



Glasgow City Council

City Administration Committee

Report by Councillor Anna Richardson, City Convener for Sustainability and Carbon Reduction

Contact: George Gillespie Ext: 79106

**ESTABLISHING A LOW EMISSION ZONE IN GLASGOW**

**Purpose of Report:**

The purpose of this report is to seek approval for proposals to establish a low emission zone in the city.

**Recommendations:**

It is recommended that Committee:

- Notes the proposals made in this report for improving air quality in the city centre.
- Agrees to introduce a low emission zone by the end of 2018 on the basis of these proposals.
- Agrees that the Council should work together with the Scottish Government on the next steps towards Scotland's first low emission zone, including appropriate funding.
- Notes that a further report will be presented within the next six months as more detail on implementation and funding becomes available.

Ward No(s):

Citywide: ✓

Local member(s) advised: Yes  No ✓

consulted: Yes  No ✓

## OFFICIAL

### 1. Background

- 1.1 This report informs members of work to improve air quality in the city and across Scotland. In particular, it presents proposals for further intervention to reduce air pollution in the city centre through the introduction of a Low Emission Zone (LEZ).
- 1.2 The City Government has stated a number of major commitments in relation to transport, air quality and sustainability. One of the key elements of its approach to this significant policy agenda relates to the introduction of a Glasgow LEZ which will address all vehicles entering the city centre. The proposals in this report are therefore intended to set out a means and a timescale for delivering on this commitment.
- 1.3 Glasgow's air quality has improved over the years and is now better than at any time since the Industrial Revolution. Factors in this improvement include restrictions on the burning of coal and wood, the reduction in heavy industry in the city, and the targeted air quality measures included within the Council's Air Quality Action Plans. However, even at today's lower levels, air pollution still harms human health and the environment. Poor air quality can be a significant factor in local health inequalities, affecting the more vulnerable members of the population disproportionately, such as people who are very young, elderly, those with pre-existing medical conditions, and those living in deprived circumstances. A recent public health report calculated air quality mortality figures for the UK, with 300 premature deaths per year being attributable to air pollution in Glasgow itself. In addition to the health impact and associated costs, the Scottish Government also risks infraction proceedings from the EU for failure to meet human health based European air quality limit values in the greater Glasgow Urban Area (an agglomeration that includes all neighbouring local authorities).

### 2. The policy framework

- 2.1 The Environment Act (1995) requires that local authorities report annually to the Scottish Government detailing the status of air quality in their area and work being undertaken to improve it. As in previous years, Glasgow's Annual Progress Report 2017 shows that the majority of the city enjoys good air quality meeting all Scottish Air Quality objectives. Air quality across the city continues to improve – but there remain significant hotspots, particularly in the city centre, where pollution levels are unsatisfactory. In these areas, air quality targets are unlikely to be met within a reasonable timescale without more radical measures being taken.
- 2.2 At national level the Scottish Government acknowledges that local authorities are meeting their statutory responsibilities in actively working towards achieving air quality standards. However, across many areas of Scotland, the rate of progress needs to increase if the national aim of achieving full compliance with air quality legislation by 2020 is to be met. As a means to increase the rate of progress, the Scottish Government introduced a national

OFFICIAL

## OFFICIAL

air quality strategy in November 2015, called the Cleaner Air for Scotland Strategy (CAFS).

- 2.3 Glasgow contributed in the development of the CAFS, being the only local authority represented at the start of the process. Implementation of this strategy now involves all four of Scotland's main cities, along with national agencies such as Transport Scotland, the Scottish Environment Protection Agency (SEPA), Health Protection Scotland and others. In addition, the Council's participation in the Core Cities grouping also links Glasgow to the broader UK discussion on urban transport and air quality.

### 3. Low Emission Zones

- 3.1 One of the proposals in CAFS relates to the establishment of low emission zones in areas of Scotland's cities where air quality does not meet national standards.

- 3.2 A LEZ is a defined geographical area in which vehicle entry is restricted, based on the level of engine emissions. They are aimed at reducing levels of particulate matter and nitrogen dioxide, the latter being particularly associated with local vehicle exhaust emissions. The means by which an LEZ is typically enforced is through number plate recognition cameras which allow for fixed penalty notices to be issued for non-compliant vehicles. There are many LEZs in use across Europe, with one of the largest covering much of London (introduced in 2008). There are currently no LEZs in Scotland.

- 3.3 The 2016 Programme for Government commitment on Low Emission Zones states: "*We will take forward the actions set out in 'Cleaner Air for Scotland' - Scotland's first distinct air quality strategy - to reduce air pollution further. With the help of local authorities, we will identify and put in place the first low emission zone by 2018, creating a legacy on which other areas can build.*" This commitment has been confirmed again in the 2017 Programme for Government.

- 3.4 This commitment has recently been re-iterated in the Scottish Government's draft Climate Change Plan (published on 19 January 2017), which acknowledged that Scotland also needs to reduce greenhouse gas emissions from the transport sector. It should be noted that this 2018 date for implementation is significantly earlier than the 2020 date for implementation originally stated in the CAFS.

### 4. National Approach and Partnership Working

- 4.1 The National Low Emission Framework (NLEF) and National Modelling Framework (NMF) are two key components required by CAFS to allow for the introduction of LEZs. The NLEF is a transport-focused, evidence based appraisal process to enable local authorities to develop a business case for implementing vehicle access interventions on a consistent nationwide basis and to seek funding for them. The NLEF is currently being developed by Transport Scotland. A national public consultation exercise "Building

OFFICIAL

## OFFICIAL

Scotland's Low Emission Zones" was launched on 06/09/17 as part of the NLEF process with an expectation that the NLEF will be available early next year.

- 4.2 In response to the Scottish Government's commitment to have the first LEZ in place by 2018 the NLEF approach has had to be revised with a more streamlined appraisal process now being prepared by SEPA. This approach will allow for the identification of a local authority as an early adopter to deliver an LEZ by the end of 2018. As stated in the consultation, the first LEZ design may not fully reflect the eventual NLEF appraisal document guidance. The Scottish Government would therefore not expect the first LEZ appraisal to be repeated once NLEF is published.
- 4.3 As part of implementing the NMF, Glasgow City Council set up a bespoke NMF Working Group that consisted of representatives from the Scottish Environment Protection Agency, Transport Scotland, Strathclyde Partnership for Transport, and relevant officers from Glasgow City Council. This working group coordinated the collection of traffic data and relevant information required for the NMF. The data collected has now been used to undertake air pollution modelling of LEZ scenarios in the city centre. Work included a detailed source apportionment study and quantifying air quality improvements possible through LEZ restrictions. Glasgow is therefore well positioned to be the LEZ early adopter in Scotland.

## 5. LEZ – scenario testing

- 5.1 Initial LEZ scenario model runs in Glasgow have been focused on the city centre and main feeder routes. The appended map below shows the current city centre Air Quality Management Area, which is the geographical basis of the proposals for a Glasgow LEZ. This is where higher levels of pollution are being experienced in the city. It is also recognized that the benefits of an LEZ scheme will extend beyond the city centre area, as cleaner vehicles entering the LEZ also travel to areas beyond the zone. Further work will be undertaken to consider the impact of the future LEZ beyond the defined area.
- 5.2 The Euro engine standards adopted by the European Union state acceptable limits for exhaust emissions for new vehicles sold in member states. They set out a series of EU directives which have been staging the progressive introduction of increasingly stringent standards over the past two decades. In this light, only vehicles of Euro VI/6 (for diesel) and Euro IV/4 or better (for petrol) are capable of delivering significant air pollution reduction in the problem areas in Glasgow. That approximates to diesel vehicles no more than 2-3 years old and petrol vehicles no more than 10 years old. It is, however, possible to retrofit large (bus and truck) diesel vehicles with exhaust modifications capable of bringing older vehicles up to an acceptable standard.
- 5.3 Modelling work undertaken by SEPA as part of NMF identified the emissions attributable to road traffic and then split it into the specific sectors. The study area included the city centre and the main feeder routes. Air pollution levels were taken from the extensive records GCC hold.

OFFICIAL

## OFFICIAL

5.4 Key findings from the modelling work are as follows:-

- There is a clear link between areas of increased bus traffic and higher levels of city centre air pollution.
- An initial focus on reducing emissions associated with bus movement through the city would achieve the quickest improvements in air quality.
- Greatest improvements in air quality are where buses are the greatest contributor and are replaced by Euro 6 and/or retrofitted.
- Reducing the overall car fleet could reduce congestion and deliver modest improvements to air quality.
- On bus dominated streets such as Hope Street, buses contribute around 70-80% of NOx emissions
- On the car dominated streets, diesel cars can contribute approximately 93% of NOx with the remainder emitted from petrol engines.

5.5 The most significant and immediate improvements in air quality can be made by reducing bus emissions. Bus services are essential to Glasgow's transport infrastructure and the Council continues to promote the use of sustainable and public transport in the city over the use of private cars. Reducing bus emissions, rather than removing or reducing bus services through the city, is clearly the objective for this approach. In addition to the wider public, bus passengers will benefit directly from lower exposure to pollutants at stops and en route and therefore enjoy a healthier, cleaner means of public transport.

5.6 Reducing overall congestion and thereby bus travel time through the city centre is also a means of reducing emissions. Tackling city centre congestion and prioritising sustainable and public transport is a key component of the recent City Centre Transport Strategy, and will be subject to further review and detailed in any LEZ report to the Traffic Commissioner (see below).

5.7 Further improvement in air quality by targeting cars and goods vehicles will affect a substantial number of vehicles. It is proposed therefore that Glasgow's LEZ shall initially relate to buses, for the reasons stated above (subsequent phases will address trucks, vans, taxis, cars and motorbikes). All of the modelling demonstrates that such an approach promises the most significant immediate benefits for air quality in the city centre. The operation and actual air quality monitoring of the LEZ will be subject to review, with the intention to assess the potential for a phased extension to other vehicle types, such as heavy goods vehicles and vans.

## 6. Enforcement

6.1 The LEZ will bring about access restrictions on a variety of vehicle types, based on evidence from traffic data and air quality modelling. Traffic

OFFICIAL

## OFFICIAL

Regulation Orders (TROs), needed to enforce restrictions, will be a critical component of an effective LEZ. Currently such enforcement would be a criminal matter for Police Scotland. Transport Scotland are therefore exploring the options for creating a decriminalised offence to support LEZ enforcement by local authorities.

- 6.2 For buses only, however, a Traffic Regulation Condition approach may be appropriate and does not require additional statutory powers. This would also allow the city to maintain its progress towards 2018, based on the evidence of where the most significant benefits can be made in local air quality.

## 7. Timescales

- 7.1 The 2018 date for declaration of an LEZ is challenging, and sooner than the initial 2020 date proposed in the national strategy. Whilst this sets a challenging administrative context for bringing in a LEZ to Glasgow, it should be clearly noted that the proposal to focus initially on buses has been led by the evidence. This presents a strong case, backed by robust information, for taking such an approach and promises the most immediate and significant benefits to air quality. Indeed, Glasgow's LEZ will have the most stringent emission standards of any city in the UK and stands comparison with the Ultra Low Emission Zone for London.
- 7.2 Discussions have therefore taken place with the Traffic Commissioner on supporting councils by means of imposing Traffic Regulation Conditions on bus operator licences as the first phase in any LEZ. There are still significant logistical requirements for bus operators to procure new vehicles, or retrofit older vehicles, within such a timescale. New bus orders can take 18-24 months from placing an order to delivery, and retrofitting buses require the, potentially, hundreds of buses to be in the garage workshop for approximately 2 days per retrofit. Procurement processes and the availability of contractors to supply and fit large numbers of buses within the suggested timescale is also a concern.
- 7.3 Commercial fleet operators and owners of private vehicles will also require a significant lead in time to upgrade or replace vehicles. Unlike buses, vans and cars cannot be cost effectively retrofitted and made compliant for a LEZ. These vehicles will have to be replaced or kept out of the LEZ area. A full consultation, including consideration and agreement of exemptions, and lead in times will require to be undertaken in advance of any declaration for such vehicles.
- 7.4 Further discussions will now take place with fleet operators and relevant parties to look at reasonable timescales for the implementation of the LEZ. This will include consideration of a phased approach to the use of Euro VI compliant vehicles in the city centre. These will represent an increasing proportion of bus movements from the declaration of the LEZ and on to total compliance. Such an approach will give operators realistic deadlines, as well as maintaining a clear focus on full delivery of the LEZ from its declaration.

OFFICIAL

## OFFICIAL

### 8. Costs

- 8.1 The NLEF work is currently estimating costs in order that funding may be made available by the Scottish Government. It is clear, however, that the infrastructure costs associated with automatic number plate recognition camera enforcement and backroom administration could run to several million pounds over a ten year period. The UK Department for Transport calculated earlier this year that for the five English cities which are looking to introduce Clean Air Zones (effectively LEZs) the cost would be approximately £101 million. It should be noted in this light that the Scottish LEZs are not expected to be revenue raising or self-funding, with the intended purpose being specifically to deter entry rather than generate income. There is no intention for there to be any form of road user charging in place, such as operated in LEZs elsewhere.
- 8.2 Transport Scotland has commissioned consultancy support from Jacobs to look into the costs of administering a LEZ. This work will help to give the Council a clearer sense of the resource requirements for administering a LEZ, initially as proposed above for buses and then with its extension to further vehicle types. Members' agreement to the proposals made above will help to drive such discussion and provide a mandate for the Council to engage in further work on scoping out potential costs and sources of funding support. In this light, a further report on such detail will be presented to the committee in due course.
- 8.3 The costs to the bus industry and commercial fleet operators will be dependent on the number of vehicles that are non-compliant and is likely to be substantial. Retrofitting older buses does cost significantly less than the cost of brand new buses. The number of buses likely to be non-compliant on local services through the city centre has led the SPT to estimate this cost to be in the region of £10-17 million. The Scottish Government may also wish to exercise the option of a scrappage scheme for older buses.
- 8.4 The 2017 Programme for Government clearly commits the Scottish Government to the putting in place the first LEZ by the end of 2018. Glasgow is similarly committed to having the first Scottish LEZ in place by the end of 2018. National funding support will need to be applied to the Glasgow LEZ in order to make this happen. Discussion will therefore be taking place with Transport Scotland and the Scottish Government in relation to this requirement.

### 9. Consultation with stakeholders

- 9.1 Consultation and engagement with stakeholders will be essential before and immediately after declaration of a LEZ and in relation to its subsequent extension beyond the initial focus on buses. This will include the wider business sector, recognizing that access to the city centre needs to be maintained at the same time as a cleaner city centre has the potential to be a key element of a vibrant and sustainable business environment.

OFFICIAL

## OFFICIAL

- 9.2 Early engagement and leadership to help shape the debate and inform the public will therefore be essential. Access for disabled drivers, charities, social services and other groups will require to be considered, with a view to establishing the level of exemptions that may be needed in due course. A formal equality impact assessment will also be undertaken to ensure that the establishment of the LEZ takes the needs of all equality groups into account.
- 9.3 The outputs of this engagement and any implications for the operation of the LEZ will be presented to members in an update report on progress towards the LEZ within the next six months.

### 10. Concluding comments

- 10.1 A LEZ covering Glasgow's city centre Air Quality Management Area is capable of bringing about a significant improvement in air quality. This improvement will be targeted on the streets in Glasgow currently experiencing the highest levels of pollution in the city. The proposals made above will ensure that benefits will be enjoyed throughout the city.
- 10.2 The initial phase of the LEZ will focus on reducing bus emissions. It is intended that subsequent phases will include trucks, vans, cars and motorbikes in order that all harmful sources of air pollutants are further reduced.
- 10.3 The associated costs for implementing and enforcing an LEZ for Glasgow City Council will be significant, together with the cost for commercial fleet and bus operators. Therefore, further work requires to be undertaken to estimate these costs in more detail and will be presented to committee in the update report within 6 months. Engagement will also take place with the Scottish Government to ensure that adequate funding is made available for the LEZ to be put in place within the agreed timescale.
- 10.4 The case for the introduction of a low emission zone in the city centre, initially focused on buses, is clear and compelling. It is backed by detailed technical assessment and scientific evidence. Members are therefore asked to support the city's ambition of introducing Scotland's first LEZ, with an initial focus on buses.

### 11. Policy and Resource Implications

#### Resource Implications:

- Financial:* Costs associated with work currently underway will be met from existing resources & from various partner agencies..
- Legal:* There are a number of legislative issues in relation to a LEZ for all vehicle types.
- Personnel:* No direct personnel issues.

OFFICIAL



## OFFICIAL

*Procurement:* Not known at this time. An update will be provided within the next report.

**Council Strategic Plan:** Work on cycling and air quality supports the following Strategic Plan objectives:

- Economic growth
- A world class city
- A sustainable city.

### **Equality Impacts:**

*EQIA carried out:* An equality impact assessment will be undertaken in due course as further vehicle restrictions are considered for the LEZ.

*Outcome:* N/A

### **Sustainability Impacts:**

*Environmental:* Promotion of more sustainable forms of transport and improved air quality.

*Social:* Improved air quality has the potential to improve health and wellbeing, particularly for more vulnerable residents.

*Economic:* A healthier city with cleaner air also provides a positive environment for businesses.

## **12. Recommendation**

12.1 It is recommended that Committee:

- Notes the proposals made in this report for improving air quality in the city centre.
- Agrees to introduce a low emission zone by the end of 2018 on the basis of these proposals.
- Agrees that the Council should work together with the Scottish Government on the next steps towards Scotland's first low emission zone, including appropriate funding.
- Notes that a further report will be presented within the next six months as more detail on implementation and funding becomes available.