

**A57 Link Roads  
TR010034  
6.5 Environmental Statement  
Appendix 5.1 Air Pollutants**

APFP Regulation 5(2)(a)

Planning Act 2008 Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

# 1. Pollutants

## 1.1 Nitrogen Dioxide

1.1.1 NO<sub>2</sub> is a secondary pollutant produced by the oxidation of nitric oxide (NO). NO and NO<sub>2</sub> are collectively termed NO<sub>x</sub>. One third of the UK NO<sub>x</sub> emissions are from road transport<sup>1</sup>. The majority of NO<sub>x</sub> emitted from vehicles is in the form of NO, which oxidises rapidly in the presence of ozone (O<sub>3</sub>) to form NO<sub>2</sub>. In high concentrations, NO<sub>2</sub> can affect the respiratory system and can also enhance the response to allergens in sensitive individuals. Additionally, there is an increasing awareness of an association between long-term average concentrations (chronic exposure) of NO<sub>2</sub> and mortality. NO does not have any observable effect on human health at the range of concentrations found in ambient air.

## 1.2 Particulate Matter

1.2.1 The principal sources of 'primary' polluting particles are combustion processes, which include traffic and industry. Road transport produces 11% of primary PM<sub>10</sub> emissions in the UK<sup>2</sup>, of which the majority of emissions are from diesel engines. Finer fractions of particulate matter appear to be associated with a range of symptoms of ill health including effects on the respiratory and cardiovascular systems, on asthma and on mortality.

## 1.3 Other Pollutants

1.3.1 National assessments have demonstrated that there is no risk of exceedance of the air quality objectives set for 1,3-butadiene, benzene, carbon monoxide, lead or sulphur dioxide due to emissions from traffic anywhere in the UK. These pollutants are therefore not considered further as there is not considered to be a potential for significant effects associated with these pollutants.

1.3.2 In addition to these air pollutants, dust may be generated during the construction phase in areas adjacent to the proposed Scheme. Dust is not considered as a local air pollutant but may cause a perceived loss of amenity and can give rise to soiling (dust deposition).

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<sup>1</sup> [https://naei.beis.gov.uk/overview/pollutants?pollutant\\_id=6](https://naei.beis.gov.uk/overview/pollutants?pollutant_id=6) - Accessed February 2021

<sup>2</sup> [https://naei.beis.gov.uk/overview/pollutants?pollutant\\_id=24](https://naei.beis.gov.uk/overview/pollutants?pollutant_id=24) - Accessed February 2021

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