

Air quality

Nitrogen dioxide (NO₂)

South Australia's

Environmental trend and condition report card 2018



STATEWIDE



Trend
Stable



Condition
Very good



Reliability
Very good

Trend

Ambient levels of NO₂ in South Australia have been stable since 2005.

This assessment is of annual average levels of ambient NO₂ measured at six air quality monitoring stations around metropolitan Adelaide (top figure).

Monitoring is not conducted elsewhere in South Australia because there are potentially low community risks from exposure to NO₂. This has been confirmed in past short-term air quality monitoring campaigns in Gawler, Mount Gambier, Port Pirie and Whyalla. Source of nitrogen oxides in these regions are managed by state-based legislation.

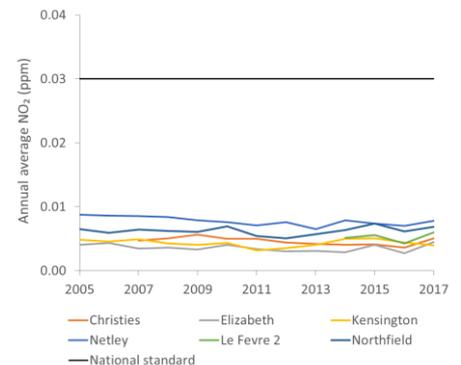
In metropolitan Adelaide, NO₂ levels have been below the national standard and stable since 2005.

Condition

The condition of ambient NO₂ levels across South Australia is rated as very good because the annual average levels are below the national standard.

In 2017, the annual average levels of ambient NO₂ ranged from 0.004 to 0.008 parts per million (ppm), which is below the national standard of 0.03 ppm (bottom figure).

Annual average levels of NO₂ in South Australia are low and below the national standard



Why is air quality important?

NO₂ is an air pollutant that can affect human health. Effects include increased risk of respiratory infections in children, increased mortality and hospital admissions for respiratory diseases, and aggravation of asthma.

Nitrogen oxides are precursors in the formation of ozone and photochemical smog, and can form secondary particles that also cause cardio-respiratory problems.

Environmental effects of NO₂ include toxicity for some plants and reduced plant growth.

What are the pressures?

Combustion of fossil fuels in air produces NO₂ and nitric oxide (collectively called nitrogen oxides or oxides of nitrogen). NO₂ may also result from the combustion of nitrogen compounds in some fuels.

The combustion of fuel in vehicle engines is a significant source of NO₂ in urban areas. Burning of fuels in industrial boilers and for power generation are another source of emissions. Domestic activities (such as wood burning), controlled burns and bushfires also contribute to ambient levels of NO₂.

What is being done?

Australia has national standards for NO₂, which are currently being reviewed as part of the National Clean Air Agreement. Vehicle emission limits in the Australian Design Rules continue to play a role in reducing emissions from vehicles. The South Australian Government is also promoting alternative modes of transport, such as cycling, public transport and low emission vehicles. The Environment Protection Authority regulates industry and provides advice as part of the state planning assessment process.

For further information see: [technical information](#)



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