



Environment Protection Authority Victoria

CASANZ 2026 | 29 Aug-2 Sep 2026

Local air pollution in the inner west Melbourne near the West Gate Tunnel

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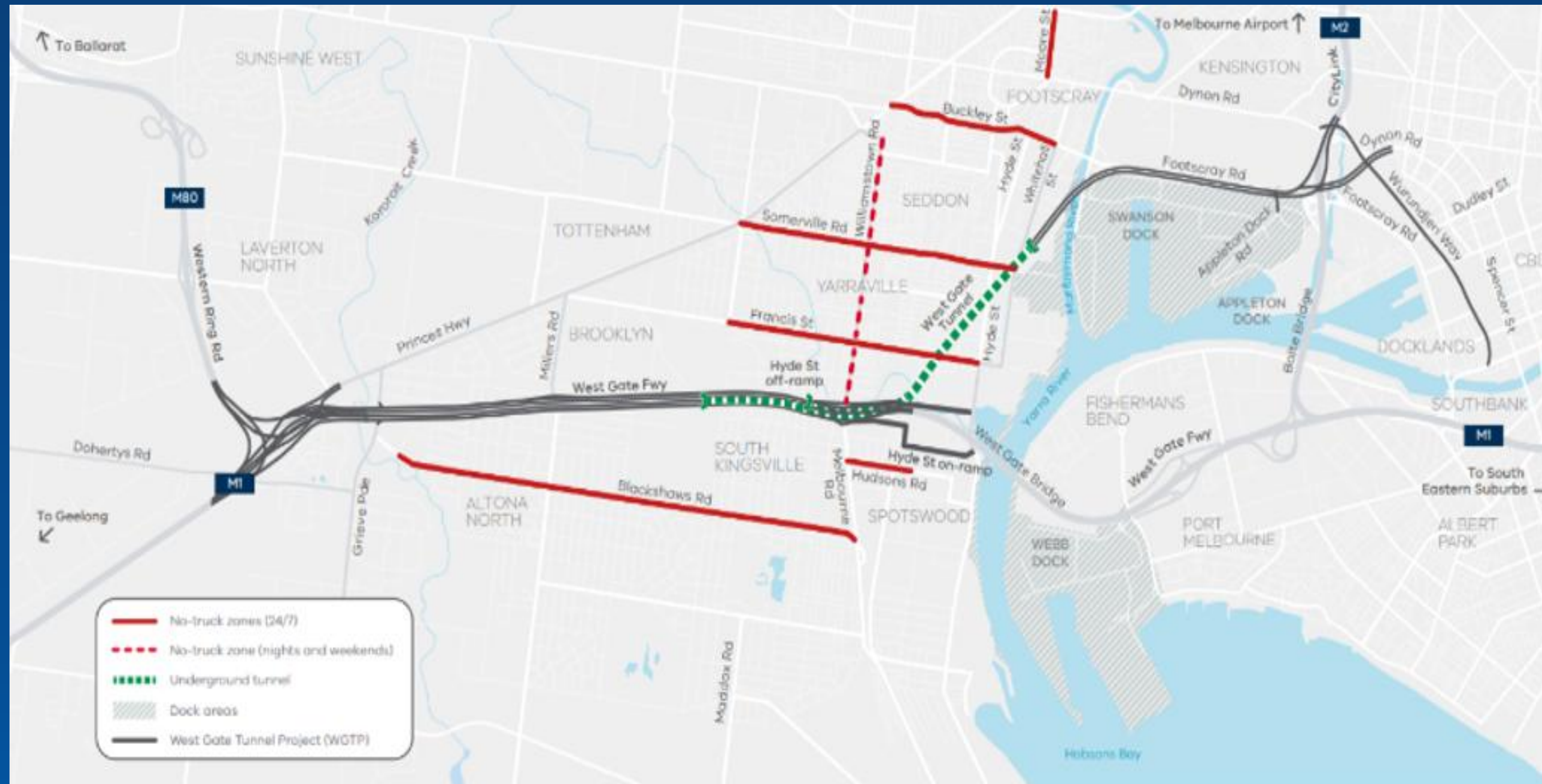


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Outline

- Background and Objectives
- Air monitoring program -1
- Air pollution levels during tunnel construction
- Air monitoring program -2
- Air pollution levels tunnel construction vs operation
- Summary

West Gate Tunnel Project



The West Gate Tunnel Project will take over 9000 trucks a day off local streets and prevent an additional 5000 trucks from taking rat runs to avoid the West Gate Freeway.



Removing Trucks from Inner West Streets – FACTSHEET 2025



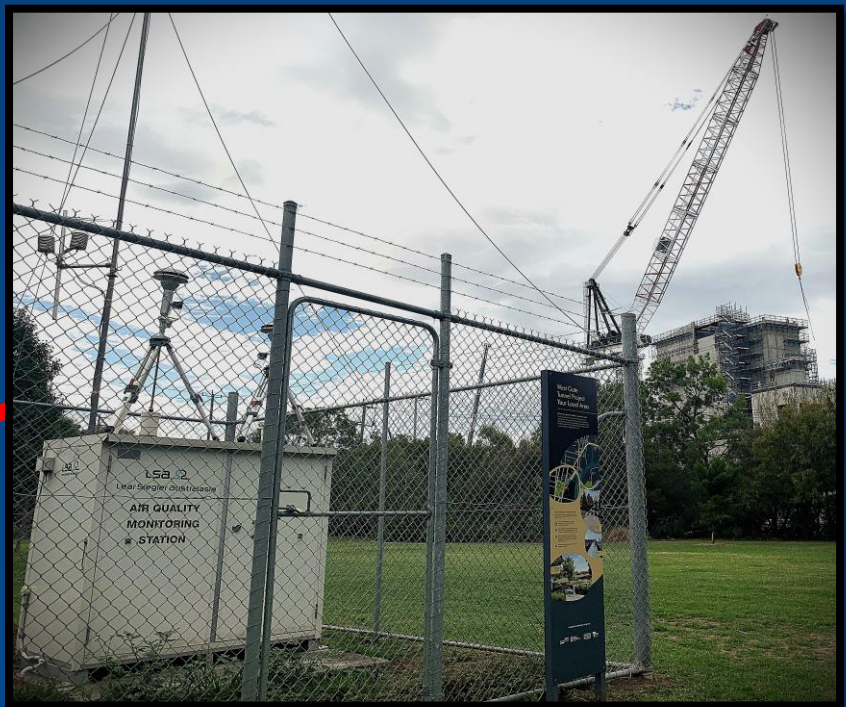
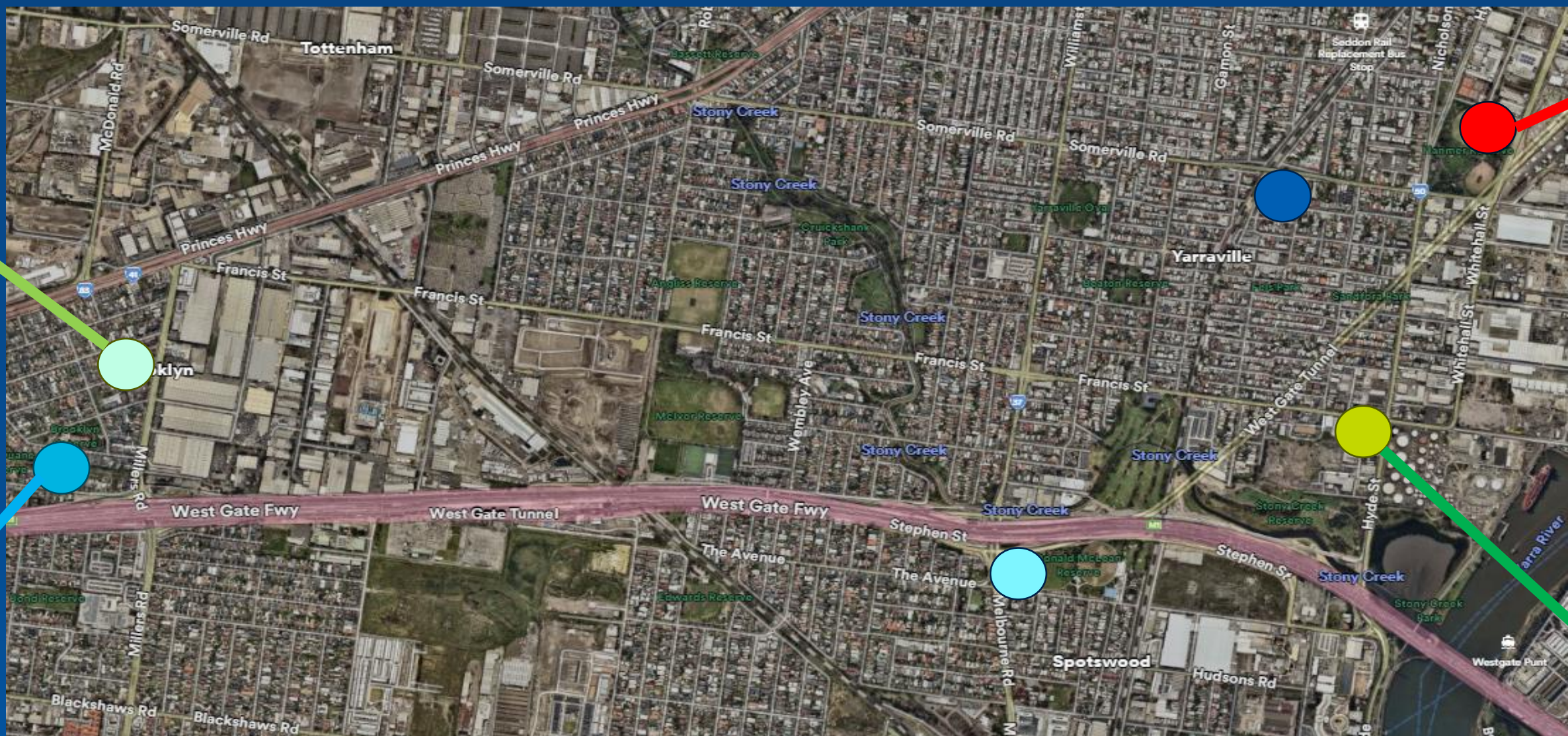
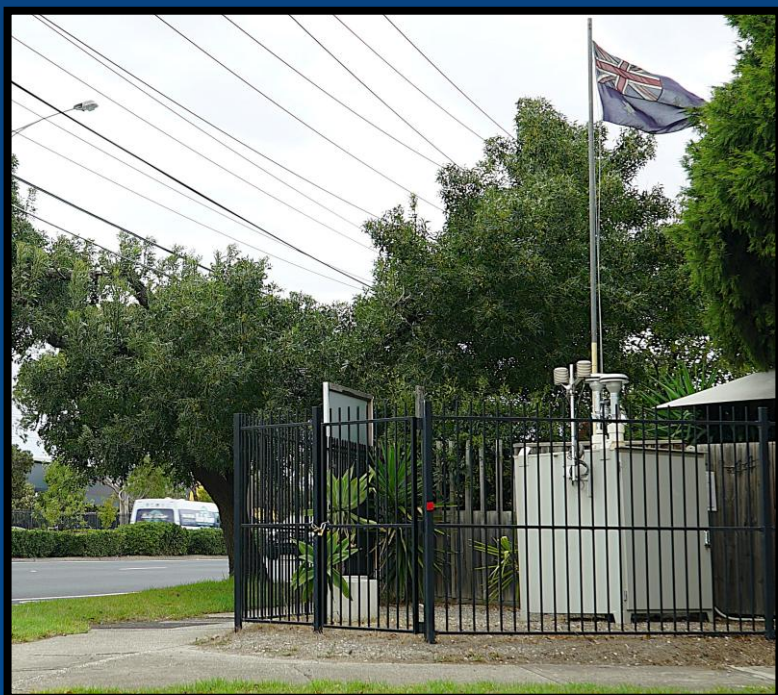
Melbourne road tunnel ventilation stacks



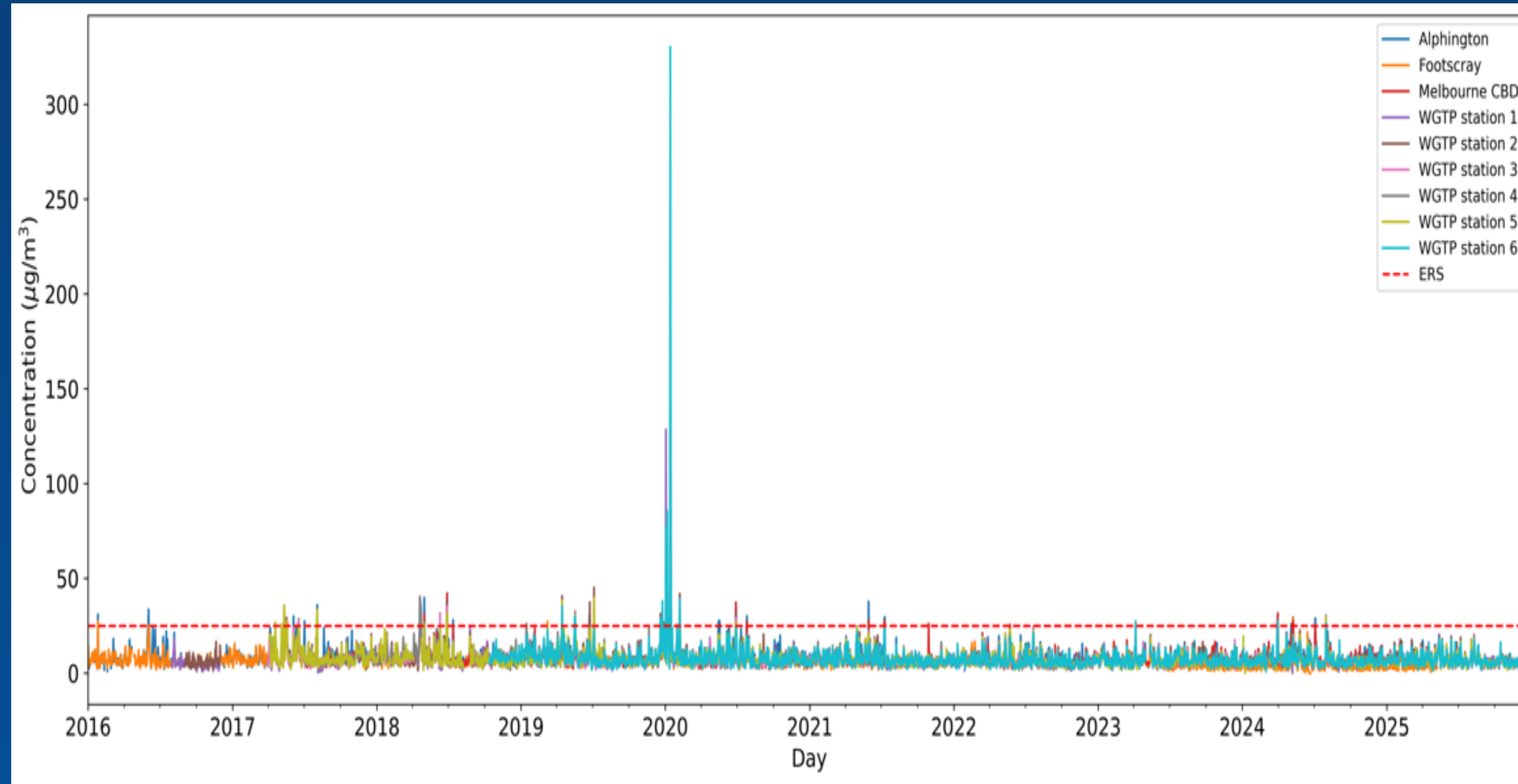
Air monitoring network-1

West Gate Tunnel Project operated air quality stations

- Donald McLean
- Primula Avenue
- Woods Street
- Francis St
- Millers Road
- Yarraville Gardens



Tunnel construction PM_{2.5}



PM_{2.5} levels April 2016-December 2025

Inner-West Melbourne PM_{2.5} Pollution Sources

Major sources

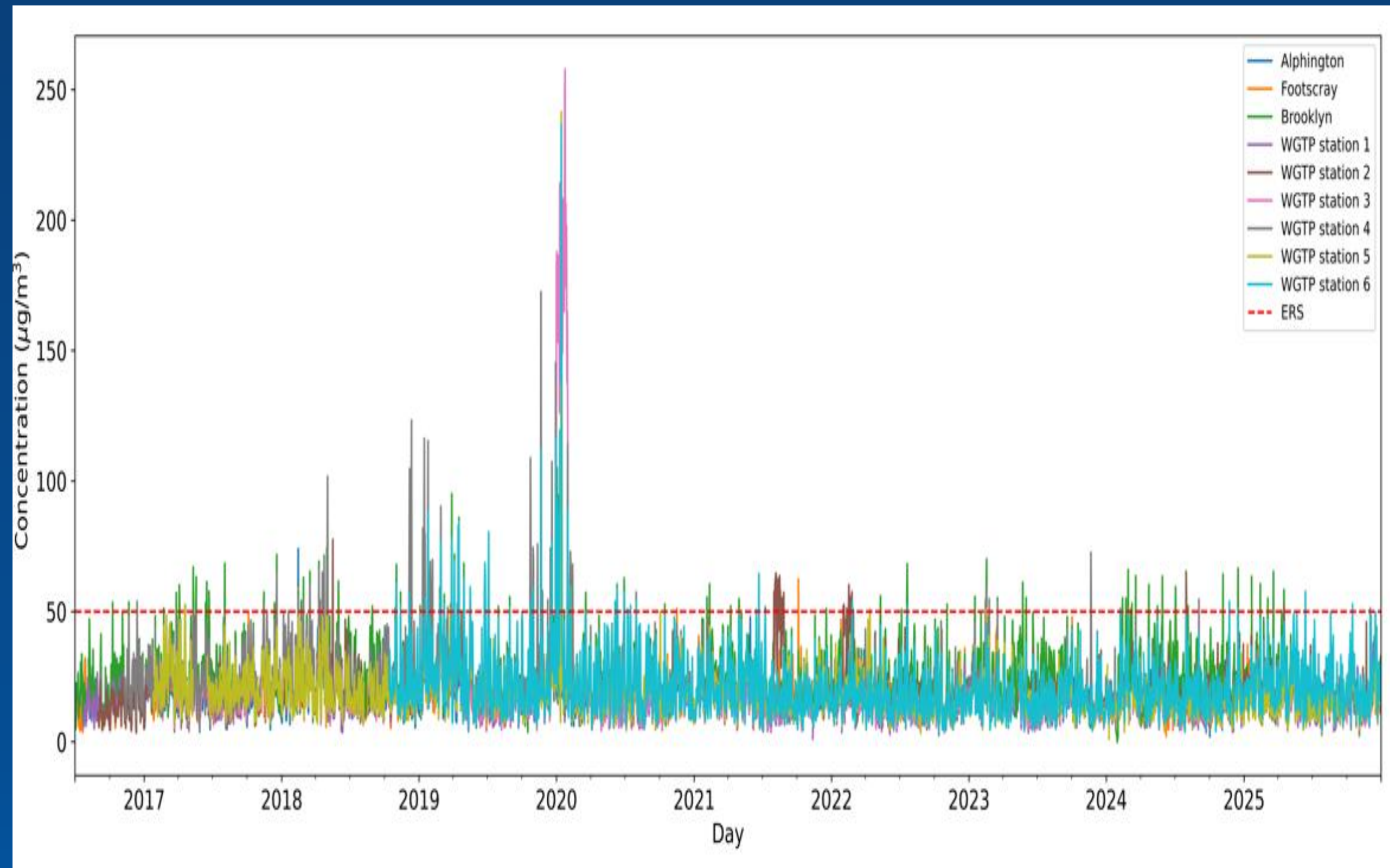
- Wood heaters (winter)
- Hazard reduction burns raise (autumn)
- Diesel vehicle exhaust
- Secondary sulphates and nitrates aerosols

Minor sources

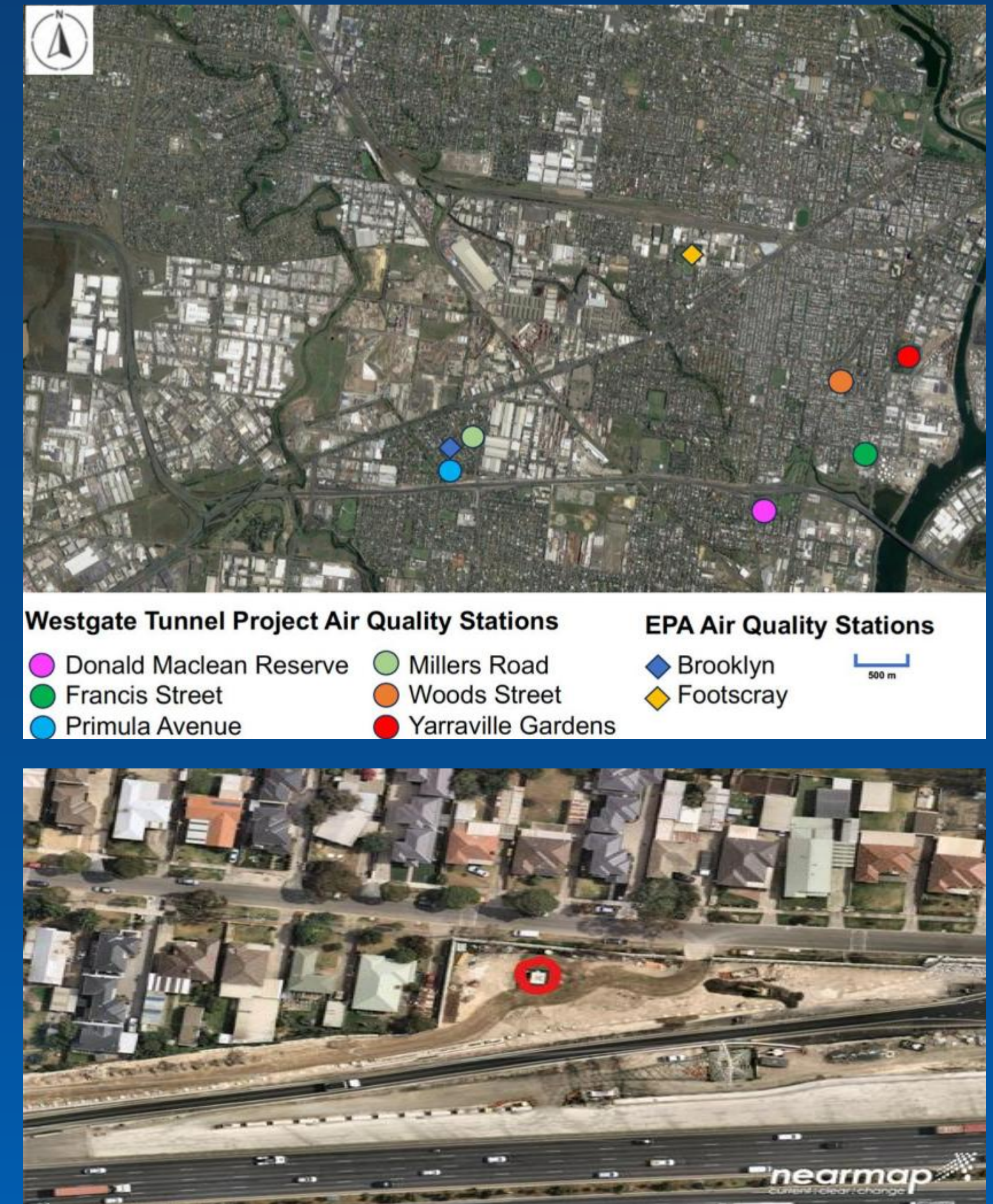
- Local industry
- Petrol vehicle exhaust
- Dust
- Shipping

Air pollution sources of inner west Melbourne EPA Vic Publication 2060 March 2024

Tunnel construction PM₁₀

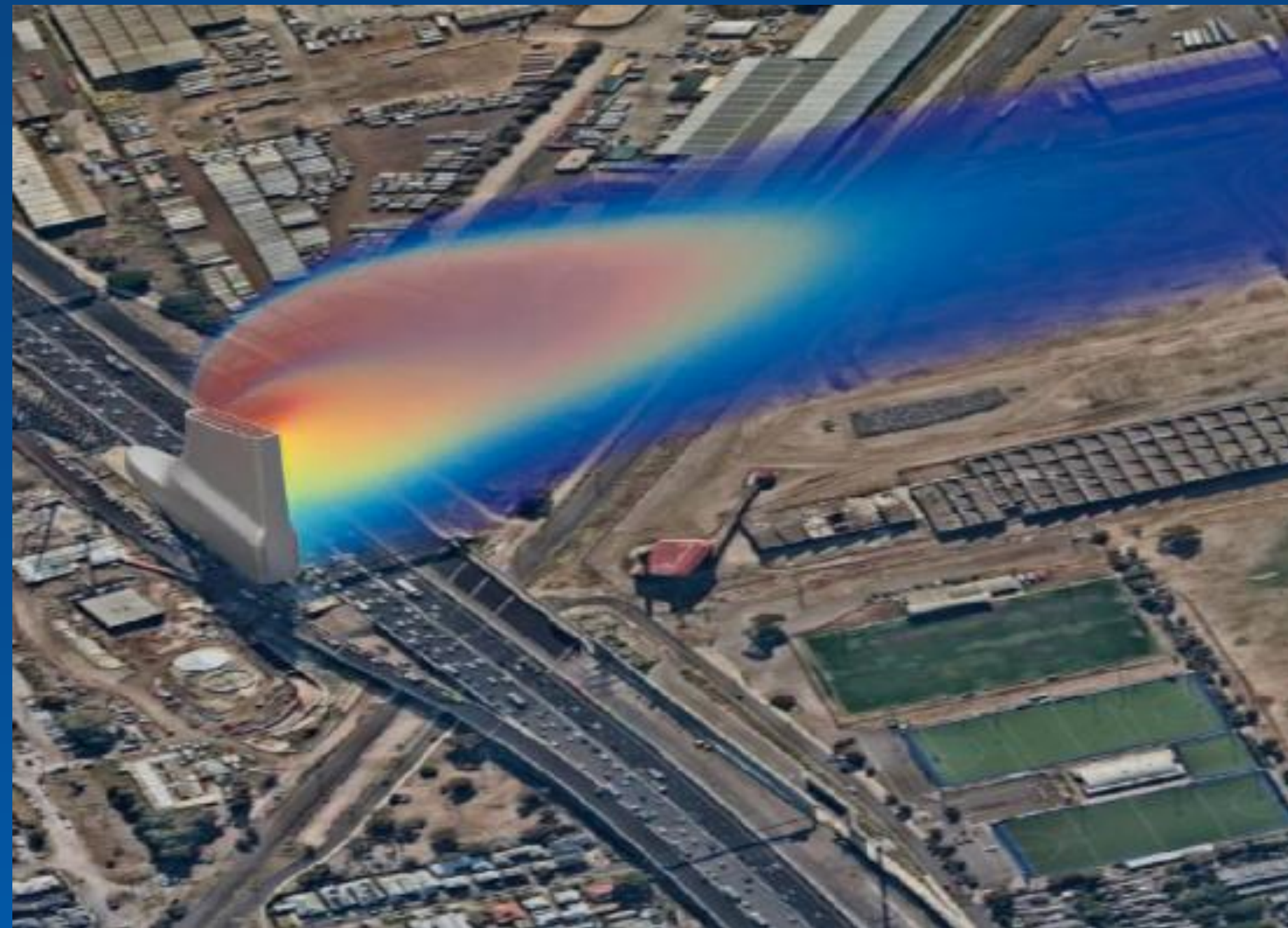


PM₁₀ levels April 2016-December 2025

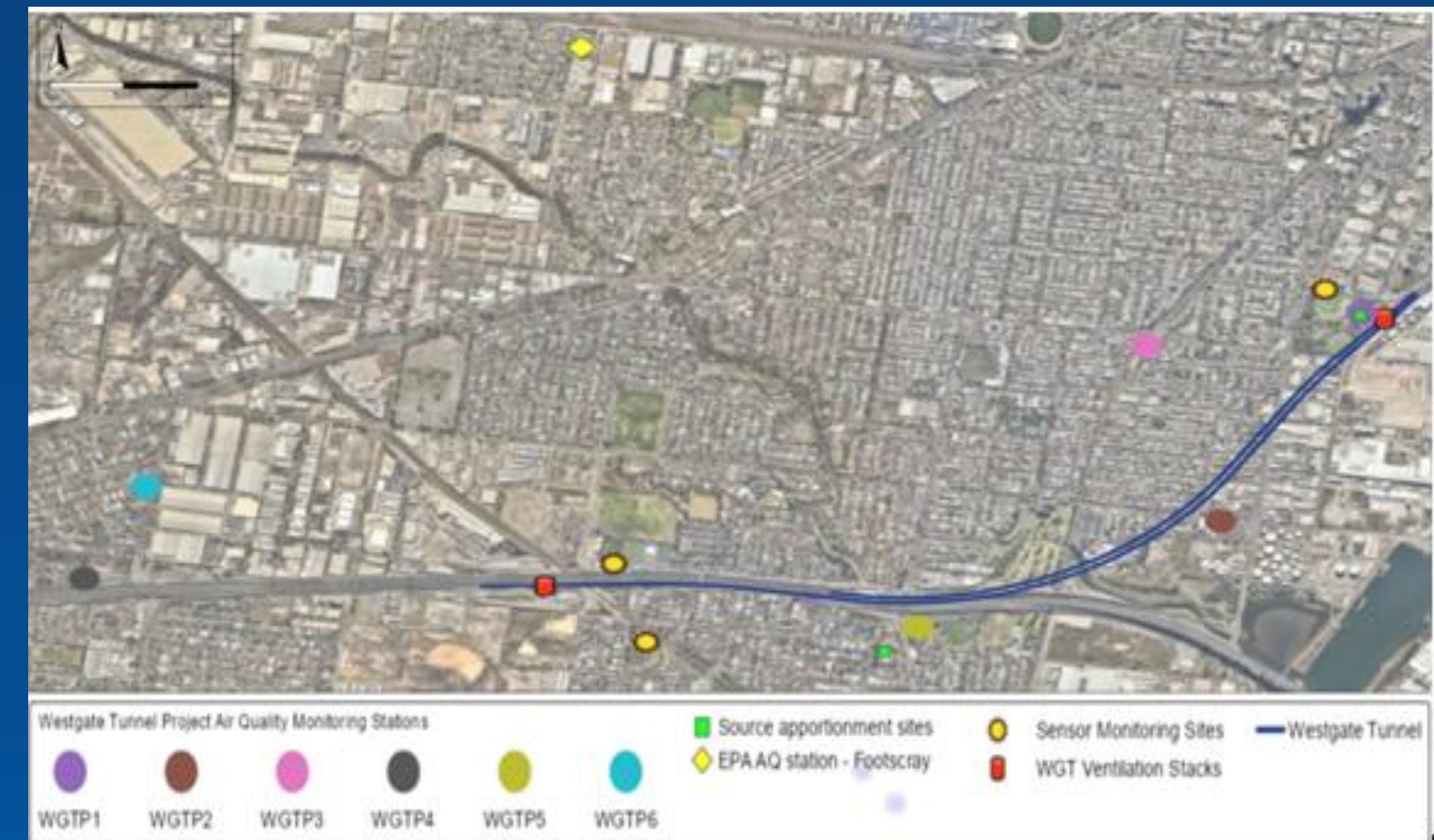


West Gate Tunnel ventilation stack emissions

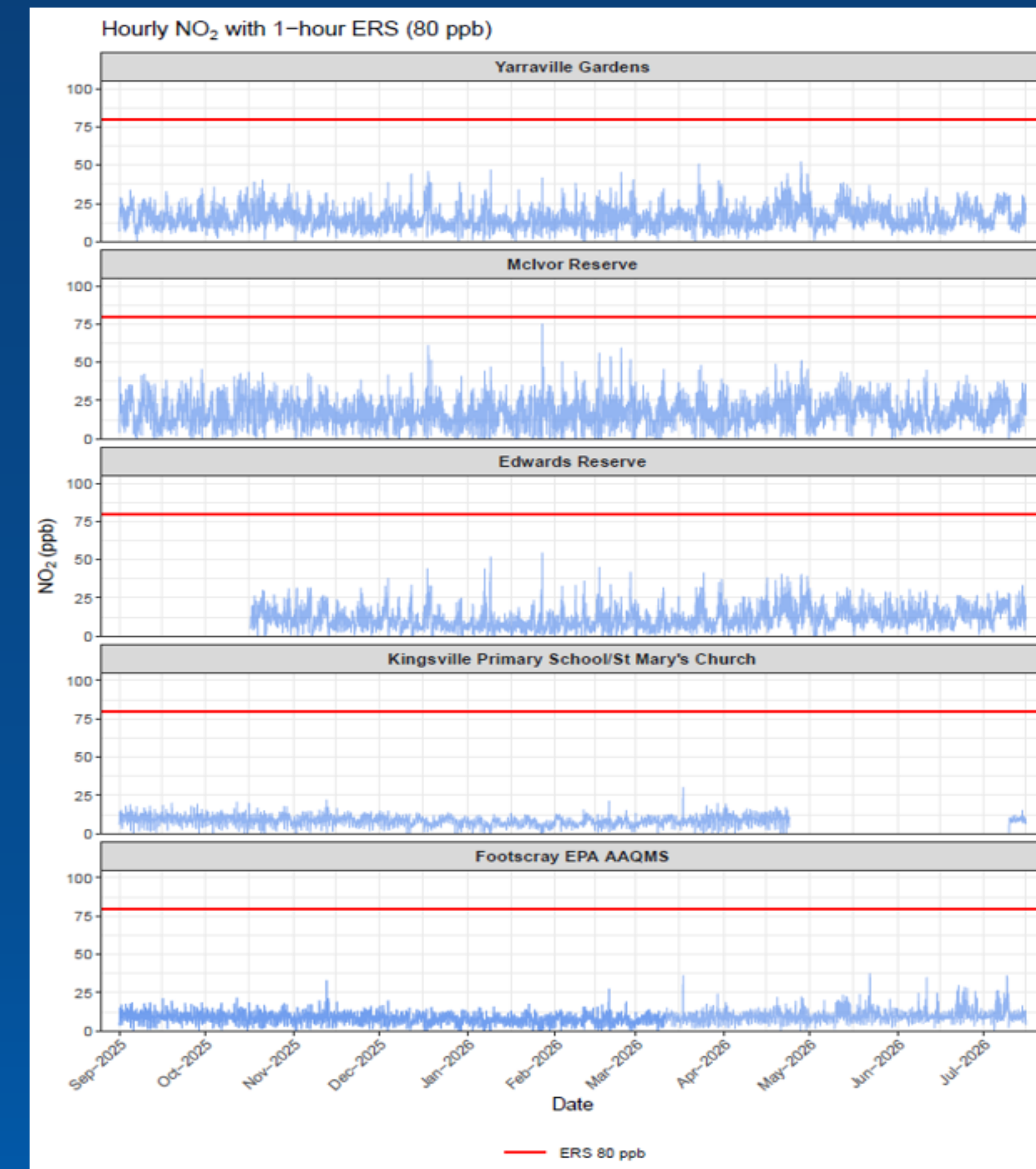
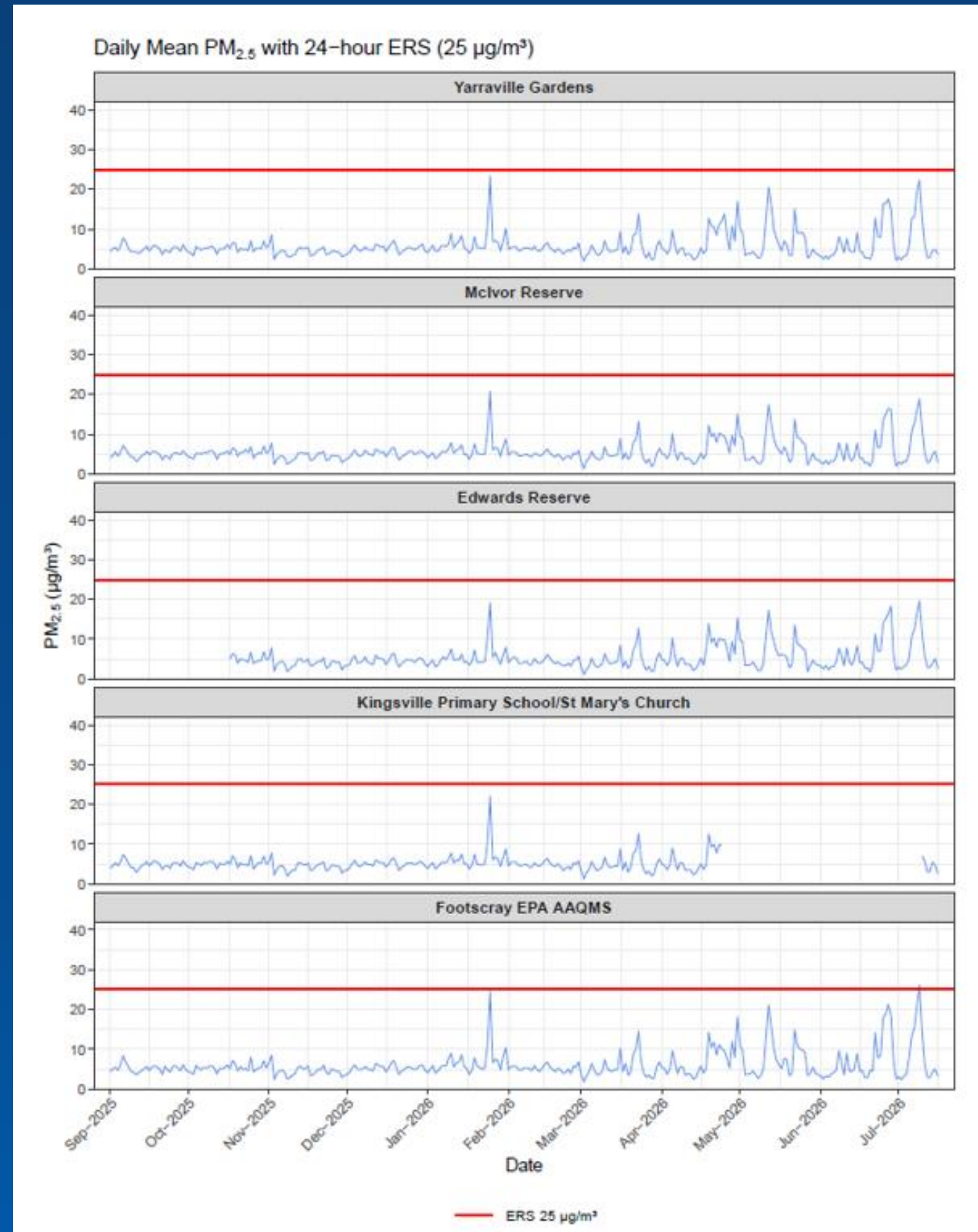
POLITICS
There's no hiding from the facts: The West Gate Tunnel stacks will funnel toxic fumes directly over thousands of residents
Contributor | Date: 1 November 2025



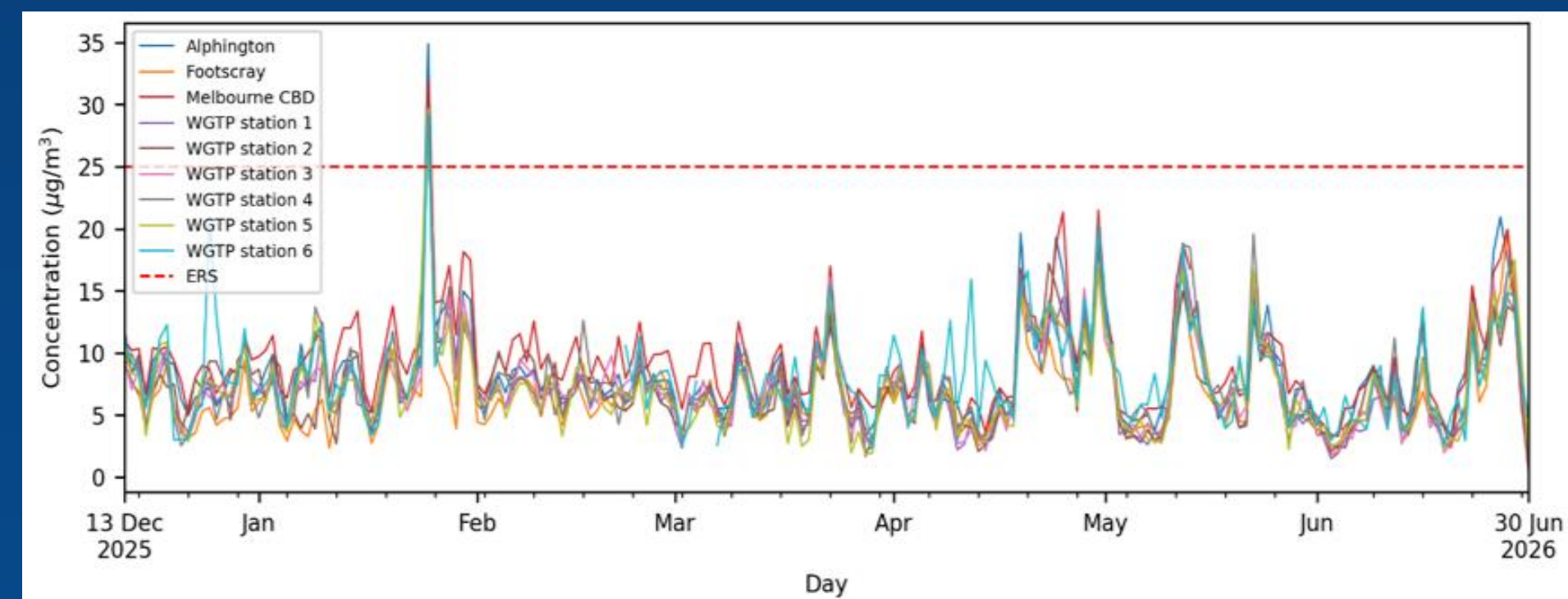
Air monitoring network - 2



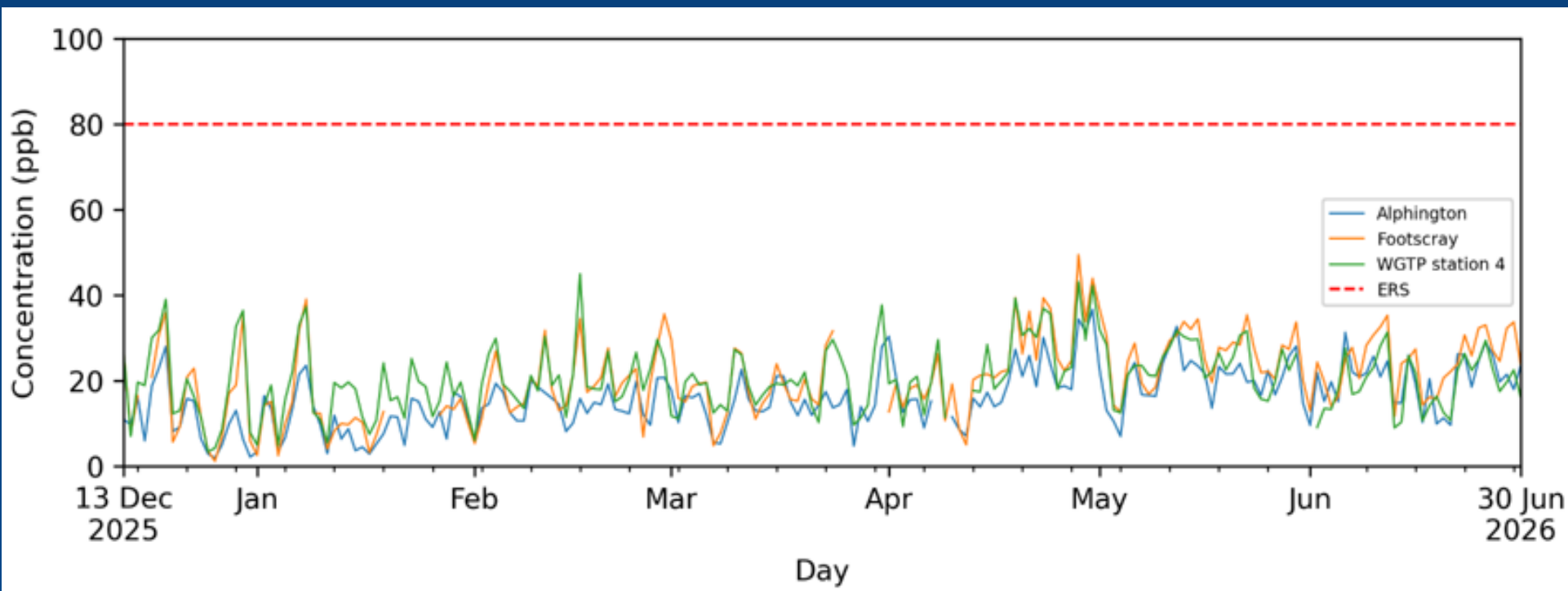
Sensor air monitoring network PM_{2.5} & NO₂



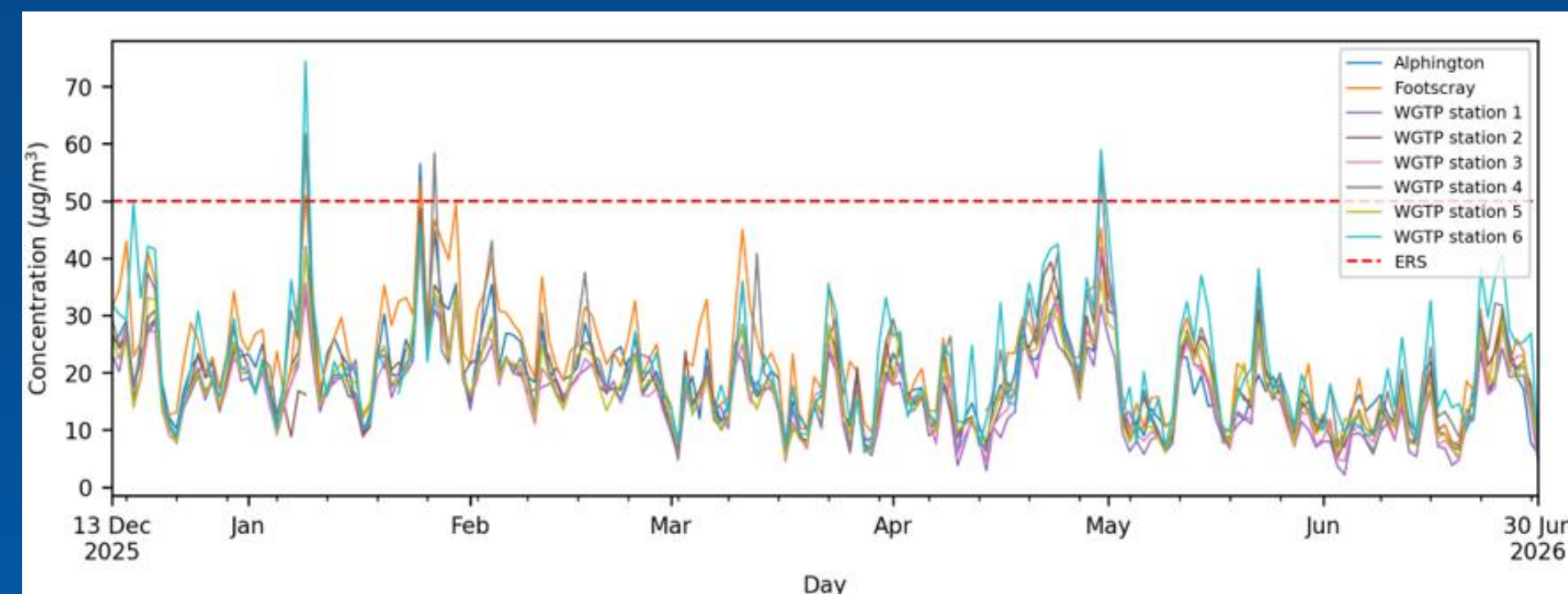
Tunnel operation PM_{2.5} PM₁₀ NO₂ CO



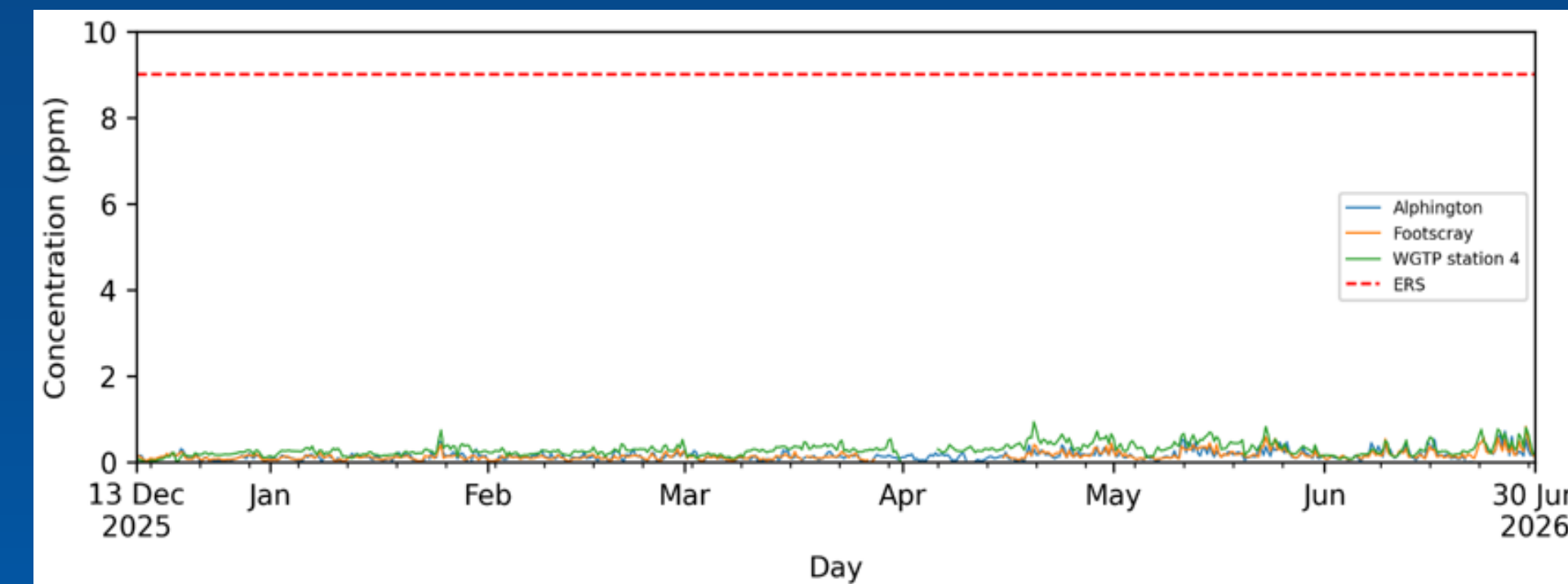
PM_{2.5} levels Dec 2013-June 2025



NO₂ levels Dec 2013-June 2025

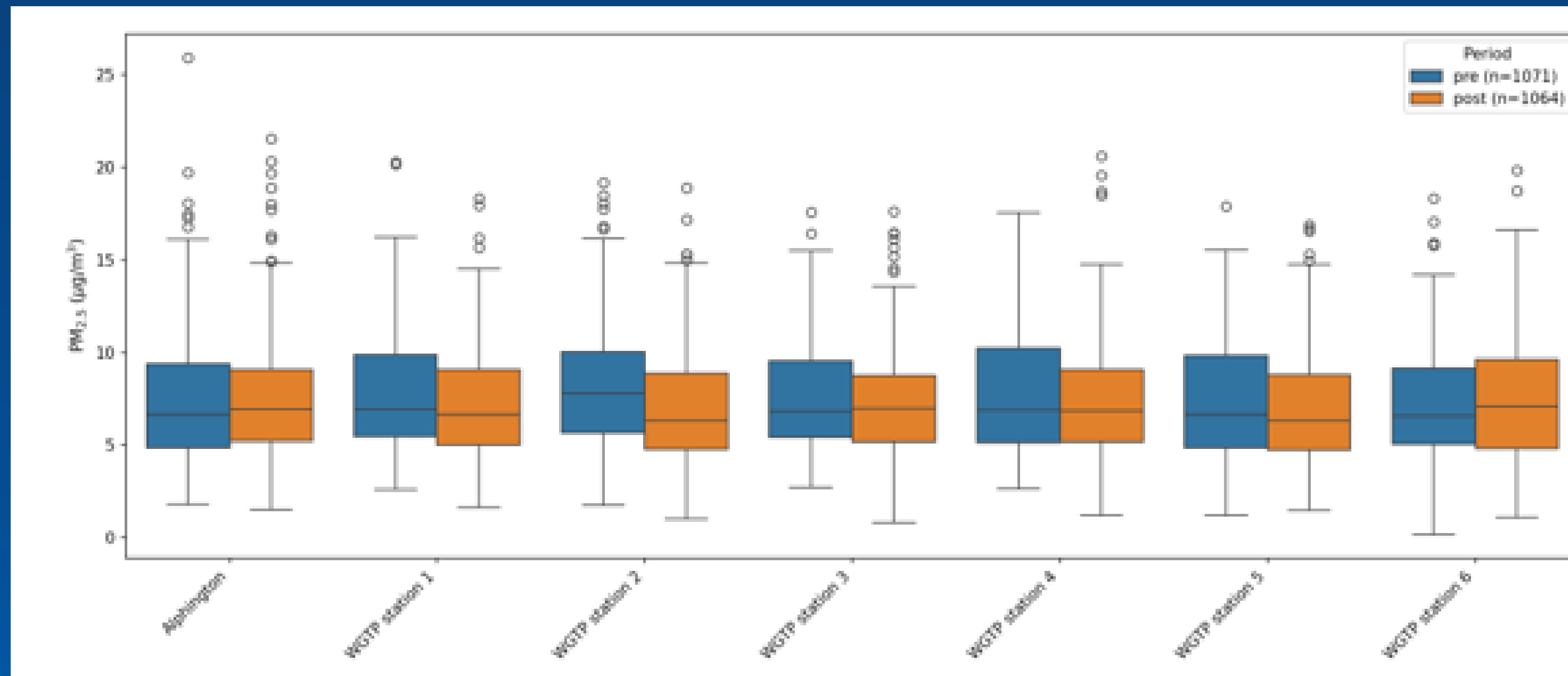


PM₁₀ levels Dec 2013-June 2025

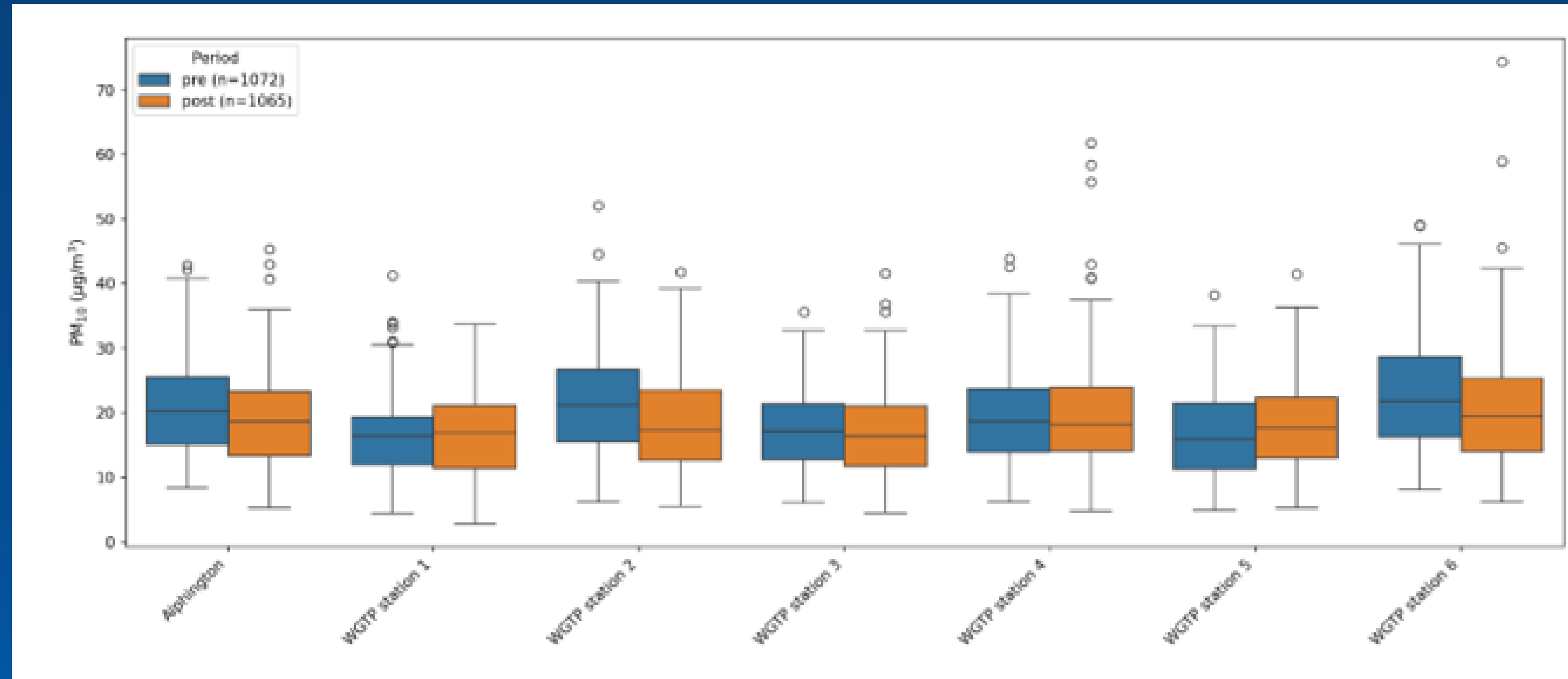


CO levels Dec 2013-June 2025

Tunnel construction vs operation PM_{2.5}



Tunnel construction vs operation PM₁₀



Tunnel construction vs operation NO_2



Tunnel construction vs operation DiD analysis

DID analysis	PM _{2.5} (mg/m ³)	PM ₁₀ (μg/m ³)	NO ₂ (ppb)
Baseline difference (pre)	-1.720	-2.077	+1.969
Change after opening	-0.634 (p=0.0149)	+0.215 (p=0.7846)	+0.033 (p=0.9554)
Post opening difference	-2.354	-1.863	+2.002

Dec 2025-Jun 2026

Summary

- $\text{PM}_{2.5}$, NO_2 & CO levels below ERS (excluding $\text{PM}_{2.5}$ regional bushfire smoke)
- PM_{10} levels below ERS except for 2 or 3 days at 2 WGT roadside sites
- $\text{PM}_{2.5}$ slightly lower to regional background location. indicating a statistically significant decrease between similar periods in the previous year
- PM_{10} and NO_2 are broadly consistent with regional background location
- Overall no statistically significant widespread increase in ambient $\text{PM}_{2.5}$, PM_{10} & NO_2 due to tunnel emissions
- Results are preliminary (6 months) requiring more data for suitable analysis

Thank you!

