



# **Proposed London Low Emission Zone Equality Impact Assessment Non-Technical Summary**

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London has the worst air pollution in the UK and amongst the worst in Europe. Air pollution affects the quality of life of a large number of Londoners, especially those with respiratory and cardiovascular conditions, older people and the young.

Local authorities, including the Greater London Authority (GLA), have a statutory obligation to work towards national and European Union (EU) air quality objectives and limit values, which are designed to protect human health and the environment. On current trends and without further action, it is predicted that London will not meet current objectives for two pollutants, Particulate Matter (PM<sub>10</sub>) and Nitrogen Dioxide (NO<sub>2</sub>). These pollutants are associated with adverse effects on human health.

The Mayor of London and Transport for London (TfL) are proposing to designate Greater London as a Low Emission Zone (LEZ), to help move London closer to achieving national and EU air quality objectives for 2010 and thereby improve the health and quality of life of those who live in, work in and visit London. The LEZ would seek to improve air quality in Greater London by discouraging the most individually polluting heavy goods vehicles (HGVs), buses and coaches from driving within Greater London. It would encourage operators to upgrade or replace their vehicles to meet an emission standard of Euro III for particulate matter (PM) in 2008 followed by a tighter emission standard of Euro IV for particulate matter in 2012. Heavier more-polluting light goods vehicles (LGVs) and minibuses would be included in the LEZ from 2010 and would also be required to meet an emission standard of Euro III for PM to drive within London without charge.

In accordance with best practice, TfL commissioned TRL to carry out an Equality Impact Assessment (EqIA) of the proposed London LEZ scheme. The purpose of an EqIA is to identify the potential positive and negative impacts of a proposal on particular groups of people. TfL has also conducted assessments of the impact of the proposed LEZ on the environment, health, the economy and business and sustainable development. These impact assessment reports have been prepared to support the public and stakeholder consultation on a Scheme Order for the proposed London LEZ.

TfL's guidance defines the Equality Target Groups (ETGs) for this study as:

- Women;
- Black, Asian and minority ethnic people;
- Young people and children;
- Older people;
- Disabled people;
- Lesbian people, gay men, bisexual people and transgender groups; and
- People from different faith groups.

In addition to this list of formally identified ETGs, other groups that could be impacted by the proposed LEZ are included in this review:

- Socio-economically deprived people; and
- Gypsy and traveller communities.

The EqIA assesses potential positive and negative impacts of the proposed LEZ on the equality target groups in the following areas:

- Air quality and health impacts;
- Economic impacts; and
- Public and community sector impacts.

### **Methodology for conducting the EqIA**

The methodology for conducting the EqIA involved combining quantitative and qualitative information from the following sources:

- A review of other relevant studies already carried out as part of the development of the LEZ proposals;
- A review of the research literature in the fields of air quality and health;
- Spatially mapped air quality data taken from the forecasting models used to predict how the LEZ would affect air quality;
- Spatially mapped population data on the distribution of different ETGs, taken from the 2001 Census; and
- Interviews with a number of stakeholder organisations representing a number of ETGs.

A review of previous assessments of the impacts of the proposed LEZ concluded that the improvements in air quality that are expected to arise, would deliver an overall improvement in the health of London's population, primarily through reductions in PM<sub>10</sub> concentrations. Furthermore, it is expected that the greatest benefits would be found in those places that currently experience the worst air quality. A review of published research into the health impacts of poor air quality found evidence of a link between economic deprivation, exposure to air pollution and poor health. As many ETGs suffer, to a greater extent, from economic deprivation and poor health, it could be expected that they would consequently experience above-average benefits from the improved air quality that the LEZ would achieve.

To assess how the air quality changes arising from the proposed LEZ would affect the different equality groups, mapping techniques were used to compare the forecast changes in air quality with the distribution of the population of each group. Mapped air quality data were made available from models used to predict how air quality would change in the years following the possible implementation of the LEZ. Maps were produced showing the forecasted changes in PM<sub>10</sub> and NO<sub>2</sub> concentrations across London for 2008, 2010 and 2012.

A quantitative analysis was carried out using a Geographical Information System (GIS) to map forecast changes in air quality relative to the distribution of equality target groups resident in Greater London. This used spatially mapped population data taken from the 2001 Census, to plot the population of each ETG at the level of the Lower Super Output Areas (LSOAs).<sup>1</sup> This exercise provided a series of maps that highlighted the parts of London in which each ETG was most concentrated. A second set of maps were produced to show the forecasted changes in PM<sub>10</sub> and NO<sub>2</sub> emissions for the years modelled for the LEZ (2008, 2010 and 2012). Comparing the two sets of plots allowed for a visual comparison of which ETGs could be most affected by the forecast change in air quality. The GIS software was then used to quantify the numbers of people within each ETG that could be affected by significant changes in air quality.

### **Air quality and health impacts**

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<sup>1</sup> Super Output Areas are a new geographic hierarchy designed to improve the reporting of small area statistics in England and Wales. They replace wards and districts. Lower level SOAs have a minimum population 1000; mean 1500.

The analysis of the forecast changes in air quality following the possible implementation of the proposed LEZ found that the whole population would experience an overall improvement in air quality and that health improvements would be expected from this, especially from the reductions in PM<sub>10</sub> exposure. Some ETGs would be expected to experience above average improvements because they are more likely to live in areas of higher existing exposure to air pollution, and/or because they may be more vulnerable to health impacts associated with poor air quality due to existing poor health. In particular Black, Asian and minority ethnic people were found to experience higher levels of air pollution than the average for the whole population and could therefore be expected to benefit more from any reductions. Research has also found that older people and young people are at greater risk from exposure to air pollution, so these groups could also benefit more than the rest of the population from reduced air pollution. Women, disabled people, lesbian, gay, bisexual and transgender people would be expected to experience the same improvements in air quality and health resulting from the proposed LEZ as the general population.

### **Economic impacts**

A review of the economic and business impact assessment undertaken to accompany this consultation, together with other relevant literature, suggests the economic impacts of the LEZ would arise primarily from the cost of retrofitting existing vehicles or buying new ones that comply with the required standards. In some cases this may not be economically viable, leading to the possibility, in extreme cases, that services could be withdrawn or businesses could close.

The evidence reviewed for this study suggested that the businesses that are most likely to suffer adverse effects are very small businesses that use heavier vans or minibuses. This is a consequence both of the greater average age of vehicles in small fleets and the greater vulnerability of small businesses to increased costs. Analysis of available information on business ownership suggested that businesses owned by black and Asian groups, and by women, tend to be smaller than average and therefore could, to a greater extent, incur increased costs as a result of the proposed LEZ. Furthermore, minibuses are often used for employee transport in service sectors where large numbers of ethnic minority workers are employed. However, as no quantitative data is available on vehicle fleet ownership broken down by ETG it was not possible to analyse this in greater detail. Overall however, no hard evidence was found to suggest that there would be any significant economic impacts that would disadvantage ETGs to a greater extent than the rest of the population.

### **Public and community sector impacts**

There was little information on the potential impact of the proposed LEZ on community groups available from a review of the LEZ impact assessments and the wider research literature. The stakeholder engagement undertaken as part of this study sought the views of ETGs on the proposed LEZ. Fourteen stakeholder groups representing older people, younger people, Black, Asian and minority ethnic people, gypsies and travellers, and people with disabilities were interviewed along with groups representing community transport organisations. The interviews sought to identify the perception of the impact of air pollution on the target groups, awareness of the proposed LEZ, reactions to the proposals, potential positive and negative effects from the proposed LEZ and potential mitigating strategies.

While a number of groups expressed some concern about the potential cost of compliance on charities and small community organisations, in general there was little evidence that these impacts would fall more on ETGs than on the wider

community. However, there were some exceptions to this. Young people, older people and disabled people were seen to be more reliant on minibuses for transport, through youth groups and other community transport schemes. Travelling communities, especially fairground and circus operators, also tend to use larger vans and other specialist vehicles and there could be a risk that they would move their events outside of London, leading to reduced cultural diversity for London residents.

### **Possible mitigation strategies**

To help alleviate any potential negative impacts of the proposed LEZ that have been identified by the study, possible mitigation measures that TfL could consider include:

1. A public information campaign using the DVLA database to target owners of registered vehicles that would be non-compliant under the LEZ. It is understood that TfL plan to undertake such an exercise and this would be welcomed.
2. A public information campaign potentially targeting the equality target groups that are most likely to be affected by the LEZ to improve the level of awareness of the LEZ, both to inform them of the benefits and to improve their ability to comply with the requirements without incurring excessive cost.
3. Encouragement to community service providers, particularly those who provide services to vulnerable groups, to respond to the public and stakeholder consultation on the LEZ Scheme Order to help improve understanding of the potential impacts of the LEZ, and ways that any adverse impacts might be mitigated.

It is accepted that these measures could give rise to further considerations which are beyond the scope of this EqIA.

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