

Subject: Particulate Air Pollution

Report to: Environment Committee

Report of: Executive Director of Secretariat

Date: 7 December 2017

This report will be considered in public

1. Summary

- 1.1 Toxic airborne particles are a major form of air pollution harming the health of Londoners. The Committee will discuss with guests from the Greater London Authority, Transport for London and others the sources of these particles and how to reduce the harm they cause.

2. Recommendations

- 2.1 **That the Committee notes the report as background to putting questions to invited guests on particulate air pollution, and notes the subsequent discussion.**
- 2.2 **The Committee delegates authority to the Chair, in consultation with Party Group Lead Members, to agree any output arising from the discussion.**

3. Background

- 3.1 Tiny airborne particles are known as particulate matter (PM). They are among the most prevalent and harmful air pollutants in London (as in other urban areas). PM is breathed into the lungs and affects the body. Very fine particles (PM_{2.5}) reach the deepest, and can enter the bloodstream and travel to other parts of the body. They can worsen diseases of the lungs, heart and circulation. Official estimates are that over 3,000 additional deaths happen each year in London because of long-term exposure to man-made PM_{2.5}. The health effects are thought to vary in proportion to the concentrations of particles in the air.
- 3.2 There are therefore legal limits on the concentrations of PM in the air. There are also guidelines from the World Health Organisation (WHO) recommending lower concentrations still. Sources of particulates in London's air include road transport, construction and demolition, industry, and homes.

4. Issues for Consideration

- 4.1 The Mayor's draft Environment Strategy seeks to secure compliance with the legal limit for the concentrations of PM_{2.5} as soon as possible. It also sets the goal of meeting the WHO guideline for PM_{2.5} (a concentration in the air half of the legal limit by 2030).

- 4.2 With modern standards for clean engines, and especially with the rise of electric and hydrogen powered vehicles, exhaust emissions from road transport are being markedly reduced. However, particles shed from the wear of brakes and tyres are not reducing, and are coming to dominate transport emissions. The Committee will seek to explore ways of reducing brake and tyre wear, including different tyre and braking technology, different driving patterns, and traffic reduction.
- 4.3 There are other source of emissions including construction and demolition, non-road mobile machinery, industry and domestic energy. The Committee will also seek to explore how these emissions can be reduced. The Mayor has recently drawn attention back to the law against smoke-emitting fireplaces and burners for wood and other solid fuel in London, and suggested further limits on solid fuel emissions.
- 4.4 Many Londoners are regularly exposed to a high level of particulate matter on underground rail services. The dominant source of particles on the Tube is wear of the metal parts such as wheels, brakes and rails. The resulting tiny iron particles have been said to be of low toxicity in the body, compared to road traffic emissions, but this has been questioned and the Mayor has commissioned a review of the evidence.
- 4.5 The Committee has invited guests from the GLA Group and beyond to discuss these issues. Officers are expected to attend from the GLA and Transport for London. There may also be external experts such as from industry and academia.

5. Legal Implications

- 5.1 The Committee has the power to do what is recommended in the report.

6. Financial Implications

- 6.1 There is no financial implication to the Greater London Authority arising from this report.

List of appendices to this report:

None

Local Government (Access to Information) Act 1985
List of Background Papers:
None
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