZ is too lenient by not focussing presently on private cars; and that there is a need to improve public transport and use wider levers such as the Workplace Parking Levy.

Thoughts on Glasgow specifically

Thoughts on Glasgow specifically include issues pertaining to the city centre, the wider city and public transport and its users.

Comment is made generally about accessibility issues with public transport and that city centre congestion will create more of an issue and that abatement technology for buses will not have as big an impact on air quality if buses are forced to travel at low speeds due to congestion. Bus operators note a wish for infrastructure to allow people to cycle to bus stops, store bikes and take the bus into town. It is also noted to be mindful of the consequences and implications for areas outwith the boundary and the viability of bus services here, taking the social impact into consideration, for example on retail workers, in terms of the public transport options open to them and the impact this will have on buses.

Points also raised for consideration include whether road user charging should be considered and the potential consequences for parking charges. Mention is made that City Deal investment should be used to unlock development and regeneration and that Glasgow is becoming a city for young people with less consideration of older generations. Comments

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also cover that the LEZ should be applied to all main transport corridors and it is questioned why there is no LEZ in the West End especially Byres Road which has air quality issues. Standardised LEZ signs would also be appreciated, and mention is made of ensuring deliveries can happen, allowing time and perhaps considering night deliveries.

Thoughts about specific user groups

Bus operators specifically query when ANPR cameras will be put in place to police the LEZ especially with regard to 'pirate' vehicles; ask for congestion charging at set times to reduce vehicle numbers and for bus park and ride facilities to be placed further out from the city centre.

Coach operators are felt to be key by some and there appears to be no mention of this group. The average age for some coaches is 10 to 20 years and they are used to take schoolchildren into the city centre, so the question is raised of what will coaches do and are any subsidies open to them. It is also noted that coaches are not allowed to use bus lanes and at present there are no designated areas for coaches to drop off/unload.

Other queries include: why have HGVs not been 'targeted' yet; why is there no aim to electrify the bus fleet; worries about electric vehicle technology being insufficient; and that there is a limited range of such vehicles for taxis.

Thoughts about technology

Specific issues are raised about electric vehicle technology:

- diesel versus electric vehicles in terms of range and recharge time (one citing that 20 electric vehicles would be needed to replace a 12 bus service, raising the question of the viability of investment in buses)
- more information needed on the lifespan of electric vehicle charge especially when rapid recharging is now possible
- a note that hydrogen is too expensive at the moment (heavily subsidised).

Thoughts on individual behaviour

Note is made that LEZ success will come down to encouraging individuals to change their behaviour, with a need for access to clear information.

3.9.2 Support for the Glasgow LEZ

In terms of the Glasgow LEZ, likewise 20 participants support this, with 4 unsure. The main themes raised reflect those made in general for LEZs.

Thoughts on Glasgow LEZ

In principle most are keen to support the LEZ, saying if it works it will be good and improve air quality, but some note it should tie in with health policies and that consistency is key, as is encouragement to individuals to comply and/or discourage private car use. It is said that the parameters are easily defined, although some feel it is a car-centric development.

Thoughts on the LEZ and queries for consideration include:

- target dates, 2022 and 2030: accelerating them generally, tying them in to each other, and reviewing their suitability
- reviewing emission targets: most vehicles will comply by 2022/23; emissions are falling over time; statutory ban on non-compliant vehicles is supported

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- emphasising positive evidence of schemes already in place: e.g. bus gates
- review of potential LEZ consequences: areas outside LEZ boundary; Avenues Project increasing taxis out of boundary; high initial levels of displacement; increased parking in residential areas; continued use of newer vehicles and older vehicles taken elsewhere; LEZ dilution by adding exclusions and exemptions; and lack of modal shift without encouragement.

Thoughts on public transport

Public transport receives specific comment, including: improve it; make it cost effective; make it affordable/free/offer free family bus passes; extend Subway hours; consider introducing trams/trolley buses; review if majority of city centre traffic is from Glasgow and if not provide infrastructure to support travelling in. Amsterdam is cited as an example of a connected transport infrastructure that could be replicated with the support of the LEZ.

Thoughts on individual groups

The effects of the scheme need to be reviewed for individual groups, from potential socio-economic differences and specific review for disabled people and their access, to the benefits being more for tourists and the general public than for business, necessitating thought to prevent a negative impact on business. Specifically, exemption is requested for taxis, more time for HGV/trucks to adapt and consideration of the capital investment for HGV/trucks as most businesses work on a 10 year model so the LEZ will happen sooner.

3.9.3 Preferences for LEZ options

In terms of the options put forward thoughts are quite mixed, with 12 of the 24 participants saying they prefer Option A, 9 preferring Option B and 2 saying they prefer Neither. Their thoughts at this point are very varied and reflect thoughts already mentioned, but those specific to the boundary options include:

- Support Option A:
 - boundary easy to understand for the public, a good starting point
 - takes traffic away from city centre and on to the motorway
 - Clyde St included – if busy/polluted will discourage cycling and active travel
 - joined up action with other issues will aid air quality and reduce car flow, e.g. Clydeside regeneration
 - city centre has bypasses (M8, M74), Clyde St should not become another
 - excluding High St would cause residents anxiety that traffic would amplify
 - option B might give Glasgow's southside heavier traffic/higher pollution
- Neither: prefer Option A minus Broomielaw area
- Support Option B:
 - because option A might increase journeys and therefore emissions
 - in case it changes to ULEZ, it might be less confusing
 - option A could cause disruption to wholesalers, e.g. with a key unit in the west and distribution in the east.

3.9.4 Agreement with emission standards

There is less agreement with the emission standards proposed with 6 agreeing, 12 not agreeing and 5 unsure. Again, a mix of responses are given, many relating to and reiterating

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the comments made about the LEZ generally. The considerations and thoughts cited here are those specifically about the emission standards as given:

Standards should be higher

- should have higher and more ambitious standards
- need to go a lot further and have zero emissions vehicles by 2025
- too lenient, not really tackling the use of cars in the city
- open to become tighter regime in near future if environmentally justifiable
- air quality and pollution, awareness and understanding of health impacts may force air quality standards to increase further
- need to include drive to reduce carbon emissions, not only air quality/ pollutants – broaden the aims of the LEZ.

Issues for those needing to comply

- help needed for businesses to transition to new engine standards
- consistency needed as many businesses travel across many cities in one day
- use Euro 5, MOT standard for emissions
- age of vehicle not indicative of compliance – DVLA data inaccurate
- standards should be guided by carbon emissions from vehicles
- phased approach with Euro 4 and then increasing over time
- family business, Euro 6 only available until 18/19, so buses must be very new
- Scania withheld the sale of Euro 6 and made sure they sold all Euro 5s before Euro 6s, this should be taken into account
- distribution for hauliers not an option for Glasgow, not feasible for 12 ton vehicles, will mean additional cost/time and carbon emissions will more than double (3 vans will do the work of 1 truck = more emissions, journeys, time)
- traceability, who does retrofit, a third party, and how is it demonstrated
- no time to keep additional records, prove vehicle retrofitted, bureaucratic
- 'huge' costs for taxis
- too much to ask of bus operators to deliver in timescale, bus services may be reduced rather than upgraded
- bus operators argue major contributor to bus emissions issues is congestion
- scheme is dependent on buses not being disrupted too much
- FSB vehicles (SMEs) – how many will be affected?
- associated costs for individuals – resident and those commuting
- exemptions will need to be considered.

3.9.5 Agreement with grace periods

In terms of grace periods views are also mixed, with most mention from participants for buses being 'about right' (12 of 24), for all vehicles 'too short' (9 of 24) and for residents a mix of 'too long' (5) and 'too short' (4). Thoughts here include the same issues with regards to concern over people being able to comply and the feasibility of ensuring this happens and monitoring that people and businesses comply. It is also noted that clear and precise information is needed for all and consideration made of suitable exemptions.

3.9.6 Temporary exemptions

Temporary exemptions are felt to be needed by three quarters of participants, with emergency voluntary sector organisation vehicles, accident and breakdown recovery vehicles, community transport vehicles and health service vehicles leading the way. Further to this the

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remaining options given were each picked by a few participants: utility emergency repair vehicles, postal vehicles, hearses, low frequency travel vehicles, out of hours workers, specialist vehicles and wedding vehicles.

3.9.7 Unintended consequences

The majority of participants felt there would be unintended consequences, most mentions are negative, a few positive, and there are also some neutral thoughts that need to be taken into consideration:

Negative:

- unemployment, less people in city to spend money will impact businesses, office, retail, caterers, deliveries / less shopping in the city/desolate / drop in shop footfall / stress of poorer economic activity
- consumer will ultimately pay / potential negative health impacts / cost to bus industry placed upon passengers
- businesses will suffer greatly / businesses not wanting Glasgow HQs
- MOT servicing by local dealerships will be undermined / may create issues with second-hand car market, no one will want older non-compliant vehicles
- unless public transport vastly improved, city centre accessibility compromised
- hard to enforce / if penalty not high may just pay or pass on cost / potential to rack up multiple Parking Charge Notices before realising have violated LEZ
- informal parking of non-compliant vehicles outside LEZ
- potentially swapping number plates

Positive:

- alongside other actions improve likeability and attractiveness of city / more tourism / greater investment / encourage businesses to cleaner/healthier city
- reduce congestion
- accelerate improved alternate service provision / improve awareness of public transport availability
- accelerate 5G uptake city centre / improve connectivity

Neutral thoughts:

- implementation window needs careful management, strong communication
- requires full impact assessment and/or consideration of:
 - displacement factor to surrounding areas
 - impact on businesses regularly travelling between Glasgow and Edinburgh
 - impact on discretionary travel
 - impact on emission levels as refrigerated haulage won't need to meet emissions targets
 - how this interacts with council schemes, other impacts on businesses – digital tax, hourly rates and Brexit
- introduce parking levy at out of town shopping centres to level playing field
- rail infrastructure needs upgraded
- consider hydrogen/hybrids, alternatives and renewables and trials for the manufacturing and wholesale industries

3.9.8 Overall thoughts on the Glasgow LEZ

The final thoughts of the participants at the workshop cover a range of different issues, encompassing views of the LEZ overall and what it will do for Glasgow, how

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communications should be addressed and also considerations and issues to do with how it is to be delivered, enforced and dealt with by all parties.

Thoughts on the LEZ area

- should be much bigger / more encompassing / widen the area, join up approach with other policies to encourage modal shift out of vehicles / there is a need to expand the area over time or cause traffic displacement / expand to the West End which has air quality issues
- get it done now / the rate of change needs to be at a tenable rate

Thoughts on what it will do for Glasgow

- contribute toward CO2 emission reduction / needs to be integrated with other initiatives to reduce CO2 emissions, discouraging private vehicles/traffic
- integrate residents back into the city centre
- may be unintended effects on the economy

Thoughts on communicating the LEZ

- needs to be clear communication that is easily accessible to everybody
- make it clear that the aim is for a better, cleaner, healthier environment, not to punish anyone or to raise revenue
- make the wider benefits clear and that it is part of a suite of actions to create a more pleasant outdoor space, making it relevant to the end-user
- work with all major employers in the city to gain their support
- ratchet up the communication campaign generally
- requires a robust communication campaign ahead of the private car roll-out

Thoughts on delivery and enforcement

- must be consistent to avoid confusion and/or unfairness
- grace periods need to be timed sufficiently
- short term exemptions needed to allow SMEs to become compliant based on turnover, i.e. means tested
- de-prioritise car use / private cars should be the main focus / ban SUVs
- uniform LEZs between all 4 cities in Scotland
- link in with Sat Nav devices to advise people of LEZ areas
- enforcement: of anti-idling measures / traffic wardens to police related issues / ban deliveries during working hours / HGVs still allowed into the city centre
- public transport:
 - steer people towards public transport / increase patronage and image / use public transport incentives / recognise the role of buses, support the bus industry, don't hinder it
 - more taxi ranks / bring back water taxis / increase park and ride facilities
- include e-bikes as part of NextBike subscription, not just standard hire bikes.

Appendix – print version of online survey

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2. PART 1: YOUR USE OF GLASGOW CITY CENTRE

**1. Which of the following, best describes your use of Glasgow city centre?
(please tick all that apply)**

- City centre resident
- Work in the city centre
- Visit the city centre for shopping / leisure
- Own a business in the city centre
- Study in the city centre

2. How often do you visit / use Glasgow city centre?

- Rarely / Occasionally
- Once a month
- 1-2 times a week
- 3-4 times a week
- 5-6 times a week
- Every day

3. How often do you use each of these forms of transport to travel to or within, Glasgow city centre?

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	Never	Less than once a month	At least once a month	At least once a week	Every day
Walk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bus or coach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Train	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taxi or private hire car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motorbike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Light Goods Vehicle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heavy Goods Vehicle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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3. PART 2: LOW EMISSION ZONES (LEZs)

4. Low Emission Zones are used in the UK and in many cities around the world to reduce air pollution and support sustainable transport.

Do you support the use of Low Emission Zones in principle?

- Yes
- No
- Don't know / no opinion

5. Do you support the general principle of a Low Emission Zone in Glasgow?

- Yes
- No
- Don't know

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6. Please give reasons for your opinion on the principle of a Low Emission Zone in Glasgow.

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5. PART 3: GLASGOW'S LOW EMISSION ZONE PROPOSALS

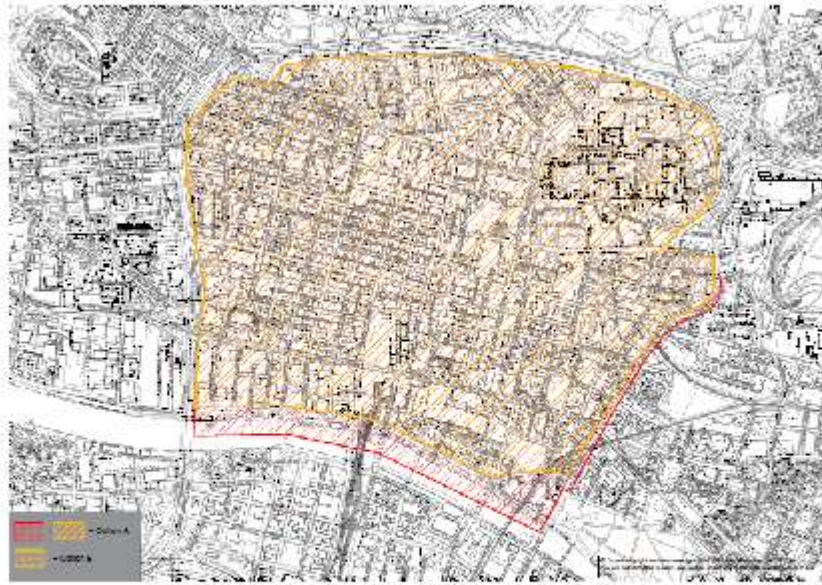
Glasgow proposes two options for the area covered by the city centre Low Emission Zone.

Option A covers the whole of the city centre; bounded generally by the M8 motorway to the North and West, the River Clyde to the south (including the Broomielaw and Clyde St), and Saltmarket, High St and Castle St to the east.

Option B would exclude from the area outlined in Option A; the Broomielaw, Clyde St, Saltmarket, High St and Castle St from the southern and eastern boundaries. This option would permit the use of these roads by vehicles which do not meet the LEZ entry requirements.

The proposed LEZ boundary options are shown in the map below, with Option A represented by the area coloured orange and red and Option B represented by the area coloured orange only.

A higher resolution copy of the boundary map which allows you to zoom in/out, is available [here](https://www.glasgow.gov.uk/CHttpHandler.ashx?id=48385&p=0). (<https://www.glasgow.gov.uk/CHttpHandler.ashx?id=48385&p=0>)



7. Which of the proposals for the city centre LEZ area do you prefer? *

- Option A
- Option B
- Neither
- I don't support a LEZ in Glasgow

Please feel free to give reasons for your preference.

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42%

6. PART 3: GLASGOW'S LOW EMISSION ZONE PROPOSALS

Glasgow's Low Emission Zone will apply to ALL vehicles except motorcycles, mopeds, motorised tricycles and quadricycles. The proposed emission standards are:

- Euro 4 standard for petrol vehicles (generally vehicles registered from 2006 onwards)
- Euro 6 standard for diesel vehicles (generally vehicles registered from 2015 onwards)
- Euro VI standard for heavy duty diesel vehicles such as buses / coaches and HGVs (generally vehicles registered from 2015 onwards)

Vehicles which have been appropriately modified or retrofitted to meet or exceed these emission standards will also be permitted entry to the LEZ.

8. Do you agree with the proposed emission standards for Glasgow's LEZ? *

- Yes
- No
- Don't know

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50%

7. PART 3: GLASGOW'S LOW EMISSION ZONE PROPOSALS

9. Please feel free to give a reason for your response.

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8. PART 3: GLASGOW'S LOW EMISSION ZONE PROPOSALS

10. Which vehicles do you think Glasgow's LEZ should apply to? (please tick all that apply)

- Buses / coaches
- HGVs / LGVs / Vans
- Taxis / private hire cars
- Cars
- None

Please feel free to give a reason for your response.

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9. GRACE PERIODS AND LEZ ENFORCEMENT

Glasgow's LEZ is already in effect for scheduled service buses, with full compliance expected by the end of 2022.

The LEZ for all other vehicles will be implemented at the end of 2020. There will however be a grace period of two years to allow the owners of non-compliant vehicles time to prepare. This means enforcement of the LEZ would not start until the end of 2022. An additional one year grace period is proposed for individuals whose vehicle is registered at a residential property within the zone, with enforcement for these vehicles starting at the end of 2023.

11. What is your opinion of the proposed grace periods / LEZ enforcement timetable for each of the vehicle categories?

	Too short	About Right	Too long	Don't know
Buses (phased enforcement with full compliance end of 2022)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All other vehicles (enforcement to begin end of 2022)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LEZ residents' vehicles (enforcement to begin end of 2023)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. The Scottish Government proposes that certain vehicle categories may be exempt from LEZs in Scotland. Please tick all those you agree should be exempt:

- Emergency Vehicles
- Military Vehicles
- Historic Vehicles (30 years old or more)
- Vehicles for Disabled Persons
- Showman Vehicles

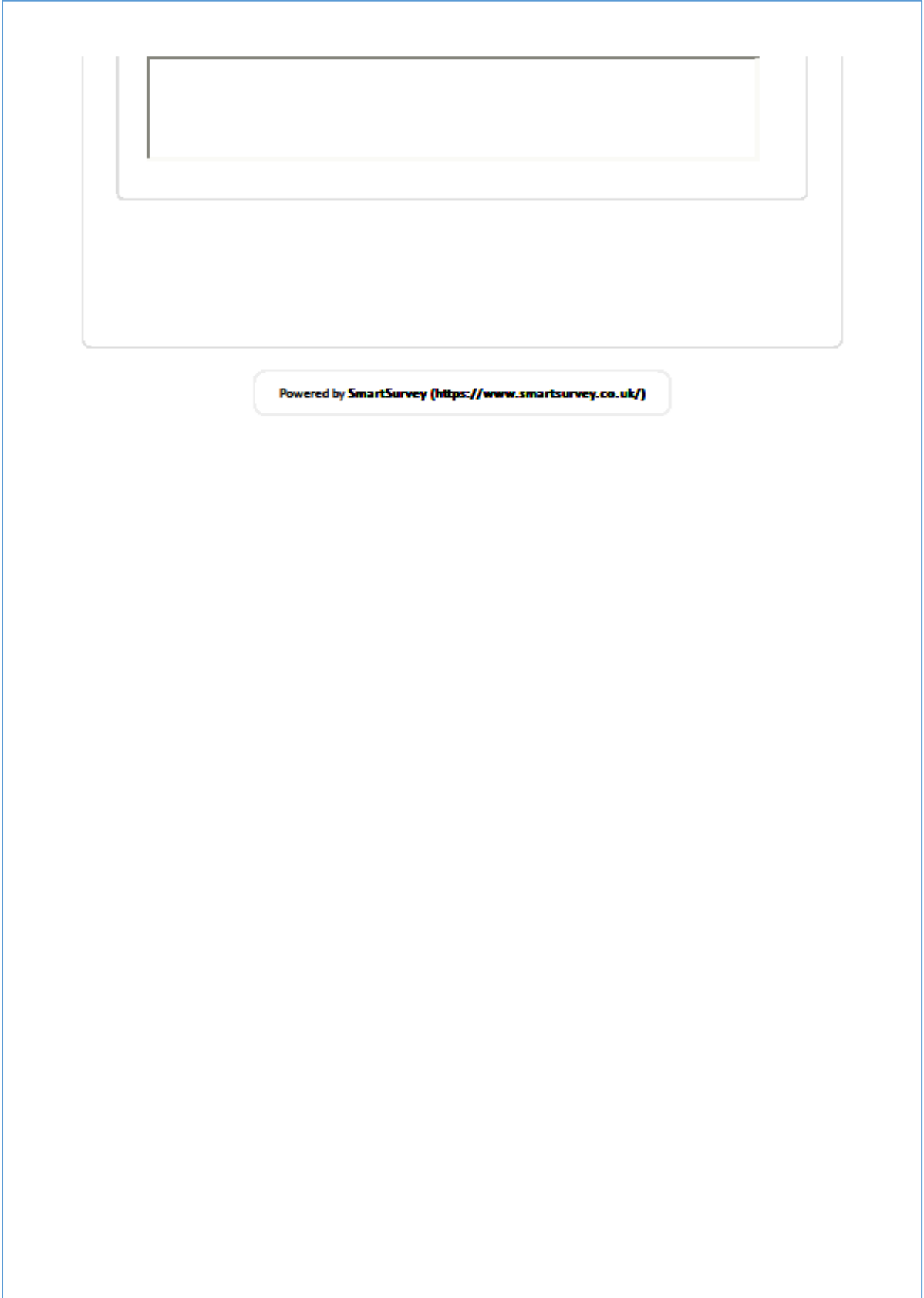
In addition to LEZ exemptions set nationally by the Scottish Government, Glasgow City Council may also have the power to issue 'time-limited' (temporary) exemptions in respect of specific vehicle types/categories. This could mean an exemption period of up to one year which would then require renewal if the exemption were to be continued.

13. Possible vehicle types/categories for temporary exemption are shown below. Please tick any that you think should be considered for exemption:

- | | |
|--|---|
| <input type="checkbox"/> Emergency voluntary sector organisation | <input type="checkbox"/> Specialist vehicles |
| <input type="checkbox"/> Community transport vehicles | <input type="checkbox"/> Postal Vehicles |
| <input type="checkbox"/> Accident / breakdown recovery vehicles | <input type="checkbox"/> Health service vehicles |
| <input type="checkbox"/> Refuse collection vehicles | <input type="checkbox"/> Hearses |
| <input type="checkbox"/> Out of hours shift workers | <input type="checkbox"/> Low frequency travel vehicles |
| <input type="checkbox"/> Wedding vehicles | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> Diplomatic vehicles | <input type="checkbox"/> I prefer no further exemptions |
| <input type="checkbox"/> Utility emergency repair vehicles | <input type="checkbox"/> Other (please specify): |

Please feel free to give reasons for your response.

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10. GRACE PERIODS AND LEZ ENFORCEMENT

14. If Glasgow's LEZ is implemented as proposed, what, if anything, would you do differently as a result? (please tick all that apply)

- Nothing – my vehicle complies
- Nothing – I don't travel through the city centre
- Upgrade my vehicle
- Give up my vehicle
- Change my route or destination
- Walk more
- Cycle more
- Use public transport more
- Use taxis / Private Hire cars more
- Use more park and ride
- Other (please specify):

15. Do you believe there will be unintended consequences from Glasgow's LEZ?

- Yes
- No
- Don't know

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11. PART 4: ABOUT YOU

16. First part of postcode (i.e. G2, G53, G31, etc.):

17. Which age group do you belong to?

- 16 – 24
- 25 – 34
- 35 – 44
- 45 – 54
- 55 – 59
- 60 - 64
- 65+
- Would not like to say

18. Which of the following describes how you think of yourself?

- Male
- Female
- Would not like to say
- In another way

19. Do you have any long-term illness, health problem or disability which limits your daily activity or the work you can do?

- Yes - Mobility
- Yes - Other
- No
- Don't know/No opinion
- Would not like to say

20. Which of the following best describes your ethnicity?

- | | |
|--|--|
| <input type="checkbox"/> Scottish | <input type="checkbox"/> British Bangladeshi / Bangladeshi |
| <input type="checkbox"/> British | <input type="checkbox"/> Other Asian background |
| <input type="checkbox"/> Irish | <input type="checkbox"/> British Caribbean / Caribbean |
| <input type="checkbox"/> Other white background | <input type="checkbox"/> British African / African |
| <input type="checkbox"/> Mixed background | <input type="checkbox"/> Other black background |
| <input type="checkbox"/> British Indian / Indian | <input type="checkbox"/> Chinese |
| <input type="checkbox"/> British Pakistani / Pakistani | <input type="checkbox"/> Would not like to say |

Any other background (please specify)

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