



Australian Government

Department of Infrastructure, Transport,
Regional Development and Communications

WESTERN SYDNEY Fact Sheet



Air quality and the airport

Western Sydney Airport, the Australian Government-owned company responsible for building Western Sydney International (Nancy-Bird Walton) Airport, is monitoring and managing impacts on air quality during the airport's construction and operation. This will ensure that the air quality requirements set out in the *Airports (Environment Protection) Regulations 1997* will be met.

Reducing air quality impacts

The *Western Sydney Airport Environmental Impact Statement 2016* (EIS) assessed air quality impacts and emissions from the construction and operation of the airport and found that these will be within relevant standards.

The *Western Sydney Airport Plan 2016* (Airport Plan) provides the authorisation for the construction and operation of the Stage 1 development (with a single runway and terminal facilities capable of handling 10 million annual passengers).

The Environment Minister considered the draft Airport Plan against the EIS and included environmental conditions under section 96B of the *Environment Protection and Biodiversity Conservation Act 1999*. The conditions included measures identified in the EIS to minimise air quality impacts from the airport's construction and operation, which were incorporated into the Airport Plan and must be complied with by Western Sydney Airport.



Air quality impacts during construction

During bulk earthworks and construction of the terminal and buildings there may be dust emissions. The EIS modelled air dispersion and found that predicted dust emissions from construction would be within the NSW Environmental Protection Authority (EPA) criteria and the National Environment Protection (Ambient Air Quality) Measure advisory reporting goals.

The Airport Plan requires that Western Sydney Airport develop Construction Environmental Management Plans (CEMPs). The [Air Quality CEMP](#) ensures that impacts associated with air quality are managed within permitted air quality criteria and that best practice controls and procedures are implemented during construction activities to maintain air quality at acceptable levels around the airport site and to minimise the risk of dust and odour nuisance impacts.

Air quality impacts during operation

Operation of Stage 1 of the airport is expected to increase emissions of air pollutants. However, the EIS found that emissions would largely be within the relevant standards, and represent an increase of just 0.1 to 0.7 per cent of total emissions in the Sydney basin. The following table shows the predicted emissions of selected pollutants from aircraft operations and the equivalent share of total emissions for the entire Sydney basin.

Selected pollutant	Predicted on-site emissions (tonnes per year)	Share of total emissions in the Sydney basin, 2030
Nitrogen oxides, including NO ₂	368	0.7%
Sulfur dioxide (SO ₂)	29	0.2%
Particulate matter (PM _{2.5})	5	Less than 0.1%
Particulate matter (PM ₁₀)	5	Less than 0.1%

The largest source of air pollutants will be from background road traffic associated with other developments in the region. As a result, many air quality impacts are predicted to occur on roads to the north and north-east of the airport site.

Airport operations may have marginal ozone impacts, which are expected to occur downwind of the airport site to the south and south-east, away from population centres. Australia's greenhouse gas emissions for the transport sector are predicted to be 115 megatonnes in 2029–30. The airport site would generate approximately 0.13 megatonnes of greenhouse gas emissions per year during Stage 1 operation — around 0.11 per cent of Australia's total transport emissions.

Understanding the terminology

- **Particulate matter:** A complex mixture of extremely small solid and liquid particles suspended in air. Major sources of particulate matter include dust and smoke.
- **Air toxics:** Air pollutants that are considered hazardous to the environment and human health, including benzene, dioxins, lead and other metals. Major sources of these toxics include motor vehicle exhaust and some commercial and industrial processes.
- **Greenhouse gases:** Any gas that absorbs and re-emits heat into the atmosphere. Major types of greenhouse gases include carbon dioxide (CO₂), nitrous oxide (NO) and methane (CH₄).