

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

## **6 Summary and Analysis of Representations Received from Stakeholders**

### **6.1 Introduction**

6.1.1 This chapter sets out a summary of TfL's consideration of the representations received from stakeholders.

6.1.2 TfL has considered the representations received as a result of the public and stakeholder consultation exercise which began on 13 November 2006 and closed on 2 February 2007. This analysis covers representations received from stakeholders in response to the consultation documents and the proposed amendment to the Scheme Order clarifying the inclusion of motor caravans, ambulances and large hearses. Representations are considered fully in Annexes A, C, D and E as follows:

- An analysis of the public, business and other organisation representations received until 23 February 2007, 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** sets out a summary of the main issues raised by each stakeholder that responded to the consultation
- **Annex E** provides details of those public, business and other organisation's representations received after 23 February 2007 but up until 20 April 2007. Representations received after 20 April but before the Mayor's decision were made available to the Mayor, but without consideration by TfL

6.1.3 In **Annex D**, stakeholder representations have been categorised into 21 'themes' according to the issue being raised. This chapter summarises the representations and TfL's response to these 21 themes.

6.1.4 The chapter sub-headings that follow give the titles of each of the 21 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.

### **6.2 Summary of support and opposition to the proposals**

#### *Support / Opposition*

There was generally a positive response to the LEZ proposals with the majority of public responses (70%) and stakeholder responses (69%) supporting the proposed LEZ. The response from businesses and other organisations was more mixed. Slightly more businesses indicated support for the proposals (48%) than opposed (45%), while more of the responses from other organisations opposed (55%) than supported (20%) the proposals.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The other organisations were those representative organisations which responded to the consultation but which TfL did not invite to participate as stakeholders. Chapter 4 sets out more detail on the consultation process and Appendix 2 details the stakeholders who responded to the consultation.

Table 6.1 sets out in summary the response to the LEZ proposals from the public and stakeholder consultation and from the attitudinal survey. The attitudinal survey commenced on 3 January and ran until 31 January 2007. It was conducted separately from the public and stakeholder consultation and provides a representative sample. The attitudinal survey indicates a higher level of support, and a lower level of opposition to the scheme than 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, and an analysis of the consultation responses is set out in the report by Accent at Annex A.

**Table 6.1: Support for and opposition to the LEZ proposals**

	<b>Support (%)</b>	<b>Oppose (%)</b>	<b>Neither (%)</b>	<b>No comment (%)</b>
<b><i>Consultation</i></b>				
Stakeholders	70	6	20	4
Other Organisations	20	55	20	5
Public	70	27	3	<1
Business	47	45	7	1
<b><i>Attitudinal survey</i></b>				
London residents	75	11	15	n/a
London businesses	69	18	15	n/a
Transport Operators	45	40	15	n/a

Base (Consultation): 20 other organisations, 53 business written submissions, 5,502 business questionnaires, 34 general public written submissions, 1,869 general public questionnaires.

Base (Attitudinal Survey): 1,000 responses from weighted attitudinal survey of Londoners, 400 responses from attitudinal survey of London business and 600 responses from attitudinal survey of Transport Operators across the UK currently travelling in Greater London. All figures have been rounded to the nearest percentage point, this may mean that in some cases the sum is not exactly 100%.

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.

## Themes Table of Contents

Theme A: The principle of the Low Emission Zone.....	49
A1: Support / Oppose a LEZ .....	49
A2: Revenues.....	51
A3: Increased bureaucracy .....	52
A4: Other principle issues .....	52
Theme B: Suggested alternatives to a Low Emission Zone.....	53
B1: Incentives based on Congestion Charge or other Road User Charging schemes .....	54
B2: Ban instead of a charging system / London Councils should administer LEZ (TRO options).....	55
B3: Need for central government action.....	57
B4: Incentives to exceed the Euro Standards used in the LEZ .....	58
B5: Grants for retrofitting vehicles .....	58
B6: Alternative fuel vehicles .....	59
B7: Other incentives for cleaner vehicles .....	60
B8: Links to other strategies.....	61
Theme C: Business case .....	61
C1: Proposed LEZ has a poor business case .....	62
C2: Assessment of alternatives.....	64
C3: Data presented in the Scheme Order consultation material .....	66
Theme D: Timetable .....	68
D1: Proposed timetable is correct .....	68
D2: Proposed timetable is premature.....	69
D3: Proposed timetable commences too late.....	70
D4: Confusion over phased introduction of the scheme.....	71
D5: Future of the LEZ.....	71
D6: Other timetable issues.....	72
Theme E: Vehicles to be included.....	74
E1: Agree with vehicles included in LEZ .....	75
E2: Vehicles to which the LEZ should apply.....	75
E3: Motorcaravans, hearses and ambulances .....	77
E4: Other vehicles to be included issues .....	79
Theme F: Proposed LEZ Emission Standards.....	81
F1: Euro standards versus an age-based scheme.....	81
F2: Effectiveness of pollution abatement equipment.....	83
F3: Certification of pollution abatement equipment .....	85
F4: Extension to standard for oxides of nitrogen (NO <sub>x</sub> ) .....	86
F5: Tightening of proposed LEZ emission standards .....	87
F6: Other proposed LEZ emission standards issues.....	88
Theme G: Boundary.....	91
G1: Proposed LEZ area is appropriate.....	91
G2: LEZ should cover a reduced area .....	92
G3: LEZ should cover a larger area .....	92
G4: Inclusion of motorways and trunk roads .....	93
G5: Definition of charging area.....	95
G6: Inclusion of BAA roads .....	96
G7: Detailed boundary issues .....	96
Theme H: Operations.....	96

H1: Hours of operation .....	97
H2: Payment of the LEZ charge .....	98
H3: General operational processes.....	99
H4: Registration .....	100
Theme I: Enforcement .....	101
I1: Enforcement of foreign-registered vehicles .....	101
I2: Concerns regarding database accuracy.....	103
I3: Concerns regarding drivers evading fixed cameras .....	103
I4: Persistent evaders .....	105
I5: Transfer of liability .....	106
I6: Other enforcement issues .....	106
Theme J: Level of charge .....	109
J1: All charges are correct.....	110
J2: Charges are too low .....	110
J3: Charges are too high .....	111
J4: Other charge level issues .....	112
Theme K: Discounts and Exemptions.....	112
K1: General exemptions and clarification .....	113
K2: Not for profit & community organisations .....	115
K3: Vehicles used for public service.....	116
K4: Historic vehicles .....	118
K5: Specialist vehicles .....	119
K6: Non-road going vehicles .....	120
K7: Diplomatic vehicles .....	121
K8: Breakdown and Recovery organisations.....	121
K9: VOSA Testing .....	121
Theme L: Business Impacts.....	122
L1: Impacts on businesses.....	122
L2: Support for small businesses .....	124
L3: Costs of compliance with the LEZ standards .....	126
L4: Impact on residual value of vehicles .....	127
L5: Other business impacts.....	127
Theme M: Impacts on the public and community sectors .....	128
M1: Cost impacts on public and community fleets .....	129
M2: Impact on the provision of public and community services.....	130
M3: Impact on London boroughs.....	132
M4: Impact on cross-border bus services.....	133
M5: Grants or assistance for the public and community sector .....	135
Theme N: Environmental Impacts.....	135
N1: Failure to make progress towards air quality targets .....	136
N2: Air quality projections are different from those in Transport and Air Quality Strategy Revisions consultation .....	137
N3: Impact on NO <sub>x</sub> and NO <sub>2</sub> .....	139
N4: Impacts on greenhouse gases.....	140
N5: Impact on other pollutants .....	141
N6: Need for a PM <sub>2.5</sub> standard .....	141
N7: Impact of the LEZ on vehicle construction and scrappage .....	142
N8: Increase in abandoned vehicles as a result of the LEZ .....	142
N9: Air Quality impacts outside London .....	143
N10: Monitoring issues.....	144

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

N11: Other environmental impacts issues.....	145
Theme O: Streetscape.....	146
O1: General signage issues.....	146
O2: Borough-specific signage issues.....	148
O3: Camera and other Monitoring Site Issues.....	148
Theme P: Health impacts.....	150
P1: Impact on general health.....	150
P2: Economic and social impacts.....	151
P3: Monitoring of health impacts.....	152
P4: Consultation information.....	153
P5: Other health impacts.....	154
Theme Q: Traffic Impacts.....	154
Q1: Increased traffic due to move to smaller vehicles.....	154
Q2: Traffic diverting around London.....	156
Q3: Use of unsuitable roads ('rat-running') to avoid enforcement cameras.....	157
Q4: Modal Shift.....	157
Q5: Monitoring and mitigation of traffic impacts.....	158
Theme R: Impacts on the London economy.....	159
R1: LEZ would have a negative impact on London's economy.....	159
R2: Impact on London events.....	160
R3: Impacts on other projects.....	161
R4: Links with freight policies.....	162
R5: Monitoring of economic impacts.....	163
R6: Impact on tourism.....	163
R7: Other London economy impacts.....	164
Theme S: Consultation.....	165
S1: Previously expressed views not taken into account.....	165
S2: Insufficient information provided.....	166
S3: Inadequate consultation.....	169
S4: Need for further operator information and ongoing support.....	170
S5: Further research and modelling work required.....	171
S6: Other consultation issues.....	172
Theme T: Issues relating to the 2012 Olympics.....	173
Theme U: Other issues.....	174

## **Theme A: The principle of the Low Emission Zone**

Representations falling within this theme concerned the principle of the proposed LEZ. Sixty-three stakeholders made representations under this theme. These were made up of twenty London boroughs, nine business representative groups, nine UK local authorities, six health representative organisations, five transport and environment representative organisations, four London political representatives, four non-departmental government bodies, two professional organisations, two economic partnerships, one ethnic / voluntary representative organisation, and one GLA functional body.

The sub-themes are:

- Support / Oppose a LEZ
- Revenues
- Increased bureaucracy
- Other principle issues.

### **A1: Support / Oppose a LEZ**

Sixty stakeholders made comments specifically supporting the principle of a LEZ to help reduce the levels of harmful pollutants in the atmosphere and move closer to meeting national and EU air quality objectives to protect human health, through tackling emissions of PM<sub>10</sub> and NO<sub>x</sub> from road transport. Westminster City Council agreed that a London-wide Low Emission Zone is the best method to reduce harmful emissions from road transport, as shown in their proposal for a LEZ in 1999. The London Boroughs of Brent, Hounslow and Lambeth also agreed with this. The Greater London Assembly Conservative Group considered that the Scheme was very close to being what they would consider to be fair. The London Borough of Croydon endorsed the LEZ in its environmental objectives and the LEZ is also endorsed in the air quality action plans and Local Implementation Plans of the London Boroughs of Hackney, Southwark, and the Royal Borough of Kingston upon Thames.

The Freight Transport Association and the Society of Motor Manufacturers and Traders supported the principle of the LEZ as a means to improve air quality by accelerating the uptake of cleaner vehicles. The Environment Agency and Healthy Southwark Partnership welcomed the health benefits expected from the scheme, particularly for deprived communities and those most vulnerable to poor air quality. Tandridge District Council acknowledged that both road users and the general public, as well as people living inside and outside Greater London, would benefit from improved air quality. The Thames Gateway London Partnership also welcomed the health benefits of the LEZ in areas of the Thames Gateway.

Friends of Capital Transport welcomed the LEZ, stating that it would encourage modal shift from private to public transport and lead to more frequent services.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Very few stakeholders stated opposition to the principle of the LEZ, though many others had concerns over the proposed details of the London LEZ. The Guild of British Coach Operators pointed out that while it did not oppose the principle of the LEZ, and welcomed the changes made following the consultation on the Mayor's Transport and Air Quality Strategy Revisions, it nevertheless considered the LEZ proposals unfair, unworkable and counter-productive. Conversely, Friends of the Earth expressed disappointment on the revisions made to the proposal, noting that the emission standards and introduction dates has been relaxed since the Transport and Air Quality Strategy Revisions consultation, reducing the benefits. Transport 2000 stated that it would have preferred the proposals to have gone further.

The London Borough of Barnet expressed general support for the principle of the LEZ but objected to the Scheme Order on the grounds of its effectiveness, timing and adverse impacts of the proposal (particularly on the business sector). The Road Haulage Association (RHA) and Royal Mail strongly opposed the LEZ in its proposed form, with the RHA believing that there would be a large cost to London ratepayers and to business for little environmental benefit.

Looking at all consultation responses, 69% of the public and 48% of businesses supported the principle of the LEZ, whilst 27% of the public and 45% of businesses opposed it.

### *TfL Response*

TfL notes the high level of support for the principle of a LEZ in London from the majority of stakeholders. In the absence of national initiatives, the proposed LEZ represents the most effective option to reduce harmful transport related emissions in London between 2008 and 2015.

TfL estimates that by 2012 the introduction of a London LEZ would make greater reductions in the areas of London that exceed the PM<sub>10</sub> objectives compared with the reductions that would come through the natural vehicle replacement cycle. If the proposed LEZ were implemented in 2008, it is expected that the area of Greater London exceeding the daily PM<sub>10</sub> limit (applicable from 2004 in UK law), would be reduced by around seven per cent in 2008. This PM<sub>10</sub> limit is provisionally tightened under the National Air Quality Strategy issued in 2003. If the LEZ were implemented as proposed, in 2012, the area of London exceeding this proposed tighter limit would be reduced by almost 15 per cent. It would also deliver reductions in total emissions of NO<sub>x</sub>.

Based on the most recent modelling the estimated health benefits of the scheme are £170m - £240m for the Defra/IGCB method and £250m - £670m for the EU CAFE method.

The reduced PM<sub>10</sub> 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.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

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 LEZ would primarily target the most individually polluting vehicles on the road, which are heavy goods vehicles (HGVs), buses and coaches. Following modification to the scheme after consultation on the Strategy Revisions, heavier light goods vehicles (LGVs) and minibuses would also be included in the proposed LEZ from 2010.

TfL considers that the LEZ proposals are not overly complex and that it is clear which categories of vehicle are included within the Scheme from which implementation date. Should the Mayor confirm the Scheme Order, TfL would undertake an extensive public and operator information campaign using a wide range of media to inform the public and operators of the LEZ requirements prior to the scheme commencing.

TfL believes that overall 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 standard to a minimum of Euro IV for PM until 2012 would considerably reduce the pressures on many vehicle operators and this has been broadly welcomed by the industry. Overall, TfL feels that the current proposals strike an appropriate balance between operator needs and air quality improvements. If implemented, TfL would keep the Scheme under review and would modify it as necessary.

Issues relating to the impact of the proposed LEZ on businesses are considered in more detail under *Theme L: Business impacts*.

## **A2: Revenues**

Two stakeholders, the London Borough of Hillingdon and the Association of British Drivers queried how revenue from the scheme would be used. The Association of British Drivers considered that the scheme should not be revenue raising and that surpluses should be minimised, with any unexpected surpluses applied to air quality improvement measures rather than general transport programmes.

### *TfL Response*

The aim of the proposed LEZ is to reduce emissions from road transport sources. It is not designed to be a revenue generating scheme. The revenues of the scheme are not expected to offset the costs of implementing and operating the scheme. It is expected that air quality improvements would be maximised by high levels of operator compliance and that relatively few daily charge payments would be made. In the unlikely event that TfL were to make any net revenues from the Scheme, these would be spent according to Annex 3 of the Scheme Order, which is subject to the approval of the Secretary of State for Transport. This Annex sets out initiatives which any unforeseen revenues might be spent on, including air quality technology and monitoring

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

improvements, traffic management initiatives, and improvements to the street environment and public realm.

### **A3: Increased bureaucracy**

The Construction Plant-hire Association and Westminster City Council were concerned that operator administration associated with the LEZ should be minimised. The Construction Plant-hire Association stated that the LEZ should be kept as simple as possible to avoid increased costs and administrative workload for managers in the industry. Westminster City Council felt that the Scheme should avoid duplicating any of the work which is already required for the London Lorry Control Scheme.

#### *TfL Response*

Most vehicles would be compliant with the LEZ should it be implemented, either as a result of operators upgrading their fleets, or making adjustments to their vehicles. Once their compliance status is confirmed on TfL's register, operators would not have to do anything else to be able to drive the vehicle in London without charge. Operators of non-compliant vehicles who wish to use these vehicles in the proposed LEZ would have to pay a daily charge. The administrative systems of the proposed LEZ would be similar to those already being used in the Central London Congestion Charging Scheme. Therefore TfL does not consider that the administration of the proposed LEZ would unduly burden businesses. Further information about the operational aspects of the Scheme, including registration processes, can be found under *Theme H: Operations*.

The London Lorry Control Scheme, which is administered by London Councils, has different objectives to the proposed LEZ.

### **A4: Other principle issues**

The Environment Agency stated that the LEZ is important and should influence and generate proposals for similar schemes in other cities and regions.

The London Borough of Barking and Dagenham commented that a real risk of fines from exceeding EU target values for specified pollutants would likely constitute a strong argument in favour of the LEZ.

Transport 2000 and Friends of the Earth considered that there is a contradiction between the LEZ proposals and the proposed Thames Gateway Bridge development, which they believe will reduce air quality benefits. Friends of the Earth stated that less polluting ways of helping to improve access in the local area and to develop the Thames Gateway in a sustainable manner have not been properly considered.

The London Borough of Hillingdon commented that the LEZ may become redundant as newer vehicles come into circulation and improve the standard of air quality.

### *TfL Response*

TfL notes the support from stakeholders on certain aspects of the proposed LEZ.

TfL considers the Thames Gateway Bridge important in terms of the regeneration and economic development of a large section of east London. TfL has worked with the neighbouring boroughs to develop an agreement to minimise harmful emissions from the construction of the bridge. The low emissions strategies developed under this agreement regulate the emissions of construction equipment, as well as heavy diesel vehicles going to and from the site. In the latter case, these vehicles would need to meet the same emissions standards as the LEZ, though with a tightening of the standard to Euro IV in 2010 rather than 2012.

The LEZ would bring forward reductions in PM<sub>10</sub> emissions by three to four years compared to the natural vehicle replacement cycle. It is the bringing forward of reductions in PM<sub>10</sub> emissions that generates the substantial levels of health benefits associated with the LEZ proposal. In the absence of the LEZ, Londoners would remain subject to unacceptably high concentrations of PM<sub>10</sub>. New vehicles already have to conform to tighter emissions standards, but the aim of the proposed LEZ is to accelerate the removal or upgrade of the older, more polluting vehicles from the overall fleet and thereby maximise the health benefits.

### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

## **Theme B: Suggested alternatives to a Low Emission Zone**

Representations falling within this theme suggested alternatives to the Low Emission Zone. Twenty three stakeholders made representations under this theme, including seven business representative groups, eight London boroughs, two transport and environment representative organisations and one each from a non-departmental public body, an ethnic / voluntary representative organisation, a London political group, an economic partnership, a health representative organisation and a professional organisation. The sub-themes are:

- Incentives based on Congestion Charge or other Road User Charging schemes
- Ban instead of a charging scheme / London Councils should administer LEZ (Traffic Regulation Order option)
- Need for central government action
- Incentives to exceed the Euro Standards used in the LEZ
- Grants for retrofitting vehicles
- Alternative fuel vehicles

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

- Other incentives for cleaner vehicles
- Links to other strategies.

### **B1: Incentives based on Congestion Charge or other Road User Charging schemes**

Four stakeholders, including the Society of Motor Manufacturers and Traders (SMMT) and London First, submitted representations concerning the use of incentives based on the Congestion Charge or other Road User Charging schemes. The SMMT, Royal Mail and the Park Royal Partnership proposed that vehicles which are compliant with the LEZ should be given a discount or exemption from the Congestion Charge as this could incentivise the manufacture and uptake of cleaner vehicles. The SMMT stated that this would also recognise the efforts they claimed that the industry had made in recent years to invest in new, cleaner technologies. Furthermore, encouraging the use of cleaner vehicles would, it was claimed, have benefits throughout and beyond both the Congestion Charging and Low Emission Zone schemes. The SMMT suggested that the Congestion Charge is already shifting its focus from reducing congestion to reducing emissions.

London First made reference to the long-term future role of road user charging in London, calling for the early publication of the Mayor's/TfL's plans in this area. It quoted *Transport 2025* as saying that road user charging will account for 33% of the Mayor's CO<sub>2</sub> reduction target.

#### *TfL Response*

The principal objective of the Central London Congestion Charging Scheme is to reduce congestion. This can result in reductions in CO<sub>2</sub> emissions and a reduction in harmful vehicle emissions. The scheme already includes incentives for the uptake of cleaner vehicles, for example a 100% discount for vehicles using certain alternative fuels. TfL is currently considering ways in which the current alternative fuels discount for the Congestion Charging Scheme could be adjusted to further encourage the use of cleaner vehicles without detracting from the principal objective of the scheme. These proposals would concentrate on CO<sub>2</sub> emissions from cars, though the proposals could also include measures to improve air quality. TfL intends to consult on these proposals later in 2007. It is not currently proposed that the category of vehicles compliant with the LEZ should be eligible for any discount or exemption from the congestion charge.

The *Transport 2025* document sets out a number of measures, including road user charging, which could contribute to reducing CO<sub>2</sub> emissions in London. In early 2007, the Mayor published his *Climate Change Action Plan*. This includes a new target to reduce London's CO<sub>2</sub> emissions to 60 per cent below 1990 levels by 2025.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

## **B2: Ban instead of a charging system / London Councils should administer LEZ (TRO options)**

Eleven stakeholders made comments on this theme: the London Boroughs of Barnet, Ealing, Hillingdon, Hounslow, the City of Westminster and the Royal Borough of Kensington and Chelsea, Royal Mail, London Councils, the Association of British Drivers, the Environment Agency, and the GLA Conservative Group.

Three stakeholders, (Royal Mail, the Association of British Drivers and the Environment Agency), called for an outright ban on non-compliant vehicles. Royal Mail commented that the daily charge paid by non-compliant vehicles would not, in itself, improve air quality which is the main objective of the LEZ. The Association of British Drivers (ABD) said that bans had been implemented in other countries and were a much simpler and cheaper way of achieving the air quality improvements required. The Environment Agency, while preferring a ban, said that it recognised that TfL had considered other options and needed to take socio-economic factors into account. The Royal Borough of Kensington and Chelsea recommended that TfL consider mandating London authorities and other operators to replace non-compliant vehicles once they had reached a certain age.

A number of stakeholders submitted representations concerning the use of a Scheme Order to implement the LEZ. London Councils, the London Borough of Ealing and the Royal Borough of Kensington and Chelsea, opposed the use of a Scheme Order for the implementation of the LEZ, and stated that a Traffic Regulation Order (TRO) would be a better option. These stakeholders argued that this would not be complicated if it were co-ordinated via London Councils' Transport and Environment Committee rather than individual authorities. In a similar vein, the London Borough of Barnet suggested that the LEZ could be incorporated within the London Lorry Control Scheme (LLCS), and operated jointly by TfL and the boroughs. London Councils added that using a Scheme Order prevents individual London Boroughs from introducing their own road user charging scheme in the future, while the Greater London Assembly Conservative Group and the London Boroughs of Hillingdon and Hounslow sought clarification on whether this was the case. The City of Westminster felt that TfL had not fully considered alternatives to implementation via a Scheme Order.

### *TfL Response*

TfL considers that the proposed charging approach is more flexible than an outright ban. It allows operators to make an economic choice as to whether they would pay the daily charge or not drive in London. The levels of charge are designed to encourage operators driving frequently within the zone to ensure their vehicles are compliant, whilst at the same time allowing operators of non-compliant vehicles to drive within the zone on an occasional basis, albeit at a cost. This means that the difference in air quality impacts between a ban and a charge are likely to be minimal. However, a charge provides flexibility for infrequent visitors to London to choose to pay and drive non-compliant vehicles within the city.

To implement the proposal using an outright ban would lead to higher operator compliance costs than implementation via a Scheme Order. The European Commission has also responded favourably to a charge-based approach on the grounds of flexibility for operators. This issue was discussed in greater detail in the consultation documents published for the consultation on the Revisions to the Mayor's Transport Strategy in 2006.

As for mandating the replacement of specialist vehicles at a certain age, under the proposals, operators would have a range of options available to them for making their vehicles compliant with the LEZ. Operators may choose to fit particulate abatement equipment, renew or re-engine their vehicles, reorganise their fleets so that only compliant vehicles operate within the LEZ, or pay the daily charge.

In regard to the TRO option, TfL has investigated a number of legal routes for implementing a LEZ in Greater London. TfL considered these matters as part of the public and stakeholder consultation on the Revisions to the Mayor's Transport and Air Quality Strategies in 2006. Following this consultation, the Mayor decided to proceed with the Scheme Order approach on the following basis:

- implementation via a Traffic Regulation Order (TRO) would ban non-compliant vehicles from driving within the zone rather than charging them. As stated above, TfL judges that it is sensible to allow non-compliant vehicles access on an exceptional basis albeit paying a charge to do so;
- implementation by means of a single TRO would require up to 34 traffic authorities in London to sign up to a 'joint arrangement' agreement under Section 101 of the Local Government Act 1972 to delegate their TRO-making function to a joint committee or a single traffic authority; and
- as can be seen in the difficulties involved in the coordination of the LLCS, to which the London Boroughs of Barnet, Redbridge and Hillingdon are not signed up, the use of a TRO to implement the LEZ would be overly complex and time-consuming. TfL considers that the risks associated with this implementation approach in terms of significant delay to the programme are too high. At this stage a TRO approach would also delay the implementation of a LEZ by at least a

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

year and probably longer as TfL would have to re-consult on the Transport and Air Quality Strategy amendments.

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, which would be a requirement in any event.

### **B3: Need for central government action**

Two stakeholders commented on the need for central government action on the issue of air quality improvement. The Royal Borough of Kensington and Chelsea noted that TfL and the Mayor have sought to justify the benefits of the LEZ by arguing that this is the most that the Mayor can do, and that greater improvements in air quality would only occur via central government intervention. The Royal Borough of Kensington and Chelsea considered that taking the LEZ forward allows central government to remain unengaged with the air quality debate, when they should be pushed into taking action. Similarly, Healthy Southwark Partnership suggested that should TfL lobby for national initiatives to halt rising air pollution and increase physical activity through active travel.

#### *TfL Response*

The 2001 to 2003 Feasibility Study considered that a LEZ covering the whole of Greater London was the most effective measure available to the Mayor that could move London significantly closer towards meeting its air quality objectives. Since then, TfL has reviewed a number of alternative ways of addressing road transport related emissions, including both national and local schemes. These considerations were published as part of the public and stakeholder consultation on the Revisions to the Mayor's Transport and Air Quality Strategies in 2006. These were reiterated in the Scheme Description and Supplementary Information published at the start of the consultation on the Scheme Order. It remains the case that national initiatives – such as the introduction of national road user charging with higher charges for more polluting vehicles – could have an important part to play in improving air quality, but the Mayor has no powers outside Greater London and planning for a national road user charging scheme is in its infancy. Based on TfL's analysis, and in the absence of any suitable national initiatives, the LEZ remains the most effective option for achieving reductions of the most harmful road transport generated emissions in London between 2008 and 2015.

The Government recently undertook a consultation on the Review of the Air Quality Strategy for England, Wales and Scotland, including an option of incentives for cleaner vehicles. In his response, the Mayor of London expressed disappointment about the ambition of the proposals and urged the government to commit to specific actions at national, regional and local level.

#### **B4: Incentives to exceed the Euro Standards used in the LEZ**

Five stakeholders, the London Borough of Islington, London First, the Freight Transport Association (FTA), the Road Haulage Association (RHA), and the Society of Motor Manufacturers and Traders (SMMT), said that operators should be encouraged to exceed the standards set down in the LEZ, or achieve them ahead of the proposed timetable. SMMT regretted that there was no reference to incentives for operators to exceed the Euro Standards set for the Scheme. The FTA commented that the EC has said it would support measures by the German government to encourage early uptake of cleaner technologies.

London First suggested a non-financial incentive such as allowing extended loading/unloading times or dedicated loading bays for vehicles achieving these higher standards. Royal Mail called for vehicles meeting the emissions standard to be exempt from the London Lorry Control Scheme. The Road Haulage Association (RHA) notes that while it had hoped that there would be a tax incentive for businesses to invest in cleaner vehicles, this has not happened. The London Borough of Islington commented that it would be unfair for there to be grants available to retro-fit vehicles to Euro IV standard but not for the purchase of the newer Euro V vehicles which it planned to buy.

#### *TfL Response*

The provision of grants for buying cleaner vehicles is a decision that would need to be taken at national government level. As such, TfL would not be able to provide such incentives, and as outlined in the sub-theme below, TfL's remit only covers Greater London so there would be practical difficulties in it administering any national scheme. In regard to non-financial incentives, these are not considered to be suitable for inclusion in the Scheme, since the principal objective of the LEZ is to improve air quality, rather than attempt to influence other behaviours. It would not be appropriate to include other provisions, such as a change to loading times, within the Scheme. The overall framework for freight is covered in the draft London Freight Plan.

The London Lorry Control Scheme is administered and co-ordinated by the London Boroughs through the London Councils' Environment Committee. As such, neither TfL nor the Mayor have any powers to offer waivers or exemptions from this scheme.

TfL has no plans to offer grants for retrofitting vehicles, as discussed below.

#### **B5: Grants for retrofitting vehicles**

Three stakeholders made comments on this theme: The British Association of Removers (BAR); London Councils; and the London Borough of Hillingdon. All three considered that there should be incentives for operators to fit pollution abatement equipment. All three respondents felt that there would also be environmental benefits from encouraging retrofit solutions, rather than vehicle replacement.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

European Union state aid rules limit any environment-related grant to 30% of the capital cost of the equipment. Funding grants for operators to this level is unlikely to be cost-effective, and unlikely to provide an adequate incentive to operators to clean up their vehicles.

The Government announced in 2005 that it was stopping its Air Quality Retrofit programme which gave grants to operators to fit pollution abatement equipment to vehicles. The Reduced Pollution Certificate (RPC) programme which offers a VED discount incentives for cleaner vehicles has been successful in encouraging some bus and truck operators to clean up their vehicles but the incentives have not been great enough to have an impact on the lighter end of the HGV market. The Mayor continues to lobby national government for ambitious action to improve air quality.

TfL considers that there would be practical problems associated with it running a scheme offering grants for retrofitting vehicles with pollution abatement equipment. Given that operators in London come from all over the UK and beyond, it would be very difficult for TfL to target operators fairly and effectively, given that its remit covers transport in Greater London only. For this reason, TfL feels that grant schemes would be better run at national level.

In regard to the environmental consequences of operators taking action in order to comply with the LEZ, it should first be noted that many vehicles would already be compliant with the emissions standards at the time the LEZ is proposed for implementation. Without any change in fleet management practices, some 67 per cent of HGVs, 76 per cent of LGVs, and 49 per cent of buses and coaches that currently travel in the zone would be compliant with the proposed minimum emission standards by the time they would be introduced. For these operators, then, neither retrofitting nor vehicle replacement would be necessary in order to comply.

The Environmental Report produced for the consultation concluded that the proposed LEZ would not be expected to have significant adverse effects resulting from increased scrapping of vehicles. It noted that legislation such as the Directive on End of Life Vehicles Regulations (2003), which transposes the EC Directive on End of Life Vehicles ('the ELV Directive', 2000) into national law, and the Hazardous Waste Regulations (2005) set procedures for waste management. The ELV Directive includes targets for re-use, recycling and recovery of materials from end of life vehicles.

### **B6: Alternative fuel vehicles**

Two comments were received on this theme. The Consortium of Bengali Associations said that there should be an incentive for electric-powered vehicles and those using CNG (Compressed Natural Gas). The Royal Institution of Chartered Surveyors (RICS) said that an increase in the use of alternative fuels would help to reduce carbon emissions.

### *TfL Response*

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The LEZ targets the most polluting diesel-engine vehicles and so vehicles running on alternative fuels would not be within its scope. Diesel vehicles that have been modified to run entirely on alternative fuels, and have been certified as doing so, would qualify as being compliant with the Low Emission Zone Standards.

It is worth noting that other Mayoral and TfL strategies seek to encourage the use of alternative fuels. The Mayor's *Climate Change Action Plan* lists various ways in which this work has already begun, including the introduction of hybrid and fuel-cell buses, and states that the Mayor will lobby the EU and the UK government for the accreditation of biofuels. As described in sub-theme B1 above, TfL is currently considering ways in which the current Alternative Fuels Discount for the Congestion Charging Scheme could be adjusted to increase the use of cleaner vehicles without detracting from the principal objective of the scheme.

### **B7: Other incentives for cleaner vehicles**

Three stakeholders provided responses on this theme. The GLA Conservative Group, Park Royal Partnership and the British Association of Removers considered that the LEZ was based on punitive measures and that they would prefer positive measures to incentivise the uptake of cleaner vehicles.

#### *TfL Response*

TfL believes that by providing a phased timetable well in advance of the scheme, operators would be able to plan their vehicle modification or renewal programme as best suits them. Some operators are likely to choose to invest in vehicles which exceed the standards set out in the proposed scheme.

Studies undertaken by TfL suggest that some 67 per cent of HGVs and 49 per cent of buses and coaches would be compliant with the LEZ emission standard in 2008 and 76 per cent of vans would be compliant with the LEZ emission standard in 2010. Therefore, many operators would not have to take any action in order to comply with the LEZ. Given this, TfL does not consider the proposed scheme to be punitive. The proposed LEZ would offer a range of ways in which operators could make their vehicles compliant with the standards, so that they could choose method best suited for their particular circumstances.

As described in section B6 above, there would be practical problems associated with TfL running a scheme to provide grants to operators, and many vehicles would already be compliant with the scheme at the time it would be introduced. Other TfL and Mayoral initiatives seek to provide incentives for the use of cleaner vehicles. Given these circumstances, TfL does not consider it to be appropriate to provide other incentives within this Scheme.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### **B8: Links to other strategies**

There was a wide range of comments in this theme and responses were made by five stakeholders. London First commented that the Mayor's various air quality initiatives need to be joined up and suggested that reducing congestion would have the effect of minimising emissions. Transport 2000 said it supported measures to reduce traffic, including those to reduce emissions from cars. The Royal Institution of Chartered Surveyors said that there needed to be a modal shift towards public transport, cycling and walking. The London Borough of Ealing, while acknowledging that the LEZ is the most practicable option, said there may be other ways of reducing transport-related emissions.

BAA commented that it uses a Clean Vehicles Programme, which includes vehicle age limits, which reduces the emissions from airside vehicles.

#### *TfL Response*

The proposed LEZ is just one of a number of measures which are concerned with mitigating the environmental impact of transport in London and delivering reductions in vehicle emissions. London is the only major city to move away from private car usage to public transport – a five per cent modal shift since 2000, and CO<sub>2</sub> emissions in the congestion charging zone have been cut by 16 per cent as well as a 15 per cent reduction in emissions of PM<sub>10</sub> and 13 per cent reduction in emissions of NO<sub>x</sub>.

Strategy Five of the Transport 2025 document is concerned with reducing congestion and emissions, which would be achieved by the expansion of public transport capacity and the promotion of walking and cycling; measures to reduce the CO<sub>2</sub> emissions from road-based transport such as 'eco-driving' initiatives and the introduction of hybrid buses; travel demand management; and possible road-user charging. Such measures would also have benefits for local air quality and noise. The *Climate Change Action Plan* provides further detail about how this can be achieved, focusing on the reduction of CO<sub>2</sub> emissions from cars and freight. Much of this work would be done in partnership with other London agencies.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

### **Theme C: Business case**

Representations falling within this theme concerned the business case of the proposed LEZ. Twenty stakeholders made representations under this theme. These were made up of: ten London boroughs, five business representative organisations, two UK local authorities, one economic partnership, one London political representative and one transport representative organisation.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The sub-themes are:

- Proposed LEZ has a poor business case
- Assessment of alternatives
- Data presented in the Scheme Order consultation material.

### **C1: Proposed LEZ has a poor business case**

Thirteen stakeholders expressed concern that the LEZ had a poor business case. These included: four London boroughs (Hillingdon, Harrow, Hammersmith and Fulham and Bexley), the GLA Conservative Group, London First, the Road Haulage Association (RHA), the Society of Motor Manufacturers and Traders (SMMT) and CBI London.

The Greater London Assembly Conservative Group questioned whether the scheme provides rigorous enough value for money, given that it would only run until 2015/16, and felt that for such a cost, a longer-term commitment should be given. It also sought undertakings that a clearly favourable benefit cost ratio be established before the scheme is fully implemented. CBI London was also concerned about the cost of the Scheme and the low benefit: cost ratio. London First wanted to see an updated benefit cost ratio produced, taking into account the exclusion of a NO<sub>x</sub> standard from the scheme. The London Borough of Hillingdon was concerned at TfL's projected outlay of £120m for the scheme. Another UK local authority also queried where the funding for the LEZ was coming from.

The London Borough of Harrow questioned whether the scheme offered the best value, since it was bringing forward benefits by between two and four years compared to the natural vehicle replacement cycle.

The Road Haulage Association (RHA) considered that there was no new or independently verifiable information to prove that the scheme would bring any quantifiable benefit to Greater London, and felt that the scheme was expensive and burdensome for little benefit. The RHA urged the Mayor to abandon the LEZ in its proposed form.

The London Borough of Hammersmith and Fulham and the Thames Gateway London Partnership noted that the costs of the proposed scheme would outweigh any income. The Thames Gateway London Partnership sought assurances that all costs had been included in the analysis, including costs to local businesses and residents.

The Society of Motor Manufacturers and Traders felt that the amalgam of dates, vehicle types, standards and emissions levels was complex and would compromise the cost effectiveness of the scheme.

#### *TfL Response*

The Mayor has a statutory obligation to take steps towards achieving national and EU air quality objectives. Failure to take steps could lead to the European Commission taking infraction proceedings against the UK Government and fines being imposed. A 2003 Feasibility Study concluded that a LEZ that

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

targeted the most individually polluting vehicles was the most cost-effective means available to the Mayor of reducing the most harmful emissions from road transport in London. A 2005 Strategic Review confirmed this assessment.

TfL estimates that compliance costs for operators over the lifetime of the scheme are in the region of £200m to £300m. In terms of health benefits, since the consultation documents were prepared, Defra has introduced a change to the IGCB methodology, which results in a reduction in the formation rate of secondary particulates per unit of NO<sub>x</sub> emissions. This slightly reduces the overall benefits of the LEZ. However, this has been offset by a number of other minor changes which increase the benefits of the LEZ. The most important of these is a re-analysis of the outside London data, using DfT data, that has more accurately assessed the split of outside London kilometres by area type, which leads to a small increase in outside London PM benefits. This results in revised estimates of health benefits of £170m - £250m for the Defra/IGCB method and £250m - £670m for the EU CAFE method. This gives a benefit to cost ratio of 0.6 to 2.0 using the EU CAFE methodology and 0.4 to 0.7 using the Defra/IGCB approach. It should be noted, though, that the benefit to cost ratio is influenced by other costs, such as TfL's set-up and running costs for the Scheme.

It is worth noting that the LEZ is part of a package of measures intended to improve air quality in London, including strategies to reduce emissions from London taxis and the London bus fleet as well as emissions from London's construction and demolition sites.

The capital costs of setting up the LEZ are expected to be around £50m at Net Present Value (NPV). This involves policy development and consultation costs, as well as implementation costs. The total operating costs from implementation until 2015/16 are expected to be around £80m (NPV). Whilst revenue generated through the charge and penalty charge payments is expected to be between £30m and £50m (NPV) over the same period, it should be stressed that the LEZ is not intended to be a revenue generating scheme. Indeed, air quality improvements would be maximised by high levels of operator compliance and consequential low levels of revenue from the daily charge and penalty charge. Funding for the proposed LEZ would come from a combination of streams, as is standard for TfL projects.

The LEZ would bring forward reductions in PM<sub>10</sub> emissions by three to four years compared to the natural vehicle replacement cycle. It is the bringing forward of reductions in PM<sub>10</sub> emissions that primarily generates the health benefits associated with the LEZ proposal. The latest, modern vehicles do have to conform to tighter emissions standards under EU regulations, but the aim of the proposed LEZ is to accelerate the removal or upgrade of the older, more polluting vehicles.

TfL commissioned four independent consultancies to carry out impact assessments for the LEZ. These covered health, the environment, equalities and inclusion and business and the economy. The final reports, as well as

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

non technical summaries, were made available as part of the public and stakeholder consultation. The health impact assessment reviewed the anticipated health benefits of the Scheme and noted that the LEZ would be an important part of London's overall air quality strategy. The environmental appraisal concluded that the LEZ would be likely to have "a significantly beneficial effect given the number of people affected by the air quality benefits". The economic and business impact assessment concluded that the net cost to the economy of London and the UK as a result of the LEZ would be low, and the Equalities Impact Assessment concluded that some equalities target groups would be expected to experience above average health and air quality improvements as a result of the LEZ.

TfL does not consider that the proposals for the LEZ are unnecessarily complex. Should the Mayor confirm the scheme, TfL would undertake an extensive public and operator information campaign using a wide range of media to inform the public and operators of the LEZ requirements prior to the scheme commencing.

TfL does not consider it appropriate at this stage to be making commitments about the future of the LEZ beyond 2015. Any such decision would have to be taken closer to that date in the light of the Scheme's performance, London's air quality at that time and the national and EU air quality objectives in place at that time.

## **C2: Assessment of alternatives**

The Association of British Drivers and the London Borough of Barnet felt that alternatives to the LEZ may deliver benefits more cost-effectively. The London Borough of Barnet considered that in particular, congestion reducing measures should be considered. The Central London Partnership felt that TfL should carry out different cost-benefit analyses for different zone boundaries.

### *TfL Response*

A Feasibility Study into the LEZ carried out in 2003 considered that a LEZ was the most effective policy available to the Mayor that could move London significantly closer towards meeting its air quality objectives. A 2005 Strategic Review confirmed this assessment.

TfL has reviewed alternative ways at both the national and local levels for addressing road transport related emissions. Alternative methods to a LEZ for achieving road transport related emission reductions that have been considered are summarised below. These include:

- **Relying on the natural vehicle replacement cycle and tighter Euro standards to produce the same air quality improvements as the proposed LEZ.** Modelling carried out for TfL estimates that the introduction of a London LEZ would bring forward reductions in PM<sub>10</sub> emissions by up to 3 – 4 years compared with the 'natural' vehicle replacement cycle.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

- **Higher levels of Vehicle Excise Duty (VED) for more polluting vehicles.** Government has indicated it has no current plans to support the introduction of differential VED rates depending on PM<sub>10</sub> and NO<sub>x</sub> emission levels.
- **The introduction of national road user charging with higher charges for more polluting vehicles.** Planning for a national road user charging scheme is still at a very early stage. There is no firm target date for its introduction and much debate on its form and development is still to be had.
- **Grants for retro-fitting emissions reducing equipment to vehicles.** Given that operators in London come from all over the UK and beyond, it would be very difficult for the Mayor or TfL to target operators in London fairly and effectively. For this reason, TfL considers that grant schemes would be better run at the national level.
- **Scrapping of older vehicles.** The Mayor and TfL do not oppose incentives for scrapping older, more polluting vehicles. However, as with grants, this would be an issue best dealt with at the national level.
- **Roadside emission testing of vehicles.** Roadside emissions testing, combined with advertising, is an effective way to encourage better maintenance of vehicles, especially lighter vehicles, which can result in reduced emissions. However, as an approach for dealing with the emissions of HGVs, buses and coaches, roadside emissions testing would achieve very small reductions in emissions compared to those from the proposed LEZ.

TfL considered these alternatives as part of the Strategy Revisions consultation between January and April 2006. Following consideration of the representations made to that consultation, the Mayor concluded that in the absence of suitable national initiatives, the proposed LEZ remained the most effective option for achieving reductions of the most harmful road transport generated emissions in London between 2008 and 2015.

Modelling projections set out in the Transport and Air Quality Strategy Revisions consultation documents indicated that a LEZ covering just the existing Central London Congestion Charging Zone, or other smaller areas, would provide significantly fewer operators with an incentive to clean up their vehicles. As a consequence, this would not address a substantial number of the pollution hotspots in London that exceed air quality objectives. The health benefits associated with a LEZ covering the existing Central London Congestion Charging Zone are estimated to be less than five 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 from large vehicles diverting around the perimeter of the zone, creating localised pollution and safety risks.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

TfL acknowledges that reduced congestion can contribute to improving air quality, and will continue to address this through Congestion Charging and other traffic management initiatives.

### **C3: Data presented in the Scheme Order consultation material**

The London Borough of Ealing and the London Borough of Brent expressed concern that the estimated running costs of the LEZ were higher in the material accompanying the Scheme Order consultation when compared with figures provided to accompany the Strategy Revisions consultation. Similarly, the London Borough of Hammersmith and Fulham pointed out that the estimated compliance costs for operators were also higher in the material accompanying the Scheme Order consultation.

The London Borough of Brent, the London Borough of Southwark and the London Borough of Ealing expressed concern that the wide range of estimated costs and benefits meant that an overall assessment of the scheme was difficult.

The Royal Borough of Kensington and Chelsea observed that the figures presented in the Scheme Description and Supplementary Information on costs did not match the cost figures in the Economic and Business Impact Assessment. In particular, the operator costs stated in the impact assessment are higher than in the Scheme Description document, where operators are assumed to take an economically rational approach. Were the impact assessment figures to be used, the benefit: cost ratio of the LEZ could be lower than stated.

The Road Haulage Association felt that several additional and pertinent issues had arisen since the 2003 Feasibility Study into the LEZ, so that most of the findings of that study are largely unrepresentative of the impact the LEZ would have on operators in London.

#### *TfL Response*

In the material accompanying the consultation on the Scheme Order revisions, the costs to TfL of the Scheme as proposed were between £125m and £130m over the life of the Scheme. The costs to operators were estimated at between £195m and £270m. In the latest consultation documentation, the figures were £119m - £123m and £200m - £300m respectively. Current estimates of these figures are £130m - £132m and £200m - £300m respectively. The estimated costs to operators have remained broadly consistently throughout the consultation process. The recent estimates of costs to TfL have increased due to a higher than anticipated spend on camera communications and image processing, as well as additional public information later in the lifetime of the Scheme to support the inclusion of heavier LGVs and minibuses from 2010 in the proposed LEZ and the deferral of the standard of Euro IV to 2012.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The costs to operator estimates assume that operators take the minimum, least cost approach to achieving compliance with the LEZ standard. However, it is possible that operators may choose to comply with the LEZ by taking action which is not rational in a purely economic sense. If this were the case, TfL estimates that the compliance costs to operators could be between £340m and £490m in the period up to 2015/16. TfL considered it appropriate to present both these ranges in the consultation material.

The Economic and Business Impact Assessment, carried out by Steer Davies Gleave and published in November 2006 to accompany the Scheme Order consultation, estimated that the total compliance costs to operators in the period up to 2015/16 would be between £300m and £470m. Whilst this assessment was based on an independent study of available information, it is within the higher range of compliance costs estimated by TfL.

Since TfL's assessment of the compliance costs for operators as a result of the LEZ depends on a number of variables, it cannot be estimated with complete accuracy at this stage, which is why a range of values has always been presented. TfL has estimated costs to vehicle operators of complying using a model which takes into account factors including the volumes of vehicles that could be affected, the likely costs of upgrading, replacing or moving vehicles and the impact on second hand values of vehicles. This model is based partly on results from behavioural surveys of operators, the most recent of which was carried out late in 2006, which provided information on how operators would behave in response to the proposed LEZ. TfL therefore considers that its estimates are based on the most accurate information that is currently available.

TfL's modelling of the likely health benefits of the LEZ uses both the UK Defra-led Interdepartmental Group on Costs and Benefits or IGCB approach and the EU Clean Air for Europe (CAFE) methodology for calculating the benefits of reduced air pollution. The EU method recognises a wider range of health impacts than the UK method, which takes a more conservative approach. On the basis of the most recent modelling carried out for TfL the estimated health benefits of the scheme are £170m - £240m using the Defra/IGCB method and £250m - £670m using the EU CAFE method over the period until 2015/16.

TfL always seeks to present the costs and benefits of the proposed LEZ in terms of ranges. This reflects levels of uncertainty around how operators would behave in terms of upgrading their fleets and managing the costs associated with this. For the health benefits, the wide ranges reflect both the uncertainty over operator behaviour and the two different methodologies that can be used to estimate health impacts.

*TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

## **Theme D: Timetable**

Representations falling within this theme concerned the timetable for the introduction of the proposed LEZ. Thirty-one stakeholders made representations under this theme. These were made up of eleven business representative groups, ten London boroughs, two UK local authorities, two London political representatives, one ethnic/voluntary representative organisation, one GLA functional body, one economic partnership, one transport and environment representative organisation, one non-departmental government organisation and one professional organisation.

The sub-themes are:

- Proposed timetable is correct
- Proposed timetable is premature
- Proposed timetable commences too late
- Confusion over phased introduction of the Scheme
- Future of LEZ
- Other timetable issues.

### **D1: Proposed timetable is correct**

Thirteen stakeholders made comments in support of the proposed timetable for the LEZ. These included: six London Boroughs (Brent, City of Westminster, Hackney, Havering, Lewisham and Newham), the Association of International Courier and Express Services (AICES), the British Vehicle Renting and Leasing Association (BVRLA), the Environmental Industries Commission, the Federation of Small Businesses, Central London Freight Quality Partnership, CBI London, and the Environment Agency.

The London Borough of Brent and Westminster City Council agreed that the LEZ should include Heavy Goods Vehicles (HGVs) over 12 tonnes from early 2008, with inclusion of diesel-engined HGVs over 3.5 tonnes, buses and coaches later in 2008, and heavier diesel-engined LGVs and minibuses from October 2010. The Environment Agency agreed with the proposed timetable as it gives fleet operators time to comply. The Environmental Industries Commission agreed that on the basis of impact and practicality, the LEZ should start with heavy-duty diesel vehicles.

A number of stakeholders welcomed the deferral of the introduction of the Euro IV standard from 2010 to 2012. The Environmental Industries Commission noted that this would address the concerns of many operators by allowing compliance through their natural vehicle replacement cycles, of normally 5 to 6 years. This change was also supported by the BVRLA, AICES, CBI London, the Central London Freight Quality Partnership and the London Boroughs of Hackney, Newham and Brent. The London Borough of Lewisham commented that all of its fleet would be compliant with the Euro III standard in 2008, and the few vehicles that would not be compliant with Euro IV in 2012 were already scheduled for replacement.

*TfL Response:*

TfL notes the support for the revised timetable from a number of stakeholders.

## **D2: Proposed timetable is premature**

Nine stakeholders considered the proposed timetable for the LEZ to be premature. The Federation of Small Businesses judged that the time period between possible confirmation of the LEZ and implementation in early 2008 was insufficient as many small operators may lack knowledge or understanding of the Scheme, and urged TfL to delay implementation by 6 months to enable businesses to prepare. The Covent Garden Market Authority and the London Borough of Hackney also expressed concern that there would be insufficient time for operators to prepare for the introduction of the LEZ. The St John Ambulance London (Prince of Wales) District stated that it would be impossible to fully replace their fleet within the timescales given. The London Borough of Islington expressed concern that the period between final decision and implementation would not leave enough time for vehicle replacement, and that the timetable does not take account of the increased demand for new vehicles that manufacturers may not be able to meet. It called for a staggered replacement programme to prevent cost-spikes.

The Guild of British Coach Operators felt that the proposed introduction date of July 2008 for coaches is likely to cause difficulties as it falls in the middle of the industry's busiest period, and suggested September 2008 as an alternative. For similar reasons, Hertfordshire County Council proposed that the LEZ should be introduced for buses and coaches at the end of the academic year. The Road Haulage Association (RHA) expressed concern that autumn 2010 was too early for the introduction of the Euro III standard for heavier vans and minibuses.

### *TfL Response:*

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 and the intention of the LEZ is to bring forward improvements in air quality standards that would otherwise happen through the natural vehicle replacement cycle.

The Scheme Order consultation provided operators with details of the proposals. Should the Mayor confirm the Order, there would be an intensive public and operator information campaign in advance of the LEZ going live in early 2008. TfL considers that operators would have sufficient time to plan their compliance with the proposed LEZ emission standards. The proposed emission standard for 2008 is Euro III. Buses, coaches and lighter HGVs (between 3.5 tonnes and 12 tonnes) would have until July 2008 to comply. Euro III vehicles have been manufactured since the year 2000, and older vehicles can be modified to meet the minimum standard. Many small businesses which operate heavier LGVs and minibuses would have until 2010 to make their vehicles compliant.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

TfL has urged operators to consider the possible implementation of the LEZ when developing and reviewing their fleet management plans. Even without the proposed LEZ, TfL estimates that two thirds of HGVs and around half of buses and coaches would be compliant with the proposed 2008 standards and around three quarters of heavier LGVs and minibuses would be compliant with the proposed standard for 2010. The possibility of a LEZ in London was first considered in 2000, and the Mayor included proposals for a LEZ in his 2004 re-election manifesto. Furthermore, the Attitudinal Survey carried out by Ipsos MORI during the consultation period showed that more than three-quarters of operators are aware of the proposed LEZ.

TfL does not consider that the proposed introduction of the LEZ in 2008 should be delayed as a high proportion of vehicles would be compliant with the proposed LEZ standards. Nor does it consider it appropriate to delay introduction beyond the proposed July implementation date. Such a delay would be likely to erode the air quality and health benefits of the proposed Scheme. Furthermore, operators would not be required to replace their fleets: vehicle replacement is just one of the options available to operators to make their fleets compliant with the proposed LEZ, and operators may also choose to retrofit their existing vehicles. TfL does not therefore expect the proposed LEZ to result in significantly increased demand for new vehicles.

### **D3: Proposed timetable commences too late**

Four stakeholders (the London Boroughs of Lambeth, Ealing, City of Westminster and the London Liberal Democrats) opposed the deferral of the Euro IV standard for HGVs, buses and coaches from 2010 to 2012, commenting that this would reduce the air quality benefits of the Scheme. Westminster City Council also deemed that the delay would reduce the incentive for fleet managers to 'leapfrog' Euro III by choosing a Euro IV vehicle when replacing a Euro I or II vehicle. The London Liberal Democrats requested that the Euro IV standard be brought forward to 2010, as it judged this standard to have the greatest impact on the scheme.

The London Boroughs of Lambeth and Ealing considered that the requirements for heavier LGVs should be introduced into the LEZ scheme earlier than the proposed date of October 2010. The London Borough of Lambeth wished to see the inclusion of LGVs and minibuses from 2008, subject to further analysis of the impact on small businesses.

#### *TfL Response:*

The proposal to introduce heavier LGVs and minibuses into the LEZ from 2010 is because a greater proportion of these vehicles are operated by smaller businesses and the fact that the market for pollution abatement equipment is less developed for this sector than for large vehicles. TfL therefore considers it appropriate to allow operators of these vehicles until 2010 to make their vehicles compliant.

TfL recognises that deferring the proposed standard of Euro IV from 2010 to 2012 would lead to reduced air quality and health benefits. However,

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

following consultation on the Strategy Revisions in 2006, significant concerns were raised that the 2010 date would place an undue burden on many operators who would potentially have had to upgrade their vehicles after just four years of use. TfL considers that deferring the Euro IV standard to 2012 would considerably reduce the pressures on these vehicle operators and that the current proposals strike an appropriate balance between operator needs and air quality improvements. Any reduction in air quality benefits due to this deferral would be largely offset by the inclusion of heavier LGVs and minibuses in the Scheme from 2010.

#### **D4: Confusion over phased introduction of the scheme**

The Federation of Small Businesses and the British Vehicle Rental and Leasing Association considered that operators, particularly those with vehicles of varying weights to which different standards apply, may be confused by the Scheme's multiple introduction dates. The Federation of Small Businesses suggested a single commencement date on 1 July 2008 for all buses, coaches and trucks over 3.5 tonnes, commenting that this would also ease the burden on smaller businesses by giving them some extra time to make their vehicles compliant.

#### *TfL Response:*

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. If the Mayor decides to confirm the Scheme Order, the earliest that the LEZ could be introduced is February 2008. Should the Mayor confirm the Scheme Order, an intensive public and operator information campaign would seek to ensure that all affected operators have the information they need. It should be remembered that the majority of vehicle owners would not need to take any action prior to the commencement of the Scheme.

TfL considers that it is necessary to have a staggered introduction of the LEZ in 2008 so that more time is available for the operators of smaller HGVs, buses and coaches to make their vehicles compliant. The pollution abatement equipment market for these vehicles is less well developed compared with heavy HGVs. Additionally, TfL believes that the phased implementation approach will have a beneficial effect in terms of giving operators notice of the LEZ and time to plan the most suitable option for them to ensure their vehicles meet the emissions standards. This might be particularly important for operators who have fleets which comprise both heavier and lighter trucks.

#### **D5: Future of the LEZ**

Seven stakeholders commented on the future of the proposed LEZ.

The London Borough of Hammersmith and Fulham mentioned that despite the Scheme Order's provision for the LEZ to run indefinitely, and short of including cars at some point in the future, there is no indication of what could happen next.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The British Vehicle Rental and Leasing Association (BVRLA) called for any plans to change or tighten up the standards of the LEZ to be communicated well in advance, giving their members the chance to plan accordingly.

The Central Council of Physical Recreation asked if there would be further tightening of the emissions standards in the future, pointing out that clubs who invest in new vehicles to meet the currently proposed standards would expect to see a good return on their investment. It noted the British University Sports Association's estimate that universities expect at least ten years service from a vehicle and that many other community clubs require double that.

The Association of British Drivers opposed the scheme running indefinitely, when, beyond 2015, air pollution levels should have substantially improved and the parameters of the scheme may require reconsideration.

However, the London Borough of Newham judged that if the scheme proves beneficial, work on the future beyond 2012 needs to be continued to consider new standards and the extension of the scheme to other vehicles. Westminster City Council considered that a date should be set for Euro IV to apply to heavier diesel-engined LGVs and minibuses. The Greater London Conservative Group also considered that given the disparity between the costs and income predicted for the LEZ, a longer term commitment should be given.

### *TfL Response*

TfL considers that the actual emission standard in place would remain subject to review, and could be broadened to include a standard for pollutants other than PM<sub>10</sub> beyond 2012. For example, TfL continues to investigate the possibility of including a standard for NO<sub>x</sub> as part of the proposed LEZ.

TfL does not consider it appropriate at this stage to be making commitments about the future of the LEZ after 2015. Any such decision would have to be taken closer to that date in the light of the scheme's performance, London's air quality at that time and the national and EU air quality objectives in place at that time.

Vehicle renewal is just one of the compliance options open to operators. Other options, such as fitting pollution abatement equipment or re-engining would allow operators to keep to their planned vehicle replacement cycles.

The pressures on operators of heavier LGVs and minibuses are different to those on HGV, bus and coach operators. TfL therefore currently has no intention of proposing the introduction of a Euro IV standard for heavier LGVs and minibuses.

### **D6: Other timetable issues**

The Covent Garden Market Authority indicated that a study into transport movements between London's wholesale markets is currently being carried

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

out and suggested that the findings of the study be taken into account. The timetable for introduction of the LEZ may not allow for this.

The London Fire & Emergency Planning Authority (LFEPA) suggested that the introduction of Euro IV standard in 2012 be phased over a number of years. This would reduce the impact on their predominantly Euro III fleet of heavy diesel-engined vehicles, which will only be between four and eight years old in 2012.

West Sussex County Council, the Federation of Small Business and London First suggested TfL widely publicise the proposals. West Sussex County Council suggested publicising the scheme as soon as possible in order that small operators outside London can become aware of the scheme to comply and allow for in their future general business and financial planning.

The Federation of Small Businesses and London First suggested establishing a pilot period to better inform operators about the LEZ and give them the fullest opportunity to comply before introduction of the scheme. London First suggested the scheme should be shadow run for six months in advance of each implementation stage. West Sussex County Council suggested allowing heavy vehicle operators with five older vehicles or fewer more time to modify or buy new vehicles by temporarily registering one or more of their vehicles for use in the LEZ without charge.

The St John Ambulance London (Prince of Wales) District considered that there is a strong case for a review of the deadlines, and requested discussions to identify an achievable timetable for fleet replacements to achieve emission standards.

The London Borough of Islington felt that by not targeting larger LGVs and minibuses until 2010, there would be an incentive for operators to run smaller vehicles before that date, which would cause more pollution and congestion.

#### *TfL Response*

TfL would continue to monitor the impacts of wider initiatives on vehicle emissions in London and would keep relevant policies under review.

The Scheme Order provided operators with details of the proposals. Should the Mayor confirm the Order, there would be an intensive operator information campaign in advance of the LEZ going live.

The timetable for the LEZ takes into account the time required to complete the legal processes, including consultation on a Scheme Order, as well as the time to put in place the required business systems and processes to publicise standards, and for vehicle operators to implement the necessary changes to their vehicle fleets and the ability of pollution abatement equipment suppliers and testers to meet any increased demand. The phased implementation of the proposed LEZ would mean that only heavier HGVs would come within the scope of the Scheme from February 2008. The majority of HGVs, buses and

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

coaches would be included in the proposed LEZ from July 2008, which would provide over a year from the earliest decision date to implementation.

The health and air quality benefits of the LEZ would be eroded if there was a shadow operation used at the start of the Scheme, as compliance levels would be expected to be significantly lower during that period. Low compliance levels and therefore reduced air quality and health benefits can also be expected if operators were allowed to comply with standards set over a number of years, rather than on the implementation date.

In effect, the Scheme Order consultation was the second consultation on the proposed LEZ. Having considered representations to these consultations, and having met a large number of stakeholders at face to face meetings, TfL considers that the current proposed timetable strikes an appropriate balance between operator needs and the need to take urgent action to improve air quality in London.

As discussed in more detail under *Theme Q: Traffic Impacts*, TfL considers it unlikely that many operators would use LGVs in preference to HGVs in order to avoid the 2008 implementation dates for the Scheme, because this would incur other overheads such as additional drivers and larger fleets. The inclusion of heavier LGVs in the LEZ from 2010 would also discourage some operators from switching to older LGVs.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

### **Theme E: Vehicles to be included**

Representations falling within this theme concerned the vehicles to be included in the scope of the proposed LEZ. Forty-eight stakeholders made representations under this theme. These were made up of fifteen London boroughs, eleven business representative organisations, six health representative organisations, four economic partnerships, three transport and environment representative organisations, two London political representatives, two professional organisations, two ethnic and voluntary representative organisations, one UK local authority, one non-departmental government body, and one GLA functional body.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The sub-themes are:

- Agree with vehicles included in the LEZ
- Vehicles to which the LEZ should apply
- Motorcaravans, hearses and ambulances
- Other vehicles to be included issues.

### **E1: Agree with vehicles included in LEZ**

The Environment Agency, Royal Borough of Kingston upon Thames and the City of Westminster agreed with the proposed vehicles to be included in the LEZ.

#### *TfL Response*

TfL notes the support for the proposed vehicles to be included in the LEZ.

### **E2: Vehicles to which the LEZ should apply**

Forty-three stakeholders submitted representations concerning the vehicles to which the LEZ should apply. These included: 14 London boroughs, CBI London, London First, the Freight Transport Association (FTA), the Road Haulage Association (RHA), the Guild of British Coach Operators, the Confederation of Passenger Transport (CPT), the Environment Agency, Royal Mail and the London Liberal Democrats.

Five stakeholders considered that further vehicles should be included in the LEZ. London First commented that the current proposals only target the source of some PM<sub>10</sub> emissions in central London, whilst cars and light goods vehicles are responsible for some 40 per cent of PM<sub>10</sub> emissions. London First commented that if the LEZ is to achieve its full potential in improving air quality, all vehicles should be covered by the LEZ. It also noted that the Mayor's Taxi Emissions Strategy requires licensed taxis to meet Euro III Standards by the end of June 2008, and recommended that this standard be tightened to Euro IV in 2012, in line with the LEZ standards for HGVs, buses and coaches.

Friends of the Earth also agreed that all vehicles should be included and asked that should a decision be made to exclude any of the categories at this stage, that plans be put in place to include them in the future at the earliest opportunity. Friends of the Earth requested that TfL annually review which vehicles can be included, taking into account new information and trends.

The majority of representations received on this issue concerned whether LGVs (vans), cars and minibuses should be part of the LEZ proposals. Twenty-three stakeholders commented on the inclusion of LGVs and over half of these positively supported the inclusion of heavier LGVs in the LEZ. The London Borough of Ealing stated that they would welcome the inclusion of heavier LGVs in the scheme sooner than the proposed date of 2010. However, some stakeholders considered that TfL should undertake further consultation or obtain more information on the impact of including LGVs. The

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

London Borough of Hammersmith indicated that TfL's information on including LGVs was confusing and sought clarification.

Twenty-nine stakeholders made reference to cars; almost all supported the inclusion of cars in the scheme or welcomed TfL's undertaking to investigate including cars in the scheme in the future as they are the single largest group of road vehicles in London and overall account for more pollution. Some stakeholders queried when the investigation into including cars would take place and recommended TfL undertake a more extensive consultation.

Fifteen stakeholders commented on minibuses; six opposed the inclusion of minibuses as many are operated by schools, voluntary organisations, and small businesses, but nine welcomed their inclusion in the LEZ. The Central Council for Physical Recreation said that minibuses are primarily used by community groups and voluntary, charitable and not-for-profit organisations, and constitute only a small part of the overall dangerous particle emissions compared to commercial companies. Including minibuses in the scheme, they claimed, would affect the most vulnerable groups in the Capital.

The City of Westminster wanted Private Hire Vehicles (PHVs) to be subject to the same LEZ requirements as licensed taxis. It recognised that adding these vehicles to the LEZ would involve complexities, but was concerned that this was a 'loophole' that would provide an unwarranted commercial advantage to PHV operators.

Representations from members of the public using the questionnaire indicated that 80 per cent of public respondents thought that the LEZ should include HGVs, 75% supported the inclusion of coaches, 74% buses, 67% all LGVs and 62% minibuses. In addition, 67% of the public wanted Sports Utility Vehicles (SUVs) to be included in the scheme, and 51% supported the inclusion of petrol cars. Representations from businesses using the questionnaire indicated that 65 per cent of businesses supported the inclusion of HGVs, the same number supported the inclusion of buses, 62% coaches, 48% all LGVs and 45% minibuses. Fifty two per cent of business respondents to the questionnaire supported the inclusion of SUVs in the scheme, and 32% petrol cars.

### *TfL Response*

The LEZ is designed to discourage the use of the most individually polluting vehicles in Greater London by encouraging the upgrade or renewal of diesel-engine HGVs, buses and coaches to Euro III by 2008 and Euro IV by 2012, and the upgrade of heavier LGVs and minibuses from 2010.

TfL has considered both the cost to operators and projected improvements in air quality of including LGVs in the LEZ. By 2010 it is forecast that LGVs would be responsible for 24 per cent of road transport emissions of PM<sub>10</sub> within London. This is a considerable percentage of PM<sub>10</sub> emissions relative to the other vehicle types and is due to the relatively large size of the LGV fleet. On the basis of this analysis, TfL recommends that heavier LGVs be

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

included in the LEZ from 2010 to maximise the potential health and air quality benefits. This analysis takes into account the fact that the market for the retrofitting of pollution abatement equipment for smaller and lighter diesel vehicles is less well developed than for larger, heavier vehicles such as HGVs, buses and coaches. TfL estimates from modelling undertaken on the LEZ proposals that including LGVs in the scheme would increase the monetised health benefits of the core proposal by around £25 million between 2010 and 2015.

TfL considers that minibuses should also be included in the LEZ at the same time as heavier LGVs. Minibuses are the passenger equivalent of heavier LGVs, they use very similar chassis and engines to LGVs, and have similar emissions levels, and there are no technical reasons to exclude them from the scheme. The Mayor is encouraging boroughs to assess and improve their own vehicles, including minibuses, and a number of boroughs have moved to incorporate alternative fuelled vehicles into their fleet. Also, operators would have until October 2010 to become compliant with the proposed Euro III standard. Issues relating to the impact of the proposed LEZ on community transport operators are discussed under *Theme M: Public and Community Impacts*.

The 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 focuses on reducing emissions from particular road transport sources in the most cost effective way. This suite of initiatives will generate significant improvements in the health of people who live and work in Greater London through improving air quality. The Mayor's Taxi Emissions Strategy complements the LEZ and will result in all 20,000 licensed taxis meeting Euro III standards by the end of June 2008. The Taxi Emissions Strategy is administered and managed by the Public Carriage Office and emissions standards are ensured through the licensing process. It is therefore considered appropriate that taxis are not covered by the LEZ.

The Mayor is delivering initiatives to discourage car use as well as other vehicles through the recently enlarged central London Congestion Charging scheme, by improving the accessibility and reliability of London's public transport and promoting walking and cycling. TfL does not therefore recommend the inclusion of cars, including PHVs, within the proposed LEZ at this time. However, the Mayor has asked TfL to consider the possibility of including cars and lighter vans within the LEZ at a later date. This work is ongoing, and would include an assessment of the LEZ once it is operational, should the Mayor confirm the Scheme Order. Any Variation Order to the Scheme Order would require a period of public consultation, save in exceptional circumstances.

### **E3: Motorcaravans, hearses and ambulances**

Seven stakeholders commented on the proposals to include motorcaravans, heavier hearses and ambulances within the proposed LEZ. These included: two London Boroughs (the City of Westminster and the London Borough of

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Hillingdon), the Society of Motor Manufacturers and Traders (SMMT), the Caravan Club and three emergency services providers.

The Ambulance Service Association (ASA) felt that stakeholders had not been made sufficiently aware of the proposal, and urged TfL to abandon it. The ASA argued for the exemption from the Congestion Charge given to NHS ambulance services to be extended to the proposed LEZ, as including ambulances in the LEZ would make it difficult to provide appropriate and timely healthcare to patients. The ASA also noted that cost pressures and replacement cycles mean that ambulances often have to be kept in service when they are up to eight years old.

The ASA and St John Ambulance both commented that ambulances from outside London often have to make journeys into the capital. Requiring these vehicles to be LEZ compliant could cause logistical problems and possible delays to patients' treatment.

The ASA, the South East Coast Ambulance Service NHS Trust and St John Ambulance stressed that services provided by specialist major incident vehicles could be jeopardised if they were included within the LEZ. These vehicles are only deployed when required (apart from some journeys for maintenance and servicing), so they tend to have low mileages. They felt that replacement of older vehicles was therefore neither practical nor economically viable.

The Caravan Club stated that the LEZ consultation was flawed in that it placed motorcaravans outside the M<sub>1</sub> category, where they claimed they legally belong. They said that whilst it was likely that the base vehicle on which motor caravans are built would fall into the N categories, once conversion has taken place, they automatically become M<sub>1</sub> vehicles, which are described as 'motor cars'. The Caravan Club said that the Mayor had specifically excluded cars from the LEZ.

### *TfL Response*

Throughout the development of the LEZ proposals, it had been intended that all vehicles derived from HGVs and heavier LGVs should be included within the scope of the Scheme. This had been made clear in communications and meetings with stakeholders and in the consultation documents. During the course of the LEZ Scheme Order consultation it became apparent that further clarification of the vehicles intended to be included within the LEZ was required. In order to elucidate the wording of the Scheme Order, an amendment was prepared. This clarified that the proposed LEZ would apply to motor caravans, ambulances and heavier hearses. TfL sent a letter detailing the reason for the amendments to the Scheme Order and the text of the proposed amendments to some 50 stakeholders possibly most directly affected by the amendments. The consultation materials were also available on TfL's website. The consultation period for consideration of this issue was extended until 2 March 2007.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

As set out in detail under *Theme K: Discounts and exemptions*, TfL does not recommend exempting motorcaravans, heavier hearses or ambulances from the proposed LEZ. TfL is aware that motor caravans are legally defined as passenger-carrying vehicles and so fall into the M<sub>1</sub> vehicle category. However, because the emissions from these vehicles may be substantially higher than those from passenger cars, TfL has included the vehicles in this class within the scope of the LEZ. Such vehicles have similar emissions characteristics to the HGVs and LGVs from which they are derived, and as such TfL considers that they should be subject to the same emissions requirements.

The proposed LEZ would enable operators to choose the option for making their vehicle compliant which is most cost-effective and suitable for them. Buying brand-new vehicles is not the only option available to owners of these vehicles: they may choose to retro-fit their existing vehicles or buy newer vehicles which meet the LEZ emissions standards. TfL is not aware of any technical factors which make retrofitting of these vehicles any more difficult or impractical than for other similar vehicles which are included within the proposed Scheme.

The aim of the proposed LEZ is to improve air quality and health in London by encouraging operators to make their vehicles compliant with emission standards. TfL does not therefore consider it appropriate to grant exemptions or discounts on the basis of vehicle purpose. Issues relating to the impact of the proposed LEZ on public services are discussed in more detail under *Theme M: Public and Community impacts*.

#### **E4: Other vehicles to be included issues**

The London Borough of Ealing asked why standards have not been introduced for petrol-engine HGVs as fleet operators may opt for petrol-driven vehicles in order to become exempt.

The Central London Freight Quality Partnership commented that it would be unclear how the difference between an LGV and some estate cars would be identified on the street or from the DVLA log book. It suggested a simplification by including all van type vehicles with panels instead of windows and pick ups.

The London Borough of Hillingdon commented that privately-owned large vehicles such as motor homes need to be mentioned as part of the LEZ, and expressed concern that other forms of transport such as trains and planes would not be covered by the scheme.

The London Borough of Hounslow sought clarification as to whether Heathrow airside vehicles are included in or exempt from the scheme, commenting that while airside vehicles do not leave the airport boundary they still contribute to poor air quality.

### *TfL Response*

The LEZ is designed to discourage the use of the most individually polluting vehicles in Greater London by encouraging the upgrade or renewal of diesel-engine HGVs, buses and coaches to Euro III by 2008 and Euro IV by 2012 and the upgrade or renewal of heavier LGVs and minibuses by 2010. It is considered appropriate to target the heaviest, diesel-engine vehicles, rather than petrol-driven equivalents, because these are the most polluting vehicles. For similar reasons, TfL recommends that motor caravans, heavier hearses and ambulances should be included in the proposed LEZ (see above). TfL does not consider it likely that large numbers of operators would switch to petrol-driven HGVs: many operators would already be using vehicles which meet the LEZ emissions standards at the time the proposed scheme would commence, and using petrol-driven HGVs would be an unattractive and limited option for reasons of cost and availability.

So called 'car-derived vans' would be excluded at this stage as TfL judges that it would be unfair to include such vehicles and not the cars they are derived from, and because of the practicality of identifying and enforcing against such vehicles.

'Airside' vehicles would only come within the scope of the proposed LEZ if they were driven on public roads. This would include roads owned by BAA, as described in more detail under *Theme G: Boundary*.

Heavier LGVs and minibuses would be defined as those with an unladen weight over 1.205 tonnes, and these would be included within the scope of the proposed LEZ. Most operators would be aware of the unladen weight of their vehicles, as it is relevant to a wide range of regulations. However, should the Mayor approve the Scheme Order, TfL would put in place on its website a facility by which vehicle operators could check the compliance of their vehicle by inputting its vehicle registration mark. This would be in addition to a major public and operator information campaign. It should also be emphasised that heavier LGVs would not come within the scope of the LEZ until late 2010.

The proposed LEZ would focus on sources of emissions over which the Mayor has a high degree of influence – that is emissions from the most individually polluting road vehicles. The 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 focuses on reducing emissions from particular road transport sources in the most cost effective way. This suite of initiatives would generate significant improvements in the health of people who live and work in Greater London through improving air quality.

In relation to emissions from trains, TfL is studying information in the London Atmospheric Emissions Inventory about train operations in London and the resultant air pollutant emissions. This will provide a basis for discussions with the rail industry in the future. The Mayor has no direct control over air quality emissions from aircraft or marine vessels. The Mayor's Energy Strategy deals with emissions from other non-road transport sources, such as heating.

*TfL Recommendation*

TfL recommends that the Mayor confirm the proposed amendment to Annex 2 to the Scheme Order to make explicit that heavier diesel engine motor caravans, ambulances and heavier hearses which have similar emission characteristics to other HGVs and LGVs already included in the Scheme Order are included within the scope of the proposed LEZ.

## **Theme F: Proposed LEZ Emission Standards**

Representations falling within this theme concerned the vehicle emissions standards for the proposed LEZ. Thirty stakeholders made representations under this theme. These were made up of 12 business representative organisations, nine London boroughs, four economic partnerships, two health representative organisations, one London political representative, one ethnic and voluntary representative organisation and one transport/environmental representative organisation.

The sub-themes are:

- Euro standards versus an age-based scheme
- The effectiveness of pollution abatement equipment
- Certification of pollution abatement equipment
- Extension to standard for oxides of nitrogen (NO<sub>x</sub>)
- Tightening of proposed LEZ emission standards
- Other proposed LEZ emission standards issues.

### **F1: Euro standards versus an age-based scheme**

Nineteen stakeholders made representations regarding the use of Euro standards for the LEZ emission standards over an age-based scheme. These included: five London boroughs (the City of Westminster, the London boroughs of Ealing, Hillingdon and Wandsworth and the Royal Borough of Kensington and Chelsea), the Freight Transport Association (FTA), the Road Haulage Association (RHA), the Confederation of Passenger Transport (CPT), the Society of Motor Manufacturers and Traders (SMMT) and the Environmental Industries Commission (EIC).

Six stakeholders, including three London boroughs, the CPT and the EIC, submitted representations acknowledging that the use of Euro emission standards for the proposed LEZ was appropriate. Transport 2000 considered the proposed LEZ emission standards were too lenient. The London Ambulance Service NHS Trust and the RHA considered the proposed LEZ emission standards were too severe.

Eight stakeholders submitted representations advocating an age-based scheme rather than the use of Euro standards. The FTA expressed concern that the use of Euro standards would lead to an increase in older vehicles than would arise from an age-based scheme and reduced air quality improvements. The FTA and the SMMT both considered that an age-based scheme would be simpler for operators to understand and less complicated to administer and enforce. The London Borough of Wandsworth considered

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

that, in order to reduce emissions from early vehicle scrapping, local authorities and other vehicle operators should introduce new compliant vehicles when their vehicles reached a certain age rather than at a fixed date. The Royal Borough of Kensington and Chelsea recommended that TfL mandate London local authorities and other operators to replace specialist vehicles with Euro IV compliant vehicles when they reach a certain age.

### *TfL Response*

TfL notes the support for the proposed Euro standards. TfL considers that the Euro III standard for HGVs, buses and coaches from 2008 and for heavier LGVs and minibuses from October 2010 are appropriate. All HGVs, buses and coaches manufactured since October 2001 and LGVs and minibuses manufactured since January 2002 would meet the Euro III for PM emission standard.

A LEZ based on Euro standards that allows vehicle modification to meet the standard best balances affordability, fairness and clarity for operators against 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 higher Euro standard vehicles, those who had converted their vehicles to alternative fuels or re-engined or fitted exhaust after-treatment systems to meet a higher emissions standard. It is also fairer for smaller operators, who tend to retain vehicles for a longer period of time.

TfL has examined the air quality, 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 only marginal 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 Euro standards based scheme.

TfL does not consider that a LEZ based on Euro standards would be any more difficult for operators to understand than an age-based scheme. TfL would use the date of first registration of a vehicle to determine whether a vehicle was compliant with the emissions standards. Therefore, a HGV, bus or coach first registered on or after 1 October 2001 and a LGV or minibus first registered on or after 1 January 2002 would be considered to comply with the emission standards and could operate within the zone without charge. Should the Mayor confirm the Scheme Order, TfL would undertake an extensive public and operator information campaign using a wide range of media to inform operators of the LEZ requirements prior to the scheme going live in February 2008. In addition, the LEZ website would allow operators to check the compliance of their vehicles by entering the vehicle's vehicle registration mark (VRM).

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

## **F2: Effectiveness of pollution abatement equipment**

Ten stakeholders submitted representations concerning the effectiveness of pollution abatement equipment. These included: the London Borough of Hillingdon, the Federation of Small Businesses (FSB), London First, FTA, RHA, EIC and SMMT.

Two stakeholders supported the proposal allowing operators to meet the LEZ standard by fitting pollution abatement equipment. The EIC stated that the abatement equipment industry supported the use of pollution abatement equipment to meet the LEZ Euro emission standards and argued that retrofit technologies were proven in allowing older vehicles to meet both the Euro III and Euro IV emissions standards. The EIC also stated that the LEZ would benefit the industry through innovation. The SMMT supported the retrofitting of pollution abatement equipment provided that it was fitted to a high standard, tested and maintained to that standard in future. The SMMT stated that while retrofit equipment has an important role for specialist vehicles with a long lifespan, it may not be suitable for light, smaller classes of vehicle such as vans. Thames Gateway London Partnership suggested that advances in pollution abatement equipment technology could mean that in future non-road going and other vehicles proposed to be exempted could be retrofitted with pollution abatement equipment, and so should be included in the Scheme.

The FTA, the FSB, the London Ambulance Service NHS Trust and the Thames Gateway London Partnership expressed concern about the effectiveness of pollution abatement equipment in an urban environment with low-mileage stop/start operating conditions. The FTA considered that the use of abatement equipment on buses could not be compared with that on commercial vehicles, as bus engines ran constantly whereas commercial vehicle engines were switched off when making deliveries. The London Borough of Hillingdon sought clarification on whether pollution abatement equipment had been proven to be effective in removing air pollutants. SMMT expressed concern that pollution abatement equipment may not be suitable for LGVs, motor caravans or ambulances.

London First and the SMMT expressed concern about the impact on air quality of inadequate maintenance of pollution abatement equipment and advocated regular testing, including roadside testing, to ensure vehicles continued to meet the LEZ emission standards. The London Borough of Islington expressed concern that emissions of NO<sub>x</sub> could increase with the use of pollution abatement equipment. The Road Haulage Association stated that it had not had an adequate response from TfL concerning disagreements between TfL and vehicle manufacturers about the effectiveness of pollution abatement equipment.

### *TfL Response*

TfL has carefully examined the issues relating to the efficiency of pollution abatement equipment, particularly in urban conditions. TfL is confident that the current generation of pollution abatement equipment is robust and delivers significant reductions in emissions of particulate matter. Furthermore, there

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

are only a very small number of specialised vehicles for which particulate abatement equipment could not be fitted. Whilst TfL recognises that there were problems with the first generation of pollution abatement equipment, this was predominantly due to poor fitting and the lack of proper maintenance. The current generation of pollution abatement equipment is more sophisticated and includes devices with active regeneration systems that reduce emissions for vehicles with low or stop/start drive cycles. These can be fitted to a much wider range of vehicles as long as they are properly matched to the vehicle and its duty cycle and are properly maintained. TfL has also ensured that stakeholders have been kept fully aware of the issues around the effectiveness of pollution abatement equipment through formal and informal consultation.

TfL considers that if properly fitted and maintained, pollution abatement equipment can work effectively on the vast majority of vehicles including buses and coaches. TfL has proposed exemptions or 100% discounts for vehicles where pollution abatement equipment cannot be retrofitted and the vehicle cannot be replaced, such as historic vehicles.

While some fleet operators have identified issues with abatement equipment, it has not been a universal problem. TfL has discussed the issue with many fleet managers and has found that urban vehicles (including buses and refuse collection vehicles) can operate satisfactorily if the abatement equipment is maintained in accordance with the suppliers' instructions. Newer equipment is available with electronic monitors which help alert operators to early signs of problems, thereby helping avoid failures and unnecessary equipment replacements.

TfL considers that it is the responsibility of both pollution abatement equipment manufacturers and vehicle operators to ensure that a vehicle's specification, age and typical operating conditions are considered when fitting pollution abatement equipment and establishing maintenance procedures. In response to discussion with TfL about 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 will only accept pollution abatement equipment which has been subject to independent technical certification of the emissions reduction achieved, and for UK vehicles will require an annual inspection and test by VOSA to ensure continued operation of the equipment.

TfL notes the evidence suggesting that certain types of pollution abatement equipment may emit an increased proportion of  $\text{NO}_x$  as  $\text{NO}_2$  and the impact this may have on  $\text{NO}_2$  concentrations. In terms of the key health-based objectives of the LEZ, the reductions in  $\text{PM}_{10}$  have a significantly greater impact on health than that of a higher proportion of  $\text{NO}_x$  emitted as  $\text{NO}_2$ . It should also be noted that total  $\text{NO}_2$  and  $\text{NO}_x$  emissions are expected to continue to decline as a result of the scheme. This approach supports the Government's Air Quality Expert Group's recommendations that a wider, more

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

holistic approach to air quality management should be taken in such circumstances. TfL will continue to refine how a NO<sub>x</sub> option might feasibly be implemented with the retrofit abatement industry and the Department for Transport and will consider moving to implement a NO<sub>x</sub> standard when feasible. Any proposal to implement a NO<sub>x</sub> standard would be subject to consultation and would allow sufficient time for vehicle operators to comply with the standard.

While the LEZ does not include an explicit standard for either NO<sub>x</sub> or NO<sub>2</sub> emissions, it would still lead to reduced emissions of NO<sub>x</sub> (and concentrations of NO<sub>2</sub>) through encouraging the uptake of newer vehicles that emit less of this pollutant.

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. Emissions from these vehicles are also addressed through other initiatives, such as the GLA Best Practice Guidance on reducing dust and emissions from construction and demolition, which includes a requirement for abatement equipment for off-road construction machinery, where suitable.

As part of an operator information campaign, operators would be able to access detailed information about the options available to them in relation to fitting particulate abatement equipment to meet the LEZ emissions standards.

### **F3: Certification of pollution abatement equipment**

Five stakeholders submitted representations concerning the certification of pollution abatement equipment. The CPT stated that an affordable certification scheme was required for older vehicles that met the LEZ emission standards but could not get a Reduced Pollution Certificate (RPC), for both UK and non-UK operators. The FTA expressed concern that there is no other mechanism than the RPC for certifying pollution abatement equipment, questioned the reliability of the RPC method and expressed concerns that an alternative certification method could lead to increased costs for operators. The London Borough of Merton, SMMT and Thames Gateway London Partnership stated that TfL should clearly set out the process for alternative certification, including costs. The SMMT also expressed concern about the certification of emission standards of non-UK registered vehicles.

#### *TfL Response*

The main route for the certification of particulate abatement equipment for the LEZ would be via the current Reduced Pollution Certification (RPC) scheme administered by the Vehicle Certification Agency (VCA) and the Vehicle & Operator Services Agency (VOSA). The RPC has been in operation since 1999. Certification by RPC also offers UK registered vehicles a Vehicle Excise Duty (VED or road tax) discount of up to £500.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

In order to be certified as a reduced pollution vehicle, the vehicle must have an improvement of two Euro PM standards. VOSA would perform an initial inspection of the vehicle when the particulate abatement equipment is fitted, and would provide for an annual inspection to ensure the equipment is still fitted and operational. These inspections would be performed at any of the 94 VOSA test stations nationally, and could be scheduled at the same time as vehicle annual inspections thus minimising costs to operators. If the inspection fails, a failure notice would be issued, and operators would have 14 days to submit for a re-test.

The LEZ also offers an alternative certification route for reduced pollution vehicles or devices not eligible for a RPC that meet the LEZ emissions standards. The proposed Low Emission Certificate (LEC) would use an identical vehicle inspection and testing regime from VOSA but the certificate would not grant eligibility for a VED discount. This certification route would apply to light duty tested vehicles (under 5 tonnes GVW) fitted with particulate abatement equipment, which are precluded by RPC legislation and for any vehicles in tax classes not eligible for RPC, such as private buses. It would also apply for the certification of devices such as partial filters which may enable vehicles to meet the proposed LEZ emissions standard but would not be eligible for RPC approval (e.g. a Euro II vehicle that reaches Euro III but does not have a 33 per cent reduction in PM). The LEC certification route would also apply to vehicles that had been re-engined and met either the Euro III for PM or Euro IV for PM emission standards.

VOSA would inform TfL of the test results for both RPCs and LECs within three days, negating the need for vehicle owners to contact TfL themselves. VOSA would issue operators whose vehicles passed certification either with a RPC or a LEC. Vehicles which fail this inspection would also be notified to TfL and become non-compliant.

Vehicles previously fitted with technologies or modifications accredited under the Energy Saving Trust (EST) PowerShift (e.g. natural gas conversions) or CleanUp (e.g. abatement equipment) programmes would be able to apply to VOSA for either a RPC or LEC, dependent on the vehicle type and modifications.

Operators of vehicles registered outside the UK that had been modified to meet the LEZ emission standards would also be able to submit evidence of the modification from a recognised certification authority to TfL. The vehicle compliance application would be available to operators through the LEZ website or the operator call centre. TfL would also provide a list of recognised certification authorities on the LEZ website.

All operators would be able to access clear information about the certification processes from the LEZ website or through the operator call centre.

#### **F4: Extension to standard for oxides of nitrogen (NO<sub>x</sub>)**

Sixteen stakeholders submitted representations concerning the extension of the Euro IV emission standard to include NO<sub>x</sub>. These included: four London

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

boroughs (the City of Westminster and the London boroughs of Ealing, Hammersmith and Fulham and Lambeth), London Councils, London Liberal Democrats, CBI London, Asthma UK, the Guild of British Coach Operators and the EIC.

Three stakeholders, CBI London, the Guild of British Coach Operators and the Central London Freight Quality Partnership expressed support for the removal of the proposal for the Euro IV standard in 2012 to also include NO<sub>x</sub>. However, thirteen stakeholders stated that TfL should reconsider the introduction of an emission standard for NO<sub>x</sub> as a means of reducing NO<sub>x</sub> emissions. The London Liberal Democrats and London Boroughs of Islington and Lambeth expressed concern that the LEZ did not go far enough to improve emissions of NO<sub>x</sub> and stated that a NO<sub>x</sub> emission standard should be included from the outset. Asthma UK and the City of Westminster stated that it should be a national priority to develop NO<sub>x</sub> abatement technology and certification to allow for the inclusion of a NO<sub>x</sub> standard in the LEZ. The London Borough of Hammersmith and Fulham and the EIC stated that NO<sub>x</sub> abatement technology was rapidly developing and that a NO<sub>x</sub> emission standard for the LEZ should be reconsidered in the future. The EIC considered that the technology to allow a NO<sub>x</sub> standard had been shown to be successful and would be readily available for a wide range of vehicles by 2012. London Councils considered that emissions of NO<sub>x</sub> were of equal importance to emissions of PM and that TfL should undertake further work on a NO<sub>x</sub> emission standard.

### *TfL Response*

When the Mayor published revisions to his Transport and Air Quality Strategies he decided not to include a NO<sub>x</sub> standard in the LEZ because there remained a number of important unresolved issues around the certification and testing of retrofitted NO<sub>x</sub> abatement devices. TfL is continuing to consider with the pollution abatement equipment industry and central government how a NO<sub>x</sub> standard might be implemented. TfL will consider moving to implement a NO<sub>x</sub> standard in the future should this be feasible.

While the LEZ does not include an explicit standard for either NO<sub>x</sub> or NO<sub>2</sub> emissions, it would still lead to reduced emissions of NO<sub>x</sub> (and concentrations of NO<sub>2</sub>) through encouraging the uptake of newer vehicles that emit less of this pollutant.

### **F5: Tightening of proposed LEZ emission standards**

Five stakeholders submitted representations seeking the tightening of the proposed LEZ emission standards. London First and the London Liberal Democrats submitted representations supporting the tightening to Euro IV of the emissions standard for heavier vans and minibuses from 2012 in line with HGVs, buses and coaches. The City of Westminster stated that TfL should consider extending the LEZ emission standards to include Euro V vehicles as such vehicles are expected to be available from 2009. The London Borough of Ealing and the Thames Gateway London Partnership stated that TfL should

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

encourage compliance with the Euro IV emission standard earlier than 2012 to maximise the air quality and health benefits of the LEZ.

### *TfL Response*

TfL notes the representations encouraging operators to meet the Euro IV emission standard earlier than 2012. The LEZ emission standard of Euro IV for PM was moved from 2010 to 2012 following concerns raised by operators during the consultation on the Mayor's Transport and Air Quality Strategy Revisions about the compliance costs involved in meeting this standard in 2010.

The Government announced, in the 2006 Budget Report, that it would be considering the case for incentivising the early uptake of Euro V standards through an extension of the Reduced Pollution Certificate scheme and company car tax, ahead of a formal requirement to fit Euro V standard technology. In late 2006 the Government undertook a consultation on the Review of the Air Quality Strategy for England, Wales and Scotland, including an option of incentives for cleaner vehicles. It is anticipated that the revised National Air Quality Strategy will be published later this year.

As new models of HGVs, buses and coaches are introduced, overall emissions from these vehicles are improving. The proposed LEZ is designed to bring forward these benefits by discouraging the most polluting vehicles from operating in London. TfL therefore does not consider that the air quality benefits that would result from a further tightening of the LEZ emissions standards to Euro V after 2012 would justify the significant economic cost that would be placed on businesses.

While TfL acknowledges that there would be air quality benefits from tightening the LEZ emission standard for heavier vans and minibuses to Euro IV in 2012, alongside the tightening of the emission standard for the more individually polluting HGVs, buses and coaches, this would have a greater economic impact on small companies and private operators and community organisations with small fleets.

### **F6: Other proposed LEZ emission standards issues**

Nine stakeholders submitted representations concerning other vehicle emissions standards issues. These included: three London boroughs (Westminster, Greenwich and Hillingdon), the CPT, Guild of British Coach Operators, FTA and the SMMT.

The Guild of British Coach Operators expressed concern that the LEZ emission standards did not reflect normal coach and bus replacement cycles and it proposed a system of 'grandfather rights'. The FTA expressed concern about the availability of pollution abatement equipment.

The Guild of British Coach Operators stated that the Government should set common emission standards for any other low emission zone proposed for the UK. The London Borough of Greenwich stated that the LEZ emission

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

standards were consistent with those specified in the legal agreement relating to the proposed Thames Gateway Bridge and reflected the emissions standards for vehicles for the low emission zone on the Greenwich Peninsula.

The SMMT expressed concern that the proposed standard for the LEZ is based on Euro standard PM equivalents, not whole Euro standards or age. They argue that this is complex to understand, difficult to comply with and complicated to enforce. They said that TfL had overlooked the fact that many pre-Euro III vehicles (e.g. Euro Is and IIs) were produced and approved to the Euro III standard for PM and sold in significant numbers. Manufacturers, they argue, cannot be responsible for the ongoing cost of addressing detailed technical queries, and that these costs have not been fully or correctly considered in the costs of establishing the LEZ.

The CPT stated that owners of vehicles with a derogation such that their vehicles do not meet the LEZ emission standards should not be liable to any penalty. The City of Westminster expressed concern that TfL consider a means of identifying 'early adopters' so that such vehicles are not required to register with TfL to prove they are compliant with the LEZ emission standards.

#### *TfL Response*

TfL is not recommending different standards for coaches as the coach fleet contains some of the oldest and most polluting vehicles. The delayed tightening of the Euro IV standard from 2010 to 2012 would help to reduce the compliance costs for this sector of the industry. TfL considers that grandfather rights would be difficult to administer and would distort the market for the vehicles affected.

TfL is working closely with the Environmental Industries Commission to ensure that the pollution abatement equipment industry will be in a position to provide the pollution abatement equipment required by operators to comply with the LEZ emissions standards and does not consider there would be problems with the availability of this equipment. The proposed Low Emission Certificate will provide access to the widest range of devices able to achieve the required emission levels.

In the UK, local authorities are responsible for local air quality management, including reviewing and assessing air quality, and preparing action plans and schemes to remedy any local pollution hotspots, such as LEZs. A UK Low Emissions Strategies Group was established to facilitate the sharing of information, experiences and knowledge between local authorities in relation to the development and implementation of programmes to reduce road transport emissions. The Group, which is chaired by Sheffield City Council, is made up of English local authorities, TfL and the Government departments of DfT and Defra. The Group has agreed that if LEZs are implemented in other areas of the UK then it would be desirable that they should have the same emissions standards.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

TfL considers that the proposed LEZ represents the most effective option for achieving reductions of the most harmful road transport generated emissions in London between 2008 and 2015.

TfL would seek to provide detailed information for operators on the LEZ, including a function for an operator to be able to check the compliance of their vehicle and information on the certification methods available to operators. A small number of vehicles would be required to register with TfL in order to drive within the LEZ without charge. These are vehicles for which TfL cannot easily identify whether they meet the LEZ emission standards. The registration process is set out in more detail in *Theme H: Operations*.

The use of specific PM standards in the Scheme Order was intended to provide a technology neutral approach which stated the same standard for both original equipment and retrofitted vehicles. However TfL acknowledges that this could be confusing for some operators, for whom the only information required to determine compliance is the overall vehicle Euro standard, and this is the only information readily available to them.

In the light of representations received, TfL recommends an amendment to the Scheme Order so that the base emission standards for the LEZ are the Euro standards for all four regulated pollutants, rather than for PM only. However, TfL recognises that PM is particularly harmful to human health. For this reason the LEZ standards would allow vehicles that were not originally constructed to the relevant full Euro standard (Euro III or Euro IV) but which have been adapted or retrofitted to that standard for PM, as proven by certification evidence (such as an RPC), to drive within the proposed LEZ without charge.

Further some original equipment Euro I and II vehicles have received RPCs from VOSA, since their manufacturers were able to present evidence that they met the required PM emission levels in force at the time for that certificate. These vehicles meet the Euro III for PM LEZ standard. Therefore, the LEZ standards would allow vehicles which have been originally manufactured to a lower Euro standard (i.e. Euro I or Euro II) but which meet the higher Euro III standard for PM from 2008, as proven by certification evidence such as an RPC, to drive within the proposed LEZ without charge. However such vehicles do not meet the required standard for 2012 which is Euro IV.

Information available from manufacturers and EC type approval authorities has indicated that there are no LGVs of Euro 2 standard which can meet the specified 2010 standard of Euro 3 for PM without modification, nor are there any Euro III vehicles that can meet the 2012 Euro IV for PM standard unmodified. Therefore TfL is recommending the inclusion of new clauses to the Scheme Order stating that such vehicles would not meet the required LEZ standards without approved modification. These clauses do not change the vehicles affected by the scheme and are intended to provide clarification for vehicle owners by aligning the Scheme standards with the compliance options practically available to them.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Some new models of vehicles constructed to a higher Euro standard will have been sold before that standard became mandatory for vehicles off the production line. These are referred to as “early adopters”. A small number of new models of Euro IV vehicles, for example, were manufactured and registered before the October 2006 requirement. In order to be able to identify these vehicles TfL would develop a database of these early adopters. Early adopters of Euro IV and V vehicles may be identified as they are eligible for an RPC issued by VOSA, and additional information has been provided by the Society of Motor Manufacturers and Traders. Operators would also be able to provide evidence directly to TfL that the vehicle did meet the LEZ emissions standards, by providing vehicle type approval information.

#### *TfL Recommendation*

TfL considers that the Scheme Order should be modified so that the standards for the proposed LEZ would be based on full Euro standards rather than Euro standards for PM only. However, the standards would still allow vehicle which had been retrofitted to a higher standard, or which meet the higher standard for PM to drive within the proposed LEZ without charge.

### **Theme G: Boundary**

Representations falling within this theme concerned the boundary of the LEZ. Thirty four stakeholders made representations under this theme. These were made up of: 14 London Boroughs, eight business representative organisations, five UK local authorities, three economic partnerships, two health representative organisations, one transport representative organisation and one ethnic and voluntary representative organisation.

The sub-themes are:

- Proposed LEZ area is appropriate
- LEZ should cover a reduced area
- LEZ should cover a larger area
- Inclusion of motorways and trunk roads
- Definition of charging area
- Inclusion of BAA roads
- Detailed boundary issues.

#### **G1: Proposed LEZ area is appropriate**

Five stakeholders, the City of Westminster, the London Borough of Ealing, the Environmental Industries Commission, the Consortium of Bengali Associations and London Ambulance NHS Trust, considered that the proposed area of the LEZ was appropriate.

The City of Westminster suggested that a LEZ covering all of London would be more beneficial than one confined to central areas. The Environmental Industries Commission felt that the boundary as currently proposed would be the most effective option to achieve the necessary benefits.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

TfL notes the support for this proposal.

### **G2: LEZ should cover a reduced area**

Three stakeholders proposed a reduced area of the proposed LEZ.

The Royal Mail and the Association of International Courier and Express Services (AICES) thought that the LEZ should cover a smaller area than proposed at consultation.

Royal Mail in particular thought that pollution was worse inside the North/South circular and that the LEZ should be used to address air quality issues there first. Royal Mail felt that this would mean the proposal would be cheaper to implement and comply with the objective of tackling pollution in the worst affected areas first. The AICES thought that it would be better to see if a LEZ could be successful in a smaller area first before rolling it out across London.

### *TfL Response*

A LEZ covering a smaller area than that currently proposed would provide significantly fewer operators with an incentive to clean up their vehicles and as a consequence would not address a substantial number of pollution hotspots in London that exceed air quality objectives. The air quality and health benefits of the scheme would be substantially reduced if the LEZ covered a reduced area than currently proposed. For example, a LEZ covering the Congestion Charging zone would only bring about some 5% of the health benefits of the LEZ as currently proposed.

As vehicles entering the LEZ also travel significant distances outside Greater London, the LEZ boundary as proposed would also bring about significant Air Quality benefits outside London as well.

The introduction of a LEZ in central London up to the North/South Circular could lead to potential problems from vehicles switching to alternative routes around the LEZ. This could increase congestion on these routes and offset the air quality benefits of the LEZ, by increasing air pollution around the perimeter of the zone. Such effects would not be a problem for a London wide scheme, because most 'through trips' across London already use the M25.

### **G3: LEZ should cover a larger area**

Three stakeholders felt that the LEZ should be extended in order to maximise the health benefits.

Healthy Southwark Partnership believed that action should be taken to reduce any negative health effects for those living outside the LEZ. To achieve this,

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

they advocated the extension of the LEZ nationally. Transport 2000 also considered that the LEZ should cover a larger area.

The Royal Borough of Kingston upon Thames requested that the boundary be extended to cover the whole borough so all residents can enjoy the benefits that the LEZ would bring. It also noted that the proposed boundary does not coincide with the boundary of the London boroughs with the adjoining counties as it tries to provide 'escape' routes for non-compliant vehicles. While the Royal Borough of Kingston upon Thames says that it understands the reason for the boundary being designed this way, it should only be used for an initial period.

### *TfL Response*

TfL has no powers over roads outside Greater London and therefore cannot extend the LEZ beyond the GLA boundary. Other local authorities have similar responsibilities for meeting national air quality targets and a number of them may consider the possibility of introducing environmental zones in their areas. TfL is cooperating with these authorities on other transport issues, where the legal powers allow, and is certainly willing to share its expertise with these authorities.

As vehicles travelling within the LEZ also travel significant distances outside Greater London the LEZ will bring significant Air Quality benefits outside London as well.

It is proposed that the boundary of the LEZ would be similar to that of the London Lorry Control Scheme (LLCS), which covers almost all of Greater London. TfL has, as far as possible, sought a boundary that most widely covers the Greater London Authority area to maximise the benefits of the scheme. In seeking this objective, TfL were mindful of the need to offer drivers of vehicles which do not meet the LEZ emissions standards the opportunity to safely U-turn or divert away from the zone immediately prior to the point of entry. Without this option, such drivers would have little choice but to enter the zone and pay the charge. The proposed LEZ therefore excludes small areas of the Royal Borough of Kingston upon Thames to allow for this. TfL does not consider it practicable to plan to change the boundary after an initial period of implementation, because this would run the risk of confusing operators, especially those who rarely drive into London.

### **G4: Inclusion of motorways and trunk roads**

Twenty two stakeholder responses to this sub-theme advocated the inclusion of the motorways and trunk roads in the LEZ. These included: London Councils, eight London boroughs (City of Westminster, Hillingdon, Hounslow, Kingston upon Thames, Ealing, Hammersmith and Fulham and Royal Borough of Kensington and Chelsea), three contiguous authorities (Essex County Council, Slough Borough Council and Hertfordshire County Council), the Federation of Small Businesses and BAA.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Many of these stakeholders felt that it would make the boundary of the scheme clearer and in general, easier to understand. It was also felt that this would ensure some of the major pollution hotspots would be included in the scheme.

The City of Westminster was one of the advocates of including motorways and trunk roads in the LEZ, but only on the proviso that this would not delay the start date of the LEZ. The Thames Gateway London Partnership said that the M25 should, despite mainly falling outside the GLA boundary, be included within the scheme in order to maximise the health benefits of the Scheme.

BAA, the London Borough of Hillingdon and the London Borough of Hounslow wanted trunk roads to be included in the LEZ. In particular, the M4, M4 spur, A4, A3113 and Terminal 5 spur from the M25, so that there would be no 'loophole' around Heathrow which would allow non-compliant vehicles to enter the Heathrow area.

Both Essex County Council and the Federation of Small Businesses felt that motorways and trunk roads should be included in the scheme, with the exception of the M25. This was to ensure that the M25 remained the main diversionary route around the LEZ. The London Borough of Merton felt that trunk roads but not motorways should be included in the LEZ.

Eleven stakeholder responses to this sub-theme advocated the exclusion of motorways and trunk roads from the LEZ. The London Borough of Barnet felt that it would be too complex to implement for limited air quality benefits. The Central London Partnership was concerned that including motorways and trunk roads within the LEZ would cause delays to the implementation of the scheme. The Association of International Courier and Express Services (AICES) stated that motorways should be excluded from the proposal because vehicles may enter the motorway for a short distance without being aware of the LEZ, and be unable to exit the Zone.

### *TfL Response*

TfL recommends that motorways and trunk roads (excluding the M25) are included in the LEZ as far as practically possible. TfL is not recommending that the M25 be included in the LEZ as it is an appropriate diversionary route for vehicles to avoid driving within the LEZ.

The additional air quality and health benefits of including motorways and trunk roads would be small, but the inclusion of these roads would significantly simplify the LEZ boundary and associated signage and minimise the risk of confusion about where the zone applies.

TfL recommends the inclusion of the M1 south of London Gateway Services, the M4 east of Junction 3 and the M4 spur to Heathrow.

Under paragraph 9(7) of Schedule 23 to the GLA Act, consent from the Secretary of State for Transport is required if a trunk road or motorway is to

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

be included in the LEZ and TfL is negotiating as to this consent. His approval is required on issues affecting trunk roads and motorways including where the boundary of the LEZ is drawn, the signage and enforcement on trunk roads and motorways. TfL has agreed to fund the cost of signing of the proposed LEZ, including reimbursement of the Secretary of State's costs in installing and maintaining signs. Agreement from the Secretary of State on the inclusion of trunk roads and motorways within the LEZ would be required before the Mayor could confirm the Scheme Order, which includes these roads. The negotiations are well advanced, and TfL anticipates that agreement can be reached before the date proposed for the Mayor to make his decision on the Order.

It is not possible to include the A3113 as it forms the diversion route for traffic approaching along the A4. It should also be noted that the A4 within London is not a trunk road. The M11 was not proposed for inclusion in the LEZ as it has no junctions inside London where vehicles can U-turn to escape entering the zone. It is not possible to include the Terminal 5 Spur as the point at which traffic leaves the M25 to join the spur is outside London. However, as indicated below, BAA have consented to the inclusion of their landside private roads within the LEZ. The inclusion of these roads would ensure that some of the worst pollution hotspots in the GLA area are included in the LEZ.

Should the Mayor confirm the Scheme, TfL would place advance signs at strategic locations outside London, by agreement with the Highways Agency and relevant County Councils. These signs would warn drivers of relevant vehicles that they are approaching the LEZ. The boundary has been designed to give drivers of affected vehicles who do not wish to enter the zone a suitable opportunity to divert or make a safe turn away from the zone. This is covered in more detail in *Theme O: Streetscape* and *Theme Q: Traffic Impacts*. In addition, there would be an intensive operator and public information campaign in advance of the proposed scheme commencement in February 2008.

#### **G5: Definition of charging area**

Both the London Borough of Hammersmith and Fulham and the Royal Borough of Kensington and Chelsea were concerned that the Scheme Order designates the charging area as the whole of Greater London. They believe this is confusing as the actual LEZ boundary is a slightly smaller area. The London Borough of Hammersmith and Fulham were also concerned that the boundary plans accompanying the Scheme Order are not that clear.

#### *TfL Response*

The Scheme Order defines the charging area as the whole of Greater London and the area to which the Scheme applies. This is to enable enforcement practices to take place across the whole GLA area.

TfL has made every effort in published material to make clear that the LEZ boundary does indeed deviate from the GLA boundary in some cases. If the Mayor decides to proceed with the implementation of the LEZ then TfL would

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

seek to ensure that any future public information material makes this point clear.

#### **G6: Inclusion of BAA roads**

BAA confirmed that it is willing to give consent to the LEZ applying to their private landside roads within the Heathrow area. These roads were already included in the Order as published.

The London Borough of Hounslow requested confirmation as to whether or not TfL needs the permission of BAA to include their roads in the LEZ.

#### *TfL Response*

TfL requires the permission of BAA to include their roads in the scheme as they are not public highways. These roads are private roads for which BAA is responsible.

TfL welcomes the consent given by BAA to include their roads within the LEZ. Further detailed discussions would continue to take place to ensure agreement on operational issues.

#### **G7: Detailed boundary issues**

Nine London boroughs and contiguous authorities and BAA raised detailed boundary issues. These are listed, together with TfL's responses to each point, in Appendix 5 of this Report.

#### *TfL Recommendation*

Subject to the successful conclusion of discussions with the Highways Agency and DfT, TfL recommends the inclusion within the LEZ of Highways Agency administered motorways (excluding the M25) and trunk roads within the GLA boundary.

TfL recommends a number of detailed boundary changes in accordance with the table at Appendix 5 to this Report.

### **Theme H: Operations**

Representations falling within this theme concerned the operational aspects of the LEZ. Twenty stakeholders made representations under this theme. These were made up of: nine business representative organisations, six London Boroughs, one UK local authority, one economic partnership, one health representative organisation, one transport representative organisation and one ethnic and voluntary representative organisation.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The sub-themes are:

- Hours of operation
- Payment of the LEZ charge
- General operational processes
- Registration.

### **H1: Hours of operation**

Ten stakeholders made representations concerning the hours of operation of the proposed LEZ. These included: the London Borough of Hillingdon, the Confederation of Passenger Transport (CPT), the Road Haulage Association (RHA), the Guild of British Coach Operators, the Federation of Small Businesses (FSB) and the Showmen's Guild of Great Britain.

There were six representations from stakeholders which opposed the hours of operation of the LEZ as being a 24 hour period, midnight to midnight. The Confederation of Passenger Transport, Royal Mail, Federation Small Businesses, Guild of British Coach Operators, and the Showman's Guild of Great Britain all thought that these hours of operation were unfair on those operators whose businesses happen to need to operate at night. The Federation of Small Businesses considered that the Mayor of London's policies encourage businesses to operate outside peak hours and for that reason it was unfair to make them liable for two LEZ charges if they operate before and after midnight.

Four stakeholders made representations under this theme which support the proposals for the LEZ to operate 24 hours, seven days a week, as proposed in the consultation on the LEZ Scheme Order. The London Borough of Hillingdon felt that if the LEZ did not operate seven days a week then the air quality and health benefits would be eroded.

#### *TfL Response*

TfL proposes that the LEZ operate 24 hours a day, seven days per week. If this were not the case then the air quality and health benefits of the scheme would be eroded.

It is anticipated that only a minority of operators would choose to pay the LEZ charge to bring non-compliant vehicles into the zone and TfL's analysis shows that only a very small number indeed would be affected by driving in the zone over the midnight period. Also, the charge has been set at such a level that this option would only be economical for vehicles used very infrequently in the zone. Rather, the LEZ would encourage operators to clean up their vehicles as an alternative to paying the LEZ charge. As a result, it is felt that the impact on operators of the LEZ hours of operation as proposed during the Scheme Order consultation would be low.

TfL does not therefore recommend any amendment to the scheme that would enable operators who drive within the proposed zone before and after midnight to pay only once.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

## **H2: Payment of the LEZ charge**

Five stakeholders made representations concerning the payment of the LEZ charge. The British Vehicle and Rental Leasing Association (BVRLA), the London Borough of Hammersmith and Fulham and the London Borough of Hounslow suggested or questioned whether the administration of the LEZ payments system be integrated with the Congestion Charging payments system. The BVRLA believed that it would be logical to pay both the LEZ and Congestion Charge through one call centre or website.

The Guild of British Coach Operators requested that there be a facility to pay the LEZ charge the day after a non-compliant vehicle entered the LEZ.

Both the London Borough of Hammersmith and Fulham and the Royal Borough of Kensington and Chelsea were concerned that the proposal allows payment of the LEZ charge by cheque up to and including the day of travel into the LEZ. This could cause potential problems if the paperwork and payment were to go missing.

The Royal Borough of Kensington and Chelsea also stated that a clear list of methods of payment for the LEZ charge should be widely publicised.

### *TfL Response*

The Scheme Order states that the LEZ charge could be paid via the web, call centre and by post. Given that payment volumes would be expected to be much lower than for Congestion Charging, it would be operationally impractical to offer such a wide range of payment methods.

As with the Congestion Charge, those who own non-compliant vehicles who wish to travel into the LEZ would be able to pay the LEZ charge via a call centre. Callers to the proposed LEZ call centre would be able to be transferred to the Congestion Charging call centre to make a Congestion Charging payment, and vice versa. The LEZ and Congestion Charging websites would however be separate to avoid customer confusion between the two schemes, which would have very different purposes.

There would be a facility for the charge for non-compliant vehicles to be paid the next day. The LEZ charge can be paid up to 64 working days in advance of the day of travel, on the day of travel or up to midnight on the next working day after the day of travel.

The Scheme Order includes a provision for the payment of the LEZ charge by cheque. The administrative processes for the LEZ would be in line with those which are already operational for the Congestion Charging Scheme. Should the Mayor confirm the Scheme Order, TfL would make clear to operators in publicity material exactly what the procedures would be regarding payment by cheque. Payment of the LEZ charge via the web and call centre can however be made up to midnight on the next working day after the intended day of travel.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### **H3: General operational processes**

Four stakeholders made representations concerning the general operational processes for the LEZ. The City of Westminster welcomed the process of using the date of first registration as the primary method of identifying compliant and non-compliant vehicles driving within the LEZ.

The Freight Transport Association believed that it would be very difficult for operators to work out the compliance status of their vehicle due to the complexity of the scheme and the number of databases needed to identify vehicle compliance (e.g. DVLA and RPC data, exempt vehicles and Euro I & II vehicles compliant with the Euro III standard for PM). Essex County Council was also concerned that it would be difficult to identify the vehicles that have been retrofitted with pollution abatement equipment.

CBI London requested that the administrative processes are designed to ensure minimal costs to businesses.

#### *TfL Response*

Where possible, and in the majority of cases, TfL would be able to identify the Euro standard of a vehicle through the date of first registration, identifiable from the vehicle registration mark. This register would be accessible to operators via the website and call centre.

Operators would first be able to understand the original compliance status of their vehicle by checking the date of first registration. HGVs first registered before 1 October 2001 would be assumed to be Euro III compliant and those first registered before 1 Oct 2006 would be assumed to be Euro IV compliant. LGVs first registered before the 1 January 2002 would be assumed to be Euro 3 compliant. Operators of vehicles which are older than these specified dates might be able to retrofit particulate abatement equipment and obtain a Reduce Pollution Certificate (RPC) or Low Emission Certificate (LEC) to prove their compliance with the LEZ standards as set out in more detail under *Theme F: Vehicle emission standards*. TfL would be able to identify these vehicles through access to DVLA data or a register of those vehicles which have obtained a Reduced Pollution Certificate or Low Emission Certificate from the Vehicle Operator Service Agency (VOSA).

To help operators to understand whether or not their vehicles are compliant with the LEZ they would be able to use a 'vehicle compliance checker' on TfL's website or by contacting the LEZ call centre. This vehicle compliance checker uses links to TfL's database of compliant vehicles and information on the vehicles which are exempt or entitled to a 100% discount from the scheme, to assess the compliance status of each vehicle from the vehicle registration mark.

There would be some instances where vehicles would need to register to comply with the LEZ scheme in order for TfL to be aware that they meet the LEZ standards. These are described in more detail below and under Theme I: Enforcement. Full details of the vehicle types that would need to be

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

registered with TfL would be publicised if the Mayor decides to confirm the Scheme Order and go ahead with implementing a LEZ. There would be no administration fee for operators to register their compliant vehicles with TfL.

#### **H4: Registration**

The London Borough of Barking and Dagenham was concerned that there is a lack of information on how non-UK operators would be able to register with TfL. Similarly, the London Borough of Hammersmith and Fulham suggested that it is made clear in advance which categories of vehicle are exempt from the Scheme and therefore need to be registered with TfL.

The Thames Gateway Partnership acknowledged that the proposals on how vehicle compliance would be registered are sufficiently clear.

The London Borough of Hammersmith and Fulham was also concerned that some non-compliant vehicles might be able to be registered as compliant or that non-compliant vehicles could get on to TfL's register of compliant vehicles.

#### *TfL Response*

The Scheme Description and Supplementary Information document that accompanied the Scheme Order consultation was not designed to set out all the detailed registration processes. If the Mayor of London decides to confirm the Scheme Order there would be a significant information campaign which would set out in detail which vehicles would need to be registered with TfL and the process for doing so. This would include an operator leaflet which would be direct mailed to businesses and organisations in London and poster and radio adverts alerting operators about the Scheme.

Most operators based in Great Britain would not have to register their vehicles with TfL, including those which are exempt. However, the following vehicles would need to be registered directly with TfL to either prove that the vehicle meets the LEZ emissions standards, or in the case of showman's goods vehicles, to be eligible for a 100% discount and therefore not be subject to a charge.

##### 1. GB registered vehicles:-

- Some showman's goods vehicles that may be entitled to a 100% discount from the LEZ. Detailed information on this proposed 100% discount is provided under *Theme K: Discounts and exemptions*.

##### 2. NI registered vehicles:-

- All Northern Ireland registered vehicles which would come within the scope of the proposed LEZ would have to be registered with TfL. This would include vehicles that have received an RPC from VOSA NI. TfL is currently working with DVLNI and VOSA NI to seek to automate this process.

### 3. Non GB registered vehicles:-

- All non-GB registered vehicles affected by the LEZ would have to be registered with TfL if they meet the LEZ emissions standards and are to be used within the LEZ.
- Non-GB registered vehicles eligible for an exemption or 100% discount would have to be registered with TfL.

Registration information would be made available via TfL's website and would also be available in foreign languages to assist non-UK operators. Non-UK operators would be able to download registration forms from the web and then post them to TfL along with evidence of their emission standard.

If for any reason an operator believes that the details held by TfL about their vehicle are incorrect, in particular if they believe that their vehicle is compliant when the LEZ register records it is as non-compliant, they would be able to submit a registration form along with documentary evidence of the compliance status of their vehicle.

It is unlikely that any vehicle which is not compliant with the LEZ emissions standards would appear as compliant on TfL's register. However, if such an instance did occur, the LEZ Scheme Order provides the powers for TfL to remove the vehicle from the register and notify the registered keeper.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

### **Theme I: Enforcement**

Representations falling within this theme concerned the enforcement of the proposed LEZ. Thirty stakeholders made representations under this theme. These were made up of: 15 business representative organisations, 11 London boroughs, two economic partnerships, one UK local authority and one London political representative.

The sub-themes are:

- Enforcement of foreign-registered vehicles
- Concerns regarding database accuracy
- Concerns regarding drivers evading fixed cameras
- Persistent evaders
- Transfer of liability
- Other enforcement issues.

#### **I1: Enforcement of foreign-registered vehicles**

Twenty two stakeholders expressed concerns over how foreign-registered vehicles would be enforced against. These included: the GLA Labour Group,

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

London Councils, six London boroughs (Barking and Dagenham, Hammersmith and Fulham, Havering, Hounslow, Merton and Kensington and Chelsea), the Olympic Delivery Agency (ODA), the Guild of British Coach Operators, CBI London, the Federation of Small Businesses (FSB), the Road Haulage Association (RHA), the Freight Transport Association (FTA), the Society of Motor Manufacturers and Traders (SMMT) and London First.

In particular, there were concerns that as there is no effective mechanism for enforcing civil penalties against foreign-registered operators, this would place UK operators at a competitive disadvantage. The Greater London Assembly Labour Group appreciated that TfL had undertaken work to deliver solutions to the problems of cross-border enforcement, and suggested that further progress could be made by working with the UK industry and its European counterparts. The Guild of British Coach Operators felt that the LEZ should not be introduced until TfL could demonstrate a workable system to ensure that foreign-registered coaches are subject to the same restrictions and penalties as UK vehicles. London Councils felt that TfL had not properly addressed the issue of enforcement of foreign-registered vehicles.

The London Borough of Hounslow, the Royal Borough of Kensington and Chelsea and the Society of Motor Manufacturers and Traders stated that there was a possibility that some UK operators may register their vehicles overseas in order to avoid charges or enforcement action.

#### *TfL Response*

The LEZ would be applicable to overseas operators and UK-based ones. Vehicles for which registration data was not available from the country of origin would have to be registered with TfL in advance of driving within the LEZ. Information on date of first registration of the vehicle would be required, and would be used as a proxy for the Euro standard of the vehicle. Where relevant, documentary evidence relating to the fitting of abatement equipment would also be required.

TfL has arrangements in place with an experienced Europe-wide debt recovery agency for the service of Penalty Charge Notices and to try to recover penalties incurred by non-UK registered vehicles where access to the relevant vehicle keeper data is available. However, TfL currently has no legal powers available to it abroad to enforce unpaid penalties incurred by operators based outside the UK if penalties remain unpaid.

TfL, together with London Councils (which has an interest in enforcement of parking offences), has been lobbying the Government and EU institutions to improve enforcement of non-criminal traffic offences by non-UK residents. TfL is encouraging cross-Government action to create a plan to fill the apparent gap between the civil and criminal jurisdictions into which civil traffic enforcement falls. In the longer term, TfL would support action at EU level to develop law which would complement legislation already in place for criminal offences. Ideally, this would allow civil penalties issued in one Member State to be enforced in another.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

In the shorter term, TfL is willing to develop bilateral agreements on data sharing and enforcement with partners in other EU Member States. However, such bilateral agreements would require changes to domestic legislation to allow effective data exchange through DVLA, and in this respect TfL continues to lobby for appropriate legislative amendments.

Whilst it is possible that some UK operators would choose to move their operations abroad or register their vehicles abroad in order to avoid the LEZ daily charge or penalty charge, the Scheme would still apply to all vehicles operating in London, regardless of where they are registered. They would also be subject to immobilisation and removal in the case of persistent evading. Furthermore, it is likely that the overhead costs of moving their operations overseas would deter most operators from relocating solely as a means of avoiding the LEZ charges and penalties.

## **I2: Concerns regarding database accuracy**

The London Borough of Brent supported the use of a central database to identify compliant and non-compliant vehicles. However, the Freight Transport Association was concerned that the LEZ would be reliant on a number of different databases, which could make it complex and expensive to run. The Finance and Leasing Association had concerns over the accuracy of the TfL database of compliant and non-compliant vehicles, and recommended that it be aligned with DVLA's Vehicle Keeper Database.

### *TfL Response*

TfL would hold a register of compliant and non-compliant vehicles, largely built up from data held by DVLA. TfL would establish the emission standard of a vehicle based on the vehicle type, date of first registration and relevant information provided by the Vehicle and Operator Services Agency (VOSA) and the Society of Motor Manufacturers and Traders (SMMT). The TfL register would include information on vehicles which have been fitted with pollution abatement equipment and have received a Reduced Pollution Certificate (RPC), and meet the proposed LEZ standard. This would be updated regularly.

Any operators who believe that their vehicle is incorrectly classified on the TfL register would have to register the vehicle directly with TfL, providing appropriate evidence that the vehicle meets the LEZ emission standards. Further details on registration are included under *Theme H: Operations*.

## **I3: Concerns regarding drivers evading fixed cameras**

Six stakeholders submitted representations expressing concern that operators would be able to avoid detection by using smaller, unsuitable roads which are less likely to have fixed detection cameras. These included: four London boroughs (the London boroughs of Barking and Dagenham, Barnet, Hammersmith and Fulham and Hillingdon), Surrey County Council and London Councils.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The London Borough of Barnet was concerned that since fixed camera locations would be known, and mobile enforcement units would be identifiable, it would be relatively easy for non-compliant vehicles to drive in the LEZ and avoid detection. They could also be willing to take this chance since the penalty charge was only two and a half times greater than the daily charge.

London Councils was concerned that large areas of borough roads would need to be covered by mobile enforcement cameras. The effectiveness of these cameras would need to be kept under review, especially in the early part of the LEZ scheme, and there may be a need to increase coverage if they became easy to avoid. The London Borough of Hammersmith and Fulham made the same point, and suggested that boroughs could be involved in identifying 'hot spots' where mobile enforcement could be required. Surrey County Council felt that mobile enforcement cameras would be needed on every entry point to the LEZ.

The London Borough of Barking and Dagenham was concerned that vehicles would be able to 'rat-run' to avoid the charge, but welcomed the use of mobile patrol units to supplement the ANPR camera network.

The Finance and Leasing Association supported the use of ANPR cameras for LEZ enforcement. The London Borough of Hillingdon sought assurance that the LEZ ANPR cameras would only be used for enforcing the LEZ.

#### *TfL Response*

TfL would install a network of fixed cameras across Greater London to enforce the proposed LEZ. These would be supplemented by mobile enforcement units that could be deployed flexibly as required. These mobile units would be able to target areas potentially at risk of rat-running, and TfL would use monitoring information to inform the location of these units, which would be kept under permanent review. TfL would work with boroughs to identify suitable locations for mobile units. Placing cameras at every entry into the LEZ is considered both impractical and not cost-effective compared to the flexibility offered by placing fixed cameras on key strategic routes supplemented by mobile units.

Additional fixed cameras would be installed in 2010 when the Scheme was extended to include heavier LGVs and minibuses, as these vehicles would be more likely to use smaller roads for their journeys.

Within the enlarged Congestion Charging zone, the existing cameras would also be used to enforce the proposed LEZ. There are no plans to use the LEZ fixed enforcement cameras on the Transport for London Road Network for any other purpose other than LEZ enforcement.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

#### **I4: Persistent evaders**

The London Borough of Hammersmith and Fulham and the London Borough of Hounslow queried how the large vehicles included in the proposed LEZ would be immobilised and removed, if they were identified as persistent offenders. There could be particular implications for coaches, which could have large amounts of personal possessions on board.

The London Borough of Hammersmith and Fulham also queried how the authorised person would know that a vehicle was a candidate for immobilisation and removal. The borough also asked how situations would be co-ordinated in which an illegally parked vehicle was also liable for LEZ enforcement.

The Finance and Leasing Association sought further information about the procedures for seizing vehicles.

#### *TfL Response*

Persistent evaders of the Low Emission Zone would be subject to clamping or removal action. A persistent evader is defined as a vehicle which has three or more outstanding Penalty Charges for which no representation or appeal is outstanding. A list of these persistent evaders would be provided to TfL's on-street enforcement contractor who would actively seek the offending vehicles using mobile ANPR vehicles. Once identified, on-street checks would be carried out and, in the first instance, the vehicle would be clamped and if no payment made, removed to a secure storage facility.

As with persistent evader enforcement of Congestion Charging PCNs, TfL is committed to working with the Boroughs and would apply the same business rules as those utilised successfully in the operation of Congestion Charging. There would be standing instructions to remove rather than clamp any vehicle which is also parked illegally and which has not been enforced against by the relevant borough. No action would be taken against any vehicle which is already subject to enforcement action by the relevant borough. In respect of coaches, TfL would normally clamp in the first instance thus allowing the retrieval of any valuables before removal, if no payment is made for the clamp release.

TfL has held initial discussions with VOSA with regards to joint on-street operations and the sharing of information on persistent evaders between both parties. It is expected that with VOSA's new powers to stop vehicles and the likely high levels of commonality between persistent evades of the LEZ and vehicles which VOSA would be interested in, such operations would be an effective enforcement tool should the LEZ be implemented.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### **I5: Transfer of liability**

The Finance and Leasing Association (FLA) urged TfL to extend the Congestion Charging arrangement by which a finance company can provide TfL with a 'statement of liability' for any charges or penalty incurred to the proposed LEZ. For the sake of consistency, it was recommended that hire-purchase agreements be included in this arrangement. The FLA stated that in its 2006 Simplifications Plan, DfT published measures extending the transfer of liability to the customer where the lease or hire period is greater than six months. FLA asked for this to be included in the LEZ Scheme.

The British Vehicle, Rentals and Leasing Association also urged TfL to put in place measures that allowed such a transfer of liability, stating that its members would not be aware of where hirers intended to use their vehicles.

#### *TfL Response*

The circumstances whereby liability can be transferred are defined in the Road User Charging (Enforcement and Adjudication) (London) Regulations 2001 as amended and the Road user Charging (Charges and Penalty Charges) (London) Regulations 2001 as amended. TfL is required to work within these regulations and a recipient of a Penalty Charge Notice may make a representation on the grounds that:

"We are a vehicle hire firm and the vehicle was hired out under a hire agreement on the date of contravention and the hirer signed a statement of liability for any resulting penalty charges".

TfL is aware that the DfT has proposed that the transfer of liability measures be extended to lease or hire periods of over six months, but understands that these measures are highly unlikely to be in place by the time of the possible commencement of the LEZ. The regulations, however, preclude the transfer of liability for vehicles on hire purchase agreements. Whilst TfL has no control over the content of contracts between leasing organisations and hirers, TfL would work with the industry and other organisations to ensure that at the time of agreement and contract signing, all those hiring and leasing vehicles are aware of their obligations under the current regulations. At the same time, TfL would work with the industry to ensure that their vehicles meet the proposed LEZ standards.

### **I6: Other enforcement issues**

Harry Cohen MP was unsure as to how enforcement would be carried out for the LEZ.

BAA Heathrow offered the use of its roads and facilities for the necessary enforcement equipment. It also offered to provide access to data collected by existing ANPR cameras in return for access to TfL data collected on or around the airport.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Thames Gateway London Partnership was concerned that the technology required would become redundant as older, non-compliant vehicles reached the end of their working lives. It therefore sought an assurance that every effort would be made to minimise the amount of investment in equipment required.

The London Borough of Hammersmith and Fulham felt that the registration of non-chargeable vehicles should be monitored to ensure that only those who really qualified for a 100% discount were given this. The London Borough of Hammersmith and Fulham, along with London Councils, also asked whether apparently compliant vehicles would be subject to any checks, including on-street emissions checks.

The FLA recommended that TfL carry out a finance check when PCNs are issued against a vehicle. This would allow TfL to find out quickly whether a vehicle was subject to an outstanding finance agreement and with which company. This would provide leasing providers with a quick recovery of assets, and cut bureaucracy, administration and storage costs for TfL. The FLA also urged TfL to consider a protocol between TfL and the FLA along the same lines as the Congestion Charging protocol under development which would resolve matters relating to outstanding PCNs and the storage costs of impounded vehicles.

The London Borough of Hammersmith and Fulham queried what would happen to a vehicle which is not registered with TfL, but which is compliant and 'non-chargeable' and being driven regularly in the LEZ. It also asked TfL to ensure that PCNs would be issued correctly as soon as the LEZ was introduced and not in a way that would be open to legal challenge.

The Guild of British Coach Operators was concerned about the impact of unexpected road closures on the periphery of London, particularly closures of sections of the M25. In such circumstances, non-compliant vehicles by-passing London may be compelled to enter the fringes of the charging zone. The Guild stated that they should be exempt from charging and there should be explicit reference to these circumstances, so that there is clarity of the rules and procedures in such cases.

The London Borough of Newham felt that TfL would need to be prepared to make changes to its enforcement strategy if projected enforcement targets were not met.

### *TfL Response*

The LEZ would be enforced using Automatic Number Plate Recognition (ANPR) cameras similar to those used successfully for Congestion Charging. Fixed cameras would be supplemented by mobile units fitted with ANPR cameras. The ANPR cameras would monitor vehicles operating within the LEZ and create individual records of each vehicle. TfL would maintain a database of compliant and non-compliant vehicles using data from licensing authorities such as the DVLA and VOSA. Registration by operators would be required if vehicle emission characteristics could not be determined from the data available. When operators drive their vehicles into the zone their vehicles' records would be compared against the TfL vehicle compliance database and those that did not meet the emission standards of the LEZ would be required to pay the LEZ charge for each day of use.

TfL welcomes the support from BAA relating to information sharing. However, due to camera suitability and evidential integrity issues, it is unlikely that TfL would be able to use the BAA camera system for enforcement purposes. TfL would continue to work with BAA on the use of cameras for enforcement and monitoring, whilst ensuring that data protection protocols would be respected.

The infrastructure used for the LEZ would be similar to that used for the Congestion Charge, which has proved to be successful. TfL does not consider that the equipment would become redundant with time as older, non-compliant vehicles reached the end of their working lives, because from 2010 heavier LGVs and minibuses would come within the scope of the LEZ and from 2012 the LEZ standard would become Euro IV for HGVs, buses and coaches. TfL does not consider it appropriate at this stage to be making commitments about the future of the LEZ after 2015. Any such decision would have to be taken closer to that date in the light of the scheme's performance, air quality at the time and what national and EU air quality objectives were in place at that time.

Very few vehicles would be eligible for an exemption or a 100% discount from the LEZ scheme. TfL would be able to identify those vehicles eligible for an exemption automatically (historic vehicles, non-road going and military vehicles). Operators of showman's vehicles which are the only category of vehicle eligible for a 100% discount would have to present evidence to support their applications.

TfL would primarily determine the compliance status of a vehicle from its date of first registration, which in the majority of cases would reliably identify compliant vehicles. In the case of historic vehicles, date of construction would be used. Those vehicles that are fitted with abatement equipment or are otherwise modified in order to meet the LEZ emission standards would require the modification to be certified by VOSA. This certification would have to be renewed annually with VOSA to ensure that the vehicle still met the required emissions standards.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

TfL has considered the use of roadside emission testing of vehicles but this would not be cost-effective. Roadside emissions tests would only be able to identify the most polluting vehicles as the current tests are insensitive. It would therefore not be possible to determine the Euro class of a vehicle from an emissions test. Roadside testing also requires the involvement of Vehicle and Operator Services (VOSA) or the police to stop vehicles.

TfL would develop a database of non-compliant and compliant vehicles derived mainly from the DVLA database and information obtained from VOSA. Only a very few operators would therefore be required to register their compliant vehicles with TfL. Should the Mayor confirm the Scheme Order allowing the proposed LEZ to be implemented, TfL would undertake an extensive information campaign to make operators aware of what action, if any, they would need to take to register their vehicles. In the case where operators of compliant vehicles receive a PCN, they would be given the opportunity to provide evidence of their compliance. If TfL accepted this evidence, the vehicle details would be included on the database of compliant vehicles, and the PCN would not be enforced.

TfL would work closely with traffic authorities around London, including the Highways Agency. In cases of major incidents involving road closures and diversions, TfL would suspend the scheme temporarily in that area as necessary, so that Penalty Charge notices would not be issued. This is a standard procedure for the congestion charging zone and similar procedures would be applied to the Low Emission Zone.

TfL would keep the enforcement strategy under review, should the LEZ be implemented, and would be prepared to make any necessary changes.

*TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

## **Theme J: Level of charge**

Representations falling within this theme concerned the level of the charge for the proposed LEZ. Fifteen stakeholders made representations under this theme. These were made up of eight London boroughs, two business representative organisations, two economic partnerships, one ethnic / voluntary representative organisation, one non-departmental government organisation, and one health representative organisation.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The sub-themes are:

- All charges are correct
- Charges are too low
- Charges are too high
- Other charge level issues.

### **J1: All charges are correct**

Nine stakeholders positively agreed with the level of charge proposed for the daily charges and penalty charges to encourage operators to modify or replace their non-compliant vehicles. These included: the Environment Agency, four London boroughs (Ealing, Greenwich, Hillingdon and the Royal Borough of Kingston upon Thames) and West Sussex County Council.

The Royal Borough of Kingston upon Thames supported the principle of charges to meet the objectives of the LEZ as it considered it is likely to influence the fitting of abatement equipment to non-compliant vehicles.

Thirty six per cent of the public considered that the proposed level of charge was appropriate to encourage operators to make their fleets compliant, as did 27% of businesses.

*TfL Response:*

TfL notes the support for this proposal.

### **J2: Charges are too low**

The London Borough of Hammersmith and Fulham considered that the effectiveness of the LEZ would be compromised if a high number of the most polluting vehicles continued to drive into London (not deterred by the level of the charge) and that support for the Scheme could be lost if it is largely regarded as a money making scheme rather than one intended to reduce pollution and improve air quality. The London Borough of Barnet noted that the penalty charge is small in relation to the daily charge, representing only 2.5 times the daily charge if payment is made within 14 days. The London Borough of Barnet commented that for people willing to persistently evade, the 'breakeven' point is the equivalent of being caught once every two and a half days. The London Borough of Hammersmith and Fulham expressed concern that the level of charges seemed lower than the ranges highlighted in the Transport and Air Quality Strategy Revisions consultation. It felt that this could compromise the effectiveness of the Scheme.

Twenty five per cent of the public felt that the proposed charge was too low, as did nine per cent of businesses.

*TfL Response*

The proposed daily charge has been set at a level intended to encourage the vast majority of operators who drive in London to make their fleets compliant,

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

whilst allowing operators who drive rarely in London to use non-compliant vehicles if they pay the daily charge.

The revenues of the scheme are not expected to offset the costs of implementing and operating the scheme.

Should an operator of a non-compliant vehicle not pay the daily charge for driving within the Zone, then following the service of a PCN, a penalty charge would apply. The penalty charges have been set at levels that mean that it would make more economic sense for an operator to take action to make their vehicles compliant, such as fitting pollution abatement equipment, rather than pay the penalty charge more than a couple of times (or the daily charge more than five to ten times). Furthermore, as discussed in more detail under *Theme I: Enforcement*, persistent evaders of the LEZ would be subject to clamping or removal action.

In regard to the comment that the level of charges had changed from that proposed in the earlier consultation on the Mayor's Transport and Air Quality Strategy Revisions, it should be noted that TfL did not state a set level for the daily charge during that consultation, rather that it presented a range of possible charges and penalty charge levels. The levels of charge proposed in the Scheme Order were within that range and were determined after consideration of responses to the earlier consultation as well as other factors such as the results of the Operator Survey carried out in 2006, which examined likely operator behaviour in response to the proposed LEZ.

### **J3: Charges are too high**

The Road Haulage Association, London Ambulance NHS Trust and Royal Mail considered that the proposed charges were too high. Twenty seven per cent of the public who submitted representations using the questionnaire considered that the proposed charge was too high, as did 54 per cent of businesses who submitted representations using the questionnaire.

#### *TfL Response:*

A daily charge of £200 is proposed for non-compliant HGVs, buses and coaches to drive in the LEZ, and £100 for non-compliant heavier LGVs and minibuses. This reflects the relative costs of compliance for these vehicles.

TfL's modelling work suggests that below these levels, the anticipated health benefits of the LEZ would be severely eroded, as more operators would choose to pay the daily charge than to modify or replace their vehicles.

TfL has consulted on a proposed penalty charge of £1,000 for HGVs, buses and coaches and £500 for heavier LGVs and minibuses. TfL believes that this is a level which would discourage operators from taking the risk of not paying the £200 or £100 daily charge. The penalty charge would be reduced by 50% if it were paid within 14 calendar days and increased by 50% if it were not paid within 28 calendar days.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

#### **J4: Other charge level issues**

The Royal Borough of Kensington and Chelsea requested information on the level of compliance predicted to occur with the level of daily charges set and the benefits expected to occur should the charges be higher. These, it said, should have been consulted on in a transparent way.

The London Borough of Hammersmith and Fulham sought clarification as to whether the charges would be subject to any review and Westminster City Council suggested that the penalty and daily charges be maintained at levels that would maximise compliance and minimise the number of operators paying to enter with a vehicle that does not meet the LEZ requirements.

#### *TfL Response*

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 has been set with the aim of achieving this.

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

With the level of charges and penalty charges proposed, the compliance rate for the scheme would be expected to reach over 90% of vehicles once the Scheme had been running for a while. Higher charges than those proposed would not deliver significantly greater benefits than those presented in the consultation materials, as paying the charge is only a viable option for the most infrequent visitors to London. Persuading a few more of these operators to upgrade their vehicles would have an insignificant impact on the air quality and health benefits of the Scheme.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

#### **Theme K: Discounts and Exemptions**

Representations falling within this theme concerned discounts and exemptions from the LEZ. Forty one stakeholders made representations under this theme. These were made up of: 12 London Boroughs, 12 business representative organisations, four health representative organisations, four UK local authorities, three ethnic and voluntary representative organisations, two GLA functional bodies/GLA commissions, two London political representatives, one Government Department and one transport representative organisation.

The sub-themes are:

- General exemptions and clarification
- Not for profit/community organisations

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

- Vehicles used for public service
- Historic vehicles
- Specialist vehicles
- Non-road going vehicles
- Diplomatic vehicles
- Breakdown and recovery organisations
- VOSA testing.

### **K1: General exemptions and clarification**

Twelve stakeholders made representations on this sub-theme. Those from the City of Westminster, the Environmental Industries Commissions and the London Ambulance Service NHS Trust, were in support of the current list of exemptions from the LEZ.

Four organisations requested further clarification on the list of exemptions. The London Borough of Hammersmith and Fulham felt that clear information should be provided on any exemptions and both the London Borough of Hillingdon and the London Borough of Ealing wanted further information on the borough vehicles that would be exempt. The Construction Plant-Hire Association stated that the information provided on which non-road going vehicles would be exempt was not clear. The Ministry of Defence (MoD) sought clarification as to whether the proposed exemption for 'Military Vehicles' would be identical to that for the Congestion Charge. It also wanted TfL to explore the possibility of a full exemption for all vehicles under the control of the MoD.

The London Ambulance Service NHS Trust and the Society of Motor Manufacturers and Traders believed that there should be consistency between the exemptions provided for the Congestion Charge and the LEZ. The Healthcare Commission believed that there should not be any exemptions from the LEZ.

The Central Council of Physical Recreation felt that where retrofitting was not a technical option, grants should be made available to help operators to comply with the Scheme.

West Sussex County Council requested that some leniency be given to operators with five or fewer non-compliant vehicles.

The Caravan Club noted that there would be no discount from the LEZ for residents of London who own motor caravans (as there is for the Congestion Charging scheme).

#### *TfL Response*

TfL recommends a limited number of exemptions or 100% discounts from the LEZ for certain vehicles that are technically unsuitable for retrofitting pollution abatement equipment, conversion to an alternative fuel or re-engining to meet the proposed LEZ emission standards. An exempt vehicle would be one

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

which is non-chargeable and where there would be no requirement for operators to register with TfL, as TfL would be able to identify the vehicle from information provided by DVLA or VOSA. To be eligible for a 100% discount, operators would be required to register with TfL and provide any necessary evidence regarding the vehicle.

In a very small number of cases, vehicles cannot be identified from the DVLA databases or other sources so it would not be possible to establish their emissions standards, or they are not legally required to meet emission test standards when constructed. To ensure the benefits of the LEZ are maintained and to be fair to all operators and vehicle owners, the list of exemptions recommended by TfL is limited. The Scheme Order as consulted upon proposed the following exemptions from the LEZ:

- Historic vehicles constructed before 1 January 1973 (see below);
- UK and foreign registered military vehicles; and
- Non-road going vehicles.

Non-road going vehicle types come under the following DVLA tax classes: agricultural machines (40), digging machine (41), mobile crane (42), works truck (43), mowing machine (44), limited use (77) and road construction equipment (80). Mobile Machinery, which falls within the scope of the European Union Non-Road Mobile Machinery (NRMM) Directive 1997 (which became effective from 1998), is subject to different emissions limits set by that Directive and would be exempted from the scope of the LEZ<sup>1</sup>. Construction equipment within London is covered by the GLA Best Practice Guidance for controlling emissions on construction and demotion sites.

TfL proposes an exemption for military vehicles from the proposed LEZ in a similar way that they are excluded from the Congestion Charging Scheme. Vehicles in the 'green fleet' would be excluded from the proposed LEZ, largely as it would not be possible to establish emissions levels from available data sources. Similarly, vehicles which are being used on a road by a member of a visiting force or a member of a headquarters or organisation would be excluded if TfL is satisfied that they are being used for naval, military or air force purposes. However, TfL does not consider that other MoD vehicles should be exempted from the proposed LEZ, as there are no practical or technical reasons for excluding them.

As set out in sub-theme K4 below, TfL recommends the removal of the current clause from the Scheme Order which states that the exemption applies to historic vehicles provided they are not used on the road for commercial use. TfL also recommends a 100% discount for certain

---

<sup>1</sup> Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997. The Directive covers "non-road mobile machinery", which means any mobile machine, transportable industrial equipment or vehicle with or without bodywork that is not intended to be used to carry goods or passengers on the road, in which an internal combustion engine is installed, for example excavators and other construction equipment. <http://europa.eu.int/scadplus/leg/en/lvb/l21219.htm>

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Showman's Vehicles (see sub-theme K5 below). The discount would apply only to those vehicles which have been custom built and are fitted with a rigid body forming part of the equipment of the show. Operators of these vehicles would need to register with TfL in order to qualify for the discount.

As is set out in more detail under *Theme L: Business impacts*, TfL does not propose to offer grants to operators to assist them in making their vehicles compliant. Nor is there any intention for any special treatment of operators with fewer than five non-compliant vehicles, as this would significantly erode the air quality and health benefits of the proposed scheme. The 2006 Operator Survey showed that around one third of bus and coach operators, almost half of HGV operators and over half of LGV and minibus operators have fewer than five vehicles.

If the Mayor confirms the Scheme Order then a public and operator information campaign would provide further detail on the vehicles that would be exempt or awarded a 100% discount. Both an operator leaflet and detailed information on TfL's website would explain the vehicles discounted or exempt from the LEZ and what, if anything, operators need to do to achieve this status for their vehicles.

## **K2: Not for profit & community organisations**

Both the Central Council of Physical Recreation (CCPR) and West Sussex County Council suggested an exemption for minibuses run by not-for-profit organisations. The CCPR also suggested that the introduction of minibuses to the scheme for these organisations be delayed.

The Olympic Delivery Authority requested that a sympathetic view be taken with regards to some exemption or discount requests, in view of the Mayor and ODA's wider social inclusion objectives.

The London Borough of Hillingdon suggested that consideration be given to an exemption for horseboxes. The GLA Conservative Group were also of this view as they considered that many motorised horseboxes are not used for hire or reward and the cost of compliance would be too high.

The Confederation of Passenger Transport believed that there should not be any exemptions for not-for-profit organisations.

### *TfL Response*

Community transport at its most generic refers to the multitude of operators and organisations that provide transport on a not for profit basis for "socially useful" purposes. TfL recognises and values the essential role these organisations perform, often on a purely voluntary basis. However, some of the vehicles operated by this sector are amongst the most individually polluting of their type, and a range of options are available to operators upgrade their vehicles. There are no technical grounds to exempt these vehicles from the proposed LEZ on the basis of their emissions or ability to comply.

The majority of community transport operators that would be affected drive minibuses, which would not come within the LEZ until 2010 and therefore operators of these vehicles would have longer to comply than HGV or bus and coach operators. Ongoing dialogue with the organisations concerned is believed to be the best way to encourage operators to upgrade their vehicles at this stage and to understand the potential impact the LEZ would have on them. Depending on the issues arising from this dialogue and any other representations received following the possible confirmation of the Scheme Order, TfL would keep under review the need for further support for this sector.

TfL does not recommend a specific exemption for motorised horseboxes. Whilst acknowledging that a large number of horseboxes in the UK are quite old and pre-Euro standard, the numbers of these that visit London are proportionately quite low. When they visit London infrequently, they could pay the charge. Horse boxes that are Euro I or Euro II are able to be retrofitted to at least the Euro III standard, at around a cost of £2,500 to £5,000. TfL considers that as private HGVs emit the same level of pollutants per kilometre driven as commercial HGVs, they should not be exempted from the LEZ

Representations relating to the potential impact of the LEZ on not for profit/community organisations are dealt with in *Theme M: Impacts on the Public and Community Sectors*.

### **K3: Vehicles used for public service**

Thirteen stakeholders made representations concerning exemptions or discounts for vehicles used for public service. These included seven London boroughs (Barnet, Bexley, Bromley, Hillingdon, Islington, Wandsworth and the Royal Borough of Kensington and Chelsea), London Councils and four ambulance services. Both the London Ambulance Service NHS Trust and the St John Ambulance, London (Prince of Wales) District felt that there was a special case for an exemption for some of their specialist vehicles used for incident support. The London Borough of Barnet felt that some consideration should be given to rapid response vehicles (e.g. the London Underground emergency response vehicle) and those used in emergencies.

The South East Coast Ambulance Service NHS Trust and the St John Ambulance (Kent) felt that vehicles used by the fire, police and ambulance services should be exempt from the LEZ. The Ambulance Service Association also felt that NHS ambulances should be exempt from the LEZ.

The London Boroughs of Bexley, Hillingdon, Islington and Wandsworth and London Councils all requested that there be some form of exemption or grants for specialist vehicles operated by local authorities. In particular, these organisations referred to vehicles which do low mileage, are small in number and for which it would be uneconomical to replace, such as winter gritting vehicles or highway maintenance vehicles. It was felt that these vehicles do not significantly contribute to poor air quality and should therefore be exempted from the LEZ. The London Borough of Bromley sought either an

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

exemption or derogation to allow fleet replacement or modification to occur over the lifetime of the vehicles so as not to impose a burden on council tax payers. The London Borough of Barnet in particular expressed concern over the use of public sector funding to upgrade or retrofit these vehicles and the London Borough of Hillingdon was concerned about the costs the LEZ would impose on the borough.

The London Borough of Bexley requested that their specialist vehicles such as mobile libraries be exempt from the LEZ where retrofit options may not be practical and there would be technical difficulties in meeting the proposed LEZ emission standards.

The Royal Borough of Kensington and Chelsea recommended that TfL devise an alternative policy to encourage the replacement of borough vehicles after they reach a certain age.

### *TfL Response*

TfL recognises the vital role the emergency services play in incident support. In particular, the role of not for profit organisations such as St. John Ambulance as key providers of first aid and emergency healthcare services at major events and incidents. However, given the aim of the LEZ is primarily to improve public health, TfL does not consider it appropriate to exempt specialist vehicles used for incident support from the LEZ. There do not appear to be any technical reasons that make these vehicles harder to retrofit to meet the LEZ standards than other types of vehicles. The majority of ambulances operated in London would not need to comply with the LEZ until 2010 and TfL understands that the majority of these would be compliant with the LEZ standards by that time. TfL believes that health service providers in particular should be setting an example in operating lower emissions vehicles, thus improving the health of Londoners. Exempting such vehicles would also set a precedent for other infrequently used vehicles which are considered to perform a vital service in London, potentially leading to inconsistency in the Scheme in relation to the treatment of vehicles in relation to their emissions levels.

Nor does TfL recommend an exemption for specialist borough vehicles. Local Authorities have a statutory duty to improve air quality and in the 2007 budget the Government accepted the recommendations of the Rogers Review of Local Authority Regulatory Priorities, which recommended that regulating Air Quality should become one of the five national priorities for local authority regulatory priorities. TfL considers that compliance options are available for vehicles such as mobile libraries, snowploughs and gritters. Offering special treatment for these vehicles would reward non-compliance and could be seen as penalising those local authorities which have made the effort to make their vehicles compliant.

Representations relating to the potential impact of the LEZ on public and community fleets and the provision of public and community services are dealt with in *Theme M: Impacts on the Public and Community Sectors*.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

#### **K4: Historic vehicles**

Six stakeholder organisations, including the London Borough of Hillingdon and West Sussex County Council supported an exemption for historic vehicles.

The Confederation of Passenger Transport, the Guild of British Coach Operators, the Historic Commercial Vehicles Society and the London Borough of Brent advocated an exemption for historic vehicles, whether or not they were used for 'hire or reward'. This would, it was claimed, ensure fairness for all operators of historic vehicles for which there are significant problems with retrofitting or re-engining due to the intrinsic value of the vehicle. It would also prevent commercial operators of historic vehicles from taxing their vehicles incorrectly to avoid paying the charge, which the London Borough of Brent in particular raised as a concern.

A number of these organisations also suggested either a more recent qualifying date for the historic vehicles exemption (1973 was consulted upon), or a review of that date over time. Both the Federation of British Historic Vehicles Clubs and the Historic Commercial Vehicles Society advocated a qualifying date of 25 years which they believed to be more in line with the operational life of such vehicles. The Historic Commercial Vehicles Society also requested that the 25 year qualifying date be a rolling date, representing what the industry and government define as the age to which a vehicle is 'historic'.

The London Borough of Brent referred to an answer to a question put to the Mayor in July 2006 which failed to make reference to historic vehicles not being used for commercial use in order to qualify for an exemption.

#### *TfL Response*

TfL recommends the removal of the current clause from the Scheme Order which states that the exemption applies to historic vehicles provided they are not used on the road for commercial use, i.e. for hire or reward. Therefore, any vehicle which is first registered before 1 January 1973 would be exempt from the LEZ. This would ensure that the exemption is applied fairly to all historic vehicles for which compliance would be technically difficult. Given the very small number of vehicles involved, it is not considered that there would be any significant changes to the air quality or health benefits of the scheme as a result of this exemption.

The use of the year 1973 as a threshold for the definition of historic vehicles is consistent with that used by the Government in defining vehicle tax classes. TfL does not recommend any change to the date for eligibility for the historic vehicles exemption. If the qualification date was set later than 1973, there would be some reductions in the health and air quality benefits as many more vehicles would not need to meet the specified emissions standards to drive within the LEZ. Setting the date later could also provide an incentive for operators to keep their older, more polluting vehicles for longer to obtain the LEZ exemption, rather than replacing them with newer, cleaner vehicles.

If a rolling qualification date were set, such as 25 years, then there would be an inconsistency, since as soon as a vehicle became 25 years old, it would no longer need to be compliant with the proposed LEZ. For example, a vehicle that was required to be compliant in one year, would potentially not need to be compliant the following year. It is also possible that some commercial vehicles would actually not need to be compliant with the LEZ under a rolling 25 year age-based standard. Through meetings with stakeholders, TfL is aware that some rail replacement bus services would qualify as historic vehicles using this definition, and TfL would seek to encourage these fleets to be compliant.

The proposed modification to the exemption for historic vehicles brings the Scheme into line with the Mayor's response to the July Mayor's question concerning historic vehicles.

### **K5: Specialist vehicles**

The Showmen's Guild of Great Britain, Society of Independent Roundabout Proprietors and Association of Circus Proprietors of Great Britain all requested an exemption for their specialist vehicles which perform very low mileage and for which there are technical barriers to retrofitting pollution abatement equipment. Many of these vehicles are considered by the Guild to be older vehicles for which replacement of all or part of the vehicle is not possible. Central to their argument is the fact that the vehicles are specially adapted to accommodate rides and ancillary equipment such as generators, which makes fitting abatement devices technically challenging and disproportionately more expensive. The vehicles also have long life cycles, which justify the significant construction cost.

The Freight Transport Association felt that specialist vehicles for which it would be uneconomic for the sector concerned to operate within the LEZ, should be exempt, showmen's vehicles being a good example of this they claimed.

David Drew MP registered support for a time-limited exemption for showman's vehicles in order to allow them to update their vehicles to the emissions standards set by the LEZ.

Royal Mail requested that their specialist vehicles which have security equipment fitted to them be exempt from the LEZ due to the long life cycle of these vehicles.

#### *TfL Response*

TfL has spent a considerable amount of time talking with stakeholders and the abatement industry to understand the technical issues and problems associated with specialist vehicles, which by their nature are individual in nature and for which retrofitting can be more problematic.

Following due consideration, TfL recommends that any exemptions for specialist vehicles should only be granted on the basis that the vehicles are (i)

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

technically unsuitable for retrofitting pollution abatement equipment, conversion to an alternative fuel or re-engining; and (ii) where the costs associated with compliance would place a disproportionate burden on specific sectors of the market so as to seriously jeopardise the provision of future services. As outlined in K3 above, TfL does not recommend an exemption or a different policy for specialist vehicles for which it is considered that compliance options are available, nor an exemption on the grounds that certain vehicles may have longer life cycles. Nor does TfL consider it appropriate to consider an exemption for all specialist vehicles for which retrofitting is more technically challenging, but where alternative compliant vehicles are more readily available. On this basis, TfL does not consider it appropriate to exempt Royal Mail vehicles.

In light of representations received, TfL recommends the inclusion in the Scheme Order of a 100% discount for Showman's goods vehicles. This would apply only to those vehicles which have been custom built and are permanently fitted with a rigid body forming part of the equipment for the show. This is due to the fact that retrofitting these vehicles is technically very difficult, there is no ready source of newer compliant vehicles and the costs associated with compliance would place a disproportionate burden on showmen as an economic sector, jeopardising the provision of future fairs in London. Operators of these vehicles would need to register with TfL in order to qualify for the discount, providing the necessary evidence as appropriate relating to their membership of an accredited body and modifications to their vehicle.

This 100% discount would apply only to specially adapted rigid bodied Showman's Vehicles and hence would not apply to trailers or semi-trailers.

#### **K6: Non-road going vehicles**

Three organisations agreed with the exemption set out in the Scheme Order for non-road going vehicles. The Construction Plant-Hire Association suggested that the criteria used for this exemption are the same as those used for exempting plant from using white diesel on the road. They state that white diesel is more environmentally friendly because it is manufactured to ultra-low sulphur diesel (ULSD) standards and would thereby reduce emissions of particulate matter compared with red diesel.

The Society of Motor Manufacturers and Traders (SMMT) suggested that some of these vehicles such as mobile cranes may have two engines, one of which would be certified for use on roads. They asked whether or not these vehicles would be required to register with TfL.

#### *TfL Response*

As described above in sub-theme K1, non-road going vehicles of the categories specified, would be exempt from the proposed LEZ. These categories are allied to those which are in DVLA tax classes for non-road going vehicles and TfL believes this to be a system which is familiar to operators and which is easy to understand. Details of these vehicles would be

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

available from the DVLA database, so there would be no need for operators of these vehicles to register with TfL.

With specific reference to mobile cranes which may have two engines, these would be exempt from the LEZ on the basis that it would not be practical to identify them from DVLA. It is also worth noting that when operating on a site, these vehicles could be subject to the GLA's Construction Code of Practice, which includes emissions standards for construction vehicles.

### **K7: Diplomatic vehicles**

The Foreign and Commonwealth Office (FCO) stated that they will be assessing the implications of the LEZ on diplomatic agents and officials under the Vienna Convention. Once such an assessment has been made, the FCO may if necessary seek an exemption from the LEZ for these vehicles.

#### *TfL Response*

TfL await the outcome of the FCO's investigations for the implications of the LEZ on diplomatic agents and officials. Until further advice is received from the FCO, TfL would require that diplomatic vehicles in scope of the LEZ would be subject to the LEZ scheme.

### **K8: Breakdown and Recovery organisations**

Both the Freight Transport Association and the SMMT felt that recovery vehicles and accredited breakdown organisations should have an exemption from the LEZ as with the Congestion Charging scheme. This is mainly to alleviate concerns over disruption to the service if these vehicles have to comply with the LEZ, many of which may not currently be compliant.

#### *TfL Response*

TfL does not recommend a discount or exemption for recovery vehicles or those operated by accredited breakdown organisations on the basis that there are no technical reasons as to why such vehicles could not comply with the scheme. It would not be consistent or fair to operators of similar vehicle types in other sectors if an exemption or discount were granted for this sector.

### **K9: VOSA Testing**

The Freight Transport Association requested an exemption for vehicles not operating for hire or reward, and making a trip to a VOSA test station inside the LEZ for repair, maintenance or testing.

#### *TfL Response*

TfL understands that there are a number of VOSA test stations which non-compliant vehicles can travel to without having to drive within the proposed LEZ. However, vehicles travelling to test stations to ensure compliance with the LEZ would not be penalised for doing so. Any vehicle travelling to a VOSA test station specifically for an RPC or LEC test should in practice be

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

able to enter the zone on the day of the test without being charged. This is because the vehicle would become compliant once the test has been carried out (should it pass the test) and TfL would be informed of the issue of the RPC or LEC prior to any PCN being issued. Should the vehicle fail its test, TfL is notified and the vehicle has 14 days in which to rectify the situation.

#### *TfL Recommendation*

TfL recommends that the clause for historic vehicles that the 'vehicle is not used on a road for any commercial use' be removed from the Scheme Order.

TfL also recommends that a 100% discount for certain showman's goods vehicles be included in the Scheme Order.

### **Theme L: Business Impacts**

Representations falling within this theme concerned the business impacts of the proposed LEZ. Thirty-five stakeholders made representations under this theme. These were made up of: 13 business groups, 11 London boroughs, six other local authorities, two GLA political groups, one MP, one health organisation and one economic partnership.

The sub-themes are:

- Impacts on businesses
- Support for small businesses
- Costs of compliance with the proposed LEZ standards
- Impact on residual value of vehicles
- Other business impact issues.

#### **L1: Impacts on businesses**

Nineteen stakeholders expressed concern that the LEZ could have an adverse impact on individual businesses, particularly small businesses. These included: David Drew MP, the GLA Conservative Group, six London boroughs (Westminster, Royal Borough of Kensington and Chelsea, Havering, Harrow, Barking and Dagenham and Bexley), Essex County Council, Slough Borough Council, the Federation of Small Businesses (FSB), the Healthcare Commission, the Road Haulage Association (RHA) and the Showmen's Guild of Great Britain.

The Greater London Assembly Conservative Group felt that a number of small and medium sized enterprises (SMEs) would not be able to afford to upgrade or replace their vehicles and that as a result, they could be forced out of business. Similarly, David Drew MP felt that the LEZ should not be unreasonably restrictive to small businesses.

The London Borough of Barking and Dagenham suggested that smaller operators, including operators in the construction business, which generally have smaller profit margins and therefore operate older vehicles, could be particularly severely affected by the LEZ. These operators, it was also claimed, would also lack the awareness and skills to respond to the LEZ

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

requirements. The Council therefore wanted TfL to carry out further work on the impact of the LEZ on small businesses before the Mayor makes a decision on the Scheme Order. The Road Haulage Association had similar concerns, and said that TfL had failed to carry out any independent investigation into the impact of the LEZ on small businesses. A number of other London boroughs also expressed concern about the potential impact on small businesses in their regions.

The British Association of Removers said that because the vehicles their members use generally have long life cycles and are difficult to retrofit, many removal businesses in London could go out of business as a result of the costs associated with the LEZ. This would, it was claimed, result in the loss of valuable services to communities. The Showmen's Guild of Great Britain and the Association of Circus Proprietors of Great Britain used similar arguments about showmen's vehicles, and said that a number of fairs could disappear in the medium to long term.

The Federation of Small Businesses stated that whilst it supported measures to improve air quality in London, this must not be achieved at a disproportionately high cost to business.

Covent Garden Market Authority felt that the LEZ could run counter to the London Food Strategy, in that it could jeopardise the supply chain to London's vibrant restaurant economy.

### *TfL Response*

The Economic and Business Impact Assessment commissioned to inform the Scheme Order consultation, and carried out by independent consultants (Steer Davies Gleave) concluded that the net impact of the LEZ in terms of jobs lost would be low, with a reduction of between 140 and 420 FTEs over the period up to 2015/16, and possibly even fewer.

Whilst some sectors of the economy would be adversely affected by the LEZ, by bringing forward or imposing a cost, others would benefit. It is important to bear in mind that the proposed LEZ would be just one of a number of factors affecting businesses. In this context, TfL considers that the additional costs that could be imposed by the proposed LEZ would be relatively small. TfL accepts that in extreme circumstances, some businesses could be forced to exit the London market as a result of LEZ costs eroding their operating margins. However, in the long run, it is expected that these exiting businesses would be replaced by other businesses with compliant fleets.

Despite the relatively large number of small operators in the UK, the proportion of vehicles used by small companies is not high in the road transport sector as a whole. TfL estimates that the introduction of the proposed LEZ would have no impact on many operators who currently drive in London, as their vehicles would already be compliant with the proposed standards in 2008. The proposed LEZ entry criteria are based on Euro emission standards, rather than age, enabling owners of non-compliant

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

vehicles to choose from a range of options, including fitting abatement devices, which may be more economic for certain classes and ages of vehicle.

Ancillary sectors such as the pollution abatement equipment and the vehicle maintenance industry are likely beneficiaries of the LEZ, as it would increase demand for vehicle parts, accessories, and retrofitting services.

TfL considers that the proposed LEZ strikes an appropriate balance between improving air quality and the needs of the business community. However, TfL would carefully monitor the effect of the LEZ on the business community should it be implemented, and would keep the scheme under review.

As discussed under *Theme K: Discounts and exemptions*, TfL recommends an amendment to the Scheme Order so that certain showman's goods vehicles would receive a 100% discount from the proposed LEZ. This proposed 100% discount would mean that the LEZ would have a minimal impact, if any, on the provision of fairs in London.

## **L2: Support for small businesses**

Twelve stakeholders proposed that TfL should give some support to certain small businesses, in the form of a grant, exemption or derogation. These included: the GLA Conservative Group, the GLA Labour Group, the Healthcare Commission, five London boroughs (Barking and Dagenham, Havering, Hillingdon, Southwark and Bexley) and West Sussex County Council.

The Greater London Assembly Conservative Group urged the Mayor to consider grants to small businesses and the Greater London Assembly Labour Group recommended that TfL consider ways in which to incentivise business. Four London boroughs expressed concern at the impact on small businesses in London, and asked for consideration of mitigation measures. The London Borough of Hillingdon in particular said that since small businesses often use second-hand vehicles purchased from larger businesses, they should have a longer time period to benefit from the introduction of lower emission vehicles.

The Healthcare Commission asked whether the revenue from fines could be used to fund grants for vehicle upgrading for small businesses and community groups. The London Borough of Bexley also suggested that net proceeds be used to provide targeted grants to businesses to become compliant with the LEZ standards.

The British Association of Removers pointed out that in 2006 and 2007 the European Commission had approved aid to transport operators in Italy, Denmark and Germany to alleviate the costs of retrofitting pollution abatement equipment, and felt that UK operators should also have access to such aid. The Association was also concerned about the potential impact on their specialised sector, where the vehicles tend to have long life cycles and are more difficult to retrofit.

West Sussex County Council felt that small hire companies outside but near London might not be prepared in future to rent vehicles to customers wishing to enter the LEZ if their vehicles were not LEZ compliant.

### *TfL Response*

TfL estimates that under the normal vehicle replacement cycle, two thirds of all HGVs and half of all buses and coaches would be compliant with the 2008 LEZ standards. In 2010, it is estimated that three-quarters of heavier LGVs and minibuses would be compliant with the proposed LEZ standards.

TfL is aware that grants for retrofitting of pollution abatement equipment have been available to operators in some EU countries. However, TfL considers that offering grants, exemptions or derogations to some commercial organisations but not others could be unfair. Furthermore, there would be practical difficulties in targeting the assistance, given that so many operators driving within the LEZ would be based outside London. For these reasons, TfL considers that the issue of grants or financial assistance would be better dealt with at central government level rather than regional level. Furthermore, since the LEZ is not intended to be a revenue generating scheme, it would not be practical for money gained from daily charges and fines to be used as grants for upgrading vehicles.

Should the Mayor approve the Scheme Order allowing the LEZ to be implemented, TfL would set up an operator helpline as well as providing information on its website to advise operators on methods of achieving compliance with the LEZ standards. It is also worth noting that small businesses which use heavier LGVs and minibuses would have until 2010 to achieve compliance.

TfL is aware that the compliance options for the removal industry are more limited than for other business sectors, partly because some of the vehicles used in this sector, especially pantechnicons, are specialised vehicle types, and partly because these vehicles tend to have longer than average life cycles. However, TfL has worked with the abatement equipment industry on options for compliance, and considers that equipment is available that would allow even pre-Euro removal vehicles to meet the 2008 LEZ standard, at costs little more than those for other vehicles. In addition to the retrofit option, operators could also replace their vehicles with newer, compliant vehicles. TfL does not therefore consider that the removal industry should be provided with any special assistance. However, should the Mayor approve the Scheme Order allowing the LEZ to be implemented, TfL would work with stakeholders in the removal industry to ensure that information on compliance options is made widely available to operators in the sector.

TfL accepts that some hire companies just outside London may no longer be willing to hire out non-compliant vehicles to customers who may drive within the LEZ. However, it considers this to be in accordance with the LEZ's

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

objectives, which are focussed on the need to discourage the use of the most individually polluting vehicles within London.

### **L3: Costs of compliance with the LEZ standards**

Six stakeholders stressed the potentially high costs of achieving compliance with the LEZ standards, either by fitting pollution abatement equipment or by buying a newer, compliant vehicle. The Road Haulage Association felt that a high proportion of non-compliant vehicles would have low mileages and specialised bodywork and equipment, making them expensive to retrofit or replace. One local authority said that there is no proven effective means of reducing PM emissions from vehicles with light duty cycles.

The Guild of British Coach Operators felt that TfL had under-estimated the costs and technical issues associated with converting vehicles to comply with the LEZ standards, and said that TfL appeared not to know whether pollution abatement equipment manufacturers and installers would have the required capacity to meet the potential demand.

The London Borough of Barking and Dagenham felt that many smaller businesses would be unable to meet the financial requirements of vehicle replacement. Royal Mail said that since the average life span of a truck is between five years and eight years, requiring vehicles which would be just over six years old in 2012 (ie. Euro III vehicles sold before October 2006) to be upgraded or replaced would place a high cost on operators.

The FTA was concerned that where an operator had fitted pollution abatement equipment, but did not hold an RPC, there would be additional administration costs related to obtaining certification for the device.

#### *TfL Response*

TfL has worked closely with the pollution abatement equipment industry to assess the costs to businesses of retrofitting and has also closely studied the availability and prices of devices currently on the market. Based on this analysis, TfL estimates that the costs of retrofitting even a specialised pre-Euro vehicle so that it meets the minimum Euro III standard for PM would be unlikely to amount to more than £5,500, plus ongoing annual maintenance costs of between £200 and £500. On average the costs for retrofitting a pre-Euro vehicle or a Euro I vehicle so that it meets the minimum Euro III standard, or the costs of retrofitting a Euro I vehicles so that it meets the minimum Euro IV standard are in the range of £2500 to £4500. Fitting pollution abatement equipment to a Euro II vehicle so that it reaches the minimum Euro III standard for PM would be less expensive. Since this is not the only compliance option available to operators, TfL does not consider that these costs are unreasonable, given the overall benefits that are expected in terms of air quality and health.

Based on results from surveys in both 2005 and 2006 into potential operator behaviour as a result of the LEZ, TfL estimates that retrofitting pollution abatement equipment would be the method of achieving compliance for only a

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

small proportion of operators (mostly in the HGV, bus and coach sectors). The pollution abatement equipment industry has been aware of the possibility of a LEZ being established in London since 2001, and TfL is confident that it could cope with demand, even if more operators than expected choose the retrofitting option for compliance.

It would be up to individual operators to choose the most cost-effective means of complying with the LEZ standard, depending on their circumstances, though TfL would provide advice via an operator helpline and information on its website. In some cases (for example if a Euro III vehicle was only six years old in 2012, when the LEZ standard would become Euro IV) replacement may be less cost-effective than retrofitting pollution abatement equipment. One of the reasons that TfL has proposed standards based on Euro standards rather than on vehicle age, is so that there are a range of compliance options available to operators, ensuring that compliance costs could be minimised. Smaller operators in particular might be expected to benefit from this Euro standard approach as opposed to an age-based standard approach.

TfL is working with VOSA and VCA to develop a TfL Low Emission Certificate (LEC), which would allow vehicles which had been fitted with pollution abatement equipment but which are not eligible for an RPC to be certified and drive within the proposed LEZ without being subject to the LEZ charge. The LEC is described in more detail under Theme F (Vehicle Emission Standards). However, the processes for obtaining a LEC would be modelled on those for the RPC and operators would be able to schedule the certification inspection at the same time as their annual inspection. It would therefore be unlikely to impose a significant additional administrative effort on operators.

#### **L4: Impact on residual value of vehicles**

Three stakeholders (London Borough of Wandsworth, Royal Mail and West Sussex County Council) expressed concern that as a result of the LEZ, the residual value of non-compliant vehicles would be reduced.

##### *TfL Response*

TfL accepts that the proposed LEZ could possibly have some impact on the residual value of some non-compliant vehicles in London, particularly those with shorter life-cycles. However, the aim of the LEZ is to discourage the use of the oldest, most polluting diesel-engined vehicles, or to encourage modifications to them, and a small reduction in residual value of non-compliant vehicles is an unavoidable consequence, and one which would be offset by an increase in the residual value of compliant vehicles.

#### **L5: Other business impacts**

The London Borough of Barnet considered that the LEZ would disadvantage businesses located within the scheme boundary over those located outside.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Royal Mail felt that the proposed hours of operation of the LEZ would place a disproportionate burden on businesses which have to operate around the clock.

### *TfL Response*

Whilst for operators based in London, the most cost-effective method of achieving compliance with the LEZ standards would probably involve vehicle upgrade or renewal. This would also be the case for a very large number of operators who are based outside London but regularly drive within the proposed LEZ. TfL estimates that around 40% of the national HGV and coach fleets and slightly under 20% of the national fleet of heavier LGVs and minibuses would enter the LEZ every year. Therefore the impact of the Scheme is expected to be similar for a large proportion of operators based outside London as for those based inside London.

Should the Mayor approve the Scheme Order implementing the LEZ, TfL would set up an operator helpline to advise operators on operational issues, as well as providing information on its website. The website would also include a compliance checker, whereby operators could input their vehicle registration to find out if it was compliant with the LEZ standards. The intention is that any operator wishing to check compliance would first use this compliance checker or ring the operator helpline that TfL would make available. Therefore, it is unlikely that manufacturers would be dealing with a large number of detailed technical queries resulting from the LEZ. Like the pollution abatement equipment industry, manufacturers have been made aware of the proposed LEZ standards and have had the opportunity to advise their customers of appropriate vehicle options.

TfL proposes that the LEZ should operate 24 hours a day, Monday to Sunday, 365 days a year. TfL does not consider that the LEZ would impose any greater burden on night-time operators than on those that operate during the day. Reducing the operational hours of the LEZ would significantly erode the air quality and health benefits of the proposed scheme as it would provide significantly fewer operators with an incentive to clean up their vehicles. Furthermore, air quality, unlike congestion, is a constant concern and is not confined to peak daytime periods.

### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of representations received under this theme.

## **Theme M: Impacts on the public and community sectors**

Representations falling within this theme concerned the impacts of the proposed LEZ on the public and community sectors. Thirty stakeholders made representations under this theme. These were made up of 14 London boroughs, six health representative organisations, three business representative organisations, one GLA functional body, one London political

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

representative, one non-departmental government body, one economic partnership and one ethnic and voluntary representative organisation.

The sub-themes are:

- Cost impacts on public and community fleets
- Impact on the provision of public and community services
- Impact on London boroughs
- Impact on cross-border bus services
- Grants or assistance for public and community sector.

### **M1: Cost impacts on public and community fleets**

Thirteen stakeholders submitted representations concerning the cost impacts of the proposed LEZ on public and community fleets. These included: three London boroughs (Bexley, Hackney and Harrow) and the London Fire and Emergency Planning Authority (LFEPA).

Representations from 13 stakeholders concerned the cost of upgrading or modifying vehicles to meet the LEZ emission standards, the difficulties in budgeting for these costs, and the potential for costs to be passed on to customers or council tax payers. Essex County Council stated that the proposed LEZ could lead to increases for the Council in the costs of providing transport, in particular for home-to-school transport. Surrey County Council stated that it expected the costs of services contracted by the Council to increase to meet the 2012 LEZ emissions standard.

The London Borough of Bexley expressed concern that community and voluntary organisations would find it difficult to fund pollution abatement equipment. The London Borough of Harrow questioned whether the LEZ would be cost neutral for London boroughs if boroughs had to fund the upgrade of vehicles.

The London Fire and Emergency Planning Authority stated that it would have difficulty in complying with the Euro IV standard for 2012 through its vehicle replacement programme, which replaces Euro III vehicles between 2016 and 2020, and would need to seek additional funding to modify vehicles to meet the 2012 LEZ emission standard. London St John Ambulance, the Ambulance Service Association and the South East Coast Ambulance Service expressed concern about the costs of upgrading or modifying vehicles to comply with the LEZ emission standards.

The London Borough of Bexley and the Thames Gateway London Partnership expressed concern that TfL had not provided a full assessment of the financial and practical impacts on the public sector of the inclusion of heavier vans and minibuses in the LEZ.

#### *TfL Response*

The proposed LEZ would only affect the most individually polluting vehicles: older diesel-engine HGVs, buses, coaches, heavier vans and minibuses. Studies undertaken by TfL suggest that some 67 per cent of HGVs and 49 per

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

cent of coaches would be compliant with the LEZ emission standard in 2008 and 76 per cent of vans would be compliant with the LEZ emission standard in 2010. The majority of operators would therefore not have to take action to comply with the proposed LEZ emission standards.

TfL acknowledges that the LEZ could lead to increased costs for some vehicle operators due to the need to upgrade or renew vehicles. TfL has taken account of these costs in developing the financial appraisal of the LEZ, including the costs of fitting and maintaining particulate abatement equipment. Overall, TfL believes that any small negative impacts of the LEZ on some operators, including community and voluntary sector operators, would be more than offset by the health and air quality benefits for the entire community.

A survey of London boroughs undertaken in 2004 by the Association of Local Government (now London Councils) found that the average age of borough vehicles was less than five years old, although there was a small number of vehicles that are kept for a very long period of time. Should the Mayor confirm the Scheme Order, TfL would undertake a significant operator information campaign to ensure that operators are aware of their options for complying with the proposed LEZ emission standards.

Issues relating to requests from stakeholders for exemptions or discounts for public and community fleets are dealt with in *Theme K: Discounts and Exemptions*.

## **M2: Impact on the provision of public and community services**

Sixteen stakeholders submitted representations concerning the impact of the proposed LEZ on the provision of public, community and voluntary services. These included six London boroughs (Barking and Dagenham, Barnet, Brent, Ealing, Hillingdon and Southwark), the GLA Labour Group, the Olympic Delivery Authority and the Central Council of Physical Recreation (CCPR).

Southwark PCT expressed concern that voluntary groups and schools would be unlikely to have the funding to replace their fleet or pay the LEZ charge which could discourage some activities from taking place. The London Boroughs of Barnet, Barking and Dagenham, Brent, Ealing, Hillingdon and Southwark, Essex and Hertfordshire County Councils and the Healthcare Commission expressed concern about the impact of the inclusion of minibuses in the LEZ on community transport services and the ability of community organisations to fund the upgrade or modification of older diesel-engine minibuses. The London Borough of Brent stated that further investigation was needed of the impact of the inclusion of minibuses prior to the implementation of the Scheme Order.

The Royal College of Nursing sought reassurance that the LEZ would not impact on the transportation of patients or essential equipment to hospitals or other NHS facilities. London St John Ambulance and the Ambulance Service Association expressed concern that the LEZ emission standards could impact on the provision of ambulance services, particularly in providing services to

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

large events where additional vehicles would be required from outside of London.

The CCPR and the Olympic Delivery Authority expressed concern about the impact of the LEZ on local sports clubs and that the LEZ would provide an additional burden for volunteers and participants in sport. It was noted that sporting clubs have already been required to fund an additional driving test for trailer drivers and regular assessment tests and medicals for minibus drivers. Many sporting organisations are run as charities and tend to operate older vehicles which they would be unable to afford to upgrade or modify to meet the LEZ emission standards. The CCPR also expressed concern about the impact of the LEZ on horsebox owners and riding schools in London as many horseboxes are old and expensive to replace.

### *TfL Response*

TfL acknowledges that the inclusion of minibuses in the LEZ could in some circumstances potentially impact on services provided by some public, community and voluntary organisations. The Health Impact and Equalities Impact Assessments commissioned by TfL to inform this consultation suggested that the compliance costs associated with replacing vehicles or retrofitting abatement technologies could have an adverse impact on some of these organisations. However, it should be noted that most community and voluntary organisations would not be affected by the proposed LEZ until late 2010, when minibuses would be included in the scheme. This would allow these organisations over three years in which to plan for the proposed LEZ.

Feedback from the Community Transport Association (CTA) has indicated that around half of the minibuses used by community transport operators belonging to the CTA in London would be compliant with the LEZ emission standard in 2010. This number could be expected to increase through natural vehicle replacement, independent of the introduction of the LEZ.

While TfL recognises the role of the NHS in operating community transport services, TfL considers that these vehicles should be compliant with the LEZ emission standards. As a national organisation with significant purchasing power, the NHS has the resources to manage its fleet effectively. In addition, it is also becoming increasingly common for both NHS Trusts and local authorities to outsource their transport needs to community transport providers, including to CTA members. There is funding available to local authorities through the Government's Urban Bus Challenge to improve transport provision and target support on areas of economic or social deprivation, and vehicles sourced in this way are more likely to be modern and to meet the LEZ emission standards.

Smaller organisations such as charities and sporting associations tend to operate their own vehicles which are more likely to be older and therefore non-compliant. However, there has been a move towards leasing vehicles or hiring a vehicle or driver on demand among these groups. As noted in the representations, one of the reasons for this could be the need for drivers to

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

undergo regular tests and medical assessments. Most leases are of between three and five years in length and these groups should be able to enter new leases for compliant vehicles prior to the inclusion of minibuses in the LEZ in late 2010.

For some organisations, leasing may be a more economically viable option than vehicle upgrade or renewal. For community transport providers, the leasing option is less viable, because of the nature of their contractual arrangements with local authorities and their ownership of specially adapted vehicles, such as mobility assistance vehicles. TfL studies indicate that community sector vehicle operators would be likely to take the cheapest option available to modify their vehicles to comply with the LEZ emission standards. The lowest cost option for such operators would be to fit pollution abatement equipment. TfL is not aware of any technical reasons why such equipment could not be fitted to the vast majority of community transport minibuses or converted panel vans.

TfL is working closely with the pollution abatement equipment industry to provide advice on operator options, including the most cost-effective compliance options for each vehicle type. It is developing a number of case studies for community transport vehicles, with a particular focus on Euro I and II minibuses. TfL would also seek to provide technical advice to operators, including community transport operators, and detailed information on compliance options will be made available through TfL's LEZ website and the operator call centre.

TfL would keep under review the possible impact of the proposed LEZ on the public and community sectors.

### **M3: Impact on London boroughs**

Seven stakeholders submitted representations regarding the impact of the proposed LEZ on London boroughs. These included: five London boroughs (Bromley, Hackney, Islington, Redbridge and Wandsworth), London Councils, the Road Haulage Association (RHA) and the Society of Motor Manufacturers and Traders (SMMT).

The London Borough of Bromley expressed concern about the costs involved with fitting pollution abatement equipment to low mileage specialist vehicles, such as gritters, which have a long replacement cycle due to their limited use and, as an option, sought funding to allow vehicle modification or replacement. Bromley stated that, if it was not able to replace or modify its vehicles, it would face costs of up to £81,000 per winter in LEZ daily charges to undertake its statutory duty to clear snow and ice from the road network. Bromley also expressed concern that manufacturers may not be able to meet demand for vehicles compliant with the LEZ emission standards.

The London Boroughs of Islington, Redbridge and Wandsworth expressed concern about the costs involved with achieving compliance for all borough vehicles. London Councils provided examples of the costs boroughs would face in complying with the LEZ emissions standards and sought the provision

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

of TfL or central government grants, particularly for specialised vehicles, to assist boroughs in complying.

#### *TfL Response*

TfL considers that, for the vast majority of vehicles retrofitting will be an option, depending on age and detailed nature of the vehicle's modifications. TfL research suggests that pollution abatement equipment is available for between £2,500 and £5,500, depending on the type of vehicle, its age and duty cycle. In some cases, even a pre-Euro vehicle could be retrofitted to meet the Euro III standard. These costs are little different than for other vehicle types, though the ongoing maintenance costs may be slightly higher.

A number of boroughs have already taken steps to ensure compliance of their fleets and TfL believes that they should be leading by example. For TfL to provide assistance to other boroughs in upgrading or modifying their fleets, this would penalise those boroughs who have already cleaned their fleets up. Furthermore, local authorities themselves have a statutory obligation under Local Air Quality Management to work towards meeting national air quality objectives and the Mayor is working with the London boroughs to address emissions arising from local traffic, new developments and construction activities. As well as working with the Functional Bodies to implement key measures to improve the sustainability of the GLA Group and lead by example, the Mayor has encouraged boroughs to assess and improve their own vehicle fleets.

#### **M4: Impact on cross-border bus services**

Three stakeholders submitted representations regarding the impact of the proposed LEZ on cross-border bus services. Essex and Hertfordshire County Councils expressed concern that operators may choose to withdraw the services rather than upgrading as the routes are primarily run by smaller operators with less ability to bear compliance costs. Hertfordshire County Council suggested postponing the inclusion of buses and coaches in the LEZ until the end of the academic year to allow operators of these services more time to comply. The Guild of British Coach Operators stated that the LEZ would place an unfair burden on operators of cross-boundary bus services as they would not receive subsidies from TfL as London buses do.

#### *TfL Response*

The Economic and Business Impact Assessment commissioned by TfL to inform the consultation estimated that around 7,000 non-TfL contracted buses and coaches operate regularly within Greater London. The vast majority of these are commuter, tourist or event services, and the vehicles used for these services are generally compliant.

From an analysis of the December 2006 London Service Permit Register, TfL estimated that there are between 100 and 150 school services operating regularly in London. Similarly, the London Local Service Agreement Register

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

for December 2006 shows that there were nine cross-boundary bus services operating within Greater London at the end of 2006.

London Service Permits (LSPs) are required for regular bus and coach services that stop within Greater London. These are commuter services, tourist and sightseeing buses, special event buses, school services, hotel transfer buses and park and ride buses. The LSP regime already includes certain emissions requirements, and it is intended that these would be tightened to align with the LEZ standards.

TfL accepts that there could be some impacts on companies operating school bus services or cross-boundary bus services as they would need to upgrade their fleets to meet the 2008 or 2012 LEZ requirements but would not be eligible for any financial support from TfL (as is available for TfL contracted services). For the majority of vehicles, it would be possible to fit abatement equipment. The Economic and Business Impact Assessment, carried out to support the Scheme Order consultation, concluded that in most cases, the costs could probably be absorbed as part of the natural fleet management cycle. There could, however, be some very small costs passed on either to customers or to local authorities who contract the services.

The Economic and Business Impact Assessment showed that the bus and coach sector is highly competitive, and any gaps in the market would be likely to be filled quickly, and the services provided would therefore not be at a higher cost to customers. There has already been some consolidation of the market providing cross-boundary bus services due to a combination of wider economic factors. This would be likely to continue, regardless of whether the LEZ was to be introduced. The resulting larger companies would generally have larger profit margins and would be able to provide services without any significant negative impacts on customers.

Independent of the LEZ, there are other pressures to modernise bus and coach fleets, including the Disability Discrimination Act requirements and 'green' procurement requirements. TfL does not consider that it would be appropriate to encourage operators to continue using non-compliant vehicles, especially since retrofit options exist for these vehicles. Furthermore, these services are procured on a commercial basis, and it would be inappropriate to interfere in the market by providing any assistance to particular operators.

The London Atmospheric Emissions Inventory (LAEI) produced by the GLA provides information on the relative contribution of different vehicle types to overall particulate emissions. This indicates that buses and coaches emit more PM<sub>10</sub> per vehicle km at average London speeds in Greater London than any other vehicle, except HGVs. In addition, the coach fleet also contains more of the most polluting older pre-Euro vehicles (19 per cent) and Euro I vehicles (19 per cent) than the HGV, LGV or car fleet. Therefore, even taking into account the overall lower percentage of emissions relative to all other vehicle types, it is appropriate to focus on buses and coaches in the LEZ. This is consistent with the aim of the LEZ to discourage the most polluting vehicles

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

from driving within Greater London and thereby achieve reductions in the most harmful road transport generated emissions in London.

#### **M5: Grants or assistance for the public and community sector**

Six stakeholders submitted representations regarding the provision of financial support to assist the public and community sectors in upgrading or modifying their vehicles to be compliant with the LEZ emission standards. The London Borough of Bexley, Havering PCT and the Healthcare Commission suggested that any net revenue from the LEZ be used to assist public and community sector organisations to meet the costs of compliance with the LEZ.

#### *TfL Response*

TfL is aware that grants for retrofitting of pollution abatement equipment have been available to operators in some EU countries. Grants for the community sector to retrofit pollution abatement equipment is a national Government issue rather than a London government issue. Furthermore, there would be practical difficulties in targeting the assistance, given the breadth of the community sector, and the fact that so many operators driving within the LEZ would be based outside London.

The proposed LEZ is not designed to be a revenue generating scheme. The revenues of the Scheme are not expected to offset the costs of implementing and operating the scheme. Indeed, TfL considers that air quality improvements would be maximised by high levels of operator compliance. In the unlikely event the TfL were to make any net revenues from the scheme, these would be spent according to Annex 3 of the Scheme Order. Initiatives which any unforeseen revenues might be spent on include air quality technology and monitoring improvements, traffic management initiatives and improvements to the street environment and public realm.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of representations received under this theme.

#### **Theme N: Environmental Impacts**

Representations falling within this theme concerned the impact the LEZ would have on air quality and the environment. Forty one stakeholders made representations under this theme. These were made up of: 17 London boroughs, 10 business representative groups, six UK local authorities, three environmental organisations, two health organisations, one Greater London Assembly political group, one MP and one economic partnership.

The sub-themes are:

- Failure to make progress towards air quality targets
- Air quality projections are different from those in Transport and Air Quality Strategy Revisions consultation

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

- Impact on NO<sub>x</sub> and NO<sub>2</sub>
- Impacts on greenhouse gases
- Impact on other pollutants
- Need for a PM<sub>2.5</sub> standard
- Impact of the LEZ on vehicle construction and scrappage
- Increase in abandoned vehicles as a result of the LEZ
- Air Quality impacts outside London
- Monitoring issues
- Other environmental impacts issues.

### **N1: Failure to make progress towards air quality targets**

Fifteen stakeholders expressed concerns that the LEZ would have a relatively small impact on air quality in London, and in particular that some national objectives and EU limit values would still not be met. These included: Mark Field MP, London Liberal Democrats, London First, the Road Haulage Association (RHA), London Councils and six London boroughs (Brent, Ealing, Hammersmith and Fulham, Harrow, Southwark and the Royal Borough of Kensington and Chelsea).

London First, the London Borough of Harrow and the London Borough of Ealing stated that the LEZ would bring forward reductions in PM<sub>10</sub> emissions by only three to four years compared to the natural vehicle replacement cycle. Friends of the Earth expected the Mayor and TfL to consider whether the proposals constitute adequate and sufficient measures such that it could be considered that significant action had been taken to deal with London's air quality exceedences. Mark Field MP stated that whilst air quality is a worsening problem, the consultation documents make clear that the proposed LEZ would have no significant impacts on traffic levels or congestion.

Friends of the Earth and the London Borough of Southwark stated that the LEZ needed to be just one part of a package of complementary measures to improve air quality in London. The London Borough of Greenwich and London Councils considered that the predicted improvements in air quality as a result of the LEZ were worthwhile. The National Institute for Clinical Excellence also stated that the consultation documents made a strong case for the effectiveness of a LEZ in meeting statutory air quality objectives.

The London Borough of Hammersmith and Fulham said that figures on the actual age of the vehicle fleet in use in London are more pessimistic than the figures used in modelling for the LEZ.

#### *TfL Response*

A LEZ targeted at the most individually polluting vehicles has been identified as the most effective way of reducing the most harmful road transport emissions. However, around a third of the total emissions of PM<sub>10</sub> in London are caused by sources other than road transport. Therefore, the LEZ on its own would not enable London to meet its air quality objectives, partially due to other sources of emissions in London, but also because of the significant

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

amount of pollution which is imported into London from the rest of the UK, Europe and the rest of the world. The LEZ should not be seen 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 sources in the most cost effective way. This suite of initiatives 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 *London Best Practice Guidance: The control of dust and emission from construction and demolition*.

It should also be noted that the Mayor has very limited powers in relation to emissions of controlled pollutants from non-road transport sources. He uses those powers to influence non-road transport emissions through, for example, a review of London boroughs’ Local Air Quality Management reports and action plans, and a review of referred planning applications where air quality is likely to be an issue. The GLA is also working with Defra, other Government departments and the European Commission on various issues related to emissions from other sources.

The LEZ would bring forward reductions in PM<sub>10</sub> emissions by three to four years compared to the natural vehicle replacement cycle. It is the bringing forward of reductions in PM<sub>10</sub> emissions that generates the important health benefits associated with the LEZ proposal. In the absence of the LEZ, many Londoners would remain subject to unacceptably high concentrations of PM<sub>10</sub>, although TfL recognises that the LEZ would not eliminate the problem completely. New vehicles do have to conform to tighter emissions standards, but the aim of the proposed LEZ is to accelerate the removal or upgrade of the older, more polluting vehicles and thereby maximise the health benefits.

Modelling of the air quality benefits of the proposed LEZ has been based on the fleet assumptions that are incorporated into the London Atmospheric Emissions Inventory (LAEI) 2003. This is the inventory that is used by the GLA for air quality modelling work in London. Monitoring of the age profile of the observed fleet in London is in its initial stages and would be fully explored as part of the LEZ impacts monitoring programme, should the Mayor confirm the Scheme Order.

The proposed LEZ would be expected to impact on fleet profiles rather than traffic volumes in and around Greater London. Congestion is being targeted through other initiatives, such as Congestion Charging.

## **N2: Air quality projections are different from those in Transport and Air Quality Strategy Revisions consultation**

Seven stakeholders expressed concern that the projected air quality impacts presented in the Scheme Order consultation documents were smaller than those presented in the Transport and Air Quality Strategy Revisions consultation documents. These included London Councils, the Road Haulage Association and five London boroughs (Westminster, Brent, Hammersmith and Fulham, Islington and the Royal Borough of Kensington and Chelsea).

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

In particular, London Councils considered that whilst the consultation material stated that the LEZ would bring about a 2.9% reduction in emissions, this reduction could not be attributed to the 2010 Scheme itself and the additional reduction would occur anyhow.

### *TfL Response*

The consultation material of January 2006, which was published to accompany the public and stakeholder consultation on the Transport and Air Quality Strategy Revisions, was based on a scenario of a standard of Euro III for PM from 2008 and a standard of Euro IV for PM from 2010. A separate scenario also looked at the impact of including LGVs and minibuses within the scheme, based on an eight-year rolling age based standard.

As a result of representations received during that consultation, the Mayor agreed to some changes to the LEZ proposals, notably that the introduction of the Euro IV standard be deferred until 2012 and that heavier LGVs and minibuses be included from 2010, but based on a Euro III standard. The modelling that accompanied the Scheme Order consultation was based on these most recent proposals for the LEZ.

In addition, the modelling data and methods have been updated since the modelling work which supported the Transport and Air Quality Strategy Revisions consultation was carried out. The datasets used for the more recent modelling to support the Scheme Order consultation use the London Atmospheric Emissions Inventory (LAEI) 2003 instead of the LAEI 2002. The LAEI 2003 suggests that vehicles are responsible for two thirds of emissions of PM as opposed to only half, which was assumed in the LAEI 2002. The modelling that was used for the Scheme Order consultation was also based on updated projections on operator behaviour that resulted from the 2006 Operator Survey.

Because of the differences between the schemes that were modelled for the two consultations, it is difficult to make direct comparisons between them. Whilst the deferral of the Euro IV standard to 2012 reduces the projected improvements in air quality in 2010, the inclusion of heavier LGVs and minibuses from October 2010 increases the projected improvements for 2012.

The projected improvements in air quality for 2010 over the baseline 'do nothing' scenario would be entirely due to the proposed LEZ. This would be as a result of the improvements to the fleet made in order to comply with the introduction of the LEZ in 2008 which continue to deliver benefits in the following years, along with the inclusion of heavier LGVs and minibuses in the proposed LEZ from 2010.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### **N3: Impact on NO<sub>x</sub> and NO<sub>2</sub>**

Eight stakeholders were concerned by what they regarded as the small reductions in NO<sub>x</sub> and NO<sub>2</sub> that would result from the LEZ. London Councils, the London Borough of Islington and the London Borough of Hackney were concerned that emissions of NO<sub>x</sub> seemed to have been downgraded in favour of particulates. The London Borough of Islington pointed out that the Air Quality Strategy for England, Scotland, Wales and Northern Ireland does not give priority to one pollutant over any other, so the focus of the LEZ on PM could lead to inconsistencies with the work of the boroughs through their Air Quality Action Plans.

The Royal Borough of Windsor and Maidenhead and London Councils also expressed concerns that the focus on PM could actually lead to an increase in NO<sub>x</sub> emissions. The Royal Borough referred to the Air Quality Expert Group (AQEG) draft report which suggests that an increase in vehicles fitted with particulate traps could be responsible for an increase in the NO<sub>2</sub>/NO<sub>x</sub> ratio.

#### *TfL Response*

As discussed in more detail under *Theme F: Vehicle emission standards*, it is not possible at this stage to introduce a LEZ emission standard that depends on the retrofitting of NO<sub>x</sub> abatement equipment. In terms of the key health-based objectives of the LEZ, reductions in PM<sub>10</sub> have a significantly greater impact on health than the slight changes in predicted NO<sub>2</sub> concentrations. The Committee on the Medical Effects of Air Pollution (COMEAP) does not consider the estimates of the health effects of NO<sub>2</sub> sufficiently robust for quantification (*The Quantification of the effects of air pollution on health in the UK, 2002*).

It should be noted that total and NO<sub>x</sub> emissions and concentrations of NO<sub>2</sub> are expected to continue to decline, and that the LEZ would contribute to this trend. This is due to reductions in NO<sub>x</sub> emissions that would be delivered by the scheme as operators switch to newer Euro IV and Euro V vehicles.

TfL is working with Defra to investigate and understand the implications of recent work which suggests that some Euro III vehicles and some vehicles retrofitted with pollution abatement equipment may emit a higher proportion of NO<sub>x</sub> as NO<sub>2</sub> in tailpipe emissions than previously thought. Compliance with the NO<sub>2</sub> objective is sensitive to this ratio because direct emissions of NO<sub>2</sub> are important in local (e.g. roadside) concentrations of NO<sub>2</sub>.

Though levels of NO<sub>x</sub> and NO<sub>2</sub> are declining overall, TfL accepts that it has recently been observed that NO<sub>2</sub> compared to NO<sub>x</sub> concentrations have risen slightly at some roadside monitoring stations. This implies that the proportion of NO<sub>x</sub> has risen. There are thought to be several possible reasons for this, including congested driving conditions, higher numbers of diesel-engine vehicles with engines which emit a higher proportion of NO<sub>2</sub>, and also the fitting of oxidation catalysts and some types of particulate filters which convert NO (the non-NO<sub>2</sub> fraction of NO<sub>x</sub>) to NO<sub>2</sub> as part of their operation. TfL will be contributing to further work on this issue. However, in principle, TfL would

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

support the setting of limits for NO<sub>2</sub> from abatement devices as part of a future certification regime. TfL would also continue to assess the feasibility of introducing a NO<sub>x</sub> standard into the LEZ Scheme.

#### **N4: Impacts on greenhouse gases**

Six stakeholders expressed disappointment that the LEZ scheme does little to tackle climate change, given the importance of that issue. The City of Westminster and the London Liberal Democrats both consider that future reviews of the LEZ scheme should include consideration of climate change issues.

The London Climate Change Agency felt that the LEZ could result in reductions in emissions of greenhouse gases, as it would encourage the introduction into the fleet of more efficient vehicles and result in the reduction of nitrous oxide emissions, which is itself a greenhouse gas.

The Freight Transport Association suggested that a rolling eight-year age limit (together with potentially a 12-year limit for coaches and a 10-year limit for LGVs) would reduce the carbon footprint of the freight industry.

#### *TfL Response*

The LEZ would focus on improving air quality. It is not anticipated that the proposed LEZ would have a significant impact on carbon dioxide emissions. There may be some small benefits from reduced carbon dioxide emissions through newer vehicles being introduced into the fleet, though these may be offset by greater fuel use relating to the fitting of particulate abatement equipment.

Tackling climate change is a mayoral priority, and the Mayor's recently published Climate Change Action Plan includes a target of stabilising London's emissions at 60% below 1990 levels by 2025. Transport is responsible for 21% of London's CO<sub>2</sub> emissions. Road transport is the largest emitter, generating around 80% of that total. Reducing traffic demand and congestion is central to cutting CO<sub>2</sub> emissions in London. The Mayor is taking forward a number of initiatives to reduce transport-related CO<sub>2</sub> emissions in London. Later in 2007, TfL intends to consult on proposals for emissions-influenced Congestion Charging, which would encourage the purchase and driving of cars which emit lower levels of CO<sub>2</sub>. This Scheme would also include an incentive to purchase Euro IV cars, which would improve air quality in London.

TfL does not consider that rolling age limits for the LEZ would result in lower emissions of carbon dioxide. However, TfL is working on a number of other initiatives with the freight industry to minimise the impact of the industry on climate change. These include: the development of inter-modal transfer opportunities to more sustainable forms of transport to reduce greenhouse gas emissions; the development of best practice to increase the uptake of cleaner and renewable fuel sources; and the reduction of overall fuel consumption.

### **N5: Impact on other pollutants**

The Freight Transport Association stated that vehicles which are compliant with Euro standards for PM may not comply with the standards for other pollutants such as carbon monoxide. SMMT and London Councils also felt that the focus of the LEZ on PM could be to the detriment of emissions of other pollutants.

#### *TfL Response*

TfL is recommending an amendment to the Scheme Order so that the base emission standards for the LEZ are the Euro standards for all four regulated pollutants, rather than for PM only. This issue is discussed in more detail under *Theme F: Proposed LEZ Emission Standards*.

In terms of the key health-based objectives of the LEZ, reductions in PM<sub>10</sub> concentrations have a significantly greater impact on health than those of other pollutants. The only vehicles that would not be compliant with the Euro standard for all four regulated air pollutants would be those that have fitted pollution abatement equipment for PM only and some vehicles already in receipt of an RPPC since their base emissions exceed the Euro 3 for PM standard. The 2006 Operator Survey, which asked operators how they would respond to the introduction of the LEZ, suggested that only a minority of operators would achieve compliance by fitting abatement equipment. Therefore it is likely that the LEZ would lead to reduced emissions in London of all regulated pollutants defined in the Euro standards, not just PM.

### **N6: Need for a PM<sub>2.5</sub> standard**

The London Liberal Democrats said that given that EU legislation is likely to put in force a new PM<sub>2.5</sub> standard from the start of 2008, the Mayor should introduce such a standard from the outset of the LEZ. The City of Westminster supported the proposed approach of the LEZ for reducing PM<sub>2.5</sub> but suggested that the introduction of a PM<sub>2.5</sub> standard should be kept under review.

### *TfL Response*

Should the European Commission set a new standard covering ultra-fine particles (PM<sub>2.5</sub>), TfL would consider the effects of the standard and whether there was a need to amend the LEZ standards, which would be subject to further consultation. Any amendment would require further consultation. However, the proposed LEZ would also reduce emissions of PM<sub>2.5</sub>, as road traffic is a proportionately larger source of PM<sub>2.5</sub> than it is of PM<sub>10</sub>. Particulates emitted from diesel engines are smaller than 2.5 micrometres in diameter, so exhaust PM<sub>10</sub> is mostly made up from PM<sub>2.5</sub>. The impact of the LEZ on PM<sub>2.5</sub> would be monitored. It should also be noted that it would only be practical to implement standards based on regulated emissions defined in vehicle construction legislation and a PM<sub>2.5</sub> standard could therefore not be enforced at the moment.

### **N7: Impact of the LEZ on vehicle construction and scrappage**

Four stakeholders, including London Councils, stated that the LEZ would result in an increase in pollution resulting from a growth in demand for new vehicles combined with an increase in vehicles being scrapped before the end of their economic lifespan. This would result in an increase in emissions of greenhouse gases, not just in London but also outside.

### *TfL Response*

A wide range of factors affects demand for and the manufacture of new vehicles. TfL considers that the impact of the LEZ on vehicle manufacture would be insignificant and that it would be impossible to attribute any environmental impact of increased vehicle manufacture to the LEZ. TfL does not expect that the LEZ would result in a significant increase in vehicle scrappage as the majority of these vehicles which have a remaining economic life would be redeployed elsewhere. The total number of vehicles would not be increased and the scheme would encourage operators to buy cleaner vehicles on renewal.

### **N8: Increase in abandoned vehicles as a result of the LEZ**

The London Borough of Barking and Dagenham expressed concern that the introduction of the LEZ could lead to an increase in the number of abandoned vehicles. It also asked for more money to be made available to boroughs to deal with this increase.

### *TfL Response*

The vast majority of vehicles affected by the LEZ would be commercial vehicles. TfL considers that it is highly unlikely that many commercial operators would choose to abandon their non-compliant vehicles illegally rather than sell or dispose of their vehicles for scrappage, with the associated financial recompense. Nevertheless, TfL would keep this issue under review.

### **N9: Air Quality impacts outside London**

Ten stakeholders expressed concern that the LEZ could result in worse air quality outside London. This was a particular concern for local authorities outside London with declared Air Quality Management Areas. This worsening in air quality could result from operators using their older, more polluting vehicles outside the capital. Alternatively, operators trying to sell their older, non-compliant vehicles would be encouraged to do so outside London, in effect displacing the pollution. Watford Borough Council and Slough Borough Council had particular concerns that if motorways were not excluded from the LEZ, non-compliant vehicles would be likely to divert through their areas. Watford Borough Council asked for the LEZ to include mitigation measures should it result in air quality becoming worse outside London.

Overall, Slough Borough Council and Surrey County Council felt that the LEZ had the potential to improve air quality outside London as operators would be encouraged to renew or upgrade their vehicles to meet the requirements of the LEZ.

#### *TfL Response*

Around 40% of the national lorry, bus and coach fleet and slightly fewer than 20% of the national fleet of heavier LGVs and minibuses operate in London during any given year. Many of these vehicles do the majority of their mileage outside London. As such, many of the vehicles that would be renewed or upgraded to meet the requirements of the London LEZ would contribute to reduced emissions outside London. Also, because PM emissions migrate from London to other parts of the country, reductions in London also lead to improved regional air quality. A survey of operator responses to a LEZ undertaken in 2006 indicated that some vehicle operators would reorganise their fleet so that non-compliant vehicles are used exclusively outside London. However, the air quality benefits outside London resulting from vehicle renewal and modification are expected to outweigh the negative impacts of this reorganisation.

Under paragraph 9(7) of Schedule 23 to the GLA Act, consent from the Secretary of State for Transport is required if a trunk road or motorway is to be included in the LEZ and TfL is negotiating as to this consent. His approval is required on issues including where the boundary of the LEZ is drawn, signage and enforcement on trunk roads and motorways. TfL has agreed to fund the cost of signing of the proposed LEZ, including reimbursement of the Secretary of State's costs in installing and maintaining signs. Agreement from the Secretary of State on the inclusion of trunk roads and motorways within the LEZ would be required before the Mayor could confirm the Scheme Order, which includes these roads. The negotiations are well advanced, and TfL anticipates that agreement can be reached before the date proposed for the Mayor to make his decision on the Order.

Subject to the successful conclusion of these negotiations, TfL recommends that motorways and trunk roads, other than the M25, should be included within the proposed LEZ as far as practically possible. Traffic modelling

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

carried out by TfL suggests that this would have very little impact on traffic flows outside London.

### **N10: Monitoring issues**

Three local authorities contiguous to London suggested that TfL should monitor the traffic levels and air quality in the area just outside the LEZ. In particular, Watford Borough Council urged TfL to monitor the situation in the area between the Greater London boundary and the M25.

The London Borough of Barking and Dagenham asked for monitoring arrangements to be in place to assess any unintended impacts of the LEZ and for funding to be made available from the scheme to rectify them should they occur.

CBI London urged the regular and independent monitoring of the impacts of the proposed LEZ on air quality.

#### *TfL Response*

Should the Mayor confirm the Scheme Order, the LEZ would be supported by a programme of impacts monitoring to understand the impacts of the various stages of the scheme. Collection of data on air quality and emissions representing pre-LEZ conditions would be compared to data collected after implementation. There would be an associated programme of reporting throughout the life of the scheme.

As changes to vehicle emissions cannot be measured directly, TfL proposes to use the observed changes to vehicle emissions as inputs into an emissions inventory. TfL would use the established framework of the London Atmospheric Emission Inventory (LAEI) to calculate total vehicle emissions and proportions of emissions by vehicle type or geographic area. The key pollutants to model are particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) and nitrogen dioxide, but impacts on other pollutants such as hydrocarbons, carbon dioxide, carbon monoxide and ozone would also be considered. TfL will also work with the GLA to improve the assumptions in the LAEI and associated LEZ work, taking into account the most recent research.

Estimates of emissions changes would as a minimum be produced at least annually and would be the key input to model changes in the concentration of pollutants. Modelling pollution concentrations has some benefits over relying on changes to measured concentrations as it allows the impacts of the LEZ to be quantified in a controlled way (e.g. by removing the impact of annual variability of weather conditions). This modelling would build on the assessments that have been carried out as part of the LEZ Scheme consultation to forecast emissions and air quality impacts.

TfL would work with local authorities outside London in assessing their recorded air quality monitoring data and to detect changes to the fleet profiles outside London.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### **N11: Other environmental impacts issues**

The London Borough of Barnet expressed concern that some operators with non-compliant vehicles may use residential roads to avoid detection, with resulting adverse environmental impacts.

London First felt that it was important that congestion was reduced, as the highest vehicle emission rates occur at speeds below 5km/h whilst the lowest occur at speeds above 40km/h.

The Freight Transport Association said that retrofit pollution abatement equipment is not as efficient as new vehicles in terms of improving air quality. Similarly, the SMMT quoted work from Defra that showed that the uptake of new technology was the most cost effective way of improving air quality.

Finally, the Royal Borough of Kingston upon Thames said that the LEZ proposals would do nothing to improve air quality in the area surrounding the A3, which has the worst air quality in the borough.

#### *TfL Response*

The fixed cameras across London would be supplemented by mobile ANPR units so that drivers could not rely on avoiding the fixed cameras to escape detection. TfL does not therefore expect an increased use of residential roads by unsuitable commercial traffic. Also, the number of fixed cameras would be increased when heavier LGVs and minibuses would come within the scope of the LEZ, as these vehicles would be more likely to divert off the main road network than HGVs, coaches and buses. TfL would keep the matter of camera coverage under review.

TfL acknowledges that reduced congestion can contribute to improving air quality, and would continue to address this through Congestion Charging and other traffic management initiatives.

As discussed in more detail under *Theme F: Vehicle emission standards*, TfL is confident that pollution abatement equipment is effective in reducing emissions from vehicles, even in urban driving conditions. For some operators, fitting and maintaining a particulate trap to their vehicle would represent the lowest cost option for compliance with the LEZ standards. A LEZ scheme that required non-compliant vehicles to be replaced or re-engined to operate in Greater London without paying a daily charge would involve unreasonably high costs on vehicle operators.

It is difficult to predict the impact of the LEZ on specific roads. However, the greatest reductions in PM<sub>10</sub> concentrations are expected to occur in central London and along main route corridors. Whilst the Royal Borough of Kingston upon Thames has better than the London average level of PM<sub>10</sub>, it would still benefit significantly from the air quality improvements that would result from the LEZ. The Health Impact Assessment prepared to accompany the Scheme Order consultation estimated that by 2012 there would be a 12% reduction in

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

the population of the Royal Borough of Kingston upon Thames living in areas exceeding PM<sub>10</sub> limit values compared to the pre-LEZ level.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

### **Theme O: Streetscape**

Representations falling within this theme concerned the streetscape impacts of the proposed LEZ. Seventeen stakeholders made representations under this theme, including 12 London boroughs, four local authorities and one business representative organisation. The sub-themes are:

- General signage issues
- Borough-specific signage issues
- Camera and monitoring site issues.

#### **O1: General signage issues**

Thirteen stakeholders made representations regarding the possible impact of LEZ signage. These included: London Councils, five London boroughs (Barnet, Croydon, Hackney, Southwark and the Royal Borough of Kingston upon Thames), Surrey County Council, Slough Borough Council, and the Federation of Small Businesses (FSB).

The issue raised by most stakeholders was a concern that the extent of signage needed to ensure that there is compliance with the LEZ would lead to increased visual clutter on the roads and a negative impact on the local environment and streetscape. Eight stakeholders commented on this matter.

A number of responses concerned characteristics of the LEZ scheme which, it was felt, would increase the overall number of signs required. The Royal Borough of Kingston upon Thames commented that the need to sign all 'escape routes' from the zone, including cul-de-sacs, would add to the signage clutter, and also commented that where the boundary of the LEZ coincides with the London Lorry Control Scheme (LLCS), consideration should be given to co-ordinating the signs for both schemes. Essex and Surrey County Councils noted that the need to provide advance warning of the zone, and an opportunity for vehicles to divert away, would require good advance signage. The London Borough of Merton commented that, since drivers would be unfamiliar with the GLA boundary, TfL would need to provide signage at all entry points to the zone. The London Borough of Croydon expressed concerns that the way in which the boundary had been designed to follow the borough boundary would lead to an unacceptable proliferation of signs. A couple of responses referred to the repeater signs that are a feature of the Central London Congestion Charging Scheme and expressed concerns that similar signage would be required for the Low Emission Zone.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The London Borough of Croydon commented that there should be a survey of existing signage before further work is done on LEZ signage. Several stakeholders responded that TfL should work with the boroughs in developing the design and location of signage. Hertfordshire County Council commented that it would be open to further advance signing sites in the county other than the one already proposed. Surrey County Council referred to a meeting during the consultation period at which TfL said it would cover all the costs of signage. The Royal Borough of Kingston upon Thames commented that increased signage would involve higher implementation costs.

### *TfL Response*

TfL would be careful to ensure signage is kept to a necessary minimum in order to avoid sign clutter, and would continue to liaise with the relevant London boroughs, contiguous authorities and the Highways Agency to identify appropriate sign locations. The sizes of the traffic signs would vary depending on the typical traffic speeds observed on the approach roads. The size of text on a sign is prescribed in standards set by the DfT and this in turn determines the overall size of a sign.

TfL commissioned an independent non-statutory Environmental Report on the impacts of the proposed LEZ, to support the Scheme Order consultation. This includes an appraisal of the likely effects of the scheme signage upon the local landscape. The report concluded that “these signs would have a negligible impact on townscape and visual amenity. Positioned along road corridors already characterised by a variety of street clutter, including lighting columns, speed cameras and traffic signs, additional signage would cause only minor change to townscape and visual quality.”

Where it is considered desirable, advance signage would be placed at strategic locations outside London, with agreement from the relevant County Councils or the Highways Agency, as appropriate. These signs would warn drivers that they are approaching the LEZ.

Entry signs would be positioned at each point where a public road crosses the boundary. There would need to be sufficient entry signs at each of these points, to allow a sign to be visible from each direction of approach. These signs would inform drivers of relevant vehicles that they are at the LEZ boundary. It is intended that repeater signs would generally be limited to a sign approximately every 5km on the Transport for London Road Network. There are no exit signs planned for the Low Emission Zone.

In regard to the inclusion of cul-de-sacs, the experience gained through Congestion Charging suggests that the inclusion in the scheme of all roads leading into the zone aids general driver understanding of the boundary, since entry signs can be seen at each of these roads into the zone. Additionally, the principal objective of the LEZ is to prevent the most polluting vehicles from entering London, and in so doing, improve air quality in the capital. Although the issue of visual clutter is important, it is likely that many residents would

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

actually wish to be included in the zone and would perceive a benefit even if there is little actual effect on their street.

In many cases signs for the London Lorry Control Scheme (LLCS) and in some cases other lorry controls and parking controls will be at similar points to the locations sought for LEZ signs.

TfL met with a number of local authorities during the consultation period and is continuing to discuss specific local issues around boundaries and signage with individual authorities. Should the Mayor confirm the LEZ Scheme Order, TfL would work with local authorities to decide the detailed arrangements of the signs and their location. In regard to the design of the boundary, the rationale for this is covered in more detail in *Theme G: Boundary issues*. In summary, the boundary has been designed in order to allow drivers of vehicles who do not wish to enter the LEZ to U-turn or divert away from the zone safely. However, as outlined above, TfL would seek to minimise sign clutter wherever possible.

All the costs associated with signage would be borne by TfL. This includes commissioning the signs, installation and maintenance.

## **O2: Borough-specific signage issues**

A number of boroughs raised specific issues in regard to signage in their boroughs. These are listed and responded to in Appendix 5.

## **O3: Camera and other Monitoring Site Issues**

Six stakeholders made representations with regard to the location of Automatic Number Plate Recognition (ANPR) enforcement cameras and associated infrastructure; the London Borough of Southwark commented on air quality monitoring sites within the zone. The London Borough of Brent and Slough Borough Council were concerned about the visual impact of the cameras and said that TfL should work with the boroughs to determine how many cameras would be needed, where they would be sited, and make efforts to mitigate the environmental impact of the equipment. The City of Westminster welcomed the fact that, where possible, cameras already in place to enforce the Congestion Charging scheme would be used for LEZ enforcement. The Royal Borough of Kensington and Chelsea commented that it could see no need for further cameras within the borough. The Royal Borough of Kingston upon Thames said that TfL should consult with authorities in regard to the location of signs and cameras for the proposed scheme.

### *TfL Response*

The LEZ would be enforced using ANPR cameras similar to those used for the Central London Congestion Charging Scheme. The ANPR system is the most viable technology currently available for enforcing the LEZ and has proved successful in the Central London Congestion Charging scheme. This

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

would not preclude TfL from introducing new enforcement technology in the future.

Both fixed cameras and mobile patrol units fitted with ANPR cameras would be used. The enforcement cameras used would include those used to enforce the Central London Congestion Charging Scheme and the Western Extension, plus new additional cameras which would be installed if the Scheme Order were confirmed.

Where possible, TfL would position control cabinets and feeder pillars against existing walls or at the edge of footpaths, to mitigate disruption to the public and avoid adverse impacts on the environment. In some cases, existing cabinets, pillars and cameras would be re-used. In contrast to the congestion charging scheme, LEZ enforcement cameras would be concentrated on major routes into London, almost all of which are 'A' roads. Given the nature of these roads, there is less likely to be adverse visual impact experienced.

Prior to the start of the consultation on the Scheme Order in November 2006, TfL commissioned an independent non-statutory Environmental Report on the impacts of the proposed LEZ, to support the Scheme Order consultation. This includes an appraisal of the likely effects of the enforcement cameras upon townscape and visual amenity. Most of the sites were considered likely to have a low or negligible impact, although a few (around 10%) were assessed as likely to have a moderate impact. The Environmental Report noted that, "The majority of predicted impacts are considered to be low or negligible; ie the scheme would cause minor change to existing views and townscape character. This is a consequence of the location of the majority of indicative enforcement cameras, along major road corridors, characterised by extensive existing street furniture and vehicular activity. The enforcement cameras and associated equipment would be appropriate to the existing townscape character, and any change to the existing views would be largely insignificant."

There are currently no plans for LEZ fixed enforcement cameras to be located in the Royal Borough of Kensington and Chelsea.

Should the Mayor approve the LEZ, TfL would work with local authorities in deciding where signage and monitoring and enforcement cameras should be located. In order to maximise the time available for consideration of the issue, in March 2007, TfL wrote to the 22 London boroughs in which, should the Mayor confirm the Scheme Order, it would wish to install enforcement cameras, outlining the proposed locations and seeking to arrange a meeting to discuss the location and details of the proposed equipment.

All of the 100 monitoring cameras are on existing traffic signals except for seven, which have been installed on new poles (of the type used for bus beacons) on the Transport for London Road Network (TLRN). There are currently no plans to install further monitoring cameras.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

There are over 100 air quality monitoring sites in London. These can be viewed at [www.londonair.org.uk](http://www.londonair.org.uk). TfL have created or upgraded seven sites within the proposed LEZ boundary. All but one of these sites is an existing site, which have been upgraded in preparation for possible implementation of the LEZ. TfL has no plans to put in any further air quality monitoring sites within the zone at this time.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

### **Theme P: Health impacts**

Representations falling within this theme concerned the impacts of the LEZ on health. Fourteen stakeholders made representations under this theme. These were made up of four London boroughs, five health representative organisations, one London political representative group, one professional organisation, one transport and environment representative organisation, one economic partnership and one ethnic / voluntary representative organisation.

The sub-themes are:

- Impact on general health
- Economic and social impacts
- Monitoring of health impacts
- Consultation information
- Other health impacts.

#### **P1: Impact on general health**

Nine stakeholders submitted representations regarding the positive impact of the proposed LEZ on general health, including the positive impact of the LEZ on the health of people with existing illnesses and allergies. These included: London Borough of Greenwich, London Liberal Democrats, Asthma UK, the Royal College of Nursing and the Healthcare Commission.

The Royal College of Nursing stated that the LEZ would have a positive impact on patients suffering from respiratory and other conditions and welcomed any attempt to reduce pollution and improve the quality of life for Londoners. Friends of Capital Transport stated that the LEZ would have additional benefits by reducing air pollution which would potentially encourage walking. Asthma UK, the National Institute for Clinical Excellence, Haringey PCT, the London Borough of Greenwich and the London Liberal Democrats all welcomed the health impact of the LEZ on more deprived communities. The Healthcare Commission stated that the LEZ would stimulate numerous immediate positive health impacts in terms of improvements in respiratory health and other related issues affecting the health and wellbeing of communities.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The London Borough of Greenwich supported the conclusion of the Equalities Impact Assessment that the LEZ would benefit more those living in areas subject to increased exposure to air pollution or more vulnerable due to existing poor health. The London Liberal Democrats stated that London's poorest communities are disproportionately affected by poor air quality caused by road transport emissions.

#### *TfL Response*

TfL notes the support for the proposed LEZ. The 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 to 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 was predicted that in 2005 some 1,000 premature deaths and a similar number of hospital admissions would occur due to poor air quality in London.

While the LEZ would have benefits for the whole population in terms of improved air quality and the health improvements resulting from this, it is recognised that the LEZ is likely to deliver proportionately more health benefits to more deprived areas or lower income groups. TfL's studies on the equalities impacts of the LEZ also showed that Black, Asian and Ethnic Minority people were found to experience higher levels of air pollution than the average for the whole population and would therefore benefit more from improvements in air quality. Older people and younger people are more vulnerable to the effects of air pollution, and would therefore benefit more from improvements in air quality.

#### **P2: Economic and social impacts**

Three stakeholders submitted representations regarding the economic and social impacts of the proposed LEZ on health. The Central Council of Physical Recreation and Healthy Southwark Partnership expressed concern that the inclusion of minibuses in the LEZ could have a negative impact on community travel and voluntary sporting clubs which could lead to a reduction in the number of children participating in sport and recreation, with resulting health impacts, and a potential increase in the number of cars used to transport children. The Healthcare Commission expressed concern that the inclusion of minibuses in the LEZ could impact on community transport and on 'meals on wheels' type services with resulting negative effects on the health of local people. The Healthcare Commission also expressed concern about the impact of the LEZ on small retailers who often use vans to get their stock, and the resultant impact on people with mobility impairments who are unable to access larger supermarkets and so depend on these local shops.

#### *TfL Response*

As discussed under Theme M, *Impact on public and community sectors*, the LEZ could have an impact on some services provided by voluntary and

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

community organisations. However, the majority of operators would not have to take action to comply with the proposed LEZ standards as their vehicles would already be compliant. It should also be emphasised that most vehicles operated by this sector would not come within the scope of the LEZ until late 2010, giving those operators who are not already compliant more than three years to develop compliance strategies. There are also a range of options available to those operators to make their vehicles compliant and information on these options would be made available on TfL's LEZ website and through the LEZ operator helpline.

There is a range of free and concessionary travel on public transport for children and young people, students and older people in London, and this should be a viable option for those engaged in sport and leisure activities.

While smaller community operators may tend to operate older, non-compliant vehicles, services provided by local authorities, or by their contractors, are less likely to be affected. Consultation responses from the London Boroughs did not indicate a significant problem with these types of vehicles.

The Health Impact Assessment, carried out to support the Scheme Order consultation, while noting the possible negative effects of the scheme on the community sector, found that there were possible benefits from encouraging the use of newer vehicles. These were: improved vehicle safety; and vehicles which might better meet the needs of users in terms of vehicle access.

### **P3: Monitoring of health impacts**

Five stakeholders submitted representations regarding the monitoring of the health impacts of the LEZ. Asthma UK stated it was pleased that monitoring would be ongoing and suggested that TfL investigate non-monetary, quality of life impacts and publish annual progress reports. The Healthcare Commission suggested that TfL investigate a way to better understand the relationship between transport measures and improving the health of local people, including investigating the cumulative effects of the central London Congestion Charging Scheme and the LEZ, on the health of all Londoners. The National Institute for Clinical Excellence suggested TfL could include in the monitoring programme for the LEZ an exploration of the links between people's perceptions of their environment and health related attitudes and behaviour. The City of Westminster suggested monitoring the impact of pollution exposure to wider sections of the population, including both residents and the people who travel into London for work or to visit London.

#### *TfL Response*

One of the key aims of the proposed Low Emission Zone is to improve the health of Londoners. These benefits have been quantified as part of the process of developing the LEZ proposals and the monitoring programme would build on these findings. Should the Mayor confirm the Scheme Order, TfL would monitor the profile of the observed traffic fleet in London following the introduction of the LEZ and would update the estimates of projected health benefits from the scheme based on the recorded data. As part of this

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

work, TfL would look at how the impact of the LEZ on people who travel into London can be modelled, as well as the impact on London residents.

TfL is currently working with the GLA to look at the combined benefits of all the Mayor's initiatives that will have an impact on air quality, including the Mayor's Taxi Emissions Strategy and TfL's work to reduce emissions from London buses.

TfL is also supporting leading-edge research to look at the relationships between changes to particulate composition and activity with observed trends in morbidity and mortality. Consideration would also be given to the suitability of methods such as using patient data to identify changes to incidences of diseases.

TfL would also use attitudinal surveys such as the Londoner's Survey to monitor London resident's perceptions of the LEZ and its impact on the environment and health.

#### **P4: Consultation information**

Four stakeholders submitted representations regarding the health impacts set out by TfL in the consultation documents provided to stakeholders. The National Institute for Clinical Excellence welcomed the thoroughness of the health impact assessment. The London Borough of Hounslow sought clarification of monetised health and non-health benefits for London and outside London. The Royal Borough of Kensington and Chelsea sought clarification of the difference in the monetised health benefits for the Scheme Order consultation and the earlier Strategy Revisions consultation. The Thames Gateway London Partnership suggested that the benefits of the LEZ could be greater than presented in the consultation documents because of research suggesting that particulates are a greater risk to health than previously thought.

#### *TfL Response*

Following consultation on the revisions to the Mayor's Transport and Air Quality Strategies, the Mayor confirmed some important changes to the proposals including the deferral of the Euro IV standard to 2012 and the extension of the scheme to include LGVs in 2010. The modelling which informed the Scheme Order consultation was based on the latest proposals. Furthermore, since the air quality and health benefits modelling was reported in the Report to the Mayor on the Strategy Revisions in July 2006, TfL has undertaken several studies to update the data and assumptions that underpin the modelling. The estimated monetised health benefits of the LEZ scheme have been revised for the consultation on the Scheme Order in response to these studies.

These estimates have been updated since the consultation following changes to calculation methods. Defra has introduced a change to the IGCB methodology, which results in a reduction in the formation rate of secondary particulates per unit of NO<sub>x</sub> emissions. Also the benefits outside London have

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

been re-analysed using new DfT data that has more accurately assessed the split of outside London kilometres by area type. This leads to a small increase in outside London PM benefits. The resulting overall benefits of the scheme are now estimated as between £170m - £240m for the Defra/IGCB method and £250m - £670m for the EU CAFE method.

TfL acknowledges research published by the World Health Organisation that indicates that particulate matter poses a greater risk to health than previously thought. A full body of research would be considered in any future assessments of the health impacts of the proposed LEZ.

### **P5: Other health impacts**

Healthy Southwark Partnership suggested that TfL promote the benefits of the proposed LEZ to local people in Southwark and throughout Greater London in combination with health promotion messages.

#### *TfL Response*

TfL aims to publish a series of annual reports assessing the observed air quality, environmental, health, economic and traffic impacts of the proposed LEZ across London. These reports would be published in hard copy and on the internet. The proposed LEZ would not operate in isolation, it would complement other initiatives contained in the Mayor's Transport and Air Quality Strategies which focus on reducing emissions from road transport and encouraging a modal shift to public transport, walking and cycling.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of representations received under this theme.

### **Theme Q: Traffic Impacts**

Representations falling within this theme concerned the potential traffic impacts of the proposed LEZ. Fourteen stakeholders made representations under this theme, including six local authorities, four London Boroughs, two business representative organisations, one voluntary representative organisation, and a transport and environment representative organisation. The sub-themes are:

- Increased traffic due to move to smaller vehicles
- Traffic diverting around London
- Use of unsuitable roads ('rat-running') to avoid enforcement cameras
- Modal shift
- Monitoring and mitigation of traffic impacts.

#### **Q1: Increased traffic due to move to smaller vehicles**

Five stakeholders, including the London Boroughs of Bromley and Ealing and Hertfordshire County Council, commented that, since the LEZ targets heavier, bigger vehicles, the net result might be to encourage the use of a greater

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

number of smaller vehicles. This might increase overall traffic congestion, which would run counter to other TfL policies. The Central Council of Physical Recreation (CCPR) noted that many sports clubs and amateur organisations currently use older minibuses in order to travel to venues and, because they are unlikely to have the resources to upgrade or renew these vehicles, would choose to travel by car instead. Hertfordshire County Council said that cross-boundary bus services between school and home may become unsustainable and result in parents using cars to take their children on these journeys. The London Boroughs of Ealing and Bromley expressed concern that, once the scheme becomes operational in 2008 operators may switch from using HGVs for deliveries to heavier vans, which are not covered by the LEZ until 2010. The London Borough of Bromley asked if TfL would fund any minor borough mitigation measures needed if there were to be an increase in the number of vans. Covent Garden Market Authority noted that it acted as an important distribution hub for goods into London, meaning that producers' vehicles did not need to make multiple journeys into London.

### *TfL Response*

TfL considers that the LEZ would be unlikely to result in a general switch to the use of smaller vehicles, for the reasons set out below.

The operator survey undertaken by TfL in 2006 produced little evidence that freight operators planned switching from HGVs to LGVs. TfL considers it unlikely that many operators would do this as other overheads would be incurred such as additional drivers and larger fleets. The inclusion of heavier LGVs in the LEZ from 2010 would also discourage some operators from switching to heavier LGVs.

As discussed in more detail under *Theme M, 'Impact on the Public and Community Sectors'*, TfL does not consider it likely that many cross-boundary bus services would be adversely impacted as a result of the LEZ. It should also be noted that there is a range of free and concessionary travel on public transport for children and young people, students and older people which will encourage continued use of public transport.

TfL has considered the impact of the proposed LEZ on the community transport sector under *Theme K: 'Discounts and Exemptions'*, and *Theme M: 'Impact on the Public and Community Sectors'*. Most operators in this sector drive minibuses and there are a range of options available for operators to make their vehicles compliant. It should be reiterated that the standard for minibuses would not come into operation until October 2010, allowing time for operators to review their options and decide on the best compliance solution for them.

In regard to the question of whether TfL would fund any traffic mitigation measures in the boroughs, it is not anticipated that there would be a need for any such mitigation. However, as detailed in *Chapter 2: Scheme Overview*, TfL would be monitoring the traffic impacts of the Scheme.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

## **Q2: Traffic diverting around London**

Seven stakeholders, including the London Boroughs of Harrow and Merton and Surrey County Council, made responses on this sub-theme. The London Boroughs of Harrow and Merton, Surrey County Council and Windsor and Maidenhead, Slough and Watford Borough Councils were concerned that traffic would divert into their boroughs in order to avoid the zone, and that this would have an adverse impact on the area, by increasing traffic levels and causing congestion. BAA said that the scheme would have little impact on congestion around Heathrow Airport. Slough Borough Council asked about parking provision for vehicles diverting away from the zone, as did the London Borough of Harrow, which suggested that coaches en route to Wembley might park at the edge of the zone and transfer passengers to public transport in order to avoid paying the charge. The London Borough of Harrow also raised the potential problem of trucks turning in the road to divert away from the zone. Surrey County Council detailed a number of particular locations which might be used as diversion routes, some of which were identified as being sensitive. The London Borough of Merton asked about the impacts of traffic around the boundary of the LEZ. The Royal Borough of Windsor and Maidenhead asked about the air quality impacts of this, and Watford Borough Council was concerned that there might be increased traffic in the borough.

### *TfL Response*

TfL commissioned a non-statutory Environmental Report in preparation for the consultation on the Scheme Order. This considered the likely impacts on traffic of the proposed LEZ in regard to vehicles with no origin or destination in London diverting around the zone. Its conclusion was that there would be a negligible impact from this.

TfL undertook an analysis of the impact of vehicles diverting onto the M25 to avoid entering the LEZ. This was used by the consultants in producing the Environmental Report. It concluded that the M25 (which is intended as a diversionary route) is likely to experience only a negligible increase in total daily traffic volumes of LEZ non-compliant vehicles as a result of rerouting due to the LEZ. The analysis also considered whether vehicles were likely to move to diversionary routes other than the M25. The analysis indicated that it was unlikely that significant numbers of HGVs or LGVs would choose to take the significantly slower inside-M25 route rather than use the M25. Most traffic with no origin or destination in London would already be using the M25 and therefore would not be affected by the LEZ.

TfL does not consider that it is likely that significant numbers of coaches would seek to park at the LEZ boundary and transfer passengers onto public transport, not least because this would defeat the object of using a coach to get to London, and because of the inconvenience this would cause to passengers. In a competitive market, it is likely that companies which could not provide a full service to London would lose business to companies operating LEZ-compliant coaches. There are no plans to provide additional parking facilities around the LEZ boundary, but TfL would monitor the effects of the LEZ as described in Chapter 2.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Should the LEZ be implemented, TfL would monitor the effects of the LEZ on traffic levels outside London. The environmental impacts of the scheme, including any impacts on air quality outside London, are covered in Theme N of this report, and would also be monitored by TfL in the future.

Surrey County Council raised a number of issues in regard to the possible traffic impacts of the LEZ boundary in their area. These are dealt with in Appendix 5.

### **Q3: Use of unsuitable roads ('rat-running') to avoid enforcement cameras**

Essex and Surrey County Councils asked whether drivers might use unsuitable roads in order to avoid known enforcement cameras. Surrey County Council identified particular routes where this may be a problem.

#### *TfL Response*

There are no anticipated impacts on traffic levels or congestion from the LEZ, as the Scheme is expected to impact on fleet age and emissions profiles rather than traffic volumes in and out of Greater London. The fixed enforcement cameras across London would be supplemented by mobile ANPR units, so that drivers could not rely on avoiding the fixed cameras. Should the Scheme begin operation, TfL would be able to direct these mobile units to particular areas, should this appear to be a problem. Additional fixed cameras would be installed in 2010 when the Scheme was extended to include heavier LGVs and minibuses, as these vehicles would be more likely to use smaller roads for their journeys.

The Environmental Report considered the likely impacts on traffic of the proposed LEZ with regard to vehicles 'rat-running' onto unsuitable roads in order to avoid enforcement cameras. This concluded that while there was no easily quantifiable impact, any impact was likely to be negligible. The assessment noted that the London Lorry Control Scheme (LLCS) has the effect of reducing the alternative routes for non-LEZ compliant vehicles during its hours of operation. This scheme bans lorries from roads in Greater London between 9pm-7am Monday-Saturday, and 1pm Saturday to 7am Monday. The scheme includes an Excluded Route Network (ERN), outside the ban, consisting of the North and South Circular Roads and major radials leading to these.

Surrey County Council raised a number of issues in regard to the possible traffic impacts of the LEZ boundary in their area. These are dealt with in Appendix 5.

### **Q4: Modal Shift**

One stakeholder, the Central Council of Physical Recreation (CCPR), felt that it was better to occasionally drive a non-compliant horsebox than move to using a 4x4 car with a trailer, since using the 4x4 as a daily car would also

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

result in increased pollution. Friends of Capital Transport commented that the removal of freight from roads would improve the environment for walkers.

#### *TfL Response*

The LEZ aims to encourage operators of the oldest, most polluting diesel engine road vehicles to upgrade or renew their vehicles to make them cleaner. It is not the intention of the LEZ to encourage the use of different, but still highly-polluting vehicles within the capital, and other TfL policies seek to discourage the use of such vehicles.

Where an individual does choose to switch vehicle type, it should be noted that a modern car with a trailer, for example, is still many times less polluting in terms of PM<sub>10</sub> and NO<sub>x</sub> than an old and heavy vehicle. For occasional visits, some owners might choose to pay the LEZ daily charge rather than take the bigger step of changing their vehicle and the charge has been set at a level at which it is feasible to do this.

TfL notes the support from Friends of Capital Transport. People living in and visiting London should enjoy the benefits of improved air quality as a result of the Scheme, and this may particularly benefit pedestrians.

#### **Q5: Monitoring and mitigation of traffic impacts**

Three stakeholders, all of them local authorities, asked about TfL's plans to monitor traffic impacts of the proposed scheme, and whether any mitigation measures would be available. Slough Borough Council said that there should be monitoring of the levels of HGV traffic diversion at the LEZ boundary; Surrey County Council considered that monitoring should extend outside the Greater London area, including roads just outside the LEZ boundary; and Watford Borough Council felt that there should be monitoring of traffic in the area between the Greater London boundary and the M25. Watford Borough Council also commented that there should be mitigation measures in place, complementing the work of local authorities, if the LEZ led to worsening traffic outside its boundary.

#### *TfL Response*

Should the Mayor confirm the Scheme Order allowing the LEZ to be implemented, TfL would monitor the traffic impacts of the scheme outside Greater London. This work would be likely to include analysing published DfT data to assess existing background traffic flows outside the boundary and in other cities; conducting periodic surveys to monitor changes in the profile of the fleet (in terms of age and Euro class) on selected major roads/motorways; and re-running the operator survey to assess how operators have changed their behaviour after the LEZ is introduced. TfL would bear the cost of these surveys.

Since TfL does not anticipate that there would be adverse traffic impacts outside the zone, there are no plans for mitigating measures. However, as

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

outlined above, the impact of the zone would be monitored and TfL would review the need to provide mitigation in the light of this data.

### *TfL Recommendations*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

## **Theme R: Impacts on the London economy**

Representations falling within this theme concerned the potential impacts of the LEZ on the London economy. Seventeen stakeholders made representations under this theme. These were made up of: eleven business representative groups, one voluntary organisation representative group, one health organisation, one London borough, one environmental organisation, one other Government organisation and one economic partnership.

The sub-themes are:

- LEZ would have a negative impact on London's economy
- Impact on London events
- Impacts on other projects
- Links with freight policies
- Monitoring of economic impacts
- Impact on tourism
- Other London economy impacts.

### **R1: LEZ would have a negative impact on London's economy**

A small number of stakeholders expressed concern that the LEZ would have an overall negative impact on London's economy. The Brewery Logistics Group felt that there was a risk that commercial operators would find it uneconomical to visit London due to the combined effects of the Congestion Charge and the LEZ.

The London Borough of Havering felt that the LEZ would have a negative impact on retailing in borough town centres, as fewer visitors would arrive by coach due to costs being passed on to customers. The Healthcare Commission and the Road Haulage Association were also worried about costs being passed onto customers more widely. The Park Royal Partnership urged further consideration of the economic impacts of the LEZ on the Park Royal estate.

On the other hand, the London Climate Change Agency felt that the move towards cleaner vehicles and fuels resulting from the LEZ would contribute towards economic development in London.

### *TfL Response*

TfL estimates that without any changes to fleet modification programmes, two thirds of all HGVs and half of all buses and coaches would be compliant with

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

the 2008 LEZ standards. In 2010, it is estimated that three-quarters of heavier LGVs and minibuses would be compliant. Therefore, the majority of operators would be unaffected by the LEZ.

TfL commissioned an Economic and Business Impact Assessment to inform the Scheme Order consultation, which was carried out by independent consultants (SDG). This concluded that some smaller operators may find it difficult to meet the costs needed to comply with the LEZ and may as a consequence choose to exit the London market or reduce the scale or scope of their operations. However, the impact assessment also concluded that any small number of companies exiting the London market would be replaced by companies operating compliant vehicles. In the long-term, therefore, job losses would be very low.

The net cost to the economy of London resulting from the LEZ is considered to be low, with a net impact of between 140 and 420 lost jobs over the period up to 2015/16, possibly even fewer. Whilst some sectors of the economy would be adversely affected by the LEZ, by bringing forward or imposing an additional cost, others would benefit. Adversely affected sectors could include small construction businesses, tourist coach operators, and small businesses, particularly those operating heavier LGVs. However, some ancillary sectors such as the pollution abatement equipment industry and the vehicle maintenance sector could benefit as a result of the LEZ.

The Economic and Business Impact Assessment concluded that overall around £200m to £310m of the costs of compliance would be passed onto customers. This would be most likely in the coach market and the freight market. However, any increase in costs resulting from the LEZ would be likely to be spread out over a large area and spending base (beyond London and the surrounding counties), and as such would constitute a very small impact on prices.

## **R2: Impact on London events**

Three stakeholders stated that major events in London could be jeopardised by the LEZ. The Central Council of Physical Recreation (CCPR) believed that some sporting events in London would be at risk as competitors who need to bring in heavy equipment may not be able to afford to do so if their vehicles are not LEZ compliant. In addition, other major events such as the Olympia Horse Show and the Boat Show at Excel could move from London if traders were unwilling to pay the LEZ daily charge.

The Federation of British Historic Vehicle Clubs said that many heritage vehicle events, including the London to Brighton Run could be compromised if some vehicles were required to pay the LEZ daily charge. The Federation stressed that some of these events are run for charity.

The Showmen's Guild and the Association of Circus Proprietors of Great Britain stated that as many of their vehicles are difficult to retrofit and have long life-cycles, vehicle upgrade or renewal was not an economically viable option for members. However, if members were forced to pay the daily LEZ

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

charge, their attendance at the many fairs in London would be jeopardised. These fairs attract many local and international visitors, and in the medium to long term, the fairs could disappear, which would have a negative effect on London's economic and cultural wealth. These events are often run to support charities, and they also generate a large amount of income for boroughs.

### *TfL Response*

TfL does not believe that the LEZ would impose significant extra costs on traders at major London events such as the Olympia Horse Show and the Boat Show, when compared to the other costs involved. It should also be noted that TfL expects the majority of operators to be LEZ compliant in 2008 when HGVs, buses and coaches come within the scope of the proposed LEZ and in 2010 when minibuses and heavier LGVs are included within the scheme's scope. The impact of the LEZ on such major events in London is therefore expected to be very small.

As outlined under *Theme K: Discounts and exemptions*, TfL recommends amending the Scheme Order so that all vehicles first constructed before 1973 would receive an exemption from the proposed LEZ, regardless of whether or not they were used for hire and reward. This may reduce the impact on some operators of historic vehicles who use their vehicles at heritage vehicle events and for occasional hire and reward.

Also as outlined under *Theme K: Discounts and exemptions*, TfL recommends the inclusion in the Scheme Order of a 100% discount for specialist showman's goods vehicles. This proposed 100% discount would mean that the LEZ would have a minimal impact, if any at all, on the provision of fairs in London.

### **R3: Impacts on other projects**

The London Borough of Havering was concerned that the LEZ could result in suppliers passing costs onto customers, which could have a negative impact on regeneration in the Thames Gateway. The Thames Gateway London Partnership on the other hand, felt that the LEZ was consistent with its own aims of reducing the effect of transport on the environment and contributing to healthier and more efficient workforces.

The Olympic Delivery Authority reported that their delivery partner (CLM) had no significant objections to the LEZ, apart from the potential cost impact down the supply chain for construction vehicles.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

TfL considers that all major projects in London such as the Olympics and the Thames Gateway regeneration should share the aims of the LEZ, which is to improve air quality and health in the capital. As stated above, TfL considers that the LEZ would have only a small impact on the economy in London and believes that any minor economic negative impacts would be outweighed by the air quality and health improvements that would result from the LEZ.

As stated under sub-theme R1, any increase in costs resulting from the LEZ would be likely to be spread out over a large area and spending base (beyond London and the surrounding counties), and as such would constitute a very small impact on prices.

### **R4: Links with freight policies**

The Freight Transport Association (FTA) stated that it had good working relationships with both TfL's Freight Unit and the LEZ team. However, it had concerns that TfL was not joined up internally and that it was delivering policies that affect the freight sector in a piecemeal and inconsistent way. The FTA would therefore welcome the creation of a joint industry group to help deliver societal, environmental and industry benefits.

The Thames Gateway London Partnership requested that should the LEZ produce a surplus, funding would be ring fenced for relevant freight projects in London which would promote greater efficiency of movement.

The Brewery Logistics Group felt that the night-time/ weekend lorry ban should be removed if the Mayor is serious about reducing pollution in London.

### *TfL Response*

TfL appreciates the assistance of the FTA throughout the development process of the LEZ proposals, and expects this constructive working relationship to continue should the Mayor approve the Scheme Order allowing the LEZ to be implemented. TfL tries to ensure that the organisation responds in a consistent way in its dealing with freight stakeholders. TfL stresses that the London Freight Plan was published in draft form and is at the moment being reviewed, with publication of a revised document expected later in the year.

A key element of the freight policy development process within TfL is the role of the London Sustainable Distribution Partnership (LSDP) (of which the Thames Gateway Freight Quality Partnership and FTA are active and respected members). The LSDP developed the core pillars of sustainable distribution of economy, environment and society to identify the priorities that the London Freight Plan addresses.

The LSDP was initiated by the Mayor's Transport Strategy and is a partnership based on common understanding of freight needs and shared

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

objectives for a variety of organisations including boroughs, statutory organisations, freight operators and businesses.

As previously stated, it is not expected that the proposed LEZ would generate any net revenues. However, Annex 3 of the Scheme Order outlines initiatives which any unforeseen revenues might be spent on. These include traffic management initiatives, which would promote the greater efficiency of freight movements in London.

The London Lorry Control Scheme (LLCS) is operated by London Councils, so TfL is unable to make any decisions regarding the future of that scheme.

### **R5: Monitoring of economic impacts**

The Association of International Courier and Express Services and CBI London felt that the LEZ would require regular and independent monitoring, taking into account all direct and indirect costs to businesses.

Slough Borough Council urged TfL to monitor the economic impacts of the LEZ in areas neighbouring the LEZ boundary.

#### *TfL Response*

TfL proposes to use the observed data on changes to vehicle profiles to help identify and quantify any economic impacts that are associated with the LEZ, using robust and transparent methodologies. The following areas of work would be considered:

- Refinement of the desk based assessment currently used to forecast the economic impacts of the LEZ.
- Characterisation of operator responses based on observed changes.
- An overall quantification of 'net costs bought forward' and wider economic impact, including benefits using observed data.
- An understanding of 'background' UK trends and developments in affected sectors and businesses to allow LEZ impacts to be understood in context.
- Further consideration of likely impacts (costs and benefits) outside Greater London.

### **R6: Impact on tourism**

The Caravan Club expressed concern that the bureaucracy required for visitors driving motorhomes to enter the LEZ could deter tourists, particularly foreign tourists, from coming to London. The SMMT also felt that the LEZ could deter foreign tourists with motorhomes from coming to London.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

The vast majority of motorhomes would come within the scope of the proposed LEZ from 2010, when the proposed LEZ standard would be Euro 3. This means that only owners of motorhomes over eight years old would have to pay the charge or take action to make them compliant with the proposed standards. Many motorhome owners, including those from overseas, would be unaffected by the proposed LEZ. TfL does not consider that the proposed LEZ would have a negative impact on tourism in London.

Should the Mayor confirm the Scheme Order allowing the LEZ to be implemented in London, an extensive information campaign would take place to inform operators of the LEZ requirements and compliance options. This would target the motorhome sector, along with a range of other sectors, both in the UK and overseas.

### **R7: Other London economy impacts**

The Road Haulage Association felt that the proposed LEZ could threaten employment at the VOSA Testing Station at Edmonton and at commercial vehicle dealerships based within the LEZ. Operators of non-compliant vehicles who currently come into London would go elsewhere for annual testing and maintenance if they were obliged to pay the LEZ daily charge. The Society of Motor Manufacturers and Traders made a similar point about the potential impact of the LEZ on the testing and maintenance network within London. The Freight Transport Association felt that the LEZ could have a negative financial impact on maintenance and repair providers, as operators with non-compliant vehicles from outside London would be deterred from coming into London.

Havering PCT felt that until all London buses are low-polluting, the LEZ daily charge could impact disproportionately on users of public transport, who are generally those in lower socio-economic groups.

### *TfL Response*

TfL expects that many operators who enter London more than occasionally would choose to make their vehicles compliant rather than pay the daily charge. Since most operators who choose to have their vehicles maintained at dealerships within London, or who choose to have their vehicles tested within London would be likely to be based in or close to London, it is likely that they would choose to make their vehicles compliant with the proposed LEZ. Therefore the number of operators that could be affected would be likely to be small, and the economic impact on commercial dealerships or on VOSA testing stations would be likely to be small. For those operators of non-compliant vehicles based in the area around London, other options are available for both maintenance and testing, and they would not be obliged to enter London.

Vehicles travelling to test stations to ensure compliance with the LEZ would not be penalised for doing so. Any vehicle travelling to a VOSA test station

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

specifically for an RPC or LEC test should in practice be able to enter the zone on the day of the test without being charged. This is because the vehicle would become compliant once the test has been carried out (should it pass the test) and TfL would be informed of the issue of the RPC or LEC prior to any PCN being issued. Should the vehicle fail its test, TfL is notified and the vehicle has 14 days in which to rectify the situation.

All TfL-operated buses would be compliant with the proposed LEZ standards, so there would be no impact on users of public transport in London.

#### *TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.

### **Theme S: Consultation**

Representations falling within this theme concerned the consultation process and the consultation information provided by TfL. Thirty-six stakeholders made representations under this theme. These were made up of 15 London boroughs, nine business representative organisations, five UK local authorities, three economic partnerships, two transport and environmental representative organisations and two London political representative organisations.

The sub-themes are:

- Previously expressed views not taken into account
- Insufficient information provided
- Inadequate consultation
- Need for further operator information and ongoing support
- Further research and modelling work required
- Other consultation issues.

#### **S1: Previously expressed views not taken into account**

Three stakeholders submitted representations stating that their previously expressed views had not been taken into account. The London Borough of Barnet expressed concern that TfL had chosen to implement the LEZ via a Scheme Order under the GLA Act despite Barnet's concerns voiced in the Strategy Revisions consultation. The London Borough of Bromley stated that the concerns it raised during the Strategy Revisions consultation, in relation to the cost impacts on boroughs, the request for an exemption for borough fleets and potential traffic impacts in Bromley from a modal shift to smaller vehicles, had not been adequately addressed. London Councils expressed concern that the enforcement of foreign vehicles had not been adequately addressed from the Strategy Revisions consultation.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

Following the 2006 Strategy Revisions consultation, TfL produced a report to the Mayor which summarised the consultation responses and sought to respond to all the issues raised by stakeholders during the consultation and included a number of recommendations for amendments to the LEZ proposals. The Mayor considered the Report, and also had access to individual representations made as part of the consultation process. Following this consideration, the Mayor published his revised Transport and Air Quality Strategies with some important amendments in July 2006. These amendments were in direct response to issues raised during the public and stakeholder consultation on the Strategy Revisions. The LEZ proposal as set out in the draft Scheme Order which was subject to public and stakeholder consultation from November 2006 to February 2007 is consistent with the revised Mayoral strategies.

The issue of the legal mechanism for implementing the proposed LEZ is dealt with in this chapter under *Theme B: Suggested Alternatives to a Low Emission Zone*.

The issue of exemptions for borough vehicles is dealt under *Theme K: Discounts and Exemptions*.

The issue of traffic impacts is dealt with in this chapter under *Theme Q: Traffic Impacts*.

The issue of enforcement of foreign registered vehicles is dealt with under *Theme I: Enforcement*.

### **S2: Insufficient information provided**

Sixteen stakeholders submitted representations expressing concern that TfL had provided insufficient information for the Scheme Order consultation. These included: seven London boroughs (Bexley, Hammersmith and Fulham, Richmond, Southwark, Wandsworth, Westminster and the Royal Borough of Kensington and Chelsea) and the Society of Motor Manufacturers and Traders (SMMT).

Friends of the Earth and Transport 2000 stated that TfL should supply maps showing the geographical distribution of the areas of London that would still exceed the air quality objective limit values. The Showmen's Guild expressed concern that the Environmental Report should have considered a broader definition of cultural heritage. The London Borough of Hammersmith and Fulham stated that TfL should consider a clearer definition of the charging area, including a clearer map. The London Boroughs of Wandsworth and Bexley stated that a benefit cost analysis should have been provided for alternatives to the LEZ and that the costs should have been included in the information leaflet. The London Borough of Southwark supported the use of the 2002 model as a baseline but requested that TfL carry out additional modelling using a 2003 baseline for air quality and revise the cost benefit

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

analysis to better understand the various circumstances in which the LEZ could operate.

The Royal Borough of Kensington and Chelsea expressed concern that the data presented on air quality improvements was rounded so that there appeared to be no difference between the scenarios. The London Boroughs of Kensington and Chelsea, Southwark and the City of Westminster expressed concern that the assumptions on which the air quality modelling was based were not provided in the consultation documents. Kent County Council expressed concern that the consultation documents did not provide much detail on the impacts of the LEZ outside of London, including on bus and coach operators and the provision of local bus services. The London Borough of Richmond upon Thames expressed concern that the detail of the proposed LEZ signage was not included in the consultation document.

The SMMT stated that TfL did not provide adequate information about the vehicle certification process and expressed concern that the consultation did not include other sources of transport pollution or other sources of emissions such as heating and power which fall under the remit of the Greater London Authority.

The London Borough of Bexley and the Central London Partnership expressed concern that there was a lack of information on the impacts of including LGVs and minibuses within the scheme. Essex County Council and the Royal Borough of Windsor and Maidenhead expressed concern that the consultation documents did not provide information on the number of vehicles affected by the Scheme.

#### *TfL Response*

While the consultation documents did not provide maps showing the areas across London that would still exceed air quality limit values following the possible implementation of the LEZ, the Environmental Report included maps showing the number of days of exceedence without a LEZ for years up until 2015, which could be compared with the maps of reductions in emissions following the proposed implementation. In the Scheme Description and Supplementary Information document, prepared by TfL to inform the consultation, TfL considered that the improvements brought about by the LEZ were best represented by maps of reductions in pollution concentrations. The table at Annex A of that document shows the amount (km<sup>2</sup>) of area of London that would still exceed the limit values following the introduction of the LEZ.

When developing the proposals for a LEZ in London, TfL commissioned a Strategic Environmental Assessment (SEA) which was carried out by independent consultants and published as part of the material supporting the Strategy Revisions consultation. A requirement of this process is an examination of a wide range of impacts, including the impacts on cultural heritage, of a policy. Given that such a wide ranging impact assessment had been produced at this earlier stage, it was considered appropriate to commission impact assessments which focussed in more detail on the

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

environmental, health, economic, sustainable development and equalities impacts for the later consultation on the Scheme Order. Furthermore, the Equalities Impact Assessment did examine certain cultural elements.

TfL provided a series of detailed maps which showed the boundary of the proposed LEZ. If the boundary is confirmed by the Mayor, following consideration of the issues raised during the consultation process, TfL would again publish a series of detailed boundary maps, with shading in colour, as well as an interactive map of the boundary which would be made available on TfL's website.

TfL did not provide detailed information on the costs and benefits of alternatives to the LEZ Scheme in the Scheme Order consultation documents as these had already been considered as part of the consultation on the Strategy Revisions in 2006. The revised strategies allow for a London wide scheme that could be implemented under a Scheme Order under the GLA Act 1999.

TfL considers that the consultation information leaflet provided adequate information to allow the public, businesses and vehicle operators to respond to the consultation on the Scheme Order. The estimated costs of the LEZ Scheme were available to the public in the more detailed consultation documents prepared for stakeholders and available on TfL's website.

The air quality modelling work undertaken by TfL to inform the Scheme Order consultation was based on the 2003 London Atmospheric Emissions Inventory. The health benefits modelling was updated from that provided in the Report to the Mayor on the Strategy Revisions consultation. Therefore TfL considers that the cost and benefits of the LEZ provided in the consultation documents accurately reflect the 2003 baseline.

In Annex A of the Scheme Description and Supplementary Information document, some of the figures showing areas of exceedence in km<sup>2</sup> had been rounded, potentially making it difficult to see differences between scenarios when looking at these numbers only. However, the percentage reduction figures between scenarios were also given to enable the reader to more clearly discern these differences. The reductions in tonnes of PM<sub>10</sub> and NO<sub>x</sub> were also given in the table. Detailed clarification of this point was provided to the Royal Borough of Kensington and Chelsea during the consultation.

Both the Scheme Description and Supplementary Information document and the Environmental Report explain in some detail how the air quality and health benefits modelling was carried out. It is not possible to describe in the consultation documents all the assumptions behind the modelling because of the detail involved, but TfL has responded to specific questions from stakeholders on the modelling assumptions.

The environmental, health, economic, and equalities impacts of the proposed LEZ outside of London were considered in the impact assessments commissioned by TfL to inform the Scheme Order consultation.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

The consultation material, particularly the Environmental Report, provided data on how decisions would be taken on where signage for the proposed LEZ would be located and the high-level environmental impacts of the signage. However, at this stage of the development of the proposed LEZ, it is not possible to provide exact details of the locations of all the signs. TfL would work with local authorities in deciding where signs would be sited, should the Mayor confirm the Scheme Order.

The LEZ would target the most polluting vehicles in London; diesel-engine HGVs, buses, coaches, heavier vans and minibuses. Road transport contributed almost two thirds of emissions of PM<sub>10</sub> and around two fifths of emissions of NO<sub>x</sub> in London in 2005 therefore it is appropriate for the LEZ to target road transport. This was made clear in the consultation material. TfL did not consider it necessary for the consultation material to cover other sources of pollution in any detail.

As set out in detail under *Theme F: Vehicle emission standards*, TfL is working with VOSA and VCA to develop certification processes for pollution abatement equipment. TfL has also met with key stakeholders, including the Society of Motor Manufacturers and Traders, the Environmental Industries Commission and the Energy Saving Trust regarding the certification process. However, TfL did not consider it necessary to consult in depth on the operational details of the certification schemes. Detailed information on the schemes would be provided, should the Mayor confirm the Scheme Order.

The Economic and Business, Health and Equalities Impact Assessments commissioned by TfL to inform the consultation set out the impacts of the inclusion of heavier LGVs and minibuses in the scheme. The Economic and Business Impact Assessment also provided a detailed analysis of the impacts on each vehicle type to be included in the proposed LEZ. TfL has also undertaken further research, including case studies, to further inform the Report to the Mayor on the Scheme Order consultation on the impacts of the LEZ.

### **S3: Inadequate consultation**

Three stakeholders submitted representations expressing concern that the consultation was inadequate. The London Borough of Hillingdon expressed concern about the consultation response rate, whether the consultation would be representative of the public and whether these representations would be interpreted correctly. The Federation of Small Businesses (FSB) expressed concern that TfL had not adequately consulted with the business community based on the number of business questionnaires and written submissions to the consultation, and said that businesses may not be adequately prepared for the implementation of the scheme for heavier HGVs in February 2008. The FSB stated that prior to the wider implementation of the LEZ in July 2008, TfL should better market the scheme to businesses and allow a pilot period with no penalties. The SMMT expressed concern about the validity of the question regarding air quality in the public and business questionnaires.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

TfL wrote directly to over 270,000 businesses to provide information on the LEZ and invite them to participate in the Scheme Order consultation process. In addition, TfL distributed the information leaflet and questionnaire directly to vehicle operators at a variety of locations including motorway service stations and transport cafes, freight ports and DIY stores. The information leaflet and questionnaire were also made available to the public through the London boroughs. TfL advertised the consultation in the national press, local press and trade publications as well as through outdoor advertising. Should the Mayor confirm the Scheme Order, TfL would undertake a significant information campaign to ensure that businesses and operators are aware of the LEZ.

Representations to the consultation, including questionnaire responses from members of the public, businesses and other organisations, were analysed in detail on behalf of TfL by Accent. TfL's consideration of the outcomes of the consultation analysis is included in the analysis by themes in this chapter and the consultation report is included as an annex to this report.

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. For this reason, TfL does not consider that it would be appropriate to delay the implementation of the proposed LEZ or to run a pilot period prior to full implementation.

The health and air quality benefits of the LEZ would be eroded if there was a pilot period used at the start of the scheme, as compliance levels would be expected to be significantly lower during that period.

TfL considers that the question regarding air quality in the public and business questionnaires was a valid means of assessing the importance of this issue to Londoners and to the wider business community.

#### **S4: Need for further operator information and ongoing support**

Fourteen stakeholders submitted representations regarding the need for further operator information and ongoing support. These included: four London boroughs (Barking and Dagenham, Harrow, Kingston and Westminster), the Greater London Authority (GLA) Labour Group, CBI London, Federation of Small Businesses (FSB) and the Environmental Industries Commission (EIC).

The City of Westminster, London Borough of Barking and Dagenham and the London Borough of Harrow stated that TfL must undertake extensive communication with businesses and the community sector to ensure that operators are aware of the LEZ and of the options available to them. CBI London stated that TfL must ensure that operators in London and in other regions are aware of the scheme. The GLA Labour Group stated that TfL must engage with the voluntary sector and community transport operators and clarify whether community grants would be available to assist such groups in

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

modifying or upgrading older minibuses and coaches. The FSB stated that TfL must undertake a national campaign to better inform small operators of the impacts of the LEZ scheme and asked that TfL delay implementation by six months to allow businesses more time to prepare.

The Environmental Industries Commission stated that TfL should announce as early as possible the test and certification processes for the LEZ retrofit technologies so that systems can be supplied to all affected operators in good time prior to implementation.

The Royal Borough of Kingston upon Thames stated that TfL should consult with all outer London boroughs, as well as the county councils contiguous to London on the coordination of signage.

### *TfL Response*

Should the Mayor confirm the Scheme Order, TfL would undertake a significant information campaign to ensure that UK and European operators are aware of the scheme, understand the scheme and know how and when to act. The information campaign would aim to ensure that operators have as much notice as possible of the scheme so as to allow them to plan an appropriate course of action. The information campaign would also set out any exemptions to the scheme and how operators could best determine whether their vehicle would be compliant or not and what action they could take to ensure their vehicle meets the LEZ emission standards. TfL would ensure that the information campaign specifically targets those operators who may not be aware of the scheme, such as owners of specialist private vehicles.

In addition, TfL would undertake a targeted information campaign prior to each stage of the phased implementation. In the 90 day period prior to the commencement of the LEZ in February 2008, TfL would write to operators of HGVs over 12 tonnes which had been observed in the zone and which did not appear to meet the LEZ emissions standards. This would be to inform them that their vehicle would be in the scope of the LEZ, notify them of the date after which they would be required to pay a daily charge to drive within the zone or risk a PCN and provide information about their options, such as upgrading or modifying their vehicle. TfL would repeat this process with all non-compliant HGV, bus and coach operators in the lead up to the July 2008 implementation, with all heavier van and minibus operators in the lead up to October 2010 implementation and with all HGV, bus and coach operators in the lead up to the tightening of the emission standards to Euro IV in 2012.

TfL would also undertake a significant information campaign targeting European operators via European trade associations and through advertisements in trade papers in key European countries.

### **S5: Further research and modelling work required**

Five stakeholders submitted representations regarding the need for further research and modelling work. The London Boroughs of Barking and

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

Dagenham and Harrow and the Road Haulage Association stated that TfL should undertake further work to better understand the impacts of the LEZ on smaller operators, particularly the impact of including LGVs in the LEZ, and to consider measures to reduce these impacts. The London Borough of Brent stated that TfL should undertake further investigation of the potential economic impacts of including minibuses in the LEZ on the community sector. The Royal Borough of Kensington and Chelsea stated that TfL should investigate further the sectors that would be most affected by the LEZ, as recommended in the Economic Impact Assessment, before the Mayor makes a decision on the Scheme Order.

#### *TfL Response*

The Economic Impact Assessment commissioned by TfL to inform the consultation on the Scheme Order provided a considerable amount of information on the possible economic impact of the proposed LEZ on operators. The consultation process has provided further information, and the findings are considered in this report and have informed TfL's recommendations.

TfL would continue to review the assessment methodology already used for the LEZ impacts monitoring programme to ensure that the potential impact of the LEZ on the public and community sectors, including community transport and voluntary organisations, is captured.

#### **S6: Other consultation issues**

Three stakeholders submitted representations regarding other consultation issues. The London Borough of Barnet stated that TfL would have to undertake a more extensive consultation before considering the inclusion of cars and smaller vans. The London Liberal Democrats stated that the Mayor should ask TfL to re-consult on an amended Scheme Order that would allow London to meet its air quality objectives.

#### *TfL Response*

TfL has no plans to include cars in the LEZ at this stage. However, should a proposal be brought forward to include cars and car-derived vans in the scheme, this would require separate consultation before it could be introduced.

The Mayor has a statutory obligation to take steps towards achieving national and EU air quality objectives. Failure to take steps could lead to the European Commission taking infraction proceedings against the UK Government and fines being imposed. In the absence of adequate 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.

<i>TfL Recommendation</i>
---------------------------

TfL considers that the Scheme Order should not be modified as a result of representations received under this theme.

## **Theme T: Issues relating to the 2012 Olympics**

Representations falling within this theme concerned how the LEZ would affect vehicles used in relation to the Olympics and the impact on sporting associations in the lead up to the Olympics. Six stakeholders made representations under this theme including one London borough, one economic partnership, the Olympic Delivery Authority, one organisation representing motor manufacturers and two organisations representing voluntary organisations.

The London Borough of Newham and the Thames Gateway London Partnership expressed concern that the LEZ would restrict the ability of construction and commercial vehicles and coaches to enter London to fulfil the demands of the Olympics. The Central Council of Physical Recreation (CCPR) expressed concern that the LEZ could have a negative impact on the activities of sporting associations in the lead up to the 2012 Olympics. The Society of Motor Manufacturers and Traders Motorhome Forum and The Caravan Club expressed concern that the inclusion of motor caravans in the LEZ could impact on tourism, including visitors to the 2012 Olympics.

### *TfL Response*

TfL welcomes the commitment given in the Olympic Delivery Authority's representation to designate the Olympic Park a low emission zone in its own right, complementing the proposed London LEZ. The Mayor has indicated that he would like the London 2012 Olympics to be the cleanest ever.

TfL considers that most of the vehicles manufactured before October 2006 and still on the road in 2012, when the LEZ emissions standard for HGVs, buses and coaches is tightened to Euro IV, could be fitted with pollution abatement equipment to meet that standard. Off-road vehicles used for Olympics construction work would be required to meet with the requirements of the *London Best Practice Guidance: The Control of Dust and Emissions from Construction and Demolition*.

TfL acknowledges that smaller voluntary organisations still tend to operate their own vehicles, which tend to be older and therefore less likely to comply with the LEZ when heavier minibuses are included from 2010. However, over recent years there has been a general move among voluntary organisations away from owning to leasing vehicles. Most leases are 3-5 years and sporting associations in this position should be able to enter new leases for compliant vehicles prior to the inclusion of heavier LGVs and minibuses in the LEZ in 2010.

TfL does not consider that the LEZ would be overly complicated for operators, including operators of motor caravans, to understand. Prior to the LEZ being implemented, TfL would write to the operators of vehicles in the scope of the

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

LEZ, including businesses, community transport and voluntary organisations, health trusts and sporting associations. TfL would ensure that the information campaign specifically targets those operators who may not be aware of the scheme. TfL would also undertake a European information campaign to ensure that foreign operators are aware of the scheme. Operators would also be able to easily check whether their motor caravan meets the LEZ emission standards through the LEZ website or operator call centre. The impact of the inclusion of motor caravans in the LEZ is also considered in *Theme E: Vehicles to be included*.

*TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of representations received under this theme.

### **Theme U: Other issues**

A number of miscellaneous issues were raised by stakeholders during the consultation period.

The Society of Motor Manufacturers and Traders (SMMT) requested that the LEZ regulations be as simple as possible, in order to ensure a cost effective scheme. The SMMT recommended that the databases and information on LEZ compliant vehicles should be made publicly available. SMMT was also concerned that there should be consistency of databases, standards and procedures should other cities adopt their own LEZs.

The London Borough of Hammersmith and Fulham stated that the impact assessments that were published at the time of the consultation on the proposed Scheme Order made a number of recommendations, but it was not clear whether these would be implemented prior to the introduction of the scheme.

The London Borough of Hillingdon queried whether the introduction of the LEZ would justify the third runway at Heathrow Airport.

The Royal Institution of Chartered Surveyors advocated careful use of road space, town planning and incentives to reduce dependency on private cars. It also welcomed moves to match the price paid for the use of each transport option with the true cost of its provision.

The Caravan Club considered it important that the charging system should be fair and equitable, with revenues directed to promoting the effectiveness of the initiative and reinvested in improvements to alternative transport provision.

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

### *TfL Response*

TfL has worked closely with stakeholders to ensure that signage, boundary issues, standards and payment methods for the proposed LEZ are as customer-friendly as possible. Should the Mayor approve the Scheme Order allowing the LEZ to be implemented, TfL would implement a major public and operator information campaign to make stakeholders aware of how the LEZ would affect them and what action they would need to take. This is described in more detail under *Theme S: Consultation Process*.

Also prior to the commencement of the Scheme in February 2008, TfL would establish a facility on its website and through a call centre, which would allow operators to check whether their individual vehicles would meet with the emissions standards for the LEZ. Information on numbers of LEZ compliant vehicles entering London would be included in monitoring information which would be made available annually.

TfL agrees that the LEZ needs to be presented as simply and clearly as possible, given the complex nature of emissions technology. For this reason, the information campaign referred to above would aim to explain the impact of the proposed scheme on each of the affected vehicle categories.

TfL is aware that other local authorities in England are considering establishing low emission zones, though none are as yet as well developed as the London proposals. TfL is a key participant in the Low Emissions Strategies Forum, which brings together local authorities in the UK to share best practice and discuss issues relating to the establishment of low emission zones. The Group has agreed that if LEZs are implemented in other areas then they should have the same emissions standards in order to reduce confusion and additional costs for operators. TfL is also working with other administrations across Europe which are interested in establishing LEZs, to establish joint approaches where possible.

TfL agrees that the impact assessments that were published at the time of the consultation on the proposed Scheme Order which would implement the LEZ contained a number of useful recommendations. One of the key recommendations was the need to find out more from stakeholders on the impact the LEZ could have on the public, voluntary and community sectors.

As part of the consultation process, TfL made a particular effort to engage with these sectors, both through face to face meetings and through written communications. The findings of this engagement are included throughout this Report, and have informed TfL's conclusions and recommendations. TfL would continue its engagement with this sector in the period up to the commencement of the LEZ, should the Mayor confirm the Scheme Order. In particular, TfL would seek to provide technical assistance to operators on how they could make their vehicles meet the proposed LEZ standards.

Many of the other recommendations were related to monitoring, and these are being considered in the development of the LEZ monitoring strategy, which

Report to the Mayor following consultation with stakeholders, businesses, other organisations and the public, April 2007

would be finalised before the possible commencement of the LEZ. Other recommendations related to the need for extensive public and operator information prior to the possible commencement of the LEZ. As described above, TfL would undertake a major information campaign, should the Mayor approve the Scheme Order which would allow the LEZ to be implemented.

The proposed LEZ would aim to improve air quality and health in London by reducing emissions of certain pollutants from road transport sources. The decision on the future development of Heathrow Airport is unrelated to the LEZ, and neither TfL nor the Mayor is ultimately responsible for taking that decision.

TfL's document *Transport 2025*, published in 2006, sets out a broad range of policies to reduce congestion and emissions and improve the public realm, which will be taken forward in the coming years. The LEZ is just one part of this overall strategy, focusing specifically on reducing emissions of PM and NO<sub>x</sub>.

The proposed LEZ is not designed to be a revenue generating scheme. The revenues of the Scheme are not expected to offset the costs of implementing and operating the scheme. Air quality improvements would be maximised by high levels of operator compliance. There would, however, be some gross revenues from the LEZ through charge and penalty charge payments. Revenue through charge and penalty charge payments is expected to be between £30 million and £50 million over the period 2008 to 2015 and these would contribute towards the operating costs of the scheme. Revenue and cost issues are considered in more detail under Theme C: Business case.

In the unlikely event that TfL were to make any net revenues from the Scheme, these would be spent according to Annex 3 of the Scheme Order – Transport for London's general plan for applying its share of the net proceeds of the scheme during the opening 10 year period – which is subject to the approval of the Secretary of State for Transport. Initiatives which any unforeseen revenues might be spent on include:

- Air quality technology and monitoring improvements;
- Traffic management initiatives; and
- Improvements to the street environment and public realm.

*TfL Recommendation*

TfL considers that the Scheme Order should not be modified as a result of the representations received under this theme.