

## Scottish Low Emission Strategy

### IAQM CONSULTATION RESPONSE

#### **Q1 Do you think the Mission, Vision and Objectives for the Low Emission Strategy are appropriate? If not, what changes would you suggest?**

The Mission, Vision and Objectives for the LES are appropriate and work at a high level. The IAQM believes, however, that the Strategy should recognise the transboundary nature of pollution further and emphasise the need to liaise and work with the rest of the UK and the EU.

#### **Q2 Do you think the proposed actions will deliver the Mission, Vision and Objectives? If not, what changes to the actions would you suggest? Are additional actions required? If so, please suggest what these might be.**

Many of the actions included in the draft Strategy have the potential to contribute to the ongoing improvement in air quality in Scotland and meeting the Strategy's mission, vision and objectives. Most notably, these are the inclusion of PM<sub>2.5</sub> within the LAQM regulations, the promotion of less polluting transport modes and a focus on the declassification of AQMAs, along with the development of a national LEZ framework.

Some of the actions, however, do not contribute substantially to meeting the Strategy's mission, vision or objectives – most notably increasing the annual mean objective for PM<sub>10</sub> from 18 µg m<sup>-3</sup> to 20 µg m<sup>-3</sup> and the development of a 'national air quality modelling methodology'. (Further commentary on this aspect is provided in our response to Q5.)

The strategy would benefit from having fewer actions, more of which are targeted on emissions reduction. Some of the less well defined and aspirational actions could be removed without any loss of effectiveness. Some emission sources are not mentioned at all and are worthy of inclusion, such as small to medium combustion plant and some agricultural activities that make a significant contribution to regional pollution.

The conclusions of the reviews of LAQM undertaken in Scotland, and also across the wider UK in recent years, have clearly identified the sources responsible for poor air quality existing in hotspots across Scotland. These problems have already been well characterised through the LAQM process and work undertaken by the Scottish Government in partnership with Defra and the other DAs in recent years. This phase of diagnosis does not need to be repeated. The emphasis instead needs to be on action and implementing solutions.

The Strategy includes a lot of very good actions that have the potential to help improve air quality across Scotland in the coming years, but it should perhaps also consider the importance of working with other countries in the UK and EU.

**Q3 Does the Setting the Scene section accurately summarise the current policy situation? Please suggest changes if not.**

The emphasis in this section is very much on urban air pollution and the contribution of road transport. This aspect is very important, especially in relation to human exposure, but a national LES also needs to be all encompassing.

Further information should perhaps be included in relation to O<sub>3</sub>, NO<sub>2</sub>, NH<sub>3</sub> and lead. For example, lead is not mentioned in pollutants of concern but is referenced in Table 2, whilst NO<sub>2</sub> is a primary pollutant of concern rather than NO<sub>x</sub>. The nature of the roles of O<sub>3</sub> and NH<sub>3</sub> in air pollution could be explained further to give a more complete picture and the opportunities for improvement.

**Q4 Does the Way Forward section give a reasonable outline of what further action is needed to deliver an effective Low Emission Strategy? Please suggest changes if not.**

Some good actions are listed in this section and many of these will help to support the development of a potentially successful LES. Further consideration should perhaps be given to the possible barriers to the adoption of the LES by planning authorities, such as acceptability, funding, social exclusion, etc. As the LES will not implement LEZs in its own right, further consideration should be given to what will actually encourage Local Authorities to adopt and implement LEZs.

The strategy also focuses primarily on Planning Authorities and thus primarily local road networks. Given the significant influence that trunk roads have on air quality within many AQMAs across Scotland (e.g. Glasgow M8), the LES should perhaps also include some consideration of the measures/ actions that Transport Scotland is taking or should be expected to undertake to contribute to improving air quality across Scotland (e.g. evaluation of High Occupancy Vehicle Lanes, etc to promote car sharing or the use of public transport) and how such measures are being independently evaluated.

The IAQM welcomes the recognition given to the importance of public engagement and the role that communication of these ideas has in making progress with air quality improvements.

We would wish to make a comment regarding the following statement in Section 6.3 of the draft Strategy:

**‘Roadside monitoring of air quality emissions can also be improved through the use of low-cost sensors’ and ‘Modelling of transport emissions relies on AURN station data; whilst such stations are necessary for monitoring compliance with regulations, they may not be located in the most suitable positions to inform transport modelling’.**

The value and effectiveness of low cost sensors for air quality monitoring are still being evaluated and, in many cases, the quality and reproducibility of the data from individual pods can lead to inaccurate or conflicting interpretations. As many of the pods are effectively a ‘black box’ to most users, there has to be a degree of trust from the user that the data they are being provided with is usable. With time, it is hoped that the quality of data from such sensors will help to inform local air quality monitoring as an indicative measure (screening); however, further work is needed before data from such sensors can be relied upon with any certainty.

Scotland does benefit from the extensive Scottish Air Quality Monitoring network, which is comprised of over 90 high quality monitoring sites. These include AURN monitoring sites, but also a large number of Local Authority monitoring sites which are operated at a standard equivalent to the AURN sites and many of which are located close to busy roads and can thus be used to inform air quality modelling.

#### **Q5 What are your views on the proposals for the National Modelling Framework?**

The concept of a national modelling and assessment methodology has numerous attractions, including consistency. The IAQM would note, however, that good practice in this field is already described in existing statutory guidance. We note that this proposed methodology has yet to be developed and we also note that there are some important questions left unanswered, notably around resources, ownership, access and the source and quality of input data. The IAQM would recommend that there should be a rigorous and open peer review process for developing the modelling framework and, further, that the emergent modelling architecture should be ‘open source’ and therefore subject to continuous scrutiny and improvement.

It is not realistically feasible to agree/ disagree with the proposals for the National Modelling Framework until they exist and it is recommended that a further public consultation exercise should be undertaken on the proposals for the modelling framework once they have been defined, prior to its development. A key aspect of this should focus on what level of modelling

is needed, what already exists and what benefits the national framework will bring. Dispersion modelling can be very resource intensive and it would not be wise to expend valuable resources on reproducing what has already been done elsewhere. For example, some comment in the document is made on regional modelling. If this reflects an aspiration to develop a modelling capability capable of simulating air quality across substantial parts of Scotland, then this would represent a significant investment indeed. It may be more cost-effective to make use of what has already been done elsewhere in the UK in respect of regional air quality modelling.

**Q6 What are your views on the proposals for the National Low Emission Zone Framework?**

The proposed national framework for LEZs should provide very helpful guidance and encouragement for those local authorities seeking to implement an LEZ. It should minimise questions regarding consistency of approach and thus enable authorities to undertake feasibility studies that should be comparable with other authorities across Scotland. Furthermore, it reduces the scope for duplication and wasting resources.

The details of the LEZ Framework do need further thought and refinement, however. The suggested guidance criteria for emission standards and notice period for implementation are quite stringent. On the one hand, the requirement for a Euro VI standard for HDVs is necessary to achieve a sufficiently large benefit, but, on the other hand, there will be pronounced economic disbenefits to the local economy from the sharp transformation required of commercial fleets. (It is assumed that the guidance criterion is intended to apply to HDVs and not passenger cars, although the latter are a significant contributor.)

It is appropriate for national government to suggest criteria for LEZs, but individual local authorities will need to have some latitude in the precise definition of an LEZ in order to enable implementation in practice.

Interventions in city centres and urban areas should not be confined simply to vehicles, but could also usefully consider other sources that may contribute disproportionately to high concentrations of pollutants.

**Q7 What are your views on the proposed Key Performance Indicators? Are any different or additional Indicators required?**

KPIs for concentrations of relevant pollutants are important, if not essential. They should be informed by comparable good quality data from local (kerbside/ roadside sites) and also nearby background sites. The definition of site type cannot be ignored if the KPIs are to be meaningful, ie consistency is required. The use of air quality monitoring for this purpose also underlines the importance of maintaining some sites for many years to ensure trends are valid. It would be helpful to include PM<sub>2.5</sub> as a KPI, although we recognise that a population weighted concentration is implicit in the proposal for the 'fraction of mortality' indicator. Concentrations of this pollutant are also partially influenced by distant sources, which are beyond the direct control of Scottish local authorities or government.

The focus on quantifying modal shift is also important and valuable. Given that the Strategy relates to emissions, however, it would be sensible to include an evaluation of % change in calculated emissions from sources within any LEZs that are implemented, or other interventions of note.

*For more information on this response, or on other IAQM policy work, please contact:*

**Robert Ashcroft**  
**Policy and Publications Officer**  
Institution of Environmental Sciences  
[robert@the-ies.org](mailto:robert@the-ies.org)  
020 7601 1920