



Community information



Francis Street

Monitoring program - Report one

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EPA Victoria has commenced a 12 month program from May 2012 to monitor air pollution and the noise impacts of vehicles in Francis Street, Yarraville. The program will use the latest scientific data to inform EPA about noise and air pollution in the area. This report is for the first three months of monitoring.

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Summary

The first round of air quality monitoring in Francis Street shows that pollutants fall within air quality standards, except for one occasion. However, recorded levels are slightly higher than at EPA's other fixed monitoring stations in Footscray and Alphington. These results are not surprising given Francis Street sees an estimated 20,000 trucks and cars travelling each week day between Williamstown Road and Whitehall Street.

During the first three months of monitoring, there was one day that exceeded the PM₁₀ objective and none for PM_{2.5} - the two key particles being measured as part of this air monitoring program.

Nitrogen dioxide levels fell well below the air quality objective and benzo(α)pyrene, which can only be measured over 12 months, through an

annual objective, is returning results that are expected not to exceed the annual objective.

The monitoring program for noise has measured readings high enough to be of significant concern.

What is being measured?

Noise

Noise monitoring is being measured in fortnightly blocks periodically throughout the year. Noise monitoring is measured in decibels dB(A).

A common measure used to help understand noise impacts is L₁₀ (18hr) dB(A) which is sometimes known as the 'average maximum' noise level.

This measure is a statistical calculation of the louder sound level measurements for each one hour period during 6.00am to midnight.

HOW ARE THE MONITORING RESULTS ASSESSED?

Air

PM₁₀ and NO₂ levels are compared against Victorian and Australian air quality objectives and goals¹. The objectives are set at levels that protect human health and aesthetic enjoyment. The goals, expressed as a maximum number of high-pollution days per year, are used to guide strategies for the management of activities affecting our air quality.

For PM_{2.5}, instead of objectives, the Ambient Air Quality National Environment Protection Measure (AAQ NEPM) specifies the use of advisory reporting standards for assessment.

B(α)P is assessed against the National Environment Protection (Air Toxics) Measure, 2004².

Noise

Noise levels are measured in decibels (dB)³. In Victoria, there is no official assessment criteria for arterial roads constructed prior to 1979 such as Francis Street.

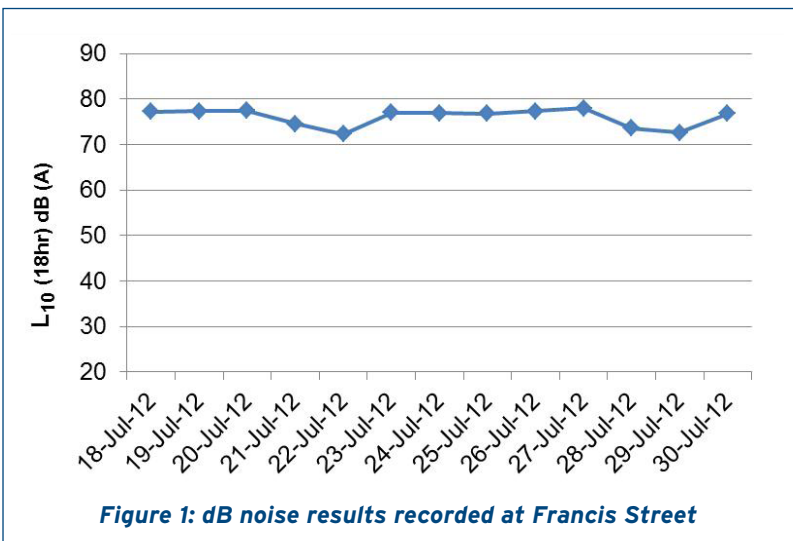


Figure 1: dB noise results recorded at Francis Street

¹ State Environment Protection Policy (Ambient Air Quality), Victoria Government Gazette No. S19, 9 Feb 1999 (amended Dec 2001), available at www.epa.vic.gov.au
² National Environment Protection (Air Toxics) Measure, National Environment Protection Council, available at www.ephc.gov.au
³ EPA Noise Fact Sheet, Publication 1467, available at www.epa.vic.gov.au

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Air

EPA is measuring major air pollutants associated with motor vehicle emissions.

This includes:

- Two types of small particles; those less than 10 micrometers in diameter (PM₁₀), which is also found in windblown dust, and particles less than 2.5 micrometers in diameter (PM_{2.5}) typically from burning or combustion, including fuel.
- Pollutants related to the burning or combustion of fuel including nitrogen dioxide (NO₂) and benzo(α)pyrene.

PM₁₀

The PM₁₀ air quality objective (50 µg/m³) was not met on one day, June 12. This spike averaged out to be for approximately three hours before midday. During this period there were light northerly winds with poor dispersion in the morning, which contributed to an accumulation of particles.

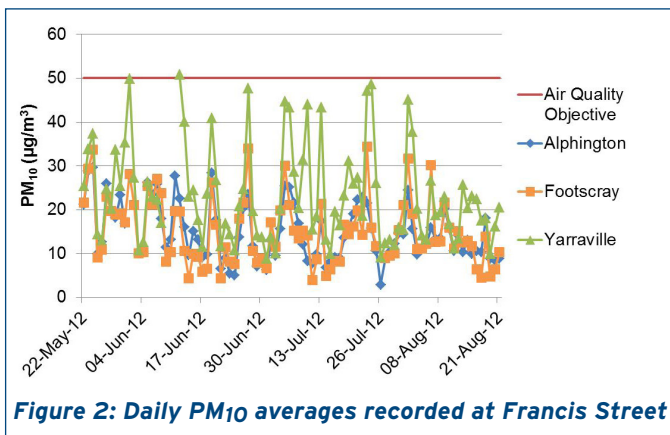


Figure 2: Daily PM₁₀ averages recorded at Francis Street

PM_{2.5}

For the first three months of monitoring the PM_{2.5} reporting standard (25 µg/m³) has not been exceeded. Results have been recorded at slightly higher levels than air monitoring stations in Alphington and Footscray but fall well within the guidelines.

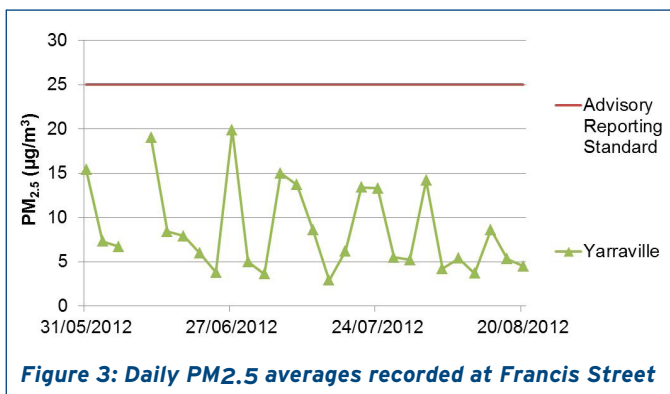


Figure 3: Daily PM_{2.5} averages recorded at Francis Street

Nitrogen Dioxide (NO₂)

NO₂ levels measured at Francis Street have been slightly higher than levels measured at Footscray and Alphington but are still almost half the air quality objective (120 parts per billion).

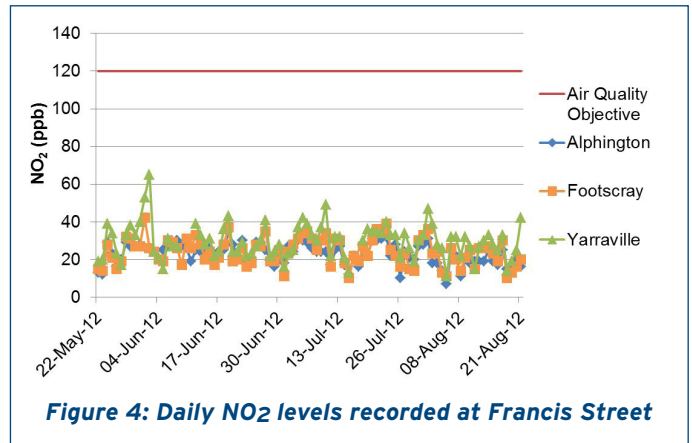


Figure 4: Daily NO₂ levels recorded at Francis Street

Benzo(α)pyrene (B(α)P)

The measurement for Benzo(α)pyrene is an annual objective (0.3 µg/m³). At the end of the 12 months of monitoring the results gathered throughout the year are averaged out and measured against this average. Based on the first round of results, shown below, the annual objective is not anticipated to be exceeded.

Table 1: 24-hour benzo(α)pyrene levels measured at Francis Street

	Maximum µg/m ³	Average µg/m ³
(B(α)P)	0.55	0.14

MORE INFORMATION

EPA will provide the community with reports throughout the program.

Visit www.epa.vic.gov.au or phone EPA on 1300 EPA VIC (1300 372 842) for further information.