

Draft Transport and Air Quality Strategy Revisions: London Low Emission Zone

REPORT TO THE MAYOR FOLLOWING
CONSULTATION WITH STAKEHOLDERS,
BUSINESSES, OTHER ORGANISATIONS
AND THE PUBLIC

July 2006

Volume 1

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1. Introduction

1.1 Background

- 1.1.1 London has the worst air pollution in the UK and amongst the worst in Europe. Air pollution affects the quality of life of a large number of Londoners, especially those with respiratory and cardiovascular conditions. It is estimated that in 2005, around 1,000 accelerated deaths and a similar number of respiratory hospital admissions would have occurred in London as a result of particulate air pollution¹.
- 1.1.2 Local authorities, including the GLA, have a statutory obligation to work towards those national and European Union (EU) air quality objectives and limit values, which are designed to protect human health. On current trends and without further action, it is predicted that London will not meet its targets for two pollutants: particulate matter (for which there are objectives and limit values for reductions in PM₁₀) and nitrogen dioxide (NO₂). Road transport in 2005 was estimated to be responsible for about half of the emissions of these pollutants in London.
- 1.1.3 Data confirms that that in many places London has not met the annual mean objective for NO₂ (date for achievement from end of 2005), nor the annual mean and daily mean objective for PM₁₀ (which applied from the end of 2004). The next target date is 2010, and on current trends and without further action, it is predicted that London will exceed its annual mean objectives for NO₂, as well as its annual and daily objectives for PM₁₀.
- 1.1.4 New EU legislation on air quality is currently being debated in the European Parliament, and will be voted on during September 2006. Current discussions include tightening the annual average limit value for PM₁₀, which would further justify the need for initiatives such as the LEZ, though there is a proposal to make the daily limit for PM₁₀ less stringent. Furthermore, there is a proposal that countries which can show that action is being taken to reach limit values, would be given more time to meet them. Therefore, initiative such as the LEZ could reduce the risk of infraction proceedings being taken against the UK.
- 1.1.5 PM₁₀ and NO₂ both impact on human health. PM₁₀ affects the respiratory and cardiovascular systems. It can worsen existing complaints, such as asthma, and can cause premature death. PM₁₀ can also carry carcinogenic compounds into the lungs. Long term exposure to NO₂ may affect lung function and lead to an increase in allergies. At high concentrations, NO₂ can cause inflammation of the airways.

¹ The Mayor of London, Greater London Authority, *Mayor's Air Quality Strategy: Progress Report to August 2005*, <http://www.london.gov.uk/gla/publications/environment.jsp>

1.1.6 In 2001, a Feasibility Study undertaken on behalf of the Greater London Authority (GLA), Transport for London (TfL), the Association of London Government (ALG), the Department for Transport (DfT) and the Department for the Environment, Food and Rural Affairs (DEFRA) concluded that a Low Emission Zone (LEZ) was the best approach to help achieve air quality objectives in London. In early 2005, TfL completed a review of the findings of the Feasibility Study, and concluded that there were no alternatives to the LEZ likely to achieve the same levels of benefit in the same or shorter timeframe.

1.2 Draft Revisions to the Mayor's Transport and Air Quality Strategies to allow for a London LEZ

1.2.1 In June 2005, the Mayor delegated to TfL the responsibility for preparing and consulting on revisions to the Transport and Air Quality Strategies, which would allow for a LEZ. A LEZ would seek to deter the most polluting vehicles from driving in Greater London. These are generally older diesel-engined heavy goods vehicles (HGVs), buses and coaches. Vehicles that did not comply with the emission standards would be required to pay a daily charge to drive in the LEZ. The charge is proposed to be between £100 and £200, which is considered to be the level at which operators would have an economic incentive to modify or replace their vehicles to comply with the proposed standards, rather than pay the daily charge. Operators of non-compliant vehicles that did not pay the charge would become liable to a penalty charge. This is currently proposed as being between £500 and £1000.

1.2.2 The draft Transport and Air Quality Strategy Revisions set out the following:

- Proposal 4G.27 and 10: The Greater London area should be designated a LEZ. The proposed LEZ would target the worst polluting heavy goods vehicles (HGVs), buses and coaches, based on their emission standards. By so doing it would accelerate the introduction of cleaner vehicles and reduce the numbers of more polluting vehicles driving within the Greater London area. The LEZ would be implemented from early 2008; it would require certain heavy duty vehicles (referred to above) to meet a proposed emission standard of Euro III for PM₁₀, which would change to Euro IV for PM₁₀ or the relevant particulate standard in force in 2010.
- Proposal 4G.28 and 11: TfL will consider further the environmental, health, economic and other impacts of the proposed LEZ when considering whether to make an order. The outcome of these investigations and other factors, including consultation results, will also be taken into account by the Mayor in deciding whether or not to confirm an order.

- Proposal 4G.29 and 12: TfL will continue to investigate further the options for the proposed LEZ, including the additional option of Euro IV for oxides of nitrogen (NO_x)² in 2010, and extending the LEZ to Light Goods Vehicles (LGVs) in 2010.
 - Proposal 4G.30 and 13: TfL will monitor and assess the performance of any London LEZ that is established, to understand the range of impacts and to inform decision-making.
- 1.2.3 The LEZ standards would be based on 'Euro Standards', which are standards for emissions that vehicles must be manufactured to by a certain date. EU legislation has meant that vehicle manufacturers have had to meet increasingly strict emissions standards that reduce the amount of carbon monoxide, hydrocarbons, particulate matter and oxides of nitrogen emitted from vehicle engines.
- 1.2.4 The draft Strategy Revisions proposed that in 2008 the emission standard for the LEZ would be Euro III for PM₁₀. Euro III became mandatory from October 2001 for all new HGVs, buses and coaches. All HGVs, buses and coaches bought new in Europe since October 2001 comply with the Euro III standard or a higher Euro standard. All new LGVs sold in Europe since January 2002 must comply with the Euro III standard or a higher Euro standard.
- 1.2.5 In 2010, it was proposed that the emission standard for the LEZ would become Euro IV for PM₁₀. All new HGVs, buses and coaches sold in Europe from October 2006 must be Euro IV compliant. All new LGVs sold in Europe from January 2007 must comply with the Euro IV standard.
- 1.2.6 According to the proposal outlined in the draft Strategy Revisions, all HGVs, buses and coaches manufactured to Euro III or above in 2008 and Euro IV or above in 2010 would be able to drive within the zone without charge. Vehicles that did not meet these standards would also be allowed to drive within the zone without charge if operators had taken steps to meet the applicable standard, for example by fitting particulate traps to their vehicles.
- 1.2.7 The draft Strategy Revisions indicated that TfL will continue to investigate further the options for the proposed LEZ, including the additional option of extending the 2010 standard to Euro IV for both PM₁₀ and NO_x, and extending the LEZ to cover diesel-engined light goods vehicles (LGVs) from 2010. The NO_x option would reduce nitrogen dioxide emissions and would require pre Euro IV vehicles to

² NO_x is the symbol for a generic group of chemicals called oxides of nitrogen, including both NO (nitric oxide) and NO₂ (nitrogen dioxide), though the emissions of NO₂ emitted in this direct way is small. NO_x is also produced by high temperature combustion processes. Tailpipe emissions include NO and NO₂. NO₂ is also formed from the reaction of NO with ozone. This reaction is thought to be responsible for the majority of NO₂ originating in London.

fit NO_x abatement equipment. TfL has considered the practical and financial implications of these extensions, as well as the views of stakeholders, and these are discussed in depth later in this Report.

- 1.2.8 In order to maximise the air quality and health benefits, it is proposed that the LEZ would cover the whole of the Greater London area. The hours of operation would be 24 hours a day, 365 days a year. Suspending the LEZ on weekends or public holidays would erode the health and air quality benefits of the proposed scheme.
- 1.2.9 The LEZ would use Automatic Number Plate Recognition (ANPR) cameras. This technology has been proven to be effective in the Congestion Charging scheme. The vehicle details would be checked against a database of compliant vehicles and non-compliant vehicles which have paid the daily charge. Vehicles not appearing on one of these two databases would be liable to a penalty charge.
- 1.2.10 Were the LEZ to be introduced in London, it would have to be in conformity with both the Mayor's Transport and Air Quality Strategies. This report has been prepared following a public and stakeholder consultation on the draft revisions to those Strategies to allow for a LEZ.

1.3 Summary of consultation process prior to public and stakeholder consultation (July 2005 – January 2006)

- 1.3.1 Prior to carrying out the public and stakeholder consultation on the draft Transport and Air Quality Strategy Revisions, TfL met and engaged on an informal basis with key stakeholders on proposals for the design of a possible LEZ. This was followed by formal consultation with the London Assembly and the GLA Functional Bodies on the draft Strategy Revisions.

Informal Engagement with Key Stakeholders

- 1.3.2 TfL conducted a period of informal engagement with stakeholders between July and October 2005, on a possible proposal for a LEZ.
- 1.3.3 TfL met with key stakeholders, including: London boroughs, the Association of London Government, business representative groups, freight and haulage representative groups, coach operator representative groups, representatives from the vehicle manufacturing industry, DfT, DEFRA, the Government Office for London and environmental groups.
- 1.3.4 At the meetings with key stakeholders, information was presented by TfL on: the background to the proposed LEZ, the key features of the proposed LEZ; a possible future programme for consultation and anticipated impacts of the proposal. This information was based on the material subsequently published in the Draft Transport and Air

Quality Strategy Revisions: London Low Emission Zone. The meetings provided an opportunity for stakeholders to seek clarification from TfL on specific issues and for questions to be answered.

Consultation with the London Assembly and GLA Functional Bodies

- 1.3.5 On behalf of the Mayor, TfL conducted a consultation on the Transport and Air Quality Strategy Revisions: London Low Emission Zone from 10 October to 14 November 2005, with the London Assembly and the GLA 'functional bodies', (ie the London Development Agency, TfL, the Metropolitan Police Authority and the London Fire and Emergency Planning Authority). The Greater London Authority Act 1999 stipulates that these organisations must be consulted ahead of consultation with local authorities, groups representing people with mobility problems and others.
- 1.3.6 The two GLA Commissions (the Health Commission and the Sustainable Development Commission) were also consulted. In line with the Strategic Environmental Assessment Regulations, TfL also consulted the four statutory environmental consultees (English Heritage, English Nature, the Countryside Agency and the Environment Agency).
- 1.3.7 A formal representation to the consultation was received from the London Sustainable Development Commission. Representations were also received from the following London Assembly party groups and individual London Assembly Members:
- The Conservative Party Group of the London Assembly
 - The Green Party Group of the London Assembly
 - Peter Hulme-Cross, Assembly Member
 - Murad Qureshi, Assembly Member.
- 1.3.8 In addition, representations were received from the following Government Departments and Agencies:
- The Environment Agency
 - The Department of Health
 - English Nature
 - The Countryside Agency.
- 1.3.9 Three other organisations responded to the consultation. These were:
- Sadler Consultants (an environmental consultancy)
 - Per-Tec Ltd (a manufacturer of pollution abatement equipment)
 - Society of Motor Manufacturers and Traders.
- 1.3.10 TfL reported to the Mayor on this consultation in January 2006. The report, *Transport and Air Quality Strategy Revisions: London Low Emission Zone – London Assembly & GLA Functional Bodies Consultation Draft – Report to the Mayor on Consultation* set out the

outcome of that consultation and recommended certain amendments to the text of the draft Transport and Air Quality Strategies.

- 1.3.11 The Report recommended that the Draft Transport and Air Quality Strategies: London Low Emission Zone be amended to:
- (i) Set out how any decision on the future of the proposed LEZ beyond 2015 would be taken
 - (ii) Outline the pros and cons of including a NO_x standard from 2010
 - (iii) Provide further information on the relative merits of the Euro emission standards over age-based standards
 - (iv) Provide further information on the proposed enforcement mechanism.
- 1.3.12 The Assembly's Environment Committee considered the proposed LEZ at a scrutiny hearing in January 2006.

1.4 Public and Stakeholder Consultation (January – April 2006)

- 1.4.1 This report has been prepared to inform the Mayor's decision on whether or not to publish Revisions to the Transport and Air Quality Strategies and if so, whether they should be in the form upon which consultation took place, or whether they should be further modified.
- 1.4.2 Following the consultation with the London Assembly and GLA Functional Bodies, TfL prepared modified text of the draft Transport and Air Quality Strategy Revisions (*Transport and Air Quality Strategy Revisions: London Low Emission Zone - Draft for Public and Stakeholder Consultation*) which the Mayor approved prior to commencing a twelve week public and stakeholder consultation on the document.
- 1.4.3 The public and stakeholder consultation on the draft Revisions to the Transport and Air Quality Strategies began on 30 January 2006 and ran until 24 April 2006. Full details of the consultation are set out in Chapter 3.
- 1.4.4 TfL produced a public information leaflet entitled 'A proposal to introduce a London Low Emission Zone' which was sent to London boroughs for distribution at public buildings. Leaflets were also directly mailed to transport businesses in and around London. Additional copies could be obtained via a call centre.
- 1.4.5 Some 1,032 stakeholders received a copy of the draft Transport and Air Quality Strategy Revisions, a Supplementary Information document and a summary of the Environmental Report.

- 1.4.6 All the consultation documents were available to view on the TfL website. These were:
- Draft Transport and Air Quality Strategy Revisions
 - Supplementary Information document
 - Public information leaflet
 - Environmental Report and Summary
 - Health Impact Assessment and Summary.
- 1.4.7 The consultation was supported by an advertising campaign, which publicised the consultation through various media, including radio, newspapers and the internet, to ensure that organisations and individual members of the public had the opportunity to respond. Responses could be made either on-line or by filling in a paper questionnaire attached to the leaflet.
- 1.4.8 TfL set up an operator helpline in October 2005 at the start of the consultation process to respond to operator queries as to what the proposed LEZ and the revisions to the Mayor's Transport and Air Quality Strategies were about.
- 1.4.9 TfL commissioned Accent, a marketing and research agency, to carry out an analysis, both quantitatively and qualitatively, of consultation representations submitted by the public, businesses, stakeholders and other organisations. The full report produced by Accent is attached at Annex A.
- 1.4.10 TfL also commissioned Ipsos MORI, a market research company, to carry out an attitudinal survey representative of businesses, operators and the London public during the consultation period in March. The aim of this survey was to provide a sample of the opinions of Londoners, London businesses and operators who drive in London to the LEZ. The full report produced by Ipsos MORI is at Annex B.
- 1.4.11 These two reports complement TfL's own analysis and consideration of the representations and objections received during the consultation. Annex C of this report provides a full analysis of TfL's consideration of points raised in representations and objections received from stakeholders, other organisations and businesses, and sets out TfL's responses to the substantive points raised.

1.5 Contents of the report

- 1.5.1 This report:
- Summarises the legislative framework and procedures underlying the consultation on the Revisions to the Mayor's Transport and Air Quality Strategies (Chapter 2)
 - Explains the consultation process undertaken (Chapter 3)

- Presents an overview of TfL's consideration of the representations and objections received to the consultation from stakeholders, other organisations and businesses (Chapter 4)
- Presents TfL's conclusions and recommendations to the Mayor (Chapter 5)
- Annexes A and B provide full details of Accent's report and Ipsos MORI's report respectively. Annex C contains TfL's analysis of representations and objections received to the consultation and Annex D contains summaries of all stakeholder representations received to the consultation. Annex E provides an analysis of responses to the consultation received from the public and businesses after 8 May and up until 23 June 2006. Annex F contains a summary of the Economic and Tourism Impact Assessment. Finally, Annex G contains TfL's proposed modified Revisions to the Transport and Air Quality Strategies for publication and Annex H provides a table outlining the suggested modifications.

2. Legislative framework and consultation procedures

2.1 Introduction

2.1.1 This chapter summarises the legislative and procedural framework underlying consultation on the draft Revisions to the Mayor's Transport and Air Quality Strategies to allow for a LEZ. It describes the powers and responsibilities of both the Mayor and TfL in relation to consultation on congestion charging schemes. It also sets out the various impact and other assessments that have been undertaken by TfL.

2.2 Requirements for a Revision of Strategies under the Greater London Authority Act 1999

2.2.1 The consultation on the draft Revisions to the Transport and Air Quality Strategies was developed against the background of the more general duties, policies and functions of the GLA, the Mayor and TfL as provided for by the Greater London Authority Act 1999 ('the GLA Act') as amended by section 199 and Schedule 13 of the Transport Act 2000.

2.2.2 Principal amongst these are the requirements for the Mayor:

- to develop and implement policies for the promotion and encouragement of safe, integrated, efficient and economic transport facilities and services to, from and within Greater London (section 141 of the GLA Act),
- to develop proposals and policies for implementing policies in Greater London from the 'National Air Quality Strategy' and for the achievement of the national air quality objectives prescribed in regulations made under the Environment Act 1995 in Greater London, and
- to prepare and publish documents containing the Mayor's policies and proposals to achieve these: the Mayor's Transport Strategy and Air Quality Strategy (sections 142 and 362 respectively of the GLA Act).

2.2.3 Section 41(4) of the GLA Act sets out a number of matters to which the Mayor must have regard in preparing or revising a strategy. These include the principal purposes of the Authority (which are defined by section 30 of the GLA Act as promoting economic development and wealth creation, social development and the improvement of the environment in Greater London), the effect of the draft revision on the health of persons in Greater London and the achievement of sustainable development in the United Kingdom.

2.2.4 In revising the Transport and Air Quality Strategies the Mayor must also, under section 41(7) of the GLA Act, include such of the available policies and proposals relating to the subject matter of the Transport

and Air Quality Strategies as he considers best calculated to promote improvements in the health of persons in Greater London and to contribute towards the achievement of sustainable development in the United Kingdom, except to the extent that he considers that any action that would need to be taken is not reasonably practical in all the circumstances. In this context, "improvements to health" include the mitigation of any detriment to health that would otherwise be caused by the Revisions to the Transport and Air Quality Strategies.

- 2.2.5 Where the Mayor concludes that the proposed modifications would materially alter the Transport or Air Quality Strategies, he must carry out consultation in accordance with sections 42, 142 and 362 of the GLA Act. Section 42 of the GLA Act provides that in preparing or revising a Strategy, the Mayor shall consult the Assembly and the functional bodies, each London Borough Council, the Common Council and "any other body or person whom he considers it appropriate to consult". For revisions to the Transport Strategy, he must also consult the Disabled Persons Transport Advisory Committee and such other persons or bodies which represent the interests of persons with mobility problems as he considers it appropriate to consult, as required by section 142 of the GLA Act. When revising the Air Quality Strategy, the Mayor shall consult with the Environment Agency and any local authority which borders Greater London, as required by section 362 of the GLA Act.
- 2.2.6 In determining what consultation is appropriate the Mayor must have regard to the classes of body set out in section 32(3) of the GLA Act. These are voluntary bodies benefiting the whole or part of Greater London, bodies representing the interests of different racial, ethnic or national groups, bodies representing the interests of different religious groups in Greater London and bodies representing the interests of persons carrying on business in Greater London. Where appropriate, the Mayor may modify the proposed revised strategy to reflect consultation responses and any other drivers for change.
- 2.2.7 TfL has considered the Mayor's GLA obligations and has concluded that the proposed Revisions to the Transport and Air Quality Strategies do not pose any conflict with his obligations under the Human Rights Act 1998, although this is a matter on which the Mayor would want to seek his own legal advice.

2.3 Strategy Implications

- 2.3.1 It is a statutory requirement (sections 41(4), 41(5)(b) and 41(5)(c) of the GLA Act) that the Mayor, in preparing or revising any of his eight statutory strategies, must have regard to the need to ensure that they are consistent with each of his other statutory strategies and the resources available for implementation of those strategies. In order to ensure maximum policy coherence, it is also desirable that regard is

had to the need to be consistent with the Mayor's additional non-statutory strategies, for example the Energy Strategy.

- 2.3.2 In preparing the draft Revisions to the Transport and Air Quality Strategies, TfL had regard to the Mayor's prepared and published Biodiversity Action Plan, Municipal Waste Management Strategy, Ambient Noise Strategy, Culture Strategy, Energy Strategy, Food Strategy and draft Older Persons Strategy (draft published in November 2005). TfL was also required by section 347 to have regard to the Mayor's Spatial Development Strategy (the London Plan) and under section 7A(5) of the Regional Development Agencies Act 1998, to the Economic Development Strategy.
- 2.3.3 To meet these obligations a Strategy Consistency Report was prepared. It concluded that the draft Revisions to the Transport and Air Quality Strategies are consistent with the Mayor's published and draft Mayoral Strategies.
- 2.3.4 Section 41(4) and (5) of the GLA Act require that the Mayor shall have regard to the need to ensure the Transport and Air Quality Strategies are consistent with national policies and such international obligations as the Secretary of State may notify to the Mayor. No inconsistencies have been identified, and TfL confirms that this requirement has been satisfied.
- 2.3.5 TfL carried out widespread consultation in addition to that required by sections 42, 142 and 362 of the GLA Act. In line with the consultations that took place on the current Transport Strategy (published in July 2001) and Air Quality Strategy (published in September 2002), TfL undertook a twelve week period of public and stakeholder consultation on the draft Revisions to the Transport and Air Quality Strategies.
- 2.3.6 As part of his consideration on Revisions to the Transport Strategy the Mayor should take account of the duties of other local authorities as highway and road traffic authorities. There are specific duties to prepare and carry out measures designed to promote safety such as sections 122 of the Road Traffic Regulation Act 1984 and section 39(2) of the Road Traffic Act 1988.
- 2.3.7 Section 362 of the GLA Act provides that when considering revisions to the Air Quality Strategy, the Mayor shall have regard to:
- (a) reviews and assessments of air quality made by local authorities in Greater London in accordance with section 82 of the Environment Act 1995;
 - (b) any designation by a local authority in Greater London of an air quality management area in accordance with section 83 of that Act;

- (c) any plan prepared for the purposes of the achievement of air quality standards by a local authority in Greater London in accordance with section 84(2)(b) of that Act; and
- (d) any guidance about the content of the London Air Quality Strategy given to him by the Secretary of State for the purposes of the implementation of the strategy prepared and published by the Secretary of State in accordance with section 80 of that Act, (National Air Quality Strategy).

2.4 Assessment of equalities

- 2.4.1 The Mayor is required by statute to ensure that in the formulation of policies and proposals to be included in any strategy, due regard is had to the principle that there should be equality of opportunity for all people. He is also required in exercising his functions to have regard to the need to promote equality of opportunity for all persons, irrespective of their race, sex, disability, age, sexual orientation or religion, to eliminate unlawful discrimination and to promote good relations between persons of different racial groups, religious beliefs and sexual orientation.
- 2.4.2 These obligations apply to TfL in carrying out the delegation (MA2401). Prior to the public and stakeholder consultation, TfL undertook an equality and inclusion assessment appropriate to the high level nature of the draft Revisions to the Transport and Air Quality Strategies, concluding that there are unlikely to be any significant inequitable disbenefits arising from a possible LEZ.
- 2.4.3 Consistent with the requirements of TfL's Race Equality Scheme, TfL also undertook an initial assessment of the draft Strategy Revisions to assess the extent to which racial groups would be affected by the LEZ proposal. This assessment showed that there would be no expected differential impacts on particular racial groups.
- 2.4.4 If the Mayor were to publish the Revisions to the Transport and Air Quality Strategies, a further equalities impact assessment would be undertaken before TfL made any Order to give effect to the revised Strategies.

2.5 Impact Assessments

- 2.5.1 In revising the Transport and Air Quality Strategies, the Mayor must, under section 41(7) of the GLA Act, include such of the available policies and proposals relating to the subject matter of the Strategies as he considers best calculated to promote improvements in the health of persons in Greater London and to contribute towards the achievement of sustainable development in the United Kingdom, except to the extent that he considers that any action that would need to be taken is not reasonably practical in all the circumstances. In this context, "improvements to health" include the mitigation of any

detriment to health that would otherwise be caused by the Revisions to the Strategies. Pursuant to the delegation in MA2401, a full Health Impact Assessment was prepared on behalf of TfL and this was available on the TfL website during the consultation period.

- 2.5.2 The SEA Directive (2001/42/EC), which was transposed in England by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations), required TfL to carry out a Strategic Environmental Assessment (SEA) to identify and evaluate the environmental effects of the LEZ.
- 2.5.3 The SEA Regulations require that statutory consultation bodies - the Countryside Agency, English Heritage, English Nature and the Environment Agency, as well as any other organisations who are likely to be affected by the programme, are invited to express their opinion on the SEA and relevant documents as soon as reasonably practicable after the preparation of the relevant documents and that the responsible authority shall monitor the significant environmental effects of the implementation of the programme.
- 2.5.4 The SEA Regulations also require TfL to document the environmental effects of the LEZ proposal in an Environmental Report, which was accompanied by a non-technical summary. These documents were made available as part of the public consultation. TfL specifically invited the consultation bodies specified in the SEA Regulations to comment on the LEZ proposal.
- 2.5.5 In accordance with regulation 8(3) of the SEA Regulations, comments received from these consultation bodies have been included in this Report, and have been considered in the conclusions and recommendations of this Report. In accordance with regulation 16(1) of the SEA Regulations, should the Mayor publish the Strategy Revisions, TfL would produce an Environmental Statement. This would outline how environmental considerations have been integrated into the scheme, how the Environmental Report has been taken into account, the results of the consultation and the measures that are to be taken to monitor the environmental effect of implementation of the scheme.
- 2.5.6 If the Mayor publishes the Transport and Air Quality Strategy Revisions: London Low Emission Zone, a further assessment of impacts would be undertaken before TfL made any Order to give effect to the revised Strategies.

2.6 TfL Consultation Toolkit

- 2.6.1 Through its Consultation Policy (published August 2003) and pursuant to the best practice set out in its Consultation Toolkit (published August 2003), TfL is committed to carrying out transparent, comprehensive and inclusive consultations with the public and

stakeholders. Moreover, TfL is committed to consulting on proposals, policies and processes at each stage of their development. TfL's consultation policy statement sets out a framework for all TfL consultations. The policy states that TfL will comply with its legal obligations to consult and sets out five principles for all consultations. Consultations will be:

- Focussed and timely
- Accessible and targeted
- Informative and accountable
- Of sufficient duration to give consultees enough time to respond
- Honest and fair.

2.6.2 The purpose of the Consultation Toolkit is to set out advice and best practice for carrying out TfL consultations. These are stated to be:

- Consult with a clear purpose
- Maximise understanding and support for TfL's plans
- Ensure value for money
- Effectively engage traditionally excluded groups
- Use a range of methods to communicate with the target audience and establish accessible and appropriate communication channels
- Consult on options
- Allow sufficient response time
- Develop a consultation strategy and develop consultation objectives.

2.6.3 These best practice guidelines were applied to the planning, implementation, analysis and reporting of the formal consultation processes associated with the draft Revision to the Transport and Air Quality Strategies. The duration of the consultation exceeded the suggested response time contained in the Consultation Toolkit.

3 The consultation process

3.1 Introduction

- 3.1.1 This chapter provides details of the consultation carried out by TfL during the public and stakeholder consultation on the draft Revisions to the Mayor's Transport and Air Quality Strategies.
- 3.1.2 The public and stakeholder consultation ran for 12 weeks between 30 January and 24 April 2006. To take into account the Local Authority elections held on 4 May, the limits placed on political activity during the pre-election period and potential changes to the composition of councils, London Boroughs and Local Authorities were provided with the opportunity to submit an addendum to their consultation responses following the close of the consultation, up to and including 5 June.
- 3.1.3 TfL used a variety of communication channels to maximise awareness of and participation in the consultation. As well as widely distributing a public information leaflet that was available in a range of languages and formats, the consultation was advertised through a range of channels, including radio, newspaper and outdoor advertising. In addition, consultation materials were also posted on the TfL website and publicised on the GLA website. An operator helpline with a local rate number was established by TfL and provided information to callers about the LEZ proposal and sent out leaflets throughout the duration of the consultation.
- 3.1.4 The consultation process was supplemented by a comprehensive process of engagement with stakeholders. In total there were 17 stakeholder meetings and 3 stakeholder forums. The purpose of this engagement was to ensure stakeholders were well-briefed on the LEZ, hear issues and concerns, answer questions and encourage responses to the consultation. Many key stakeholders, such as the Freight Transport Association (FTA), the Road Haulage Association (RHA) and the Confederation of Passenger Transport (CPT) undertook their own research and surveys of members in developing their responses to the LEZ consultation.
- 3.1.5 TfL also conducted a London wide attitudinal survey of operators, businesses and residents to ascertain how representative the consultation responses were.
- 3.1.6 The consultation activities were designed to meet the requirements set out in TfL's Consultation Policy and Consultation Toolkit. The 12-week consultation period was in line with Cabinet Office guidance on consultations, which applies to central government, though not to TfL.

3.2 Information Leaflet and Questionnaires

- 3.2.1 TfL produced a twelve page information leaflet entitled *A proposal to Introduce a London Low Emission Zone*, which included a questionnaire inviting businesses, operators and the public to comment on the proposed LEZ (attached at Appendix 4).
- 3.2.2 The leaflet set out the reasons for proposing a LEZ; which vehicles would be affected; details of the proposed emission standards; proposed implementation dates; how the LEZ would operate; potential impacts of the LEZ; and possible alternatives.
- 3.2.3 The leaflet explained that the consultation concerned the principle of a LEZ as a Revision to the Mayor's Transport and Air Quality Strategies; that it is a requirement that such a principle is included within the Strategies before it can be taken forward as a Scheme; and that there would be a further opportunity to comment on the detail of a LEZ, if the Mayor wished to proceed with the development of a Scheme.
- 3.2.4 The leaflet also referred to the TfL website, where the consultation material distributed to stakeholders and other supporting documents were available to download.
- 3.2.5 Businesses, operators and the public were encouraged to take part in the consultation by completing a questionnaire that formed part of the leaflet. The questionnaire asked a number of questions about the proposal. There were two types of questionnaires, one for the general public and one for businesses and operators, which were used to gather opinions and views during the consultation. The questionnaire could be returned to TfL via a Freepost address given in the leaflet. The questionnaire could also be completed and submitted online, through the TfL website.
- 3.2.6 In broad terms, the public questionnaire sought opinion on the importance of improving air quality in London; whether air quality is a problem in London, whether respondents supported the introduction of the proposed LEZ; whether the proposed standards for particulates (PM₁₀) are appropriate; whether the standards should be extended to include oxides of nitrogen (NO_x) in 2010; and which vehicles should be included in the proposed LEZ.
- 3.2.7 The business and operator questionnaire sought much the same information, but additionally sought to gather information about the business / operator such as the number of vehicles operated and how often those vehicles typically travel in London.

- 3.2.8 Both questionnaires had a free-form text box for respondents to add any additional comments on the proposed LEZ and the alternatives suggested. In addition respondents were advised that they could provide further comments by enclosing these with the completed questionnaire and returning both to the freepost address.

Distribution of information leaflets and questionnaire

- 3.2.9 The information leaflet was directly mailed to 130,500 key personnel within 80,500 transport businesses across the UK. A covering letter was included explaining the principle of the LEZ proposals, and to which vehicles it would apply. Operators were invited to comment on how they thought the LEZ proposal would affect them.
- 3.2.10 Transport businesses were targeted including London based and national hauliers, London and intercity bus and coach operators, goods warehousing and storage and school bus operators. Businesses with a range of fleet types and sizes were identified. Key personnel and decision makers in each business were identified and the covering letter was directly addressed to these personnel.
- 3.2.11 In addition, 2,000 copies of the leaflet were sent to each of the 33 London boroughs to be made available at local libraries and other public buildings. Additional copies of the leaflet were made available to boroughs as required.
- 3.2.12 A pack containing the leaflet and all the consultation materials was available for public inspection at TfL Surface Transport's Faith Lawson House offices for the 12 week duration of the consultation.

Face to face leaflet distribution across the UK

- 3.2.13 During the consultation, the information leaflet and questionnaire was made available to drivers of goods vehicles, buses and coaches and to the public through a series of activity days at major ports and service stations across the UK. A team handed out the information leaflet, in English and translated versions, at freight ports in Dover, Harwich and Newhaven and at 22 motorway service stations. In addition, the leaflet was made available on a rack at 90 transport cafes and at freight ports in Folkestone, Felixstowe, Ramsgate and Southampton. In total, 58,660 leaflets were distributed across 119 venues.

Translated leaflets

- 3.2.14 The information leaflet and questionnaires were translated into 15 languages to ensure that the consultation and information on the LEZ proposal was accessible to people who did not have English as a first language. Versions of the leaflet were available on the TfL website in

Arabic, Bengali, Cantonese, French, German, Greek, Gujurati, Hindi, Italian, Polish, Punjabi, Spanish, Turkish, Urdu and Vietnamese. Versions of the leaflet in these formats, as well as in Braille, large print and audio could also be obtained from a TfL fulfilment centre, which was available by calling a local rate telephone number.

3.3 Local rate telephone number

- 3.3.1 A local rate telephone number, 08457 22 45 77, was provided in the information leaflet, advertised on TfL's website as a transport operator helpline and made available through the print media, radio and bus advertising. A telephone number was also provided for people calling from outside the UK.
- 3.3.2 Transport operators, businesses and the public were able to obtain further information on the proposed LEZ and have their queries answered by calling the number. The fulfilment centre escalated more complicated enquiries to TfL for response.
- 3.3.3 The local rate telephone number was managed by TfL's fulfilment centre, Granby Marketing Services, on behalf of TfL. The call centre operated for the duration of the consultation. Initially the call centre operated 5 days a week, Monday to Friday, between the hours of 8 a.m. and 9 p.m. However, due to the limited number of calls in the evening, the operating hours were reduced in early-March to close at 8 p.m. An answering machine service was in operation outside of these 'core' hours and at weekends. Granby's figures have shown that 511 calls were made during the twelve week period of the consultation.
- 3.3.4 591 leaflets were requested and sent out by the fulfilment centre over the course of the consultation.

3.4 Website

- 3.4.1 A specific area of the TfL website was allocated to the consultation on the proposed LEZ (<http://www.tfl.gov.uk/tfl/low-emission-zone>). The following information and documents were available:
- Draft revisions to the Mayor's Transport and Air Quality Strategies
 - Supplementary Information to the Draft Revisions to the Mayor's Transport and Air Quality Strategies
 - Information leaflet on the proposed LEZ
 - Translations of the information leaflet into 15 languages
 - Online questionnaire for business
 - Online questionnaire for members of the public
 - Environmental Report
 - Non-technical Summary of the Environmental Report

- Health Impact Assessment
- Non-Technical Summary of the Health Impact Assessment
- Report to the Mayor on consultation with London Assembly and GLA Functional Bodies (January 2006)
- Submission to the London Assembly Environment Committee, 17 January 2006
- Feasibility Study (July 2003)
- Strategic Review of the Feasibility Study (February 2005).

3.4.2 The 'Low Emission Zone' part of the TfL website for the duration of the consultation was viewed as follows:

Page views	18,006
Visits	12,932
Visitors	12,656

- Page view – represents the number of times a page was viewed
- Visits – the number of times a 'visitor' viewed the website
- Visitors – individuals who visited the site during the consultation period. If someone visits more than once, they are counted only the first time they visit.

3.5 Attitudinal Survey

3.5.1 TfL conducted an attitudinal survey during the consultation to identify respondents' attitudes and opinions towards the proposal and to assess how representative the consultation findings were. The survey took place from 4 March to 24 March 2006.

3.5.2 The attitudinal survey asked similar questions to the questionnaires but also asked questions about awareness of the consultation exercise.

3.5.3 A sample size of 2,000 was chosen to give a robust data set. The sample was split between the public, businesses and transport operators. The public sample included 1,000 Londoners, selected to be representative of Londoners as a whole and matched to the profile of adult London residents by borough, age, race and gender. The business sample included 545 businesses based within Greater London. The operator sample included 482 transport operators selected on the basis of whether they operated in Greater London. The results of the attitudinal survey are published at Annex B to this report.

3.6 Stakeholders consulted

3.6.1 Some 1,032 stakeholders received a letter explaining the purpose of the consultation. It requested any representations or objections be sent in writing (London Low Emission Zone, Transport for London, 12th Floor, 42 – 50 Victoria Street, London, SW1H 0TL) or by email (lez@tfl.gov.uk). Each stakeholder received a package of additional information, as detailed in section 3.6.9 below.

3.6.2 The classification of stakeholders and the numbers consulted within each category is set out below. A full list of stakeholders is attached in Appendix 2.

3.6.3 **Government:** 451 organisations comprising the following stakeholder organisations:

- Central Government Departments (23)
- Non Departmental Government Bodies/Executive Agencies (21)
- MPs/MEPs with constituencies within Greater London (82)
- English Local Authorities (283)
- London Boroughs (33)
- Local Government Associations (2)
- Regional Government Organisations (6)
- European Government (1).

3.6.4 **Economy:** 124 organisations comprising the following stakeholder organisations:

- Business Representative Groups (35)
- Economic/Regeneration Partnerships (24)
- Professional Organisations (16)
- Think Tanks (15)
- Tourism Organisations (2)
- Trade Associations (11)
- Trade Unions (14)
- Utilities (7).

3.6.5 **Transport/Environment:** 166 organisations comprising the following stakeholder organisations:

- Transport & Environment Representative Organisations (19)
- Aviation Organisations (1)
- Bus/Coach Operators (23)
- Cycling/Pedestrian Organisations (5)
- Environmental Technology and Services Industries (63)
- Freight/Haulage Representative Organisations: Europe (30)

- Freight/Haulage Representative Organisations: United Kingdom (2)
- Motorcycling Organisations (3)
- Motoring Organisations (8)
- Transport Partnerships (2)
- Transport Research Groups (10).

3.6.6 **Health:** 125 groups comprising the following stakeholder organisations:

- NHS Trusts/Health Authorities within Greater London (80)
- NHS Trusts/Health Authorities contiguous to Greater London (20)
- Emergency Service Providers (16)
- Health Organisations (9).

3.6.7 **Greater London Authority:** 32 organisations comprising the following stakeholders:

- London Assembly Members (25)
- GLA Functional Bodies and GLA Commissions (7).

3.6.8 **Society:** 134 organisations representing the following stakeholder organisations:

- Groups representing different faiths nationally (17)
- Groups representing different minority and ethnic groups nationally (56)
- Groups representing the interests of people with disabilities and mobility problems nationally (35)
- Groups representing older people nationally (6)
- Groups representing children/young people nationally (6)
- Groups representing the voluntary and community sector nationally (14).

Information sent to stakeholders

3.6.9 TfL sent all stakeholders the following documents:

- *Transport and Air Quality Strategy Revisions: London Low Emission Zone:* This document proposed to insert new sections 4G.126 - 4G.198 and new proposals 4G.27 – 4G.30 in the Transport Strategy and replace existing sections 4C.1 – 4C.35 and Proposal 10 of the Air Quality Strategy with new sections 4C.1 – 4C.73 and add new Proposals 10 -13. Stakeholders were

informed that the same text was proposed for both strategies to ensure consistency. They were also informed that no other sections of either strategy were to be updated as part of this process and all remaining policies and proposals in the Strategies still applied. This document described the objectives of the proposed LEZ and how it would achieve these by deterring the most polluting diesel-engined vehicles from driving within the Greater London area.

- *Supplementary Information:* To facilitate a better understanding of the proposed LEZ this document supported the consultation by providing a greater depth of information than that provided in the Strategy Revisions, which were primarily strategic in nature.
- *Summary of the Environmental Report:* This document summarised the environmental aspects of the proposed London LEZ core option, and the two proposed variants. It covered the likely significant impacts on air and human health and considered the potential impacts on biodiversity (including flora and fauna), climate, material assets, cultural heritage and landscape/townscape.

3.6.10 All stakeholders were advised that copies of the above documents together with the full Environmental Report produced as part of the SEA process, a Health Impact Assessment of the Strategy Revisions and an opportunity to complete the consultation questionnaire on-line were available on TfL's website.

Key stakeholders

3.6.11 A number of key stakeholders were identified and provided with an opportunity to meet with TfL representatives to discuss issues arising from the consultation.

3.6.12 The key stakeholders comprised:

- key freight and haulage representative organisations;
- key transport associations;
- key business representative groups;
- key environmental groups;
- key health groups;
- key professional bodies;
- key trade associations;
- key non-departmental government bodies;
- 33 London boroughs;
- 6 county councils contiguous to London;
- 20 district/borough councils contiguous to London;
- DfT;
- DEFRA;

- London TravelWatch (previously London Transport Users Committee);
- Government Office for London, and
- Association of London Government.

3.6.13 The key stakeholders were chosen because of their importance to the governance of London and the operation of the proposed LEZ and because the proposed LEZ was expected to particularly impact on them and/or their members. It was felt that these particular groups required the opportunity to be further briefed about the proposed London LEZ.

European Freight Organisations

3.6.14 Some 25 European Freight Organisations were invited to comment on the LEZ proposal (see Appendix 2 for a list of organisations). Each organisation received electronically and translated into the relevant language, a letter outlining the LEZ proposals. This included information about which vehicles would be affected, the proposed emission standards and the proposed implementation dates. In addition, the organisations were advised that there would be an opportunity to comment on the details of the proposed LEZ at a later date, should the Mayor decide to proceed with a LEZ. The letter also directed each organisation to the more detailed consultation information on the TfL website.

3.7 Meetings and Forums

3.7.1 TfL provided the opportunity to meet with all key stakeholders with the intention of raising awareness of the LEZ proposal, providing an opportunity for stakeholders to seek clarification on specific issues and for questions to be answered. TfL gave briefings on the LEZ at twenty nine events including three stakeholder forums organised by TfL with key stakeholders, as outlined below. A full list of the stakeholders TfL met with to support the consultation process is attached in Appendix 3.

Government

3.7.2 TfL held five meetings with air quality and transport officers from 30 of the 33 London boroughs, as well as eight of the contiguous local authorities. All boroughs and contiguous authorities were invited to a briefing, and those that did not attend were sent the presentation materials provided at the meeting. TfL also briefed the London borough Fleet/Transport Managers who are members of the Association of London Transport Operators. In addition, TfL briefed the Greater London Authority (GLA) Transport Operators Group.

3.7.3 TfL held a stakeholder forum with central and local government agencies, including the Department for Environment, Food and Rural Affairs, the Department for Transport, the Government Office for London, the Small Business Service of the Department of Trade and Industry, the GLA and the Association of London Government.

3.7.4 At their request, a separate briefing was also given by TfL to representatives from the Government Offices for London and the South East and the South East Regional Assembly.

Business and Operators

3.7.5 TfL held a Stakeholder forum to which the following Business and Freight/Haulage Representative Groups were invited:

- London First;
- CBI London;
- the London Chamber of Commerce and Industry (declined);
- the Federation of Small Businesses (declined);
- BVRLA;
- the Freight Trade Association (FTA);
- the Road Haulage Association (RHA);
- the Society of Motor Manufacturers and Traders (SMMT);
- The Confederation of Passenger Transport (CPT);
- Environmental Services Association; and
- British Airports Authority (BAA) (declined).

3.7.6 In addition, TfL held a series of detailed one-to-one meetings with BAA, CPT, SMMT, FTA and RHA to discuss their particular concerns and proposals for the LEZ. TfL also briefed two freight quality partnerships: TfL's Coach Forum; and the London Branch of the Community Transport Association. TfL's Directors of Congestion Charging also spoke on the proposed LEZ at the TfL sponsored FTA freight conference.

Environment and health

3.7.7 TfL gave a briefing and project update to the London Transport Activists Roundtable at which the following organisations were present: Transport 2000, the Pedestrians Association, Living Streets and the Capital Transport Campaign.

3.7.8 TfL also held a forum with Health sector stakeholders, including the London Ambulance Service NHS Trust, the Regional Public Health Group of the Department of Health, the Health Protection Agency, the South East London Strategic Health Authority, the North Central Strategic Health Authority and the North East Strategic Health Authority.

3.7.9 The Environmental Industries Commission, which represents a number of manufacturers of pollution abatement equipment, were also briefed during the course of the consultation and gave feedback on the proposals and issues arising.

Meetings attended by TfL

3.7.10 In addition, TfL was invited to attend and provide a briefing to a number of meetings and events. This provided TfL with an opportunity to obtain direct feedback from freight and coach transport operators, fleet managers and borough transport personnel and to address any questions they may have had about the proposal. The meetings attended were as follows:

Table 3.1: Consultation meetings attended by TfL

Organisation	Location	Date	Number of people attended
Brimfield Freight Partnership	North London EN1	8 February	22
GLA Business Seminar, LEZ and Cleaner Transport	London	10 February	40
Local Authorities Low Emission Zone Strategies (convened by DEFRA)	London SW1	17 February	11
West London Freight Quality Partnership	London W3	1 March	29
Chartered Institute of Logistics & Transport, Northern Home Counties Region	London	6 March	10
Conference 40 (Bus Operators)	London SW1W	14 March	42
London Coach Forum	London SW1H	15 March	20
London Borough of Croydon Air Pollution Event	Croydon, CR9	3 April	Approx 40 (public walk-in event)
Association of London Transport Operators	London WC2	7 April	20

3.8 Advertising

3.8.1 Advertisements were placed in local and national newspapers, in transport operator trade press titles, in ethnic press titles, on buses and bus shelters, and run on the radio to inform Londoners, businesses and operators of the LEZ proposal and how to respond to the consultation. The media campaign ran from the start of the

consultation on 30 January to 24 March 2006, taking into account the Local Authority pre-election period which commenced on 25 March.

London and national print media advertising

3.8.2 A combination of four-page colour pullouts and colour full page, half pages, and strip advertisements which gave details of the proposal and how to respond to the consultation appeared in the following London and national newspapers:

Table 3.2: London and local print media advertising to support the consultation

Area	Newspaper	Circulation	Date(s)	Type of Ad
Greater London/ South East	Evening Standard	All adults 340,000 340,000 340,000	6 February 20 February 6 March 20 March	Full page colour Strip Strip Strip
Greater London/ South East	Metro	All adults 495,267 495,267 495,267	7 February 13 February 28 February 13 March	Full page colour Strip Strip Strip
Greater London	The Londoner	All adults (monthly)	20 February	4-page colour pullout
National	The Times (business pages)	658,051	13 February 28 February 13 March	Half page colour
London Capital titles	51 titles (see appendix 5 for details)	2,258,626 (see appendix 5 for details)	wc 6 February wc 13 February wc 27 February wc 13 March	Full page colour Strip colour Strip colour Strip colour

Ethnic press titles

3.8.3 In addition a full page spread on the consultation and how to take part was advertised in the following ethnic press titles:

Table 3.3: Ethnic press titles containing a consultation advertisement

Paper	Advertisement Language	Target audience	Circulation	Dates
Gujarat Samachar	Gujarati	Asian Community	27,000	11 Feb 18 Mar
Surma	Bengali	British Bengalis	15,500	10 Feb 17 Mar
Daily Jang	Urdu	Asian Community	13,000	6 Feb 13 Mar
New Nation	English	Black Community	22,000	6 Feb 13 Mar
Voice	English	Black Community	11,500	6 Feb 13 Mar
Eastern Eye/ Asian Times	English	Black Community	21,000	7 Feb 14 Mar
Des Pardes	Indian	Punjabi Community	150,000	16 Feb 16 Mar

Transport Operator trade titles

3.8.4 Full page colour advertisements were also placed in a number of national transport operator trade publications.

Table 3.4: Transport Operator trade titles containing a consultation advertisement

Paper	Circulation	Detail	Date(s): commencing
Motor Transport	20,396	Weekly	9 February 23 February
Commercial Motor	20,627	Weekly	9 February 23 February
Logistics and Transport Focus	20,984	10 per year	6 March
Roadway	11,500	Monthly	16 February
Truck and Driver	26,382	Monthly	2 March
Green Fleet Magazine	5,200	Monthly	24 February
Trucking	27,127	Monthly	2 March
Coach and Bus Week	4,575	Weekly	9 February 23 February
Coach and Bus Buyer	6,700	Weekly	10 February 23 February
Route One	6,366	Weekly	9 February 23 February
Truck and Plant Trader	19,785	Weekly	9 February 9 March

- 3.8.5 The FTA declined to run the LEZ consultation advertisement in its publication, *Freight* (circulation 10,857).

Radio Advertisements

- 3.8.6 Two radio advertisements were broadcast from 13 February to 21 April 2006. The advertisements made listeners aware of the consultation and advised listeners to call the local rate telephone number and to visit TfL's website in order to obtain the consultation information leaflet and questionnaire and further information.
- 3.8.7 The advertisements were broadcast on the following radio stations: Heart FM, Magic, Virgin (London), LBC, Talk Sport (London), Sunrise and Spectrum.

Impact of print and media advertising

- 3.8.8 Using a media industry standard calculation, TfL's media agency estimated that the cumulative number of adult 'impacts' was 370 million. One impact is equivalent to one person seeing or hearing an advert once. This calculation does not include trade press and ethnic press.

3.9 Legal notice to publicise the consultation

- 3.9.1 A legal notice publicising the consultation was published on 30 January 2006 in the *London Gazette*. The notice included the following information:
- The consultation title – *Transport and Air Quality Strategy Revisions: London Low Emission Zone – Draft for Public and Stakeholder Consultation*
 - A brief outline of the proposal
 - Details of where the leaflet summarising the proposal and other supporting documents could be obtained
 - The Freepost address for people to submit their questionnaires and any additional comments
 - The date by which representations were to be received.

3.10 Late consultation responses

- 3.10.1 Responses from the public, businesses and stakeholders received up to 8 May 2006 were analysed by Accent. Accent also analysed stakeholder responses received after 8 May 2006 and up to 9 June 2006, including addenda from London boroughs following the Local Authority elections of 4 May 2006. TfL's analysis of consultation responses from stakeholders and other organisations received up to 23 June is outlined in Chapter 4 of this Report.

- 3.10.2 Responses from the public and businesses received after 8 May and up until 23 June 2006 are analysed in Annex E to this report. All other representations received up to the date of the Mayor's decision will be forwarded to him.

4 Analysis of representations

4.1 Introduction

4.1.1 This chapter sets out a summary of TfL's consideration of the representations and objections received from stakeholders, other organisations, businesses and individual members of the public.

4.1.2 TfL has considered the representations and objections received as a result of the public and stakeholder consultation exercise which began on 30 January 2006 and closed on 24 April 2006. Local authorities were provided with an opportunity to submit an addendum to their consultation response up to 5 June to take into account changes arising from the Local Authority elections held on 4 May. This analysis covers responses received during the consultation period and late responses and addenda received before 23 June 2006. Representations are considered fully in Annexes A, C, D and E as follows:

- An analysis of the public and business representations received until 8 May and an analysis of stakeholder representations received until 5 June 2006, together with the numbers of respondents raising particular issues or concerns, are set out in the report by Accent Marketing & Research at **Annex A**.
- **Annex C** provides a review of TfL's detailed consideration of the stakeholder, other organisation and business representations and objections received up until 23 June 2003, and sets out TfL's considered response.
- **Annex D** sets out a summary of the main issues raised by each stakeholder and other organisation that responded to the consultation.
- **Annex E** considers those public and business representations received after 8 May but up until 23 June 2006. Representations received after 24 June 2006 but before the Mayor's decision were made available to the Mayor, but without consideration by TfL.

4.1.3 In **Annex C**, stakeholder and other organisations' representations and objections have been categorised into 18 'themes' according to the issue being raised. This chapter summarises the representations and TfL's response to these 18 themes.

4.1.4 The chapter sub-headings that follow give the titles of each of the 18 themes. Below each sub-heading there is a summary of the key issues within the theme (and sub-themes) and an outline of TfL's considerations and recommendations.

4.1.5 Those representations that simply expressed support for the LEZ proposals are not dealt with in this chapter or in **Annex C**. The focus is on the representations that, even if they were generally supportive

of the LEZ, expressed one or more concerns about the proposals; and the representations that objected to part of or the entire proposal. Any representations that simply expressed support for the LEZ proposals are included in **Annex D**.

4.2 Representations and Objections Received

Support / Opposition

There was clearly a positive response to the LEZ proposals with the overwhelming majority of public responses (89%) and most of the stakeholder responses (60%) supporting the proposed LEZ. The response from businesses and other organisations was more mixed. An equal proportion of businesses indicated support for (41%) and opposition to (41%) the LEZ proposals, while more of the responses from other organisations opposed (42%) than supported (25%) the proposals. The other organisations were those representative organisations who responded to the consultation but whom TfL did not invite to participate as stakeholders. Chapter 3 sets out more detail on the consultation process and Appendix 2 details the stakeholders, other organisations and businesses who responded to the consultation.

Table 4.1 sets out the response to the LEZ proposals from the public and stakeholder consultation and from the attitudinal survey. The attitudinal survey commenced on 4 March 2006 and ran until 24 March 2006. It was conducted separately from the public and stakeholder consultation and provides a representative sample. The results of the attitudinal survey broadly mirror the results of the consultation. Analysis of the results of the attitudinal survey is set out in the report by Ipsos MORI at **Annex B**.

Table 4.1: Support for and opposition to the LEZ proposals

	Support (%)	Oppose (%)	Neither (%)	No comment (%)
<i>Consultation</i>				
Stakeholders	60	25	10	5
Other Organisations	25	42	17	17
Public	89	8	2	1
Business	41	41	16	2
<i>Attitudinal survey</i>				
London residents	79	11	10	n/a
London businesses	65	20	15	n/a
Transport Operators	46	37	17	n/a

Base: 100 stakeholders, 25 other organisations, 4,812 public responses (both questionnaires and open responses), 3,745 business responses (both questionnaires and open responses) (from Accent consultation report at Annex A). 1,000 responses from weighted attitudinal survey of Londoners, 545 responses from attitudinal survey of London business and 482 responses from attitudinal survey of Transport Operators across the UK. Figures rounded to the nearest percentage point.

Note: the responses from the questionnaires have been amalgamated so that 'strongly support' and 'support' have been categorised together as support and 'strongly oppose' and 'oppose' have been categorised together as oppose.

Theme 1: Principle of a LEZ

Summary of representations

Representations falling within this theme concern the principle of the proposed LEZ, such as whether or not there is support for the LEZ, and what is considered to be the motivation for the LEZ.

The majority of representations supported the LEZ and the expected health benefits that it would bring. Of those who supported the LEZ, a few argued that it would be difficult to implement and would not be cost effective. The representations that did not support the LEZ argued that normal vehicle replacement cycles and operators voluntarily reducing emissions would lead to improvements in air quality. Other representations saw the LEZ as being politically motivated by only targeting businesses while others saw it as a mechanism to raise revenues with little impact on air quality.

TfL's considerations

The Low Emission Zone Feasibility Study commissioned by the Greater London Authority (GLA), the Association of London Government (ALG), TfL, the Department for Transport (DfT), and the Department for Environment, Food and Rural Affairs (DEFRA) concluded in 2003 that a London-wide LEZ was the most cost-effective policy available to the Mayor that could realistically move London significantly closer towards meeting its air quality objectives. TfL estimates that by 2012 the introduction of a London LEZ would bring forward by some three to four years reductions in particulate (PM₁₀) emissions compared with the reductions that would come through the natural vehicle replacement cycle. The reduced PM₁₀ emissions would improve the quality of life for many thousands of people who live in, work in and visit London, especially those already suffering from respiratory symptoms that restrict their daily activities. The proposed LEZ would also reduce the number of premature deaths, the number of life years lost, respiratory hospital admissions and the need for medication for adults and children suffering from respiratory diseases.

The aim of the proposed LEZ would be to reduce emissions from road transport sources. For this reason it would primarily target the most individually polluting vehicles on the road, which are heavy goods vehicles (HGVs), buses and coaches. Heavier light goods vehicles (LGVs) and minibuses should also be targeted (an option supported by the consultation) (see Theme 5). Although TfL recommends such modifications to the scheme design that was consulted upon, the principle of the LEZ remains unchanged.

TfL's Recommendations

TfL considers that the heavier LGVs should be included in the LEZ from 2010, and that the Strategy Revisions should be modified to reflect this (see Theme 5).

Theme 2: Alternatives to the proposed LEZ

Summary of representations

Representations falling within this theme concern possible alternatives to the LEZ proposals, such as implementing a 'ban' instead of a charging scheme or providing incentives for cleaner vehicles. A number of representations considered the proposed LEZ to be the best option for achieving the objectives of moving London towards meeting its 2010 objectives for PM₁₀ and NO₂ and for improving the health and quality of life of people who live and work in London.

Those representations which sought a complete ban on vehicles which did not comply with the proposed LEZ emission standards considered such a system to be more cost-effective than a system where operators could pay a charge to drive more polluting vehicles within Greater London.

A number of representations expressed the view that TfL or the Government should provide financial incentives for cleaner vehicles, such as grants to encourage fleet replacement, the fitting of particulate traps or the use of alternative fuels. Representations were also concerned that the proposed emission standards for the London LEZ should be consistent with any other proposals for LEZs across the UK.

TfL's considerations

TfL has investigated alternative ways of addressing road transport related emissions of PM₁₀ and NO_x at both the national and local level and considers that, in the absence of any national initiatives, the proposed LEZ represents the most cost effective option for achieving reductions of the most harmful road traffic generated emissions in London up to 2015.

The Government has announced that it is stopping its Air Quality Retrofit programme which until relatively recently provided grants to operators to fit pollution abatement equipment to vehicles. The Government's Reduced Pollution Certificate (RPC) programme which provides Vehicle Excise Duty (VED) discount incentives for cleaner vehicles has been successful in encouraging some bus, coach and lorry operators to clean up their vehicles.

TfL has investigated a number of legal routes for implementing a LEZ in Greater London. Implementation via a Traffic Regulation Order (TRO) would ban non-compliant vehicles from entering the zone rather than charging them. TfL judges that it is sensible to allow non-compliant vehicles access on an

exceptional basis albeit paying a charge to do so. The European Commission has also responded favourably to a charging based approach on the ground of flexibility for operators.

Implementation under a TRO would require co-ordination of the input of up to 34 traffic authorities in London to sign up to a 'joint arrangement' agreement under section 101 of the Local Government Act 1972, and each borough would potentially have to hold a public inquiry into the proposals. TfL felt that the risks associated with this implementation approach would have a high probability of introducing significant delay to the programme. At this stage a TRO approach would also delay the implementation of LEZ by at least a year as TfL would be obliged to re-consult on the Transport and Air Quality Strategy amendments.

The Scheme Order approach is more flexible in that it allows operators to make an economic choice as to whether they would pay the daily charge or not drive in London. To implement the proposal using a TRO would lead to higher operator compliance costs than implementation via a Scheme Order. So, for example, operators who drive rarely in London could still operate non-compliant vehicles in the Capital, albeit at a cost. TfL would set the daily charge and penalty charge at a level such that the vast majority of non-compliant vehicles would choose to upgrade or replace their vehicles, rather than pay the charge, hence making the difference in air quality impacts between a ban and a charge insignificant.

While the introduction of a LEZ by means of a Scheme Order under the GLA Act 1999 would restrict other authorities from implementing road user charging schemes, TfL would work with any authority that expressed an interest in doing so and would consider making an Order implementing such a scheme, as long as it was consistent with the Mayor's Transport Strategy.

TfL and the Government recognise the problems that different LEZ emission standards would cause if implemented across the UK. To minimise the risk of this, TfL is represented on a government sponsored working group looking at the potential implementation of LEZ's across the country.

TfL's Recommendations

TfL considers that a London LEZ, as broadly outlined in the draft Revisions to the Mayor's Transport and Air Quality Strategies, represents the most effective option for achieving reductions in road traffic emissions in London from 2008 to 2015. Furthermore, TfL considers that the LEZ should be introduced in 2008 in order to maximise the air quality and health benefits.

TfL considers that the draft Transport and Air Quality Strategy Revisions should not be modified as a result of the representations received under the theme 'Alternatives to the proposed LEZ'.

Theme 3: Business Case

Summary of representations

Representations falling within this theme concern the value for money of the proposed LEZ. A number of respondents to the consultation suggested that the LEZ represents 'poor value for money', with the costs of the scheme outweighing the benefits. However, some respondents, particularly those representing the health sector considered that the LEZ was a positive proposal given the projected significant health benefits it would generate.

In addition, some respondents, raised questions about the accuracy and completeness of the cost projections associated with the proposed LEZ.

TfL's considerations

The Mayor has a statutory obligation to take steps towards achieving air quality objectives. Failure to take more steps could lead to the European Commission taking infraction proceedings against the UK Government and fines being imposed. In the absence of national initiatives, a LEZ that targets the most individually polluting vehicles has been identified as the most cost-effective means of reducing the most harmful emissions from road transport in London.

Whilst the introduction of the proposed LEZ would not enable London to meet the 2010 objectives in all locations, it should reduce the areas of London that exceed the PM₁₀ objectives and reduce exposure to these pollutants of people who live in, work in and visit the capital. It is estimated that by 2012 the proposed LEZ which includes heavier LGVs from 2010, would deliver reductions of around 14 per cent in the area of London exceeding the 2010 annual PM₁₀ objective and around 14 per cent reductions in the area exceeding the 2010 daily PM₁₀ objective. It would also deliver reductions in total emissions of NO_x. The monetised health benefits within London resulting from the proposed LEZ which includes heavier LGVs from 2010 have been quantified at between £101m and £162m between 2008 and 2015. Benefits outside London are estimated at between £70m and £100m over the same period.

As there is no "safe" level for exposure to particulates, thousands of people across the whole of London would benefit from general improvements in air quality under a LEZ.

The air quality and health benefits modelling work undertaken for TfL uses advanced techniques reflecting best practice in the field, and makes use of actual concentration measurements provided by London's network of air quality monitoring sites. Estimated costs to operators draw on operator survey information and analysis of the costs associated with actions that operators of non-compliant vehicles reported they were most likely to take.

The LEZ proposal should not be viewed in isolation. Rather, it is one of a suite of measures set out in the Mayor's Transport and Air Quality Strategies, each of which focus on reducing emissions cost effectively. This suite of initiatives, which includes measures such as emissions standards for taxis and buses, as well as non transport related measures such as Local Air Quality Management systems and Best Practice Guidance on Reducing Emissions from Construction and Demolition, will generate significant improvements in the health of people who live in, work in and visit Greater London.

TfL's Recommendation

The Mayor has a statutory obligation to take steps towards achieving national and EU air quality targets and it is TfL's view that the LEZ proposals represent the most effective means of reducing the emissions from road transport that are most harmful to human health. It is important that the LEZ be seen in the context of the Mayor's Transport and Air Quality Strategies as one of a suite of initiatives to reduce emissions from road transport.

TfL considers that the draft Transport and Air Quality Strategy Revisions should not be modified as a result of representations received under the theme 'Business Case'.

Theme 4: Timetable

Summary of Representations

Representations falling within this theme concern the proposed implementation timetable of the LEZ. Some respondents considered that it was important that the LEZ was implemented as soon as possible, to maximise the air quality and health benefits. Other respondents were concerned that the proposed 2008 implementation date for the first stage of the LEZ proposals did not give operators sufficient time to make the necessary adjustments to their fleets.

TfL's Considerations

The Mayor has a statutory obligation to take steps towards achieving national and EU air quality targets. It is therefore important that action is taken as soon as possible to improve air quality in London. The earliest a LEZ could be introduced is early 2008. This date takes into account the time required to complete the legal processes, including public and stakeholder consultation on a Scheme Order, as well as the time to put in place the required business systems and processes and for vehicle operators to make the necessary changes to their vehicle fleets.

Should the Mayor confirm the revisions to his Transport and Air Quality Strategies, TfL would undertake a further public and stakeholder consultation in late 2006 on detailed proposals for a LEZ contained in a Scheme Order.

Following that consultation the earliest that the Scheme Order could be confirmed would be spring 2007, with the LEZ commencing for the HGVs over 12 tonnes in early 2008. TfL considers that operators would have sufficient time to plan their compliance with the proposed LEZ emission standards. Buses, coaches and lighter HGVs (between 3.5 tonnes and 12 tonnes) would have until mid 2008 to comply with the proposed emission standards. Given the significant concerns of operators regarding the original proposal to tighten the LEZ standard to Euro IV for PM₁₀ in 2010, TfL is recommending moving implementation of this standard back to 2012 (see considerations under Theme 6). It is proposed that heavier LGVs would be included in the LEZ from 2010.

The proposed LEZ emission standard for 2008 would be Euro III for PM₁₀. Euro III vehicles have been sold in the EU since 2001, and the vast majority of older vehicles can be modified to meet the proposed standard. TfL does not therefore feel that the proposed introduction of the LEZ in 2008 should be delayed, and would urge operators to consider the implementation of the LEZ when developing their fleet management plans.

TfL's Recommendation

TfL considers that, subject to the outcome of statutory processes, including public consultation, early 2008 is an appropriate date for the commencement of the proposed LEZ, taking account of the time required for TfL to implement the scheme, for operators to upgrade their vehicles and the need to reduce harmful transport-related emissions in London as early as possible.

Modifications to the draft Transport and Air Quality Strategy Revisions are considered necessary to defer the implementation date for the Euro IV standard for PM₁₀ to 2012 and to include heavier LGVs from 2010 (see Theme 5).

Theme 5: Vehicles to be included

Summary of Representations

Representations and objections falling within this theme concern the types of vehicles that would be subject to the LEZ proposals. The majority of these representations concerned whether LGVs (vans) and cars should be part of the LEZ proposals. In addition, a number of representations were received which objected to coaches falling within the scope of the proposed LEZ.

In relation to the representations received concerning the possible inclusion of LGVs in the proposed LEZ, the majority of these supported the inclusion of LGVs within the LEZ as it was judged that this would have a more positive impact on air quality than the 'core scheme' presented in the Strategy Revisions. This support was, however, given on the proviso that TfL could show that it had taken into account the social and economic impact of doing so on businesses. Of those representations which objected to the possible

inclusion of LGVs in the LEZ, there was concern raised about the potential adverse economic impact on London businesses, particularly small businesses.

A number of representations expressed concern that there was no clear definition of LGVs in the consultation documents. In particular, it was considered unclear as to whether 'car-derived vans' and minibuses were to be included in this definition.

A number of representations were concerned that *all* vehicles, including cars, should be subject to the proposed LEZ in order to maximise the air quality and health benefits. Many representations noted that as a vehicle 'type', cars all together contribute more to emissions than any other group of vehicles. In relation to buses and coaches, a number of representations noted the relatively small level of emissions of particulates and NO_x from these vehicles in comparison with other vehicle types and that the proposed LEZ should therefore *not* target these vehicles.

TfL's considerations

The LEZ seeks to move London closer to achieving its air quality objectives for PM₁₀ and NO₂ for 2010 by encouraging the upgrade or replacement of the most individually polluting older diesel-engined vehicles from 2008. TfL therefore considers that it is appropriate to target initially HGVs, buses, coaches, and subsequently heavier LGVs and minibuses.

TfL has considered the implications of including LGVs within the scope of the LEZ. It is forecast that by 2010 LGVs will be responsible for 24 per cent of road transport emissions of PM₁₀ within London. TfL estimates from the modelling undertaken on the LEZ proposals that including heavier LGVs would increase the monetised health benefits of the core scheme by approximately £25m. In total, the monetised health benefits within London resulting from the proposed LEZ which includes heavier LGVs from 2010 have been quantified at between £101m and £162m between 2008 and 2015. Benefits outside London are estimated at between £70m and £100m over the same period.

On the basis of these investigations, TfL considers that the most-polluting heavier LGVs should be included in the LEZ proposals. This definition excludes 'car-derived vans' as TfL judges that it would be unfair to include such vehicles as they retain the same characteristics as the diesel-engined cars they are based on and hence have similar emission levels. TfL considers that minibuses should also be included within the LEZ at the same time as the most-polluting heavier LGVs as they use very similar chassis and engines and have similar emissions levels. TfL would further define the classification of heavier LGVs that would be included in the LEZ from 2010 at the Scheme Order stage.

Where possible and practicable, it is proposed that European vehicle definitions be used to describe the vehicles to be included in the LEZ. This

ensures that vehicle definitions have a legal basis that applies equally to UK and European-based vehicles. The vehicle definitions would be defined in the Order establishing the LEZ.

TfL acknowledges that the combined kilometres driven by cars contribute a higher percentage of emissions than other vehicle types and has therefore carefully considered the costs and social and economic impacts of including cars within the scope of the LEZ proposals. Although TfL considers that a number of other initiatives within the Mayor's Transport and Air Quality Strategies, such as Congestion Charging and improved public transport provision will help to address the environmental impacts of car transport in London, it will continue to monitor the impacts of wider initiatives on vehicle emissions in London and the range of vehicles included in the LEZ would be kept under review.

TfL's Recommendations

Following further investigation of the costs and benefits of including each vehicle type within the proposed LEZ and on the basis of the representations received, TfL recommends that HGVs, buses and coaches are included within the LEZ on the basis of Euro emission standards from 2008, and that the most-polluting heavier LGVs are also included within the scope of the LEZ from 2010. TfL considers that there should be a modification to the Strategy Revisions to indicate that LGVs would include minibuses but that car-derived vans would not be included in the scope of the LEZ at this stage

TfL recommends that a new section should be included in the Strategy Revisions proposing that as far as is practical, European vehicle definitions are used to define the vehicles to be included in the LEZ.

TfL recommends a modification to the Strategy Revisions to set out the inclusion of LGVs. The exact standard for their inclusion in the LEZ should be considered at Scheme Order stage.

TfL recommends that the inclusion of further vehicles within the LEZ should be kept under review and that the Strategy Revisions should be modified to reflect this.

Theme 6: Vehicle emission standards

Summary of representations

Representations falling within this theme relate to whether a 'Euro emission' or 'age-based' standard should be used for the LEZ; the proposed timing of the tightening of the standard (to Euro IV) for various vehicle types; the feasibility of a NO_x standard for the LEZ; and, concerns about the performance of particulate abatement equipment.

Some stakeholders suggested that a LEZ based on a vehicle's age, rather than its Euro standard, would be simpler for TfL to administer and easier for operators to comply with. Others preferred a 'Euro emissions' based standard - as consulted upon in the Strategy Revisions - as it was judged that this would, be fairer, involve lower compliance costs and offer operators more options in terms of fitting pollution abatement equipment.

The majority of operators who responded to the consultation were concerned that complying with the proposed Euro IV standard for PM₁₀ from 2010 would impose very high costs on operators. It was further argued that the timing of such a standard could reduce the useful life of their vehicles. The Euro IV standard only becomes mandatory for vehicles sold in the EU from October 2006, so many vehicle operators are still purchasing Euro III vehicles. This would mean that under the 2010 proposal, some vehicles less than four years old would not be compliant with the LEZ without modification. In addition, many operators will have upgraded their fleets in 2008 to meet the Euro III standard for PM₁₀. A requirement for a further upgrade two years later would impose a large financial burden on industry.

Coach operators also argued that as their vehicles have longer life-spans than many other vehicle types, the LEZ should apply more lenient standards for coaches. Many vehicle operators responding to the consultation were concerned that it would be very expensive and impractical to comply with a NO_x standard.

A number of vehicle operators responding to the consultation suggested that particulate abatement equipment was less effective in urban 'stop/start' driving conditions experienced in many parts of London and not suitable for all vehicle types. It was also noted that certain types of pollution abatement equipment may produce a large quantity of NO₂ which could adversely affect the achievement of air quality objectives for this pollutant.

Some respondents were concerned that the Reduced Pollution Certificate (RPC) scheme would be discontinued and that the benefits of the scheme in terms of Vehicle Excise Duty (VED) may be withdrawn. This would remove an incentive for some operators to fit pollution abatement equipment in order to meet LEZ standards.

TfL's considerations

A LEZ based on Euro standards that allows the fitting of particulate abatement equipment best balances affordability, fairness and clarity for operators with air quality and health benefits. An age-based scheme could be regarded as unfair as vehicles of the same Euro class and emissions but of a different age would be treated differently. Such a scheme could also penalise early adopters of exhaust after-treatment systems, and those who had converted their vehicles to alternative fuels or re-engined their vehicles to a higher Euro standard.

TfL has examined the air quality and health benefits and operator compliance costs of a six, eight and 10 year rolling age-based scheme for HGVs, buses and coaches. This analysis has shown that a 10 year age-based standard generates poor health and air quality benefits. The benefits of a six or eight year age based scheme are also less than those delivered by the proposed Euro standards based scheme. On average, compliance costs for operators associated with an age based standard are also slightly higher than for the proposed Euro standards based scheme.

Given the significant concerns of operators regarding the original proposal to tighten the LEZ standard to Euro IV for PM₁₀ in 2010, TfL is recommending moving implementation of this standard back to 2012 to reduce compliance costs to operators, and make the scheme more acceptable. This would reduce compliance costs to operators up to 2015/16 from £270m to some £210m. However, this deferral would lead to smaller air quality and health benefits resulting from a reduction in emissions from heavier vehicles. The area of Greater London exceeding the 2010 annual mean PM₁₀ objective would drop from 17.8 per cent to 5.3 per cent and the area of Greater London exceeding the daily mean PM₁₀ objective would fall from 18.3 per cent to 4.9 per cent. Nevertheless, these reductions would be largely offset by the inclusion of heavier LGVs and minibuses within the LEZ.

TfL is not recommending different standards for coaches as the coach fleet contains some of the oldest and most polluting vehicles. Nevertheless, the recommended delay in tightening the proposed emission standards for Euro IV to 2012 would help to reduce the compliance costs for this sector of the industry.

Whilst there has been some success in fitting NO_x abatement equipment to some of the London bus fleet and Black Cabs, there remain a number of important unresolved issues around NO_x certification and testing, such that TfL is not recommending extending the LEZ standards to NO_x at this stage. TfL is continuing to consider, with the pollution abatement equipment industry and central government, how a NO_x standard might be implemented and will consider moving to implement a NO_x standard in the future should this be feasible. This is consistent with proposals 4G.29 and 12 of the Transport and Air Quality Strategy Revisions.

TfL has carefully examined issues relating to the efficiency of pollution abatement equipment, particularly in urban conditions. Pollution abatement equipment is likely to fail if it is not suitable for the particular vehicle or its typical operating conditions and is not routinely serviced. TfL has identified a number of instances where inappropriate pollution abatement equipment has been fitted and routine maintenance has not been carried out, causing the equipment to subsequently fail.

It is the responsibility of both pollution abatement equipment manufacturers and vehicle operators to ensure a vehicle's specification, age and typical operating conditions are considered when fitting pollution abatement equipment and establishing maintenance procedures. In response to these

issues, the abatement industry has introduced measures to improve customer service and to ensure operators are aware of maintenance issues. TfL is strongly supportive of these measures and is working with pollution abatement equipment manufacturers to ensure they become standard practice.

TfL notes the recent evidence suggesting that certain types of pollution abatement equipment may emit an increased proportion of NO_x as NO₂ and the impact this may have on NO₂ concentrations. In terms of the key health-based objectives of the LEZ, the reductions in PM₁₀ have a significantly greater impact on health than that of a higher proportion of NO_x emitted as NO₂. It should be noted that total NO₂ and NO_x emissions are expected to continue to decline. This approach supports the Government's Air Quality Expert Group's recommendations that a wider, more holistic approach to air quality management should be taken in such circumstances. It should also be noted that the LEZ would contribute to a reduction in total NO_x emissions.

The Government has indicated its intention to retain the RPC mechanism for operators who fit qualifying abatement technology to pre-October 2006 vehicles and DfT has expressed its support for the use of the existing RPC as an eligibility criterion for the LEZ's proposed PM₁₀ standard. TfL is now working with the Vehicle and Operator Services Agency (VOSA) and the Vehicle Certification Agency (VCA) to ensure that the RPC scheme has the capacity to support the increased demand the proposed LEZ could create.

TfL's Recommendation

Given the significant concerns of operators regarding the original proposal to tighten the LEZ standard to Euro IV for PM₁₀ in 2010, it is recommended that this should be moved back to 2012. A modification to the Strategy Revisions is recommended to reflect this.

TfL will work with the abatement industry and other third parties to ensure that the regime for fitting, maintaining and testing particulate abatement equipment ensures maximum possible reduction in particulate emissions. TfL considers that a new section should be included in the Strategy Revisions outlining that particulate abatement equipment is the most cost effective way to reduce PM₁₀ emissions from heavy duty vehicles if appropriately fitted and maintained.

TfL also considers that a new section should be included in the Strategy Revisions clarifying that the aim of the proposed LEZ is not to make progress towards the 2010 annual mean objective for NO₂ but that it would contribute to a reduction in total NO_x emissions and the health benefits from reducing PM₁₀ emissions would outweigh the impact of an increase in the ratio of NO₂ in NO_x. TfL also recommends a modification to the Strategy Revisions outlining that a NO_x standard from 2010 is not considered feasible at this stage but that TfL would work to implement such a standard in the future.

TfL considers that the Strategy Revisions should be modified to reflect additional work undertaken to assess the impacts of adopting an age-based LEZ standard.

Theme 7: Boundary of the proposed LEZ

Summary of representations

Representations within this theme relate to the boundary of the proposed LEZ as well as signage and enforcement infrastructure. Representations were split between those who wanted to see a larger area covered (such as up to and including the M25 Motorway, or even UK-wide) to those suggesting a much smaller area be covered, such as the Congestion Charging Zone.

The main arguments put forward for a smaller LEZ area were that most pollution 'hot-spots' were judged to be within central London, and that such a scheme would involve lower costs to TfL and to vehicle operators.

A number of London boroughs and other stakeholders were concerned about the possible adverse visual impacts of additional signage and enforcement infrastructure associated with the proposed LEZ. Respondents on this issue were keen to see signage clutter minimised and to engage with TfL in identifying appropriate locations for signs and cameras.

TfL's considerations

The GLA or TfL does not have any jurisdiction beyond Greater London. In order to maximise the air quality and health benefits of the proposed LEZ, TfL believes that the boundary of the scheme should be as close to that of the Greater London administrative boundary as possible. Some small deviations within the Greater London boundary are likely to be necessary to provide for suitable diversionary routes, identification of the most suitable locations for signage and to reflect discussions TfL is holding with the Highways Agency over the possible inclusion of motorways that fall within the GLA boundary in the LEZ.

TfL is not recommending that the LEZ be extended to and include the M25 as this would be more complicated to implement and enforce, requiring the agreement of non-London local authorities, the Highways Agency and the Secretary of State for Transport. Furthermore, the M25 is an appropriate diversionary route for vehicles to use in order to avoid driving within Greater London. Nevertheless, TfL is currently in discussions with the Highways Agency about the feasibility of including other motorways (excluding the M25) that fall within the GLA area in the LEZ.

Modelling shows that a LEZ covering the existing Central London Congestion Charging Zone would provide significantly fewer operators with an incentive to clean up their vehicles and as a consequence would not address a substantial number of the pollution hotspots in London that exceed air quality objectives,

such as the north and south circular and around Heathrow airport. TfL modelling shows that the health benefits associated with a LEZ covering just the existing Central London Congestion Charging Zone are less than 5 per cent of those for a LEZ covering all of Greater London. A LEZ covering an area less than Greater London could also lead to increased congestion and diversion issues on the perimeter of the zone, creating localised pollution and safety risks.

TfL would be careful to ensure signage is kept to a necessary minimum in order to avoid sign clutter, and will liaise with the relevant London boroughs, contiguous authorities and the Highways Agency to identify appropriate sign locations.

TfL's Recommendation

TfL considers that a LEZ covering Greater London is the most appropriate and practicable configuration as it maximises health benefits for all Londoners.

TfL recommends that the Strategy Revisions should be modified to note that the actual LEZ boundary would not coincide exactly with the GLA boundary to allow for suitable diversion routes and identification of appropriate locations for signage, and further, that signage would be included within the LEZ as a reminder to drivers.

TfL also recommends that a modification is made to the Strategy Revisions to reflect the discussions TfL is having with the Highways Agency on the possibility of including motorways that fall within the GLA boundary in the LEZ.

Theme 8: Level of Charge

Summary of Representations

Representations falling within this theme concern the level of the daily charge and the penalty charge. Some representations felt that the proposed daily charge was too low and would not sufficiently incentivise vehicle retrofit or replacement. Others felt that the proposed charge was too high and would discourage operators from travelling within Greater London altogether.

TfL's Considerations

The proposed range of between £100 and £200 for the daily charge was determined relative to the number of trips an infrequent user might make and the cost of fitting a vehicle with pollution abatement equipment which is approximately £3,000 - £5,000 (£1,000 - £2,000 for LGVs) depending on the age and type of the vehicle. TfL's objective is to encourage all but the most infrequent vehicles operating in London to comply with the standard and the proposed level of charge would achieve this. TfL's modelling work suggests

that below the £100 level, the anticipated health benefits of the LEZ are severely eroded, as more operators would choose to pay the daily charge than to modify or replace their vehicles.

TfL proposes to set the penalty charge between £500 and £1,000. TfL believes that this is a level which would discourage operators from taking the risk of not paying the £100 - £200 daily charge.

The level of penalty charge for non-compliance and the level of the daily charge would both remain subject to review.

TfL's Recommendation

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Level of Charge'.

Theme 9: Enforcement

Summary of Representations

Representations within this theme concern enforcement of the LEZ in terms of infrastructure and legal measures. A large number of representations expressed concerns about how the LEZ would be enforced for non-UK registered operators driving non-compliant vehicles. There was concern that domestic operators would be disadvantaged if non-compliant overseas operators were able to operate within the LEZ without paying the charge.

A small number of representations expressed concerns about the effectiveness of Automatic Number Plate Recognition (ANPR) cameras to capture vehicles entering the LEZ and the use of ANPR rather than more sophisticated technology.

A similarly small number of representations expressed concerns about the identification of vehicles which even after being retrofitted may not meet Euro emissions standards.

An additional representation was concerned with ensuring that there was a minimal burden on businesses arising from the administration of the proposed LEZ and suggested a three to six month trial of the scheme prior to implementation.

TfL's considerations

TfL would maintain a database of compliant and non-compliant vehicles using data from licensing authorities. Operators for whom vehicle emission characteristics could not be determined from the data available would be requested to register with TfL in advance of driving inside the zone. When these vehicles are recorded driving in the zone their number plate would be

compared against the TfL vehicle compliance database and those that were not compliant with the LEZ emission standard would be required to pay a substantial charge for each day of use.

TfL intend using Automatic Number Plate Recognition (ANPR) cameras should the scheme be introduced in 2008. The ANPR system is the most viable technology currently available for enforcing the LEZ, and has been used successfully for enforcement of Congestion Charging.

TfL does not consider that the administration of the proposed LEZ would unduly burden businesses. The administrative and enforcement systems of the proposed LEZ would be similar to those already successfully being used in the Central London Congestion Charging Zone. Many operators would have to take no action in relation to the proposed LEZ as their vehicles would already be compliant with the proposed standards. When a non-compliant vehicle is fitted with pollution abatement equipment and TfL has received notification of this either via the DVLA or directly from the operator, no further action would be required from the operator when they bring their vehicle to London. Therefore, TfL does not consider that a trial period is required prior to implementation.

TfL currently has no means in law to oblige keepers of non-UK registered vehicles to pay penalties they incur. However, TfL together with the ALG has been actively raising the profile of this issue with the UK Government and European institutions. In the longer term, the solution may involve new legislation at European Union level. In the shorter term, TfL and the ALG are working to develop bilateral agreements on data sharing and enforcement with partners in other EU Member States. TfL does have arrangements in place with an experienced Europe-wide debt recovery agency, to recover penalties incurred by non-UK registered vehicles. This agency has a relatively good level of success and it is envisaged that these procedures would be used for enforcement of the proposed LEZ. TfL surveys estimate that only around two per cent of heavy vehicles traveling within London are registered overseas.

TfL's Recommendation

TfL will continue to work with domestic and European partners to ensure a high degree of enforcement against non-compliant operators.

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Enforcement'.

Theme 10: Discounts and Exemptions

Summary of representations

Representations falling within this theme concerned vehicles which respondents felt should be exempted or discounted from the proposed LEZ and links between the proposed LEZ and Congestion Charging. The main representations put forward suggested that Congestion Charging incentives should be provided to vehicles that exceed the proposed LEZ emission standards. Other suggested incentives for cleaner vehicles included grants and tax allowances.

Other representations proposed that public service vehicles should be exempt from the proposed LEZ. Particular reference was made to vehicles used by the emergency services and specialist vehicles such as gritters, which are used infrequently and whose replacement would involve significant additional cost. A number of other vehicle types were also proposed as being suitable for exemption from the LEZ.

Some representations felt that the information provided by TfL for the consultation did not provide enough detail on which vehicles would be exempt and that this did not allow organisations to make plans for the long term.

TfL's considerations

TfL is currently considering incentives for cleaner vehicles as part of a review of the Congestion Charging alternative fuel discount. Once proposals are finalised, TfL will consult on any changes. The provisions of grants and tax incentives for cleaner vehicles are matters more relevant to central government. In any case, European Union rules limit the size of any environment-related grant to around 30 per cent of the capital cost of the pollution abatement equipment. Furthermore, the Government has recently announced that it is stopping its Air Quality Programme which gave grants to operators to fit pollution abatement equipment to vehicles.

The proposed LEZ would aim to reduce the harmful emissions from older diesel-engined vehicles. The health and air quality benefits would be eroded if there were an extensive range of exemptions. Consequently, it is proposed that there would be a very small number of exemptions from the LEZ and that these would only apply to highly specialist vehicles for which the fitting of pollution abatement equipment is not practical.

Should the Mayor approve the Strategy Revisions, TfL would consult with the public and stakeholders on an Order in late 2006. Detailed information on proposed vehicle exemptions would be provided as part of that consultation process.

TfL's Recommendation

TfL will continue to examine the technical and practical reasons for considering exempting certain categories of vehicle and would include details on exempt vehicles at the time of any consultation on a Scheme Order.

TfL recommends that reference should be included in proposal 4G.137 and 4C.12 that TfL has introduced a 100% discount on the Congestion Charge for the very cleanest alternative fuel vehicles. TfL considers that proposal 4G.183 and 4C.58 should be modified to specify that there would be a small number of exemptions from the LEZ.

Theme 11: Impacts on business and public sector

Summary of Representations

Representations falling within this theme concern the impact the proposed LEZ could have on businesses and public sector organisations. The main issue raised suggested that the LEZ would impose significant costs on businesses which would be forced to replace or upgrade vehicles. It was suggested that TfL should provide grants to help operators meet the LEZ standards. Some respondents considered that the burden would be particularly heavy on certain sectors, including the coach industry and the removal industry, as their vehicles have relatively long life cycles.

Some representations expressed concern that the consultation documents provided by TfL did not properly take into account the high costs associated with fitting and maintaining pollution abatement equipment.

It was suggested that the LEZ would have a disproportionate affect on small businesses, which could not easily absorb the costs associated with renewing or upgrading their fleets. Similar concerns were expressed in relation to the public sector. It was also suggested that the LEZ standards would severely reduce the residual value of non-compliant vehicles, which would also adversely affect businesses, particularly small businesses.

Some representations suggested that operators would either pass costs onto customers, or would avoid work in London altogether. This was a particular concern for those coach operators that transport tourists and school children to London.

Concern was expressed that the introduction of the LEZ could result in the withdrawal of cross-boundary bus services currently provided on a commercial basis or under contract to local authorities contiguous to London. It was claimed that many of the vehicles providing such services would not be compliant with the LEZ. It was proposed that TfL should consider measures to help these operators meet the LEZ standards.

Some representations sought assurances that LEZ implementation would impose no cost burden on the boroughs or contiguous local authorities in terms of infrastructure or implementation costs.

TfL's Considerations

The proposed LEZ would only affect the most individually polluting vehicles: older diesel HGVs, buses, coaches and heavier LGVs. Modelling suggests that some 34 per cent of HGVs and 42 per cent of coaches would not be compliant with the LEZ standard in 2008. The majority of operators would therefore not have to take action to comply with the proposed LEZ standards.

TfL acknowledges that the LEZ would lead to increased costs for some vehicle operators due to the need to upgrade or replace vehicles. There may also be some impact on the second hand values of non-compliant vehicles, although it would be possible to fit pollution abatement equipment to the majority of vehicles. Some reduction in the residual value of non-compliant vehicles is an unavoidable consequence. TfL has taken account of these costs in developing the LEZ business case, including the full costs of fitting and maintaining particulate abatement equipment.

Overall, TfL believes that any small negative impacts of the LEZ on some business sectors would be more than offset by the health and air quality benefits for the entire community. It is considered that the deferral of the proposed standard of Euro IV for PM₁₀ until 2012 would considerably reduce the pressures on many vehicle operators.

Should the Mayor confirm the revisions to the Transport and Air Quality Strategies, TfL would carry out a further assessment to examine the potential impact of the LEZ on businesses and the economy. This assessment would be made available at the time of any future consultation on a Scheme Order.

TfL acknowledges that the costs of compliance with the proposed LEZ standards, would to some extent, be passed on by operators to their customers and that these costs could then feed through to consumers in the form of higher prices. However, an economic impact assessment of the draft Strategy Revisions has indicated that any increase in the price level due to the proposed LEZ is likely to be comparatively small in terms of the UK economy as a whole. This is because any feed through to consumers is likely to be across the whole of the UK and not restricted to consumers in London, since many vehicle operators cover large parts of the UK and would pass any cost increases on as a generalised increase in costs.

It is considered that the implementation of the LEZ would have no significant effect on London boroughs or contiguous authorities in terms of providing LEZ infrastructure or operational costs, though as with businesses and other organisations, there may be costs associated with fleet management as a result of the LEZ. TfL would discuss with relevant local authorities the location of any street infrastructure and signage associated with the LEZ.

TfL's Recommendation

TfL recommends modification of the draft Strategy Revisions to change the implementation date for the Euro IV standard for PM₁₀ to **2012**, to reduce the burden on businesses and the public sector. TfL will continue to assess the potential impact of the LEZ on businesses and the public sector and would make this information available at the time of any possible future consultation on a Scheme Order.

Theme 12: Economic Impacts

Summary of representations

Representations falling within this theme concern the effect the LEZ could have on the wider economy in London. In general, representations on the economic impacts of the proposed LEZ were concerned that the LEZ could have a negative impact on the London economy by putting London businesses at a competitive disadvantage, and by possibly encouraging businesses to move out of London.

Representatives of the tourism industry in particular noted that the proposed LEZ could have a negative impact on tourism as a result of higher coach fares. Some operators of community transport services were also concerned as these are often operated using older vehicles at very low profits margins. It has been suggested that small businesses in particular could be more adversely affected.

TfL's considerations

The 2005 Operator Survey carried out on behalf of TfL suggested that only a very small number of businesses would relocate outside of London as a result of the LEZ. Whilst there may be an increase in costs for some companies, TfL considers that these would be outweighed by the health and air quality improvements for the entire London community that would be brought about by the LEZ.

TfL's analysis suggests that the impact on tourism of the proposed LEZ arising from coach operators passing any cost increases onto passengers, and flow on employment impacts of reduced visitor numbers and tourist spend, are likely to be modest (less than 100 FTEs, equivalent to £9m - £14m of expenditure over the period 2008 – 2016.) These are very small impacts in the context of the entire tourism spend in London of some £12.9 billion³.

Should the Mayor confirm the revisions to his Transport and Air Quality Strategies, TfL would undertake a further public and stakeholder consultation in late 2006 on detailed proposals for a LEZ contained in a Scheme Order.

³ Source: UK Tourism Survey (ONS), International Passenger Survey (ONS) and GB Day Visits Survey (The Countryside Agency).

An economic and business impact assessment of the LEZ would be undertaken to inform this consultation.

TfL's Recommendation

TfL recognises that the proposed LEZ could have an adverse, if modest, impact on some sectors of the London economy, though others may benefit from the LEZ. TfL's view is that the potential adverse economic impacts are outweighed by the associated improvements in the health of Londoners that the proposed LEZ would generate. TfL would continue to collect further information on the likely economic impacts of the proposed LEZ.

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Economic Impacts'.

Theme 13: Air Quality Impacts

Summary of representations

Representations falling within this theme concern the impact the LEZ would have on air quality both in London and more widely. The majority of representations in this area related to a concern that the proposed LEZ did not go far enough to ensure achievement of the PM₁₀ or NO₂ air quality targets. A number of respondents suggested that TfL or the Mayor establish a target date for achievement of the air quality objectives.

Some representations were concerned about the impact of the proposed LEZ in increasing the number of older vehicles operating outside Greater London, and associated potential increases in traffic as vehicles are diverted from the proposed LEZ.

TfL's considerations

TfL's view is that the LEZ as proposed best balances affordability, air quality and health benefits, fairness and clarity. The proposed LEZ should not be viewed in isolation – rather, it complements other initiatives contained in the Mayor's Transport and Air Quality Strategies, each of which focus on reducing emissions from particular road transport sources in the most cost effective way. This suite of initiatives which includes measures such as emissions standards for taxis and buses, as well as non transport related measures such as Local Air Quality Management systems and Best Practice Guidance on Reducing Emissions from Construction and Demolition, will generate significant improvements in the health of people who live and work in Greater London through improving air quality. A LEZ targeted at the most individually polluting vehicles has been identified as the most effective way of reducing the most harmful emissions from road transport.

Road transport contributes around half of total emissions of PM₁₀ so achievement of air quality targets also needs to consider other sources. The Mayor has very limited powers in relation to emissions of controlled pollutants from non-road transport sources so it would be inappropriate and unreasonable for the Mayor or TfL to set a date for when London would expect to meet the air quality objectives.

TfL estimates that some 30 - 40 per cent of the national lorry fleet, and around half of the coach fleet, operates in London during any given year. Where most of these vehicles are expected to be compliant in 2008, others would be replaced or upgraded to meet the requirements of the London LEZ. The reduced emissions from these vehicles would therefore contribute to reduced emissions outside London. A survey of operator responses to a LEZ which was undertaken in spring 2005 indicated that whilst some vehicle operators would reorganise their fleet so that non-compliant vehicles are used outside London, the air quality benefits outside London due to vehicle replacement and modification are expected to outweigh the negative impacts of this reorganisation.

There would be a comprehensive impacts monitoring strategy associated with the proposed LEZ, and related air quality initiatives which would assist TfL in measuring the impact of the LEZ on air quality in London.

TfL's Recommendation

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Air Quality impacts'.

Theme 14: Health Impacts

Summary of Representations

Representations falling within this theme concern the impact the LEZ would have on health. A number of representations stressed the health benefits that would result from the LEZ. Some representations state that air pollution is a factor in social exclusion, and that the LEZ could reduce social inequalities.

TfL's Considerations

TfL notes the support for the proposed LEZ. The most significant health benefits to be achieved through the proposed London LEZ are associated with potential improvements in air quality throughout and beyond London. Such improvements would contribute in reducing respiratory and cardiovascular disease. The LEZ would also reduce the number of premature deaths, the number of life years lost, respiratory hospital admissions and the need for medication for adults and children suffering from these diseases. It is estimated that every year some 1,000 premature deaths and a similar number of hospital admissions occur due to poor air quality in London.

It is recognised that the LEZ is likely to deliver proportionately more health benefits to more deprived areas or lower income groups: those living close to areas of high pollution, those in a poor state of health, the young and older people.

TfL's Recommendation

TfL recommends that the Strategy Revisions should be modified to take into account a scheme which includes heavier LGVs from 2010 but does not include initially a NO_x emission standard.

TfL considers that no further modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Health impacts'.

Theme 15: Impacts on traffic

Summary of Representations

Representations falling within this theme concern the impact the LEZ could have on traffic profiles both within Greater London and outside. The main issue raised was that the LEZ could alter traffic flows by encouraging non-compliant vehicles to use unsuitable routes to avoid detection by the LEZ cameras.

Some representations were concerned that the LEZ would increase costs for the coach industry which would be passed on to customers, thus making coach travel less attractive and potentially forcing people to use their cars instead. This would risk increasing traffic congestion and vehicle emissions in London.

TfL's Considerations

TfL is not anticipating any significant impact on traffic flows in and around London as a result of the LEZ. The M25 is expected to be the main route that drivers use to avoid the Low Emission Zone, though any increases in traffic here would be small. Cameras would be located throughout the Low Emission Zone to detect non-compliant vehicles and would be supplemented by mobile ANPR units which would be deployed in different locations every day. Additional cameras would be required for a scheme that applied to heavier LGVs as well as the larger vehicles as these would be more likely (and able) to divert to minor roads.

With regard to the coach industry the sector most likely to be affected as a result of the proposed LEZ is school transport services. However, TfL and the Mayor will work with local authorities to ensure that appropriate school services continue to be provided.

The Mayor is already delivering on initiatives to discourage unnecessary car use through the Central London Congestion Charging Scheme, by improving the accessibility and reliability of London's public transport, and by promoting walking and cycling.

TfL's Recommendation

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Impacts on traffic'.

Theme 16: Consultation process and information

Summary of representations

Representations falling within this theme concerned the consultation process and the need for further information. A number of representations expressed concern that insufficient information was provided in the consultation documents relating to a range of issues including the proposed LEZ boundaries, the inclusion of LGVs, the inclusion of a NO_x emission standard, the cost-effectiveness of the LEZ, alternatives to the LEZ and enforcement for non-UK registered vehicles. A number of representations also considered there was a need to provide more information on the detail of the proposed LEZ to operators. Furthermore, some representations suggested there was a need for more research and modelling work to be undertaken regarding the LEZ.

TfL's considerations

TfL considers that the information provided in the consultation documents was adequate to define the principle of the LEZ proposal for the purposes of revising the Air Quality and Transport Strategies. However, should the Mayor decide to publish the revisions to these Strategies to allow for a London LEZ, TfL would undertake additional impact assessments covering the economic, health and environmental impacts of the LEZ, as well as further modelling of the potential LEZ impacts and this would inform further public consultation on the detail of the scheme.

In addition TfL would undertake a public information campaign, targeted at operators to advise them about the proposed LEZ emission standards and the vehicles which would be targeted by the proposed LEZ.

TfL's Recommendation

TfL considers that the consultation undertaken in respect of the draft Revisions to the Mayor's Transport and Air Quality Strategies to allow for a London LEZ was more than adequate. Should the Mayor decide to publish the Strategy Revisions, TfL would undertake a further public and stakeholder consultation on the details of the proposed scheme.

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Consultation process and information'.

Theme 17: Issues relating to the 2012 Olympics

Summary of representations

Representations falling within this theme concerned how the LEZ would affect vehicles used in relation to the Olympics. The representations expressed concern that the LEZ would restrict the ability of construction, commercial vehicles and coaches to enter London to fulfil the demands of the Olympics in 2012.

TfL's considerations

It is recommended that the LEZ standard in 2012 be Euro IV for PM10. Most vehicles manufactured before October 2006 and still on the road in 2012 could be fitted with pollution abatement equipment to achieve compliance with that standard. Off-road construction machinery would be exempt from the LEZ as it is not currently possible to fit pollution abatement equipment to most off-road machinery. Mobile machinery which falls within the scope of the EU Non-Road Mobile Machinery Directive 1997 is subject to different emissions limits set by that Directive.

Vehicles used for high-profile construction projects such as the 2012 Olympics will be subject to the GLA Construction Code of Conduct, and will be required to meet Euro IV standards in any case.

TfL's Recommendation

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'Issues relating to the 2012 Olympics'.

Theme 18: Other issues

Summary of representations

This theme encompasses representations which did not fit with the categories of the previous themes. A number of representations within this theme raised concerns about the ability of London boroughs to impose separate road charging schemes under Clause 9(4) of Schedule 23 of the GLA Act 1999 should the proposed LEZ be implemented.

The other representations raised concerns about what would happen if one or more boroughs opposed the proposed LEZ, about the energy implications of

the scrapping of vehicles earlier than would have occurred otherwise without the LEZ and about EU Directive implications of the LEZ.

TfL's considerations

While the introduction of a LEZ by means of a Scheme Order under the GLA Act 1999 would restrict other authorities from implementing road user charging schemes, TfL would work with any authority that expressed an interest in doing so and would consider making an Order implementing such a scheme, as long as it was consistent with the Mayor's Transport Strategy.

TfL considers that it would not be possible to attribute any change in the number of vehicles being scrapped to the proposed LEZ. TfL has been working closely with the European Commission to ensure that the LEZ falls within EU regulations and TfL does not consider that the proposed LEZ would be contrary to any EU Directive, or legal principle.

TfL's Recommendation

TfL considers that no modifications to the draft Transport and Air Quality Strategy Revisions are necessary as a result of the representations received under the theme 'other issues'.

5 Conclusions and Recommendations

5.1 Introduction

5.1.1 The Mayor is required to make a decision on whether to publish the Revisions to his Transport and Air Quality Strategies allowing for a LEZ in London. A number of options are open to him:

- to publish the Revisions, with or without modifications;
- to request further information from TfL or others in order to inform a decision on the proposal;
- to request TfL to conduct further consultation on the Revisions, or specific aspects of it, including the content of the proposed modifications; or
- to reject the Revisions and instruct TfL to suspend or cease work on the proposal.

5.1.2 TfL considers that this report to the Mayor provides the information and analysis needed in order for the Mayor to make an informed decision as to whether to publish the Revisions or not. The Mayor should take into account the range of views expressed during the course of consultation on the Revisions, as well as information on the expected impact of the proposed LEZ on improving air quality and health. He has been provided with copies of all representations and objections received by TfL as part of the public and stakeholder consultation on the Revisions.

5.1.3 The Mayor should be particularly attentive to those consultation responses which raise objections to certain aspects of the Revisions and where consultees have expressed concern that the proposed LEZ would have adverse impacts for individuals, businesses or other organisations.

5.1.4 In other sections of this report, TfL has set out its views on the representations received on individual themes. Overall, TfL considers that the proposed LEZ would deliver important benefits to London in terms of improving air quality and health, as well as helping London move closer towards achieving air quality objectives for 2010.

5.1.5 However, it is acknowledged that the proposed LEZ could adversely affect some businesses and other organisations, as highlighted by a number of representations that suggest possible impacts from the proposal, as well as the findings of the attitudinal survey.

5.1.6 Following analysis of these representations, and consultation with stakeholders, TfL proposes some modifications to the text of the draft Transport and Air Quality Strategy Revisions. These are set out in detail at Annex H, Table of Modifications to the Strategy Revisions.

5.2 The need to tackle road transport emissions

- 5.2.1 According to the attitudinal survey carried out by Ipsos MORI on behalf of TfL during the consultation period, just under half of London residents think that air quality in London is poor and half think that air pollution affects them or their family. The responses to the consultation strongly supported the need for the Mayor to take action to improve air pollution. The Mayor has a statutory requirement to take action to achieve domestic air quality objectives. On current trends and without further action, it is predicted that London will exceed its 2010 annual mean objectives for NO₂ as well as its annual and daily mean objectives for PM₁₀. Each year that the UK exceeds an EU limit value there is the risk of infraction proceedings and the UK potentially paying daily fines based on a percentage of GDP.
- 5.2.2 Road transport related emissions are a significant contributor to air pollution in London. It is estimated that road transport was responsible for 47 per cent of emissions of PM₁₀ in London in 2005. PM₁₀ affects the respiratory and cardiovascular system, and is known to contribute to premature deaths. It can also carry carcinogenic compounds into the lungs that can cause cancer. It may worsen existing lung disease and increase the sensitivity to allergens of people with hay fever and asthma. Road transport was also predicted to be responsible for 47 per cent of the emissions of oxides of nitrogen (NO_x) in London in 2005. NO_x includes nitric oxide (NO) and nitrogen dioxide (NO₂). NO₂ has been associated with impaired lung function, as well as increases in allergies and a general deleterious effect on quality of life. However, PM₁₀ reductions generate more significant pollutant health improvements than reductions in NO₂.
- 5.2.3 It is estimated that by 2012 a proposed LEZ, which included heavier LGVs and minibuses from 2010, would deliver reductions of around 14 per cent in the area of London exceeding the 2010 annual PM₁₀ objective and around 14 per cent reductions in the area exceeding the 2010 daily PM₁₀ objective. It would also deliver reductions in total emissions of NO_x.
- 5.2.4 TfL is aware that increased use of certain types of pollution abatement equipment may increase the percentage of NO_x emitted as NO₂, and will continue to monitor this issue. However, in terms of the key health-based objectives of the LEZ, reductions in PM₁₀ would outweigh the impact of an increase in the ratio of NO_x emitted as NO₂. It should be noted that total NO₂ and NO_x emissions are expected to continue to decline.
- 5.2.5 Whilst it is not feasible to introduce a NO_x standard within the scope of the current LEZ proposals, TfL is continuing to consider how a NO_x option might be implemented with the pollution abatement equipment industry and DfT and will look to implement a NO_x standard when feasible. Whilst not proposing to implement a NO_x standard for the LEZ

at this time, TfL will continue to tackle these emissions from London Buses and taxis.

5.2.6 Whilst the introduction of the proposed LEZ would not enable London to meet the 2010 objectives in all locations, it should reduce the areas of London that exceed the PM₁₀ objectives and reduce exposure to these pollutants of people who live in, work in and visit the capital. It is recognised that the LEZ is likely to deliver proportionately more health benefits to more deprived areas or lower income groups: those living close to areas of high pollution, those in a poor state of health, the young and older people.

5.2.7 The impact of the LEZ on carbon dioxide (CO₂) emissions is expected to be negligible.

5.3 LEZ Boundary

5.3.1 TfL proposes that the boundary of the LEZ be the GLA administrative boundary as far as is practically possible. This would maximise the health and air quality benefits of the LEZ and is the most feasible option to implement in terms of minimising disruption to traffic flows. In practice, to allow for suitable diversion routes and identification of appropriate locations for signage, the actual boundary will not coincide exactly with the GLA boundary.

5.4 Vehicles included in the LEZ

5.4.1 The LEZ is designed to discourage the use in Greater London of the most individually polluting vehicles. These are older diesel-engined HGVs, buses and coaches. From 2008, the LEZ would apply to HGVs with a gross vehicle weight that is over 3.5 tonnes and buses and coaches that are over 5 tonnes.

5.4.2 TfL has considered the implications of including LGVs within the scope of the LEZ. In particular, TfL has considered the representations received during the consultation regarding the potential economic impacts of the inclusion of LGVs. The Economic and Tourism Impact Assessment carried out on behalf of TfL concluded that the negative impact on employment levels of including LGVs within the scope of the LEZ would be small in relation to the economy as a whole. The inclusion of diesel-engined LGVs in the proposed LEZ scheme from 2010 is likely to increase the impact in employment terms to around 0.2% of FTE jobs in the road transport sector in the UK. The effect on employment in Greater London is more significant due to a relatively larger affected LGV population in Greater London, which increases the impact to around 0.4% of FTE jobs in the sector.

5.4.3 By 2010 it is forecast that LGVs would be responsible for 24 per cent of road transport emissions of PM₁₀ within London. TfL estimates from the modelling undertaken on the LEZ proposals that including heavier

LGVs would increase the monetised health benefits of the core scheme by approximately £25m. On the basis of this analysis, TfL recommends including heavier LGVs in the LEZ from 2010.

- 5.4.4 As with all the proposals, TfL would monitor the impacts of this recommended modification. Should unforeseen adverse impacts arise, TfL would propose modifications as appropriate.
- 5.4.5 Minibuses use very similar chassis and engines to larger LGVs, and have similar emissions levels. TfL therefore recommends that minibuses should be included within the LEZ from 2010.
- 5.4.6 A significant number of responses to the consultation were in favour of including cars within the scope of the LEZ. Furthermore, cars contributed an estimated 39 per cent of PM₁₀ emissions in 2005, the highest of any single vehicle type.
- 5.4.7 TfL considers that a number of other initiatives within the Mayor's Transport and Air Quality Strategies, such as Congestion Charging and improved public transport provision will help to address the environmental impacts of car transport in London. Therefore, TfL recommends that at this stage, cars are not included in the current LEZ proposal, which should focus initially on the most individually polluting vehicles. Nevertheless, TfL will continue to monitor the impacts of wider initiatives on vehicle emissions in London and will keep the policy for including cars within the LEZ under review. A minor modification to the Strategy revisions has been proposed to reflect this.

5.5 Emissions standards

- 5.5.1 TfL had originally proposed that from 2008 the LEZ standard for HGVs, buses and coaches would be Euro III for PM₁₀ and that in 2010 the standard would become Euro IV for PM₁₀. From the consultation, it has become clear that it would be unduly expensive and impractical for operators to meet a standard of Euro IV for PM₁₀ in 2010.
- 5.5.2 The Euro IV standard only becomes mandatory for newly manufactured vehicles from October 2006, so many vehicle operators are currently purchasing Euro III vehicles. This would mean that under the 2010 proposals consulted on, some vehicles less than four years old would not be compliant with the LEZ without modification. In addition, many operators will have upgraded their fleets in 2008 to meet the Euro III PM₁₀ standard. A requirement for a further upgrade two years later would impose a large financial burden on industry.
- 5.5.3 As a result, TfL recommends that the introduction of the standard of Euro IV for PM₁₀ commence in 2012 rather than in 2010. Whilst this would result in a reduction in health benefits from the scheme, there would also be a reduction in compliance costs to operators, which makes the LEZ standard more acceptable.

5.5.4 As part of the consultation process, TfL sought views on the extension of the LEZ standards to Euro IV for both PM₁₀ and NO_x in 2010. NO_x abatement technology is still evolving and testing is a complex process, requiring sophisticated on-board diagnostic equipment to be built into vehicles. Implementing a NO_x emission standard is dependent on a certification mechanism, standards for the fitting and testing of retro-fit NO_x abatement equipment and a register of retrofitted vehicles being in place, which is not yet the case. Whilst there has been some success in the trialling of NO_x abatement equipment on London Buses and Black Cabs, there remain too many unresolved issues to include a NO_x standard in the LEZ from 2010. TfL is continuing to work with the pollution abatement equipment industry and the DfT to determine the feasibility of implementing a NO_x standard in the future. This is stated in proposal 4G.29 and 12 of the Transport and Air Quality Strategy Revisions.

5.6 Vehicle Definitions

5.6.1 TfL recommends that European vehicle definitions be used to describe vehicles to be included in the LEZ. This would ensure that vehicle definitions have a legal basis that applies equally to UK and European-based vehicles. For this reason, TfL recommends slightly amending the category of vehicles that would be included within the scope of the LEZ from early 2008. TfL intends a phased introduction with only the largest HGVs included from early 2008, with smaller HGVs, buses and coaches coming within the scope of the LEZ from mid 2008. This is to provide operators of smaller HGVs, buses and coaches with additional time to make modifications to their vehicles, which are more complex than for larger HGVs.

5.6.2 The proposed weight limit for larger HGVs as consulted upon was set at over 7.5 tonnes. However, the European vehicle definition for larger HGVs uses a 12 tonne weight limit and it is recommended that this be the weight limit for the phased introduction of HGVs included in the LEZ from early 2008. The LEZ would apply to all HGVs over 3.5 tonnes, buses and coaches from mid 2008.

5.6.3 TfL recommends that the heavier, more polluting LGVs should be included within the LEZ from 2010. TfL is now considering the relative merits of different types of standards for LGVs, eg an age-based standard or 'Euro' approach. TfL's decision on the type of standard used would be based on further consideration of the cost benefits and practicality of the standard. The details of the standard for heavier LGVs would be set out in a Scheme Order, should the Mayor publish the Strategy Revisions.

5.7 Use of Euro standards

- 5.7.1 A number of consultation respondents argued for a rolling age-based LEZ standard to be used for heavy vehicles rather than the Euro standards as proposed by TfL. The arguments were that an age-based system would be easier to administer and to enforce and more straightforward for operators to understand and comply with.
- 5.7.2 TfL's view is that a LEZ based on Euro standards that allow the fitting of particulate abatement equipment best balances affordability, air quality and health benefits, fairness and clarity. An age-based scheme can also be seen as unfair as vehicles of the same Euro class and emissions but of a different age could be treated differently.
- 5.7.3 TfL has examined the health and air quality benefits and compliance costs of six, eight and ten year rolling age-based systems for HGVs, buses and coaches. This analysis has shown that a ten year standard generates insufficient health and air quality benefits. The benefits of an age based scheme (either six or eight years rolling) have been modelled and are less than those delivered by the proposed Euro standards based scheme. On average, compliance costs for operators associated with an age based standard are also slightly higher than for the proposed Euro standards based scheme.

5.8 Pollution abatement equipment

- 5.8.1 Under the proposals, with a system based on Euro standards, operators would have a range of options available to them for making their fleets compliant with the LEZ. Operators may choose to replace or re-engine their vehicles, fit pollution abatement equipment or reorganise their fleets so that only compliant vehicles operate in London. During the consultation process, TfL received a number of representations which questioned the effectiveness of pollution abatement equipment, particularly in the low-speed urban duty cycles as commonly experienced in London.
- 5.8.2 TfL has examined these issues in some detail. Pollution abatement equipment is likely to fail if it is not suitable for the particular vehicle or its typical operating conditions and is not routinely serviced. TfL has identified a number of instances where inappropriate pollution abatement equipment has been fitted and routine maintenance has not been carried out, causing the equipment to subsequently fail.
- 5.8.3 It is the responsibility of both pollution abatement equipment manufacturers and vehicle operators to ensure a vehicle's specification, age and typical operating conditions are considered when fitting pollution abatement equipment and establishing maintenance procedures. In response to these issues, the abatement industry has introduced measures to improve customer service and to ensure operators are aware of maintenance issues. TfL is strongly supportive of these measures and will work with pollution abatement equipment manufacturers to ensure they become standard practice.

5.8.4 Following discussions with the pollution abatement equipment industry and with operators, TfL believes that abatement devices can be fitted to many different types of vehicles. They can be operated successfully, even in urban conditions, if the correct device is fitted and it is properly maintained and serviced.

5.9 Enforcement

5.9.1 A number of responses to the consultation expressed concern that TfL would not be able to take effective enforcement action against vehicles registered outside the UK, and that consequently domestic operators would be at a disadvantage.

5.9.2 It is estimated that only around two per cent of heavy vehicles travelling in London are registered overseas. At present, TfL has arrangements in place with an experienced Europe-wide debt recovery agency to recover penalty charges incurred by non-UK registered vehicles. That agency currently recovers 35 per cent of all cases passed to it. It is envisaged that at a minimum these procedures would be used for enforcement of the proposed LEZ.

5.9.3 However, TfL currently has no means in law to oblige keepers of non-UK registered vehicles to pay penalties they incur. TfL together with the ALG have been actively raising the profile of this issue with the Government and European institutions, as it affects not only TfL but also boroughs enforcing parking and other traffic contraventions. In the longer term, the solution may involve new legislation at European Union level. In the shorter term, TfL and the ALG are working to develop bilateral agreements on data sharing and enforcement with partners in other EU Member States.

5.10 Recommendations

5.10.1 In light of the information contained in this Report, TfL recommends that the Mayor should:

- Consider the whole of this report, together with other materials already available to him relating to the Draft Transport and Air Quality Strategy Revisions: London Low Emission Zone;
- Consider whether further consultation or the holding of some form of public inquiry is necessary prior to a decision on the Transport and Air Quality Strategy Revisions. TfL does not consider further consultation is needed; and
- Confirm and publish the Transport and Air Quality Strategy Revisions, subject to the modifications recommended by TfL in this report (see Annexes G and H).

