

GREATER**LONDON**AUTHORITY

Assembly Scrutiny of the Mayor's Air Quality Strategy

April 2001

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Note

This report is a summary prepared for the Assembly. The full report, as received by the Environment Committee, contains several detailed appendices including a detailed line by line analysis of the Mayor's draft Strategy, and a memorandum from the Chair of the Economic Development Committee dated 4 April 2001. The full report has been made available to the Mayor's Office and is available to any Member who may wish to see it, on application to the Secretary of the Environment Committee. It is also available to the public in the Committee papers section of the web site www.london.gov.uk, Environment Committee meeting 5 April 2001.

Executive Summary

The Assembly welcomes the Mayor's draft Air Quality Strategy (the "Strategy") and considers that it goes some way to providing a strategic policy structure for air quality in London. But it does not provide evidence that its objectives will be met or demonstrate that it is based on quantified targets.

The Assembly's recommendations are summarised below and discussed in the main report.

Consistency among Strategies

- For consistency, air quality objectives should also be prioritised clearly in the Mayor's Transport and Economic Development Strategies.

Achieving the primary objective

- There is insufficient evidence to confirm that the policies and proposals will lead to the objectives for NO_2 and PM_{10} being met by their respective target dates.
- The Mayor agrees that the target dates for these objectives might not be achieved.
- The Mayor should provide a clear longer-term vision to reflect his primary objective and include other pollutants (e.g ozone), longer-term targets and non-transport related pollutants, such as those from incineration.
- The Strategy should include contingency measures if a Low Emission Zone is thought not to be feasible.
- Improvements to tackling air quality should be made in the most cost-effective way.

Effectiveness of the Strategy

- The emission reductions necessary to meet the objectives should be quantified and included in a plan of action. These can then be set against quantified reductions for the Mayor's proposals, allowing prioritisation, target setting and a timetable for action.
- The resource implications for the Mayor, Transport for London (TfL) and others should be quantified.
- There should be monitoring schemes set up to assess progress on achieving the Mayor's targets.
- The Mayor should undertake further studies designed to assess whether the benefits he expects to achieve through his Strategy will be shared by all Londoners.

Scope

- The Mayor should use his discretionary powers to include wider policies and proposals of importance to air quality in London.
- Full and proper recognition of the Strategy should be given in the implementation of the Transport Strategy.
- The Transport for London Road Network should be a priority for action by the Mayor and TfL.

Relationship with the Boroughs

- The Mayor and TfL should work with the Boroughs, forming a strong co-operative partnership approach to help the Boroughs achieve the objectives.

Specific measures in the Strategy

- *Congestion charging* – will have little beneficial effect on air quality in central London. The Strategy should explore ways in which the charging scheme could be linked to the achievement of air quality objectives, for example by incentives to favour low emission vehicles.
- *Low Emission Zone (LEZ)* – there is concern about the timescale involved and its proven efficacy based on central London only. A wider LEZ for Greater London should be considered the priority. The LDA has a specific role here and needs to be actively involved.
- *Heathrow* – further proposals should be included in the Strategy to ensure air quality improvements.
- *Encouraging technological changes and new fuelling infrastructures* - targets and timetables should be included.
- *London Development Agency (LDA)* – need to be brought into the structured framework as to how the business community can respond.

The Assembly believes that, with these improvements to the draft Air Quality Strategy London can more realistically achieve improved air quality and meet the air quality objectives.

The Assembly is grateful for the time and effort devoted by the witnesses who submitted evidence and by officers at the GLA, and for the support provided by its consultants, the Environmental Research Group of King's College, London.

1 This scrutiny report

This report is the outcome of an examination by the Environment Committee into the Mayor's draft Air Quality Strategy. The Strategy seeks to achieve better air quality in Greater London and the Assembly supports this aim. This report offers a broad technical examination of the proposed Strategy. The terms of reference used in preparing the report are shown at appendix A.

The Mayor is required, by statute, to include proposals and policies for the achievement of the Government's national air quality objectives in his Air Quality Strategy. The Government's objectives are currently set for eight air pollutants, with target dates as soon as the end of 2003. A major question for the Committee was whether the Mayor's proposals can deliver in a way that will meet these objectives.

The Strategy may also include such other proposals and policies for the improvement of the air quality in Greater London as the Mayor considers appropriate. The Committee also examined how this aspect of the Mayor's discretion has been used.

The Strategy is necessarily both technical and scientific. In this report the Committee has set out to deal with complex issues in as clear a manner as possible.

The Government's Air Quality Strategy (January 2000) advises that local authorities should not be compelled to take measures that could disrupt local economies. The Committee considered any major impact on economy from the measures proposed in the Strategy.

The draft Transport and Economic Development Strategies, out for public consultation at the time of writing, share common concerns with this Strategy, as is recognised throughout this report. Supplementary reports were received by the Environment Committee from the Economic Development Committee and the Transport Policy Committee, and are available if required (see note on the Contents page).

The Strategy will be made available for public consultation from May 2001 with the intention that a final Strategy be published in November 2001.

2 The Strategy

2.1 Proposals in the Air Quality Strategy

The Strategy proposes important measures relating to specific areas in Greater London:

- *Congestion charging* – central to the Transport Strategy
- *Low Emission Zone* – the Strategy proposes a feasibility study for a central LEZ
- *Heathrow* – identified as having poor air quality and predicted in the Strategy to fail to meet the objectives
- *Encouraging technological changes and refuelling infrastructure* – a wide range of measures are proposed in the Strategy
- *London Underground* – the Mayor considers air quality to be important to the many users of the Underground and therefore has included it in the Strategy.

2.2 The challenge facing the Mayor's Strategy

The primary objective of the Strategy is “to reduce the damaging effects of air pollution on London's health and to create a city with air that is pleasant to breathe.” To achieve this target the Mayor proposes to adopt the Government's air quality objectives. These objectives are included in the Air Quality (England) Regulations 2000 and apply nationally. They are challenging. London is seen by the Government as a main area of concern, and recognises that there are many areas in London likely not to meet the objectives of reduced air pollution. London's air quality is widely accepted to be the worst in the UK, principally due to petrol and diesel exhaust emissions.

Air pollution does not respect administrative boundaries. The Mayor needs to co-ordinate the 33 London Boroughs, recognising they each have a specific duty to undertake air quality actions under Part IV of the Environment Act 1995.

The Strategy focuses on two pollutants predicted not to achieve their objectives across areas of Greater London. These are nitrogen dioxide (NO₂) and particles (PM₁₀).

Nitrogen dioxide (NO₂) and particulates (PM₁₀) are among the invisible pollutants in London's atmosphere today, damaging health and causing lost work and reduced productivity through illness. These two pollutants do not meet and are not predicted to meet the national air quality objectives by the dates required by government. It is thought that NO₂ especially increases the lung's susceptibility to infection and particulates may introduce chemicals deep into the lungs. Over 75% of the NO₂ and PM₁₀ in London's air are emitted by road vehicles.

Source: the Mayor's draft Strategy, 30 January 2001

The target date for the attainment of these objectives for PM₁₀ is 31 December 2004 and for NO₂ is 31 December 2005. In both cases the objectives relate to assessments over a whole year. This means that any measures introduced to meet the targets would need to be in place one whole year ahead of the due date.

3 Consistency with other Strategies

It is important that the Mayor's different strategies should be consistent among themselves, and should give appropriate emphasis to matters that have significant impact on the issues being addressed by another Strategy.

The Strategy identifies the transport sector as the principal sources of PM₁₀ and NO₂ and therefore the successful achievement of this Strategy will rely heavily on the draft Transport Strategy. But the draft Transport Strategy does not target air pollution as a principal objective. Although it is acknowledged that many of the proposals in the draft Transport Strategy will lead to improvements in air quality, a more focused approach is required to achieve the air quality strategy objectives in the required time frame. The Committee received evidence that there is little in the draft Transport Strategy to help achieve air quality objectives, and heard from Boroughs that their Local Implementation Plan funding will not be sufficient to achieve their air quality targets.

This should be evident from an emissions reduction approach and should be shown as a key objective in the Mayor's Transport Strategy.

Measures to reduce pollution emissions have other potential benefits. For example, improvements in the efficiency of domestic heating may contribute to tackling fuel poverty. Some transport measures to reduce pollution may have other health benefits. Although technical fixes to reduce pollution will yield health benefits from reduced pollution, other approaches such as modal shift or reduced need to travel will yield further health gains. These additional health gains may result from increased exercise, and social gains, from greater equity of access and less fragmentation of communities. These factors should be considered in the prioritisation of transport measures. (Mindell 2001).

The Committee noted that the draft Economic Development Strategy advises the LDA to promote continuing development of London's international transport links and to safeguard environmental concerns in future projects.

The Strategy acknowledges links to other strategies including Spatial Development, Energy and Municipal Waste Management.

The Committee believes there can be better consistency among the Mayoral Strategies.

The full appendices to the Committee's report, not attached but available if required, contain a detailed comparison to the Mayor's draft Transport Strategy.

4 Assessment of the Strategy

In this section we present an overall analysis of the Strategy, showing the Committee's comments.

4.1 The overall context of the Strategy

The Mayor's overall targets for the Strategy are statutory. The GLA Act 1999 requires the Mayor to prepare and publish a London air quality strategy and requires it to contain proposals and policies:

- For the implementation in Greater London of the policies in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland;
- For the achievement in Greater London of the air quality objectives prescribed in the Air Quality (England) Regulations 2000.

The Mayor's Strategy may also contain such other proposals and policies relating to the improvement of air quality in Greater London as the Mayor considers appropriate. It is our view that the Mayor cannot weaken the statutory targets, i.e. the Government's objectives, since these are set by law and must be considered as the minimum requirement. This does not mean that the Mayor cannot set higher standards in his Strategy.

The Mayor has set these secondary objectives, to encourage more sustainable modes of travel:

- Reduce the impact of activities, including transport on air quality, consistent with promoting economic growth
- Promote good quality, practical, pleasant and clean methods for transport of people and goods
- Promote good environmental quality throughout London

The primary objective of this strategy is to achieve the statutory objectives in Greater London and this must not be lost sight of or diluted by secondary objectives.

The Strategy's primary objectives concern two pollutants, nitrogen dioxide (NO₂) and particles (PM₁₀). It recognises that the statutory objectives for these pollutants are not likely to be achieved across many parts of Greater London, based on current evidence.

The Committee agrees that the two main pollutants for action are NO₂ and PM₁₀ and that to improve air quality for these pollutants it is necessary to take action to reduce emissions from the road transport sector. The Committee also recognises that the Mayor's objectives for these pollutants, set by legislation, are extremely challenging.

4.2 Scope of the Strategy

The GLA Act requires the Strategy to report the current air quality for the pollutants in the Government's strategy. This has not been done for all eight pollutants listed. Instead the Mayor has concentrated on the two pollutants mentioned above. He should recognise that London has the most comprehensive high quality citywide air quality monitoring in Europe, supplemented by DETR monitoring, and that the London Air Quality Network (LAQN) reports Greater London's air quality.

The Strategy needs to confirm the predicted air quality for all eight pollutants.

The Committee recognises the importance of the London Air Quality Network and the Government's Strategy in understanding current and future air quality across Greater London and in producing the Strategy. These factors should be addressed more fully in the Strategy.

4.3 The likely effectiveness of the Strategy

The Mayor was able to provide some estimates of the reductions necessary to meet his Strategy. His answers referred to specific locations in London. The expected reductions are large and exceed those reductions expected as a result of national measures.

The Strategy does not give any quantitative information as to the effect of the policies and proposals outlined. Instead it gives a list of ideas that may (or may not) achieve the primary objective. The Strategy recognises that no single measure will lead to the achievement of this objective.

The Mayor needs to be able to demonstrate that the measures he proposes will lead to achievement of the statutory objectives throughout Greater London, a primary objective for the Strategy.

The social impacts arising from air quality are being addressed separately during the consultation process.

The Committee considers that the Mayor needs to undertake further studies to consider the effects of the Strategy policies to assess whether benefits arising from the anticipated improvements in air quality will be gained by all.

The proposals and policies in the Strategy give little detail on any other effects that might arise from their adoption. The adoption of any measure to reduce specific emissions from road transport sources will usually also lead to a complementary reduction in other pollutants. This should be confirmed and quantified. The potential costs and disadvantages from the introduction of the measures have also been left out, apart from congestion charging proposals.

The Mayor needs to fully address the specific comments raised previously by the Assembly on congestion charging. This includes recognition that the proposed congestion charging alone will not achieve significant improvements in air quality.

The Government's strategy requires local authority actions to be cost effective. The Mayor should also consider this. Taking into account costs and benefits also underpinned the Government's strategy. The definition used for this is as follows:

"Decisions must take account of a wide range of costs and benefits, including those which can't easily be valued in monetary terms. When we put a monetary value on a decision, we should quantify the benefits, or failing that, assess them qualitatively. In pursuing any single objective, we should not impose disproportionate costs elsewhere. We should take into account public values, the timing of costs, benefits, risks and uncertainties."

It is noted that the feasibility study for the Low Emission Zone (Proposal 7) seeks to address many of these issues.

The Mayor has advised that the urban economy will act to improve the attractiveness of London for inward investment, without providing any evidence to support this statement. The Economic Development Strategy produced by the LDA also provides no quantitative support for this statement. It is unrealistic to assume that there will be no costs to the business economy from the implementation of the measures in the Strategy.

The Committee considers that these costs and benefits need to be assessed fully, particularly on small businesses operating where congestion charging and LEZs are proposed.

4.4 Implementing the proposals

The Strategy contains 61 proposals, mainly focusing on the reduction of emissions from road transport sources to improve air quality. It looks at:

- Traffic reduction
- Using the cleanest conventional engine technologies and smaller vehicles
- Cleaning the emissions of vehicles now on the road through fitting new technology and improving vehicle maintenance and driving style
- Promoting and adopting alternative fuels – gas, electric and fuel cells

Proposals in the Strategy are not targeted, whether by priority or resource. There is a summary which includes a comment on the timescale, but it only highlights proposal start dates, or expected date of achievement (where targets are being set), or whether the proposal is ongoing.

The Committee considers that the Strategy does not provide a plan of action to achieve its objectives.

he feasibility of the Strategy achieving its objectives is difficult to judge fully due to the limited information it provides. The proposals and policies are difficult to assess in many instances, due to a lack of quantifiable evidence as to their likely effect. The Assembly has previously concluded that Central London congestion charging on its own will make only a small contribution toward improving air quality (Congestion Charging: London Assembly Scrutiny Report, November 2000). No other evidence is provided in this Strategy to demonstrate that additional reductions in emissions will lead to any tangible improvements.

The Government's strategy indicates that London may not meet the national objectives. High priority should be given to the proposals and policies in the Strategy which are geared towards achieving the national objectives. But the Mayor, in his evidence to the Committee (13 March 2001), suggested that the objectives might well not be met.

The Committee is concerned that the Strategy will not achieve its target.

The Boroughs have responsibility for local air quality management under the Environment Act 1995. This means they are required to review and assess air quality in their geographical area, to designate air quality management area(s) and to prepare an action plan as necessary to achieve the objectives. The Mayor is required to have regard to each of these actions, when preparing the Strategy.

The Strategy is clear about the relationship with London Boroughs undertaking their own statutory actions. It advises that the Mayor has powers of direction over review, assessments and action plans. It states what the Mayor expects in relation to these and also states that Boroughs should lead by example, quoting measures that can be included.

The Boroughs are important stakeholders in the process, with their own statutory and fiscal priorities. It should therefore be a stated Mayoral policy to seek to work in partnership with the Boroughs and other stakeholders. This would also ensure consistency with public consultation draft of the Transport Strategy.

The Mayor needs to consider his relationship with the Boroughs, recognising that the Boroughs also have strict and demanding objectives to meet. There is a risk that failure to achieve the objectives could lead to a blaming exercise. To avoid this, close and careful partnership arrangements are required, whereby management responsibilities need to be agreed at the earliest possible date. The Mayor should discuss his priorities with the Boroughs.

The Strategy recognises that London is unique in the UK due to its size and population. The polluting activities resulting from these cause London to have some of the worst air quality in the UK, the result of pollution generated locally, and on a wider scale (known the background contribution).

The Mayor, through his London wide role and as his part of the partnership, should assume responsibility for reducing the background contribution within each Borough. This would recognise that much of this pollution is generated by the Transport for London Road Network (TLRN) which has, according to the draft Transport Strategy, approximately one

quarter of London's traffic. This would allow the Boroughs to concentrate on dealing with specific hotspots in their area.

The TLRN and London's motorways, taken together, carry about 50% of London's heavy goods vehicles, not addressed in the traffic management section of the Strategy. The Mayor should consider working with the Highways Agency regarding these roads.

The TLRN should be a priority for action by the Mayor and TfL. The Mayor should begin with his own road network,

The concept of a Low Emission Zone is that a geographical area is designated and then emissions in that area are restricted. Typically these are areas which only certain types of vehicle may enter, for example, those meeting specific stringent emission standards. At the time of writing no LEZs have been designated in the UK.

The consideration of a one or more Low Emission Zones (LEZs) is an attractive part of the Strategy. Many organisations are currently viewing LEZs as helpful for areas with poor air quality. A careful and balanced evaluation is required, and the Mayor is correct to propose a feasibility study.

The Mayor expressed some concern to the Committee about LEZs being untried and the Committee share this concern. The LEZ Feasibility study is already under way, with Phase 1, a research review, due to be delivered in early 2001. Phase 2, which looks at the feasibility of various scenarios and is intended to give enough information for a political decision, is due for completion in 2002. Modelling already undertaken suggests that even ambitious scenarios in central London will not appreciably affect NO₂ concentrations (Carslaw D.C and Beevers S.D, Transportation Research Part D, accepted for publication 2001).

The Committee is pleased to see that a feasibility study for a Low Emission Zone is underway. It is concerned that:

- ***The study needs to be properly funded to ensure it can be meaningful.***
- ***The LEZ should aim to achieve compliance with the objectives within the LEZ. There is doubt that the scenario proposed by the Westminster study would result in compliance with the objectives. The LEZ is the cornerstone to the Mayor's strategy, therefore if it is not going to be in place by 2004, we need to know how the Mayor intends to comply with the targets.***
- ***If it is introduced then this should be done in consultation and partnership with the ALG and the Boroughs, and it should be consistent with the objectives in the Strategy.***
- ***The consultation process for the study must be open and fair to all stakeholders and the draft Air Quality Strategy should be used as a means of carrying out this consultation.***

The Committee wishes to be kept informed of the progress of the study.

4.5 Timescales

The timescale for the achievement of the Government's objectives is short, with the compliance date for the national PM₁₀ objective being the end of 2004. As noted above, this means that any additional measures need to be in place by the end of 2003. Many of these measures will also assist with meeting the NO₂ objective. Whilst there is a further year for any additional measures over and above those for PM₁₀ to be introduced to comply with the NO₂ objective, the practicality may be that further measures cannot be introduced, particularly if infrastructure changes are needed.

Careful and urgent timetabling is required to show whether the key measures given in the Strategy can be delivered in a timely fashion to meet the objectives in time. The Strategy needs to state specific milestones and consider all steps necessary to meet these dates. For example, any contracts to be tendered should have clear delivery dates, to be enforced by penalty clauses.

4.6 Emission reduction targets

Meeting the Strategy objectives will be very difficult under existing policies. It could be informative to view the problem in terms of emission reductions required to meet the objective. Some examples of required emissions reductions are included in the Strategy, but more along these lines could have been done. This may simplify some of the confusions in the Strategy stemming from discussions of the links between emissions and concentrations of primary and secondary pollutants.

The Strategy should quantify the emission reductions required to meet the objectives in each area.

The emissions reductions from each of the proposed measures in the Strategy should be similarly quantified.

Approaches based on emission reduction targets will allow the Mayor to prioritise the proposals in the Strategy, and to set targets and timescales. This approach would greatly inform the LEZ feasibility study and allow targets to be set for the uptake of alternative fuel vehicles.

Any deficiencies can also be identified and addressed by additional policy measures.

4.7 Resources

The Strategy needs to provide information regarding the required and available resources for the implementation of the Mayor's proposals, including resources for the Boroughs.

4.8 Key pollutants

The Strategy focuses on measures to reduce PM₁₀ and NO₂, since these pollutants are those most likely to exceed the Government objectives. Measures noted in the Strategy to reduce these pollutants will also reduce emissions, and therefore concentrations, of other pollutants, including benzene, dioxins, 1,3 butadiene, CO, and annual mean SO₂. This should be recognised in the Strategy.

It is constructive to include the new lower EU Directive Limits for CO and benzene into the Strategy, ahead of their future incorporation into the next revised Government strategy.

Increased levels of ozone (O₃) may result in suburban areas, although overall emissions of O₃ precursors may be reduced. This should be recognised in the Strategy and the Mayor should maintain a watching brief for this pollutant.

4.9 Areas of exposure

The Government's strategy applies to areas where members of the public might be exposed for the relevant averaging time of the objective. DETR Guidance (LAQM.TG4 00) states that this includes air around domestic residences, schools and hospitals but excludes air around workplaces.

The assessment of individual personal exposure to pollution is complicated. Londoners spend time at home, work and in public areas. Exposure away from the home may contribute to an individual's personal exposure being above the objective and this should be recognised in the Strategy.

The area of exposure should be increased to cover air around workplaces and public areas as a minimum. Consideration should also be given to exposure while travelling in road vehicles.

In common with the Government's strategy the Strategy does not include indoor air quality. This is a complex area where the Mayor can have little influence. However, there may be opportunities to improve the indoor environment by encouraging good practice in the construction and renovation of buildings.

The Strategy should include a consideration of indoor air quality too.

4.10 Pollution sources – transport and industry

The Strategy correctly focuses on transport as the main source of PM₁₀ and NO_x emissions in London. These are also areas where the Mayor has some powers.

The Environment Agency (EA) is committed to ensuring that emissions for processes under its control will meet the Government's objectives and therefore the Strategy objectives.

The Mayor should seek clarification from the EA that this applies to the Strategy.

Assembly Members have previously expressed concern regarding the EA's perceived track record of monitoring, enforcement and prosecution. Currently, the EA receives notification of pollution incidents measured at the Government's air quality monitoring (AURN) sites. These do not cover wide areas of suburban London.

The Mayor should seek a co-operative agreement between the EA and the LAQN to provide more detailed information regarding industrial plume grounding incidents. This may be used within the EA's existing protocols to investigate pollution incidents.

The Mayor should encourage the London Boroughs to ensure that the frequency of inspection of industry under their control (Part B processes) meets DETR guidelines as laid out in Additional Guidance Note AQ4 (95).

Waste incinerators are not addressed adequately in the Strategy. The Strategy discusses incineration and states that the health concerns related to atmospheric emissions will be covered in the Mayor's Municipal Waste Strategy. Although modern waste incinerators are not significant emitters of NO_x and PM₁₀, incinerators emit other pollutants thought to be harmful to health. The overall policy regarding waste incinerators should be dealt with in the Mayor's Municipal Waste Management Strategy.

The opportunity exists in this Strategy to address minimum emission standards for existing incinerators contracted as disposal sites for London's waste and to impose planning conditions on new incinerators. For example, the Mayor may wish to ensure that these adhere to the proposed EU Directive on the Incineration of Waste (COM (1999) 330 final).

The Mayor should also consider the use of planning powers to restrict the use of poor quality fuels, such as waste or recovered oils, in new industrial plant in London.

4.11 Borough action plans

The Boroughs are vital partners in the implementation of the Strategy. The Strategy advises that the Mayor has taken over the powers of direction over Borough action plans, Air Quality Management Areas, Review and Assessments from the Secretary of State.

It is important that the Boroughs have a consistent approach to Air Quality Management. Through the LAQN, Greater London has the most comprehensive citywide air pollution monitoring network in Europe. This ensures consistency of monitoring across Greater London and the direct comparability of monitoring results.

Boroughs have used different modelling methodologies for the prediction future levels of pollution in their Review and Assessments. This has led to differences in the predicted areas of failure to meet targets but, generally, the focus of the conclusions is similar. It may not be constructive reevaluate the detailed modelling work already undertaken and it may be better to focus on action plans.

The opportunity exists for Mayoral leadership on a consistent approach in the declaration of air quality management areas and action plans. This should be addressed in the Strategy.

4.12 Borough partnerships

The Strategy is based largely on Borough assessments. Borough action plans will therefore place similar emphasis on transport emission sources and will focus on the TLRN. TfL will be an essential partner to the Boroughs and the Strategy should reflect this. There is limited time available to achieve the Government's objectives. The Committee saw no evidence as to how TfL intends to assist the Boroughs to help achieve the objectives.

Air quality should be stated as an explicit objective in the Transport Strategy, and transport measures to reduce emissions should be targeted towards Borough Air Quality Management Areas.

4.13 Measures to Target Specific Areas of London

In addition to the major road network, predictions of PM₁₀ and NO₂ in the Strategy highlight two principal zones of concern; central London and Heathrow.

Central London

Amongst the measures proposed in the Strategy to tackle the pollution concentrations are two that appear most relevant to this geographic area. These are congestion charging and the Low Emission Zone proposals.

The traffic changes as a result of the proposed congestion charging will have a minor effect on air pollution, as highlighted earlier.

The Mayor proposes examining the feasibility of a Low Emission Zone (LEZ) in London. LEZs are as yet untested in the UK and also possibly anywhere in Europe at the likely scale envisaged (the scale is still to be determined).

An LEZ could have several beneficial effects. An LEZ would reduce emissions in within the zone and would act as an incentive for investment in cleaner transport technologies bringing forward technological changes in the vehicle fleet by several years. These will have an additional beneficial affect when these vehicles are used outside the zone. As with congestion charging care would have to be taken to avoid simply transferring the problem to another area as non-compliant vehicles divert to avoid the LEZ.

The LEZ may also present significant logistical difficulties. It will impose additional costs on vehicle owners and in operating the scheme (Clove 2000). This must be seen in terms of the targeted emissions reduction approach. The required emissions reduction could be

compared to that offered by each of the proposed LEZ scenarios and cost implications considered.

The Strategy should include contingency measures if the LEZ is thought not to be feasible, and consider extending the area of the LEZ to cover the Greater London area.

Heathrow and the M4 Corridor

The Strategy contains few measures to tackle the predicted exceedence zone around Heathrow. It is estimated that the predicted NO₂ exceedence area around Heathrow is home to around 44,000 people. The Strategy proposals to reduce emissions from airside vehicles are welcome, but unlikely to make any significant impact.

The Mayor may consider greater promotion of public transport links to Heathrow including through improved ticketing arrangements for the Heathrow Express from Tube Stations.

Congestion charging or a Low Emission Zone around Heathrow would require the co-operation of the Highways Agency since both the M4 and M25 are not part of the TLRN.

Further measures are required to tackle the predicted exceedence area around Heathrow.

4.14 Promoting cleaner vehicle technologies

The Strategy seeks to promote the take up of cleaner vehicle technologies. In part this is sought through leading by example and by encouraging others through various forums and the proposed Mayoral Environmental Business Marque. The Functional Bodies, particularly LFEPA and the MPA, can do more to lead the way. The Mayor may wish to encourage similar endeavours in other public vehicle fleets such as those operated by the NHS and Consignia (formerly the Post Office).

The Committee noted that the draft Economic Development Strategy does not address the issue of cleaner technologies explicitly. It suggests some project concepts which the LDA could develop as part of promoting sustainability on the global scale, and supports the encouragement of new businesses using environmentally friendly techniques.

The Mayor should do more to promote positive action from fleets of vehicles in public ownership in London.

The prioritisation of the promotion of cleaner vehicle technologies should be informed by an emission target based approach allowing targets set for the uptake of cleaner technologies.

Evidence during the scrutiny process highlighted the chicken and egg relationship between the take up of alternatively fuelled vehicles and the installation of refuelling infrastructure. The Strategy may wish to examine the current planning issues restricting the installation of

refuelling infrastructure and recommend that liquid petroleum gas (“LPG”) be included as a planning requirement in all new and refurbished petrol stations.

Targets for the installation of LPG refilling sites should be set in conjunction with the relevant industry federations.

4.15 Monitoring Progress

The monitoring of ambient air quality is key to assessing progress towards the objectives. This is essential for all the bodies directing the management of London's air quality; the Mayor, Boroughs and the Environment Agency.

Emissions inventory and air quality data are vital to inform the emission reduction targets, to create and ensure the accuracy of air pollution models. Considerable investment has been made in the London Atmospheric Emissions inventory and this is recognised a key component to inform both the Strategy and detailed local action.

The London Air Quality Network (LAQN) is the most advanced and comprehensive citywide air pollution monitoring network in Europe. The LAQN also has sites in the Home Counties allowing London's air pollution to be understood in context. The LAQN is a summation of the Borough's air quality monitoring activities and is operated by King's College, London. The Mayor may wish to forge links with the LAQN and encourage other air quality managers to establish similar linkages.

Further schemes should be set up to monitor progress on each of the proposals set out in the Strategy.

Appendix A : Terms of reference

The Environment Committee (“the Committee”) of the London Assembly carried out this scrutiny of the Mayor’s proposals, having established an Environmental Strategies Investigations Panel for this purpose. The Environmental Strategies Investigations Panel was assisted by specialist advisors from the SEIPH Environmental Research Group of King’s College, London.

The objectives of the scrutiny

The objectives of the scrutiny of the Strategy were to:

- Identify the objectives the Mayor is seeking to satisfy through the Strategy;
- Assess whether the Mayor’s objectives proposed are reasonably achievable;
- Assess whether the Mayor’s policies and proposals are achievable and will lead to the Strategy objectives being met;
- Assess whether the Strategy is consistent with other Mayoral Strategies.

Structure of the scrutiny

The approach was to critically examine the draft Strategy and seek a range of information from organisations and individuals with expert knowledge of air quality. The Committee recognise that the Mayor is required to undertake a statutory consultation with London’s local authorities and the Environment Agency following publication of the consultation draft and therefore these organisations were not approached. Both written and oral evidence was taken.

Three evidentiary hearings were held, to inform the scrutiny. Evidence was given by:

- The Association of London Government (ALG)
- Chartered Institute of Environmental Health (CIEH) – Mr Andrew Griffiths
- DETR Air Quality Policy AEQ Division
- Freight Transport Association (FTA)
- LP Gas Association _ Mr Tom Fidell
- National Society for Clean Air and Environmental Protection (NSCA) – Mr Richard Mills and Professor Bernard Fisher
- Sainsbury’s Plc – Mr Mike Temple
- Society of Motor Manufacturers and Traders (SMMT) – Mr Robert Watson
- U.K Petroleum Industries Association (UKPIA) – Mr Malcolm Watson
- Westminster City Council – Mr Leith Penny and Ms Joy Thompson
- The Mayor