

## **Air Quality response**

November 2009





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# Introduction

This document sets out the Assembly's response to the Mayor's draft Air Quality Strategy.<sup>1</sup> It should be read alongside that consultation draft,<sup>2</sup> which provides information about air quality issues in London and the Mayor's proposals so far to address them.

This response builds on this committee's previous report *Every Breath you take: an investigation into air quality in London*,<sup>3</sup> which made several recommendations that were largely accepted in the Mayor's draft strategy.

We welcome the publication of the Mayor's draft Air Quality Strategy and its identification of air quality issues for London, including that:

- air pollution causes serious ill-health and premature deaths<sup>4</sup>
- the most prevalent and harmful pollutants include particulate matter (PM<sub>10</sub>) and nitrogen dioxide (NO<sub>2</sub>)<sup>5</sup>
- the biggest source of these pollutants is road traffic; other major sources include domestic heating, industrial and commercial processes, and aviation and rail transport<sup>6</sup>
- the UK is subject to binding EU limits on pollutant concentrations, which are being breached in London and require a robust and timely compliance plan<sup>7</sup>
- London government must work with national and local government and other partners to reduce air pollution successfully<sup>8</sup>

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<sup>1</sup> Consultation on the Mayor's website air quality page as at 12 November 2009, web address: [http://www.london.gov.uk/mayor/environment/air\\_quality/index.jsp](http://www.london.gov.uk/mayor/environment/air_quality/index.jsp)

<sup>2</sup> *Clearing the Air: the Mayor's draft Air Quality Strategy for consultation with the London Assembly and functional bodies*, October 2009. On the Mayor's website as at 12 November 2009, web address:

[http://www.london.gov.uk/mayor/environment/air\\_quality/docs/AQS09.pdf](http://www.london.gov.uk/mayor/environment/air_quality/docs/AQS09.pdf). In further footnotes, this document is referred to as 'draft MAQS'.

<sup>3</sup> *Every Breath You Take: an investigation into air quality in London*, May 2009. On the Assembly website, web address

<http://www.london.gov.uk/assembly/reports/environment/air-quality-report-200904.pdf>. In further footnotes, this document is referred to as 'Every Breath You Take'

<sup>4</sup> Draft MAQS page 14

<sup>5</sup> Draft MAQS pages 12-14, see also pages 22-27

<sup>6</sup> Draft MAQS pages 20-21, 26-27 and 75-79

<sup>7</sup> Draft MAQS, pages 14-18, see also pages 22-25

<sup>8</sup> Draft MAQS, pages 16-18 and 79-83. See also page 5 of the Executive Summary of the draft strategy, published separately (as at 12 November 2009 at web address

We welcome that the majority of the recommendations made in our previous report<sup>9</sup> are wholly or partly adopted or endorsed in the Mayor's draft strategy, including government subsidy for vehicle retrofitting, research into biofuels for London transport, public air quality information, and retrofitting of older public diesel vehicles such as buses.

However, based on the Committee's earlier work, we believe that the draft strategy could be improved in two key areas. First, more information needs to be provided to Londoners about the health impacts of poor air quality. Second, actions to tackle air pollution should focus on where the problem is worst, in addition to London-wide measures. We welcome the proposals to deal with pollution "hotspots", but these must be elaborated. There is a need to further develop the right solutions.

This response sets out the need for further work to improve the strategy, in the following areas:

- estimating the effect of the strategy in terms of
  - concentrations of pollutants
  - the base-case emissions projections it uses
  - health impacts on Londoners
- timescales for the implementation of measures
- more detailed costing and funding of proposed measures
- the need for national and local government cooperation
- how Londoners will be involved.

We welcome the progress made in the draft strategy towards establishing a robust and effective plan to improve London's air quality and reduce the harm done to Londoners by air pollution. However, we believe that there is a need for an added sense of urgency in developing a coordinated response across all tiers of

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[http://www.london.gov.uk/mayor/environment/air\\_quality/docs/AQS09-executive-summary.pdf](http://www.london.gov.uk/mayor/environment/air_quality/docs/AQS09-executive-summary.pdf)

<sup>9</sup> *Every Breath You Take*, pages 30-35

government. Londoners have been breathing air which breaches European limit values for particulates for the last four years and it is likely that large areas of London will breach air quality limits for NO<sub>2</sub> which come into force in 2010. Particulate pollution in parts of London has hit a plateau in the last few years, rather than continuing to fall as the experts predicted. Nor has NO<sub>2</sub> pollution fallen as quickly as hoped; without necessary action, it could remain at unacceptable levels for over a decade in certain parts of London.

The public consultation version of the strategy must include more detail on the health effects of London's poor air quality, including estimates of premature deaths contributed to by air pollution in London. We would expect these figures to be London-specific and robust; a London figure based on population share of a UK-wide estimate would not be preferable.

Our proposals are designed to enhance the strategy's credibility. As the Mayor's advisor on the environment told us,<sup>10</sup> there is considerable further work to do to make the draft strategy into a robust and effective plan. We welcome this recognition and the commitment to the work. The remainder of this report sets out ways in which we believe the strategy should be improved in subsequent drafts, and ways in which the Government and other partners could contribute to improving London's air quality.

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<sup>10</sup> Environment Committee meeting 29 October 2009, transcript pages 1, 3-5, 8-9 and others

# The need for further work to improve the strategy

The draft strategy is clear that actions by London alone will not be enough to meet the EU limit values for NO<sub>2</sub> in London by 2015<sup>11</sup> – a point reiterated to the committee by the Mayor's environment adviser, who noted that actions are also required by the Government to help in reduce NO<sub>x</sub> emissions, including those originating outside London.<sup>12</sup> Whether through Government action, GLA action or other partner actions, the final strategy needs to contain sufficient proposals to be sure of meeting the EU NO<sub>2</sub> limit values by the extended deadlines as a minimum.

In contrast, for PM<sub>10</sub> concentrations, the draft strategy says that the measures it lays out increase the confidence that all parts of London will meet the EU limit values for PM<sub>10</sub> by 2011.<sup>13</sup> The Mayor's adviser was confident that the limits would be met if the strategy's proposals were implemented successfully.<sup>14</sup> An answer given to the Assembly by the Mayor set out the necessary conditions to fulfil that expectation, including:<sup>15</sup>

- detailed concentration modelling now being undertaken
- full funding
- support from boroughs and central government

These points are covered in more detail in the following sections. This report also addresses the timing of the strategy's proposals, and the need for the strategy to show more clearly how private businesses and individuals will be enabled and encouraged to act on their concerns about pollution.

## Estimating the effect of the strategy

The draft strategy contains estimates of pollutant **emissions** from various sources in future years, assuming that the measures in the strategy are implemented.<sup>16</sup>

However, this analysis does not fully show the effectiveness of the strategy in three important ways:

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<sup>11</sup> Draft MAQS, page 25

<sup>12</sup> Environment Committee meeting 29 October 2009, transcript page 1

<sup>13</sup> Draft MAQS, page 75

<sup>14</sup> Environment Committee meeting 29 October 2009, transcript page 1

<sup>15</sup> Mayoral Answer 2981/2009 from the Mayor to Mike Tuffrey, 14 October 2009, at web address <http://www.london.gov.uk/mqt/public/question.do?id=28064>

<sup>16</sup> Draft MAQS, pages 75-79

- it gives no projections of the impact of its proposed measures on pollutant concentrations
- it does not compare projections for scenarios with and without the implementation of the strategy
- it does not fully demonstrate the health benefits of the strategy

#### *The need for concentration modelling*

The harm to people's health results from pollutant **concentrations**, which do not vary directly in line with emissions. Also, the EU limits are concentration limits. Therefore, whilst the current draft of the strategy does contain projections for PM<sub>10</sub> and NO<sub>2</sub> concentrations at "base" level<sup>17</sup>, it should also include projections for pollutant concentrations that will be achieved by its proposed measures. It is only once this modelling is published that the effectiveness of the strategy can be judged.

The strategy makes clear that this modelling work is being undertaken, and that it requires clarity from central Government as to what measures it intends to put in place.<sup>18</sup> There is an urgent need for this and we recommend that the results of the modelling should be published in future drafts of the strategy so that the outcomes to be achieved can be seen.

The technical appendix makes reference to discrepancies between past projections and recent trends in air quality, and research seeking to identify the reasons for these discrepancies.<sup>19</sup> The final version of the strategy should be based on concentration models that take this research into account.

When reporting concentrations, the strategy is correct to report NO<sub>2</sub> concentrations, because, among nitrogen oxides, NO<sub>2</sub> is the main hazard to health and the pollutant to which EU concentration limits apply. But when reporting emissions, the strategy is also correct to report NO<sub>x</sub> emissions, because other emitted oxides of nitrogen contribute to NO<sub>2</sub> concentrations in the atmosphere through chemical changes.<sup>20</sup>

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<sup>17</sup> Draft MAQS, pages 25 and 26

<sup>18</sup> Draft MAQS, page 79

<sup>19</sup> *Further Technical Information*, October 2009, on the Mayor's web page as at 13 November 2009 at web address [http://www.london.gov.uk/mayor/environment/air\\_quality/docs/AQS09-technical-annex.pdf](http://www.london.gov.uk/mayor/environment/air_quality/docs/AQS09-technical-annex.pdf)

<sup>20</sup> This is the reporting convention used in the current draft of the strategy, but it is clarified here following discussion at the Environment Committee meeting 29 October 2009 - see transcript page 15

### *The need for base case and alternate action scenarios*

The draft strategy does not publish emissions projections for the ‘base case’ – the scenario without implementation of measures in the strategy. It is not clear, therefore, from the draft strategy what difference to emissions its proposals will make.

We recommend that the next draft of the strategy show projections under the following scenarios alongside each other, for emissions and concentrations:

- the baseline if the strategy were not to be implemented
- the effect of the firm proposals in the strategy
- the effect of measures still needed to achieve the strategy’s goals

These scenarios should also show the EU limit values. This would help consultees understand the effect of the strategy, and strengthens the Mayor’s position in his call for further action.

So that consultees and partners can understand the effects of the various elements of the strategy and respond accordingly, the next draft of the strategy should also show separately the effect of the major specific measures proposed, and how emissions and concentrations are linked.

### *Health impact modelling*

The draft strategy briefly discusses health impacts of air pollution, rightly stating that urgent action is required and noting that there are varying estimates in terms of numbers of premature deaths or average years of life lost caused by poor air quality. The current draft notes that further work on health impacts will inform the next draft of the strategy.<sup>21</sup>

We agree with this proposal. We also recommend that the research be published and that the strategy set out more clearly the health issues in order to make the case to partner organisations and the public for action on air quality. The strategy should include estimates, based on the best available research, of likely premature deaths per year contributed to by air pollution in London. We would expect these figures to be London-specific and robust; a London figure based on population share of a UK-wide estimate would not be preferable. In particular, where there are efforts to quantify the health impact of poor air quality, the range of estimates should be noted and emphasis

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<sup>21</sup> Draft strategy, page 14

given to the seriousness of the impacts represented by even the more conservative estimates. In our previous report we reported the estimated figure of 3000 premature deaths which PM<sub>10</sub> pollution may have contributed to in London in 2005; however, this figure is a projection based on UK-wide figures, as specific numbers for London are not currently known.<sup>22</sup> Providing a usable quantification of health impacts will enable robust cost-benefit analysis to be presented and a convincing case to be made about the urgency and scale of the problem.

GLA officers told us that it was also hoped to establish the populations by ward exposed to different levels of pollution, to effectively target interventions to reduce health impacts.<sup>23</sup> We would welcome this work.

As the Mayor's adviser acknowledged, meeting the EU limits is a minimum goal.<sup>24</sup> For PM<sub>10</sub>, there is also a more stringent target recommended by the World Health Organisation (WHO) to protect human health. The recommended limit for PM<sub>10</sub> is an annual mean of 20 µg/m<sup>3</sup>, half the EU limit value.<sup>25</sup>

### Timescales

There is an urgency to reducing these pollutant concentrations, despite the Government seeking extensions to the EU limits on PM<sub>10</sub> and NO<sub>2</sub>.

The draft strategy gives timetables for several of the major measures, particularly actions at the London government level to reduce emissions from diesel vehicles. Many of these timetables are for implementation in 2012 or later, including phase III of the Low Emission Zone, which it is now formally proposed to defer for two years from the previous implementation date of 2010. Therefore, the strategy states that meeting PM<sub>10</sub> limits by the EU extended deadline of 2011 will rely on 'pre-compliance' – the tendency of vehicle operators to acquire compliant vehicles in the period between an emissions standard being announced and it coming into force.<sup>26</sup>

However, no emissions projections for 2011 are provided in the strategy and no quantified information on the extent of pre-

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<sup>22</sup> *Every Breath You Take*, page 18

<sup>23</sup> Environment Committee meeting 29 October 2009, transcript page 10

<sup>24</sup> Environment Committee meeting 29 October 2009, transcript page 1, see also page 8

<sup>25</sup> WHO Factsheet 313, available on the WHO website as at 13 November 2009, at web address <http://www.who.int/mediacentre/factsheets/fs313/en/index.html>

<sup>26</sup> Draft strategy, page 75

compliance expected. It is therefore difficult to assess the credibility of the pre-compliance approach to meeting the limit in 2011.

For the other measures proposed, there are few specific timetables. We recommend that, as the strategy is developed within the GLA group and with other partners over the coming months, timetables are agreed and are included in the next draft and in the final strategy. Because of the urgent action required, the credibility and effectiveness of the final strategy will depend on the inclusion of implementation timetables.

We recommend that in the next draft of the strategy, PM<sub>10</sub> emissions and concentrations should be estimated for 2011, and NO<sub>x</sub> emissions and NO<sub>2</sub> concentrations should be estimated for 2010.

It is to be hoped that these projections will show that the proposals in the next draft of the strategy will be sufficient to meet the EU limit and tolerance values by those dates. The strategy needs to show that there are sufficient measures to achieve these concentration reductions in 2010 and 2011.

We note that the UK application to the EU for an extension of the PM<sub>10</sub> limit deadline (to 2011) includes the implementation of phase III of the LEZ in 2010.<sup>27</sup> This implementation date was advised by the Mayor to Defra in January 2009,<sup>28</sup> before his announcement on 2 February 2009<sup>29</sup> that he did not intend to proceed with that implementation. We recommend that the Mayor work closely with the UK government to ensure that his air quality strategy fully supports the UK's application to the EU for this deadline extension.

The UK is also expected to apply for an extension to the NO<sub>2</sub> limit deadline. This extension if granted would be to 2015 from 2010, and would allow a margin of tolerance from the 40µg/m<sup>3</sup> limit value up to 60µg/m<sup>3</sup> in that period.

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<sup>27</sup> UK Notification to the European Commission to secure additional time to meet the limit values for particulate matter for certain zones/agglomerations in accordance with the Council Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe, web address

<http://www.defra.gov.uk/environment/quality/air/airquality/eu-int/eu-directives/airqual-directives/documents/annex-a-pm10-forms.xls> (spreadsheet tab 7\_regional, cell 5C)

<sup>28</sup> Evidence provided by the Mayor of London to the UK government, to inform their work to meet the air quality limit values, web address

[http://www.london.gov.uk/mayor/environment/air\\_quality/docs/evidence-28Nov08.pdf](http://www.london.gov.uk/mayor/environment/air_quality/docs/evidence-28Nov08.pdf)

<sup>29</sup> 'Reprieve for small businesses as Mayor suspends phase three of Low Emission Zone' Mayoral press release 2 February 2009, web address

[http://www.london.gov.uk/view\\_press\\_release.jsp?releaseid=20757](http://www.london.gov.uk/view_press_release.jsp?releaseid=20757)

The strategy needs to show how the NO<sub>2</sub> margin of tolerance will be met from January 2010 to January 2015 if the extension is granted, and what steps towards meeting the limit value prior to 2015 could be taken if no extension is granted.

### **Costs and funding**

The draft strategy does not contain detailed costings for the measures it proposes. Also, there is little detail in the draft about how actions will be funded. To ensure credibility the strategy should show how the proposals would be implemented, including what each proposal will cost and how it will be funded.

#### *Funding from within the GLA group*

The majority of TfL measures in the draft strategy appear in the recently published draft transport strategy,<sup>30</sup> and therefore are taken into account in the accompanying business plan. However, specific funding decisions year-by-year are still to be made and the revised business plan requires an additional £2.6bn in savings over the period 2009-18, which are yet to be identified.<sup>31</sup>

Some of the non-transport measures in the draft air quality strategy are funded through the LDA Climate Change theme, such as the Building Energy Efficiency Programme and the proposed retrofit scheme for residential properties. We note that the LDA has recently been subject to emergent budget pressures, leading to reductions in the 2009/10 budget for the measures in the Air Quality Strategy, and therefore we recommend that the Mayor use his oversight of the current 2010-11 budget setting and 2010-13 budget planning processes for the GLA group to ensure that his Air Quality Strategy has the funding necessary for effective implementation. There must be alignment between budget plans and statutory strategies such as the Air Quality Strategy, and full weight should be given to statutory obligations around air quality and its effects on the health of Londoners.

#### *National funding*

The strategy also includes a number of proposals where government funding is sought. Successful working with central government is integral to the overall success of improving air quality across London (and nationally). This issue is considered in more detail in the following section.

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<sup>30</sup> Mayor's Transport Strategy, public draft October 2009, chapter 5.19

<sup>31</sup> TfL Business Plan 2009/10-2017/18, revision October 2009, pages 8-9

### Government co-operation

There are several points in the draft strategy where action and/or funding is required from national government, including the provision of emissions data at point of sale for cars, changes to vehicle excise duty and other tax regimes, extending scrappage schemes and retrofitting grants, electrifying London's National Rail network, setting standards for NO<sub>x</sub> emissions from heavy vehicles, and others.

There is a particular need for national action on NO<sub>2</sub> concentrations, as these are a widespread problem across the UK,<sup>32</sup> and regional measures to reduce road traffic emissions will be unable to meet the EU limits<sup>33</sup>. The strategy also notes that around 25% of NO<sub>2</sub> concentrations in London, as well as 40% of PM<sub>10</sub> concentrations, originate from outside London.<sup>34</sup>

We heard from the Mayor's adviser about discussions underway to formulate with government a joint action plan. The Mayor's adviser highlighted the need to bring in sufficient senior-level involvement across the necessary range of government departments, and discussions about funding are at an early stage but it is anticipated that an action plan will be put together early in 2010.<sup>35</sup> We recommend the inclusion of this action plan in the next draft of the strategy and recommend that, if further work is required to develop the joint action plan, then the process for doing this be outlined.

We welcome that discussions with government are now progressing, following previous concerns reported by the Mayor<sup>36</sup> and others, and we would urge all parties to remain fully committed to this process. We recommend to all the central government departments concerned (including DEFRA, DECC, DfT, BIS, CLG and the Treasury) that high-level time be given to this issue and full weight accorded to the health impacts of air pollution, the UK's obligations to the EU, and government's national responsibility towards improving London's air quality. We recommend that the government respond positively to the Mayor's work to develop his Air Quality Strategy, and support the development of regional and national strategies to meet national and EU air quality targets.

As we have recommended above, a crucial part of making the national case for effective action against London's air pollution is to quantify in business-case terms the health benefits to be achieved and the costs of failure to do so.

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<sup>32</sup> Environment Committee meeting 29 October 2009, transcript page 17

<sup>33</sup> Draft MAQS, page 25

<sup>34</sup> Draft MAQS, page 21

<sup>35</sup> Environment Committee meeting 29 October 2009, transcript pages 33-34

<sup>36</sup> Mayoral answers 1025/2009 and 2348/2009 to Gareth Bacon

### Local government co-operation

As well as central government, co-operation with local government is needed for example on promoting smarter travel and low-emission forms of transport, tackling local pollution hotspots and high pollution days, implementing development control measures and improving energy efficiency in residential properties, among others.

We heard from the Mayor's environment adviser that there is not systematic engagement at senior level from some of the boroughs where the greatest air pollution problems are found.<sup>37</sup> We recommend to all London local authorities, particularly those where residents experience the most harmful pollutant concentrations, that they engage positively with the strategy and work with the Mayor to improve air quality locally for the benefit of all Londoners.

We also recommend that, in the further development of the strategy, it is made clear how local government will be incentivised and enabled to take action.

In preparing its previous report, this committee considered the role of additional London-wide measures, but was concerned to focus action where the problem is most acute. Accordingly, it recommended that low emission zones be established to tackle pollution hotspots, supported by the Mayor to ensure consistency and avoid confusion.<sup>38</sup> The draft strategy states that the Mayor will work with boroughs that wish to establish local low emission zones. However, the option for a low emission zone covering inner London was not taken forward, and the Mayor's adviser suggested to us that further analysis had shown that this would not be cost-effective.<sup>39</sup>

However, we also heard that if a number of boroughs were interested in implementing local low emission zones, the GLA would support the development of a common framework.<sup>40</sup> To advance the debate and enable an assessment of the merits of local, inner and London-wide LEZ approaches, we recommend that the analysis of the costs and benefits of these schemes be published, including the costs to Londoners of replacing or retrofitting vehicles. This should include the feasibility of adopting schemes such as those operating in Germany, which do not require expensive infrastructure.

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<sup>37</sup> Environment Committee meeting 29 October 2009, transcript page 21

<sup>38</sup> *Every Breath You Take*, page 30

<sup>39</sup> Environment Committee meeting 29 October 2009, transcript page 19

<sup>40</sup> Environment Committee meeting 29 October 2009, transcript page 22

### Involving London

Effective reduction of air pollution on the necessary scale will require individual Londoners, businesses and other private actors to take pollutant emissions into account in making decisions about transport, heating and other potential sources of pollution.

The Mayor's environment advisor told us that Londoners are highly concerned about air pollution but do not always have the awareness nor are they effectively incentivised to take action themselves to reduce it.<sup>41</sup> It is clear that there needs to be a process of engagement with Londoners on why and how to reduce pollutant emissions – elements of the process are proposed in the draft strategy.<sup>42</sup> We recommend that the next draft of the strategy, aimed at public consultation, both initiates that process (by emphasising issues such as the health effects of air pollution and the links between emissions and pollution concentrations) and sets out more fully how broad levels of engagement will be achieved. The majority of the actions towards this aim involve partners outside the GLA group and the final strategy will be more convincing if it shows agreements in place, as far as possible, rather than intentions to seek out or to lobby potential partners.

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<sup>41</sup> Environment Committee meeting 29 October 2009, transcript page 37

<sup>42</sup> Draft strategy, pages 72–74

# Conclusion

While we recognise the many good proposals in the Mayor's AQS, some funding streams are yet to be identified. We acknowledge that the Mayor is faced with a difficult situation but further modelling needs to be provided to demonstrate that particulate pollution will be dealt with within the necessary timescale and, without necessary government support, London lacks the scale of change necessary to deal with NO<sub>2</sub>.

As advocates for the interests of Londoners we feel that the Government and Mayor must urgently put forward a joint plan of action that brings together a robust, coherent and funded set of proposals to address this situation.

The next draft will need to demonstrate the impact of the strategy if implemented and what further work is needed to achieve the strategy's goals. It needs to include implementation plans with timetables, costs and funding, and agreements in place with key partners.