

Context

UK Objectives and EU limit values

1. The UK National Air Quality Objectives and European Union Limit Values are generally very similar for the pollutants of concern in Lewisham: Nitrogen Dioxide (NO_x) and Particulate Matter. However, there were differences in the dates these were to be achieved by.
2. For Particles (PM₁₀) the National Air Quality Objective and European limit value are both 40 µg/m³ for annual mean and 50 µg/m³ as 24 hour mean. The UK objective was to be achieved by 31st December 2004 and the European limit by 1st January 2005. For Nitrogen Dioxide the national objective and European limit were both set at 40µg/m³ with annual mean and 1hour mean as 200 µg/m³. For the UK this was to be achieved by 31st December 2005 and the European limit was to be achieved by 1st January 2010.
3. There are other objectives such as the World Health Organisation (WHO) guidelines, which may differ. The PM₁₀ objective for example is stricter with annual mean of 20 µg/m³. Whereas for Nitrogen Dioxide the EU objective is the same as the WHO guideline. The current limit values for PM₁₀ are less demanding than other countries such as the United States and Japan. This was highlighted in evidence given by Marco Gasparinetti, Principal Lawyer Directorate-General for the Environment, European Commission at the Environmental Audit Committee- Oral evidence: Action on air quality, on 17 July 2014.

Impact of Traffic on air pollution

4. The Mayor's Air Quality Strategy of 2010 discusses the impact of traffic on air pollution. In London in the immediate vicinity of roads, within 20m, road traffic emission sources dominate the pollution profile. The strategy details that road transport is responsible for 46% of London's NO_x emissions. This can be compared with 22% of NO_x emissions derived from domestic gas. Road transport is also the dominant source of PM₁₀ emissions in Central London, contributing roughly 79% in 2008.

How improved roads could reduce air pollution

5. The Mayor of London's Air Quality Strategy (<https://www.london.gov.uk/priorities/environment/publications/mayors-air-quality-strategy>) details how improved roads could reduce air pollution. Measures detailed in the strategy include traffic smoothing and maintaining roads in good repair to reduce the contribution of particulate matter from road surface wear. Traffic smoothing can be achieved by better traffic management and street works co-ordination through the London Permit Scheme and also the Lane rental scheme.

6. The Mayor's strategy also details how road users should be provided with information to enable them to avoid problem areas and thus further reduce the impacts of congestion. An example of this is current radio announcements to encourage drivers to check for traffic problems before embarking on their journey.

Ways to reduce traffic to potentially decrease air pollution

7. There are a multitude of ways in which traffic can be reduced to decrease emissions and improve air quality. These include:
 - Encourage travel by cleaner forms of transport such as public transport and walking and cycling.
 - Reduce emissions from buses
 - Encourage and promote car clubs
 - Maintain roads
 - 20 mph zones
 - LEZ/ULEZ (low emission zone / ultra low emission zone)
 - Electric Vehicles
 - Congestion charging
 - Freight movement improvements
 - Electric buses

(Mayor's Air Quality Strategy 2010)

Ways to mitigate air pollution

8. Air pollution may be mitigated by increasing the amount of green infrastructure to directly remove pollutants from the air. This could include trees and green walls for example and research continues into the effectiveness of this. In guidance produced for the Royal Borough of Kensington and Chelsea in 2012 "14 Cost Effective Actions to Cut Central London Air Pollution," installation on the grounds of air quality alone was shown to not be cost effective compared to other measures reviewed. The benefit cost ratio was improved where trees were used over green walls.
9. It is important to note that trees need to be planted so that they do not form a canopy that traps pollutants causing local concentrations to increase and suitable species are selected.
10. Air pollution is also mitigated by Raising awareness such as at the Lewisham People's Day and Air Quality Website (www.lovecleanair.org) that was developed by south London councils including Lewisham which gives advice on how the public can help to reduce air pollution levels and reduce their exposure to poor air quality and reduce health impacts. Similarly the Council's Senior Air Quality Officer met with Lewisham's Breathe Easy Group in the summer and discussed how they can reduce exposure and health effects of poor air quality.
11. Mitigation is also implemented through the planning process to ensure that new receptors are not placed in areas which exceed air quality objectives. Where this can not be avoided mechanical ventilation is required to ensure new occupiers are not exposed to poor air quality. This would also apply to developments such as outdoor eating areas for restaurants.

Lewisham

Action Being taken in Lewisham

12. Environmental Protection successfully submitted an individual bid and two joint local authority bids to the Mayor's Air Quality Fund. These include a construction project to reduce emissions from construction, a school engagement project through use of theatre which will promote sustainable travel to school and raise awareness of the effects of poor air quality. In addition in the Brockley Corridor area, measures including green infrastructure, school engagement and community art will bring additional air quality benefits to planned transport improvements at this location.

Air Quality Management Areas

13. There are six air quality management areas (AQMAs) in Lewisham, these are declared for nitrogen dioxide and particulate matter for the first five AQMAs and just nitrogen dioxide for the sixth AQMA. Particulate Matter is not exceeded in the borough but declaration for PM₁₀ has been retained as a conservative measure. The Air Quality Action Plan is due to be revised further following the declaration of the sixth air quality management area, similar measures are likely to remain to ensure comprehensive action is taken with regard to air quality.

Progress in relation to AQMA action plan.

14. A report is sent to Defra annually to report progress on the air quality action plan. Some reductions have been seen at the automatic monitoring stations. It is difficult to attribute this to local measures specifically, as there are London wide measures such as the Low Emission Zone and wider measures such as the European emission limits on vehicles which become increasingly more stringent. Environmental Protection provides detailed input to planning, this can have significant impacts, such as ensuring emissions from energy centres at new developments are controlled. New guidance on air quality neutral development was published by the GLA in April 2014 and this has been applied in Lewisham. This is an additional air quality assessment that can be applied at the planning stage to ensure emissions are minimal from new development.

Efforts to reduce the emissions from Lewisham's fleet of vehicles

15. Lewisham has an environmentally friendly vehicle and fuel plan, the council seeks to reduce annual mileage of the fleet. Fuel reduced by 8% 2002-2008.