

M4-M8 Link

WestConnex

Transurban

Air Quality Community Consultative Committee (AQCCC)

Meeting 18

18 March 2025



Agenda



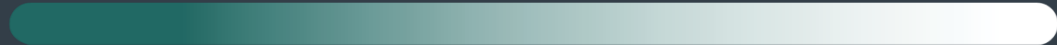
Agenda

- Welcome, declarations of interest, actions from previous meeting, Transurban contact change
- Air quality items raised by community members
- **Updates from the project team:**
 - M4-M8 Link Air Quality Complaints Update
 - M4-M8 Link Air Quality Update
 - Operations and Maintenance Update
- **M4-M8 Link: A review of impacts on local air quality using 2 years of validated air quality data - Dr Ian Longley Director, The Air Quality Collective**
- **Other business:**
 - Proposed cessation of ambient monitoring and disbanding of AQCCC
 - Any other business

Welcome

Declarations of interest

Actions from previous meeting



Air quality items raised by the community



Project update



No complaints related to air quality since our last AQCCC meeting.

M4-M8 Link Air Quality Update

No air quality exceedances since our last AQCCC meeting.

WCX Stage 1 Link Mainline Tunnels & Stage 2 Rozelle Interchange E37 & E38 Audit (Audit 3: Jan - Jun 2024)

In November 2022 Northstar Air Quality Pty Ltd (Northstar) was been approved by the Planning Secretary of the NSW Department of Planning and Environment (DPE) to perform the audit of Conditions E37 and E38 of SSI 7485.

The Audit start date was 1 January 2024 with an end date of 30 June 2022

A copy of the approval issued from DPE is reproduced in Appendix C 11 Non-Conformance Reports (NCRs) raised during the audit (January – June 2024).

All 11 NCRs have been closed out during the audit period or shortly thereafter.

These NCRs were related to in-tunnel overdue calibrations (corrected during audit period), and ventilation outlet / ambient stations multipoint linearity checks (completed during audit).

Operations and Maintenance Update

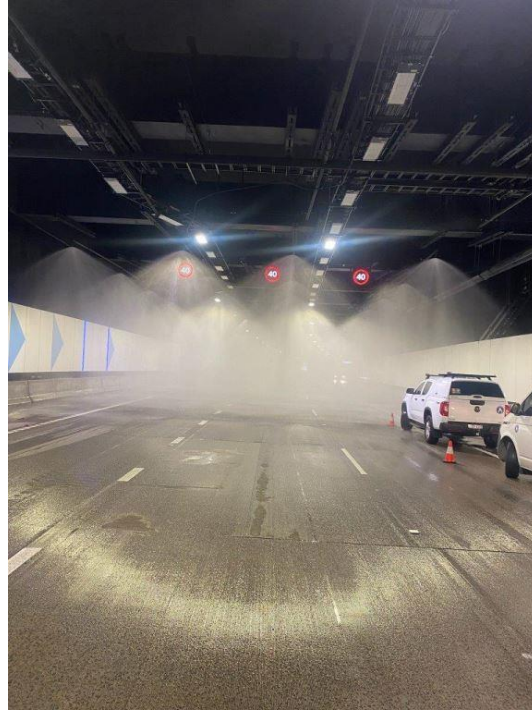




The resin media within the Heavy Metals Ion Exchange (IX) vessels was replaced as part of a biennial maintenance regime. The IX resin is the final treatment step of the water treatment plant to remove any dissolved heavy metals



Tunnel Wall Washing



Fire Systems Testing



Building Structural Inspections

M4-M8 Link:

A review of impacts on local air quality

Dr Ian Longley

Director, The Air Quality Collective

The process

I act on behalf of the community members

All raw data provided by Transurban

No other guidance/instructions provided

As Independent Expert I am free to choose my own methods

(Previously done this for M4 East and M8)

Which pollutants?

“Criteria” pollutants – proscribed in Conditions of Approval and NEPM

Nitrogen dioxide (NO_2) – combustion, especially road vehicles

Carbon monoxide (CO) – incomplete combustion, mainly older petrol vehicles

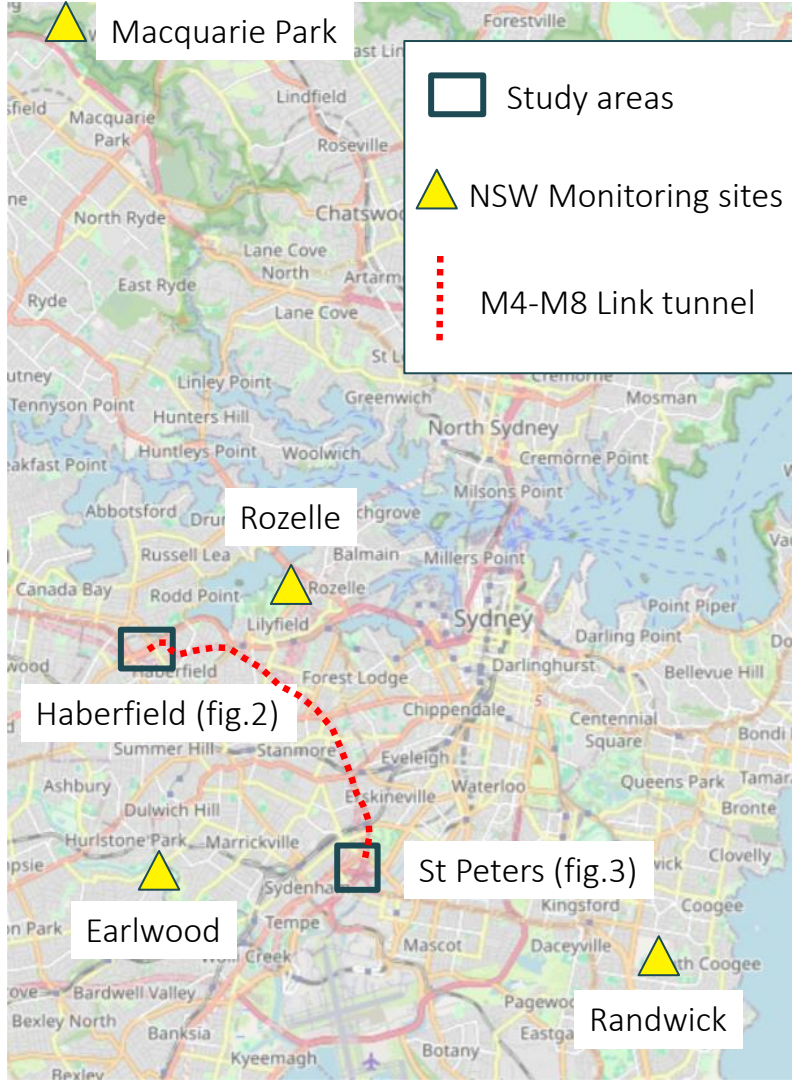
Particulate matter ($\text{PM}_{2.5}$ and PM_{10}) – dust, smoke, fumes, many sources

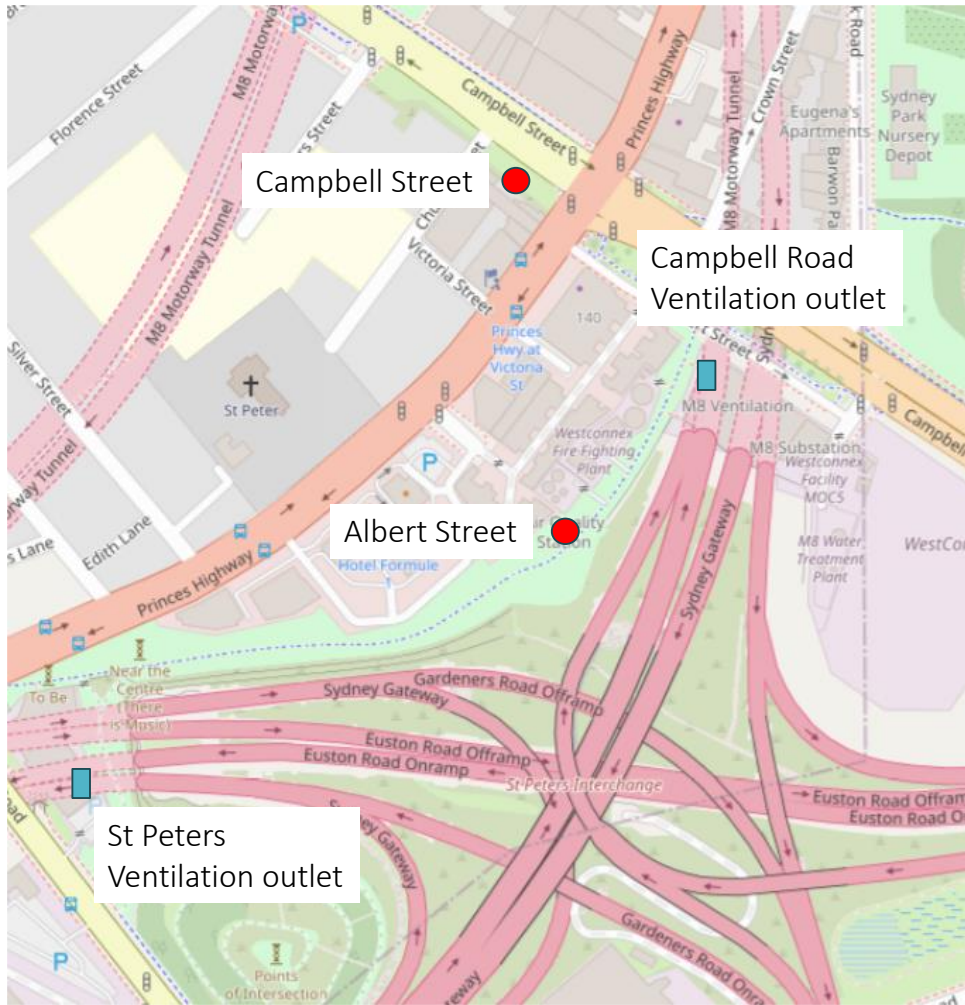
Oxides of nitrogen (NO_x)

not a criteria pollutant

most sensitive proxy for all tailpipe emissions

used to explore and explain changes in criteria pollutants





Campbell Street

Campbell Road
Ventilation outlet

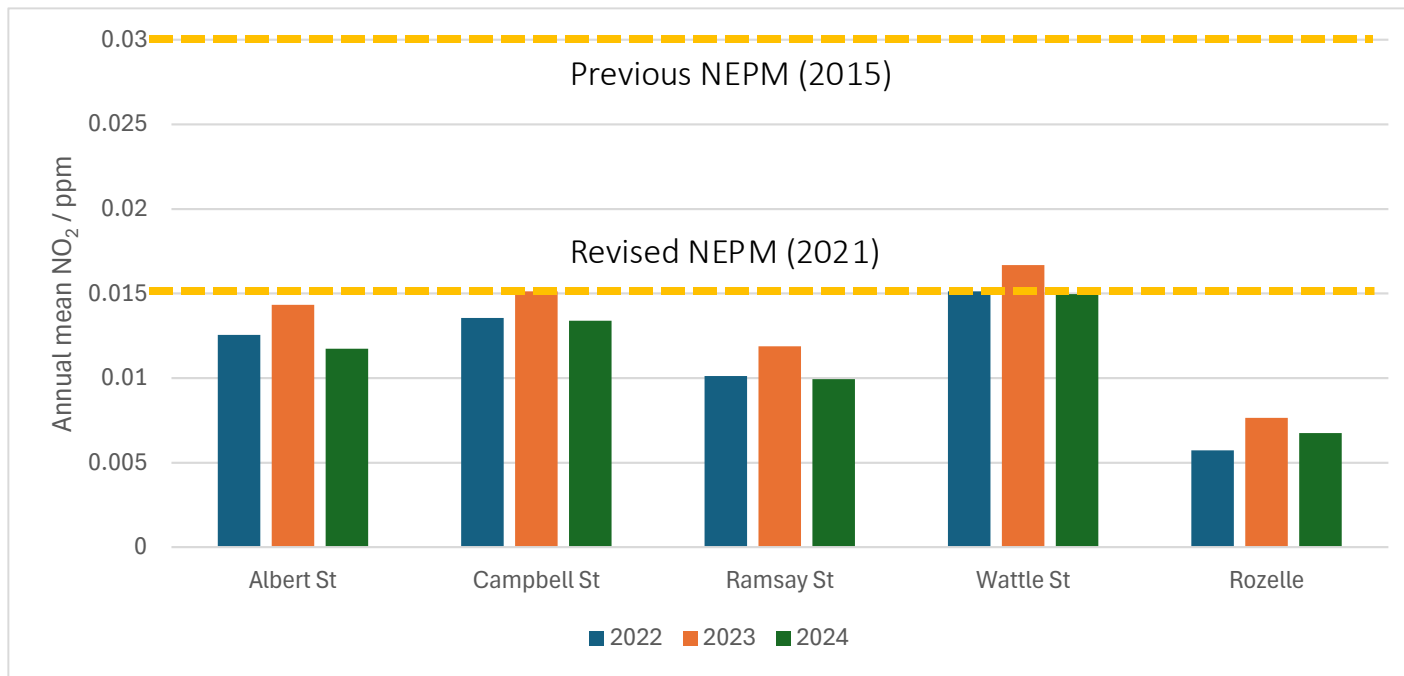
Albert Street

St Peters
Ventilation outlet

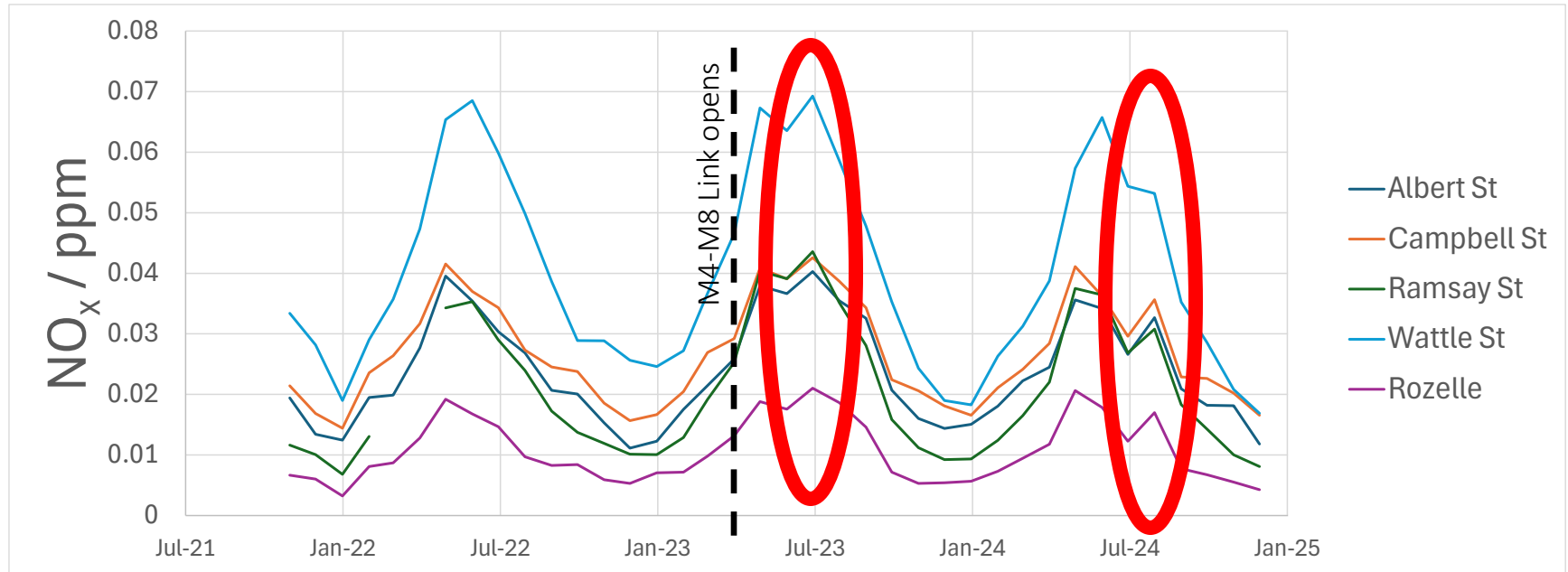


Long-term impacts (years)

Annual average NO₂ slightly worsened in 2023 across all sites, then recovered in 2024

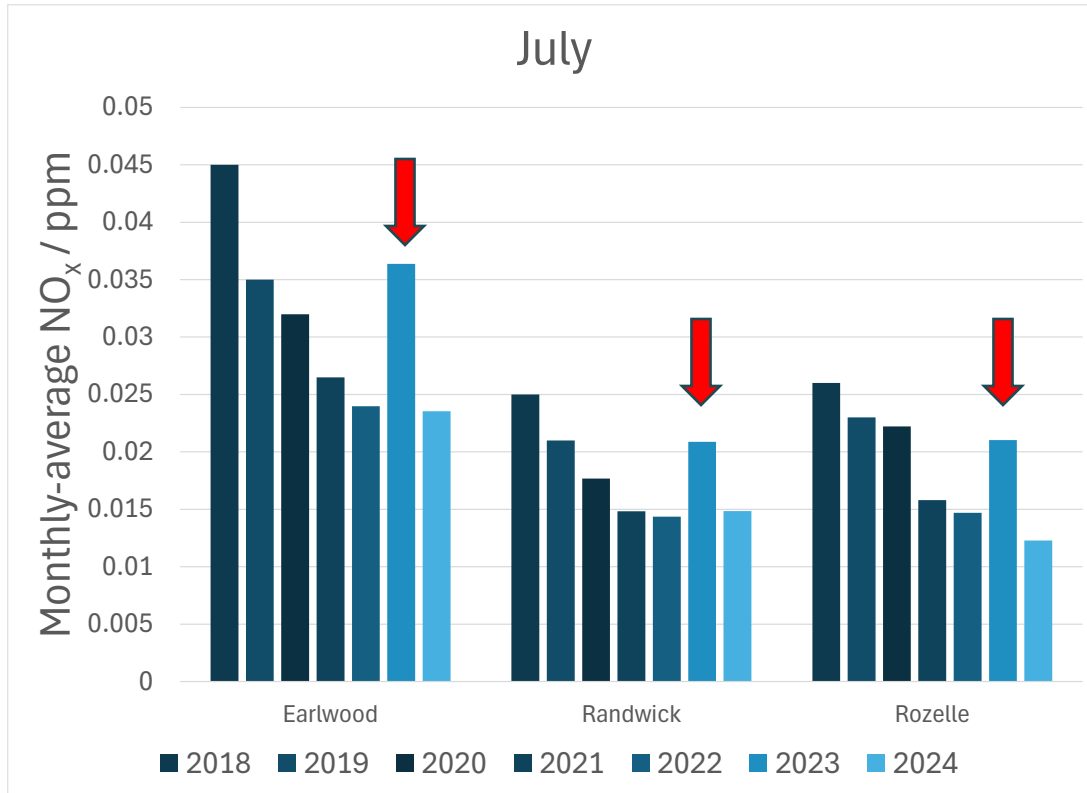


Monthly-average NO_x

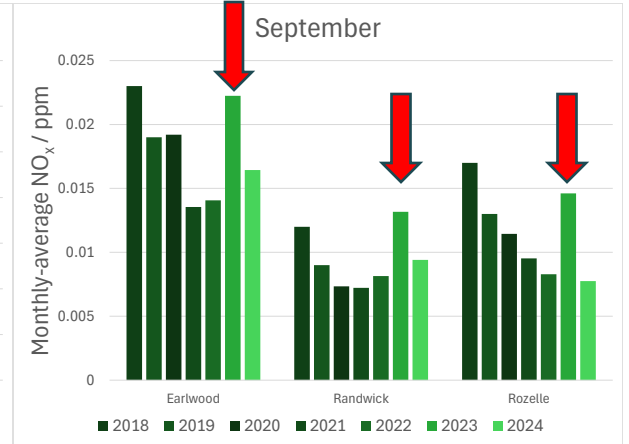
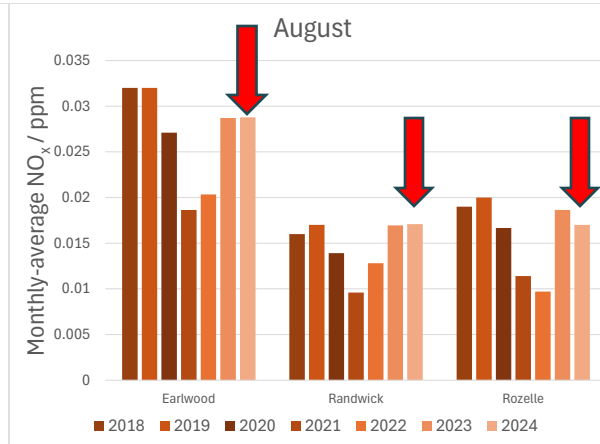
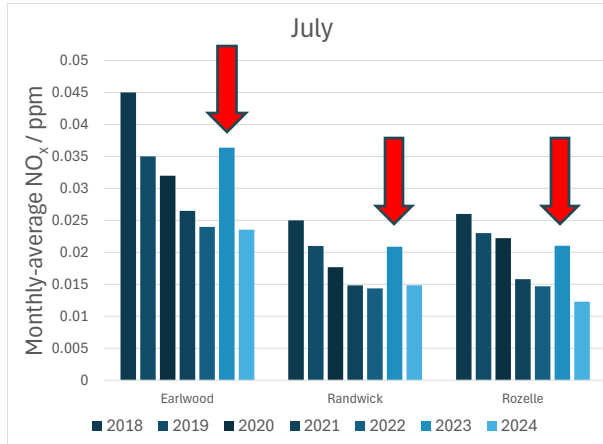


No MAJOR changes in monthly-average NO_x
BUT higher than normal in Jul, Aug, Sep 23 and Aug 24

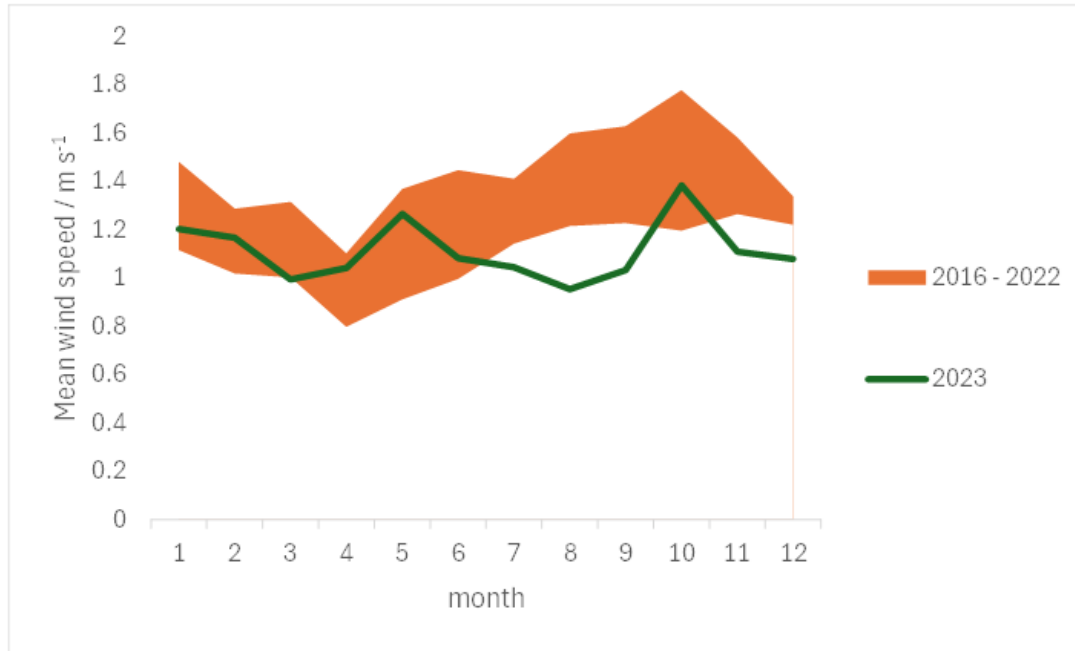
NOx higher across Sydney in July 2023



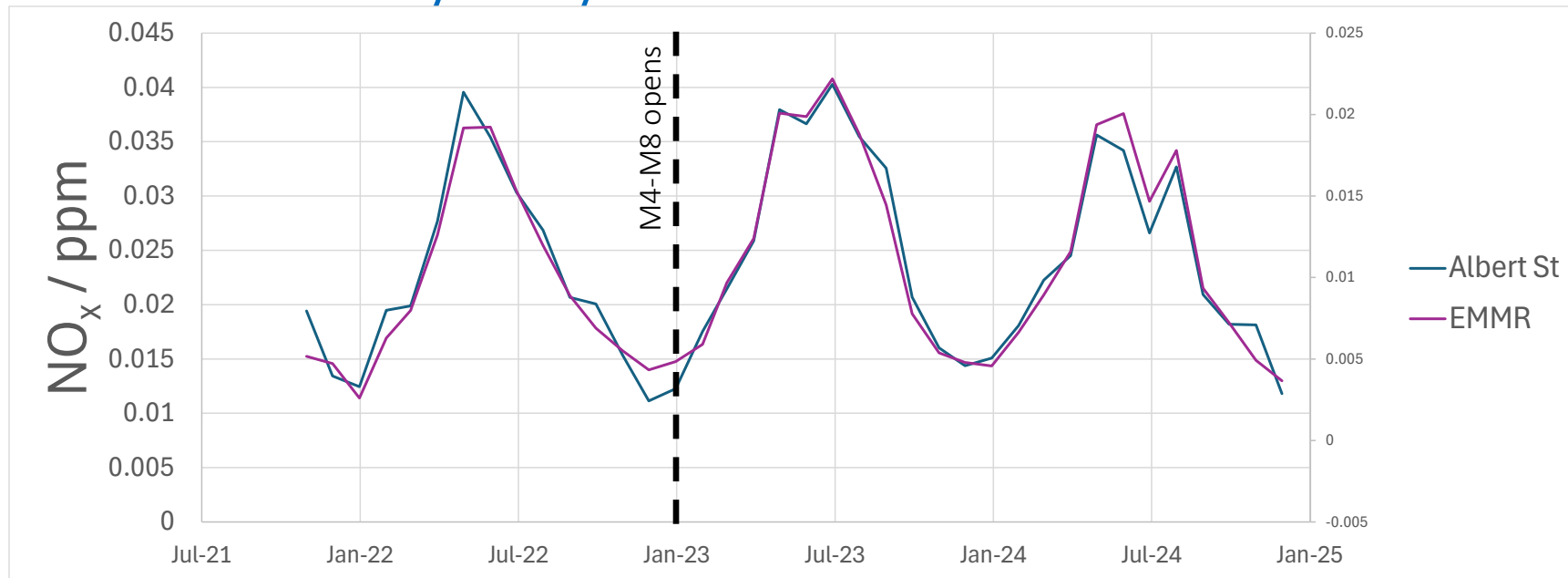
...and in Aug-Sep 23 and Aug 24



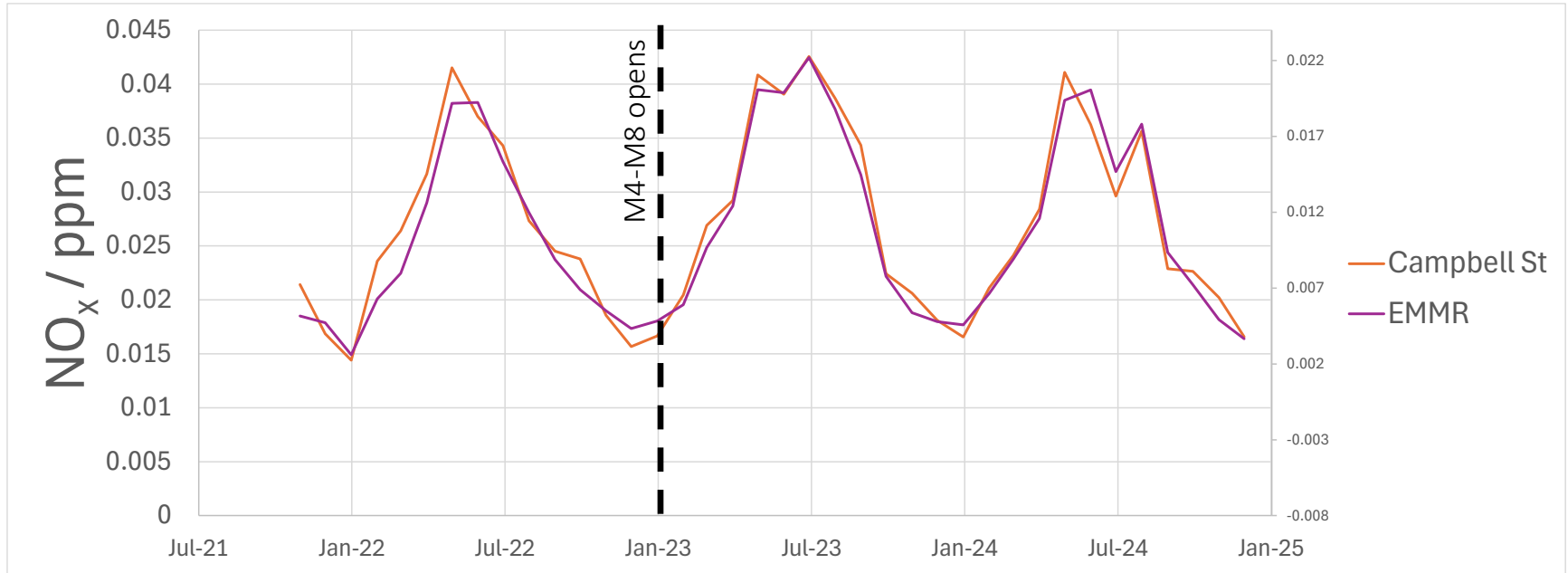
July, Aug, Sep 23 was less windy than normal:
less dispersion = higher NO_x across all Sydney



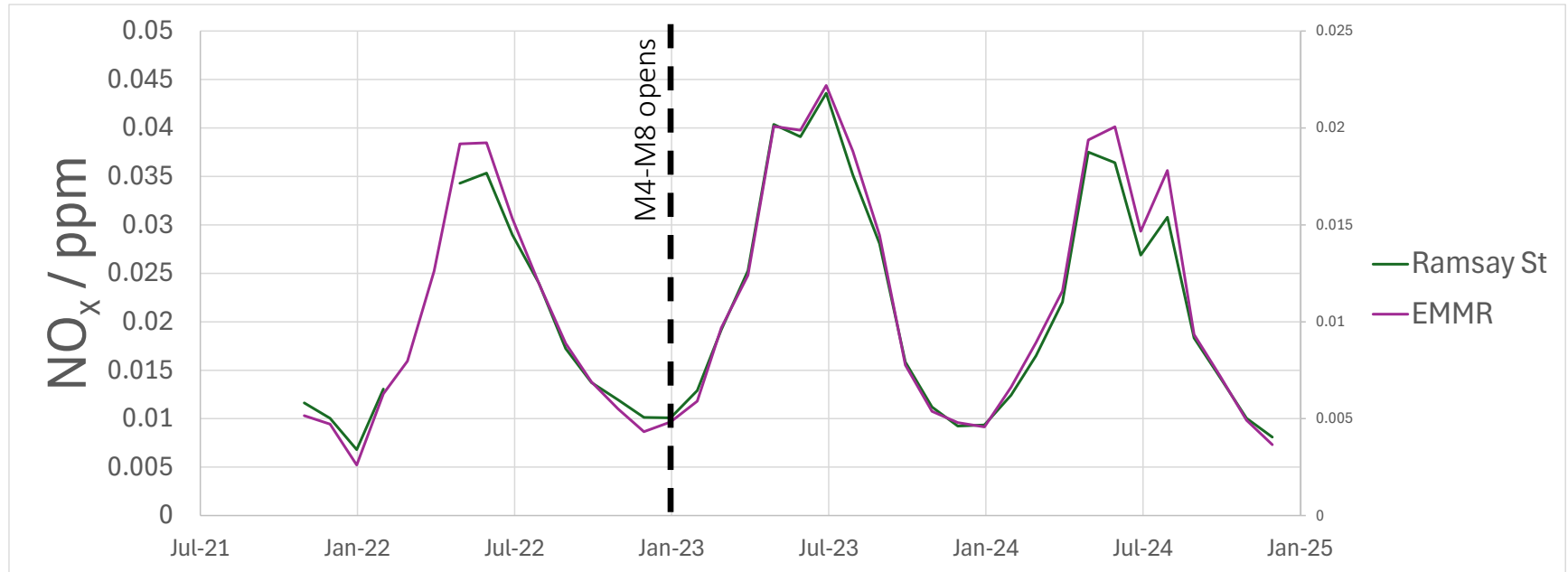
Albert St – no significant change compared to other Inner Sydney sites



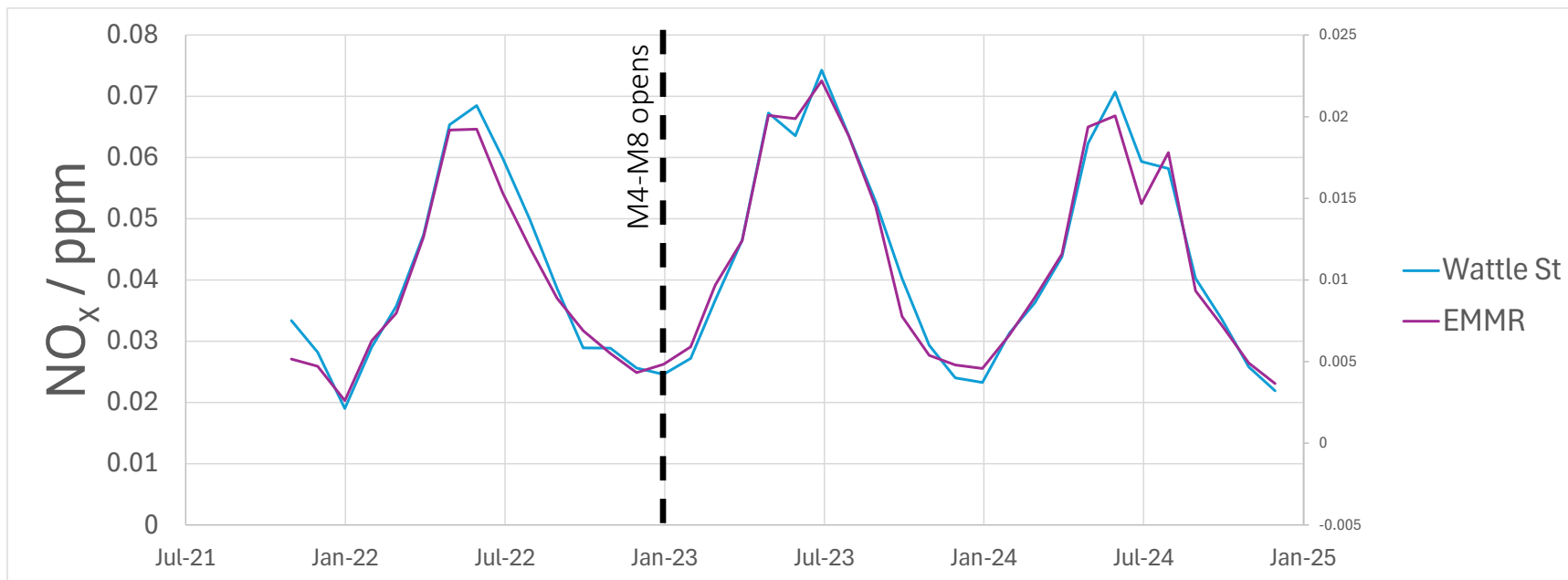
Campbell St – no significant change



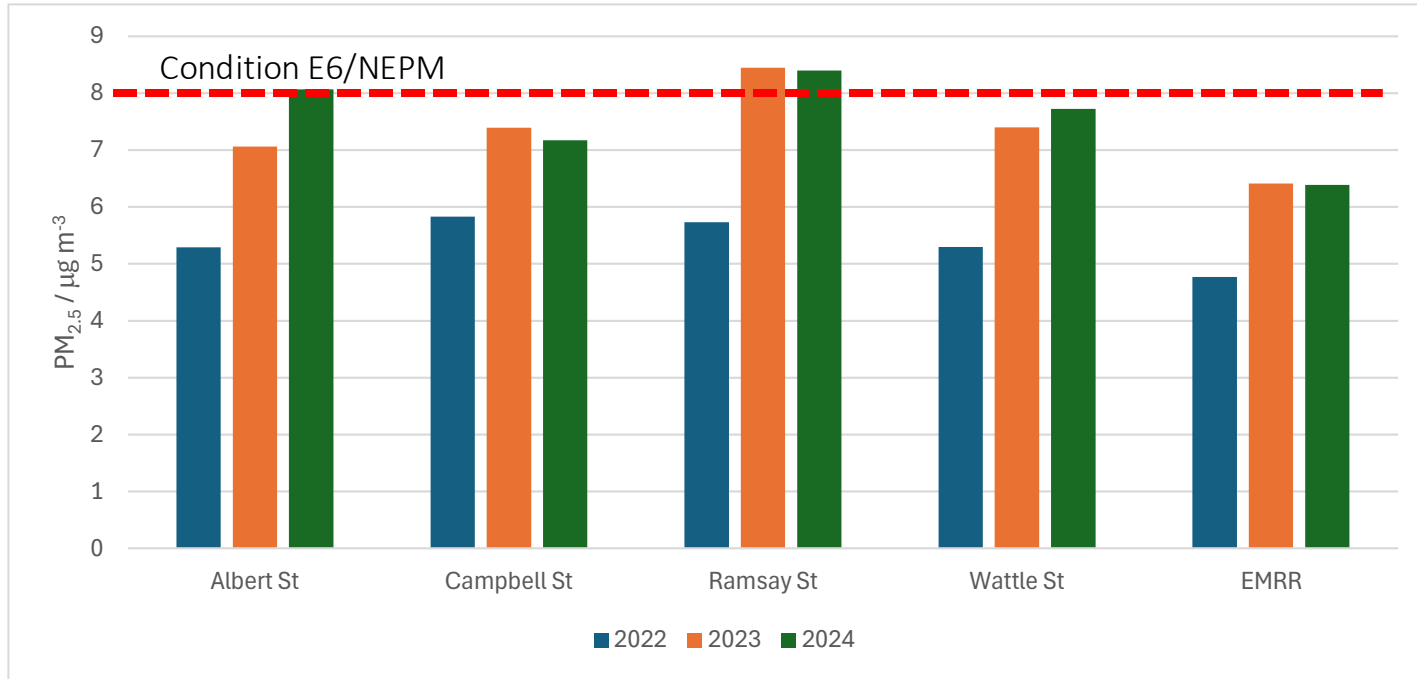
Ramsay St – no significant change



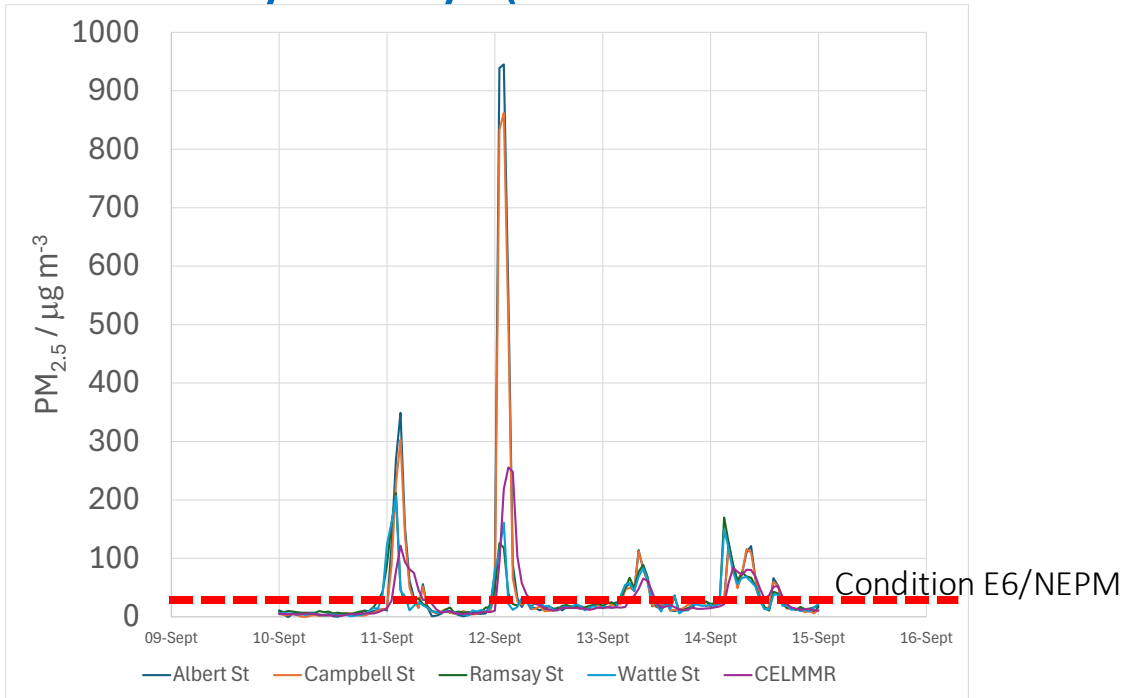
Wattle St – no significant change



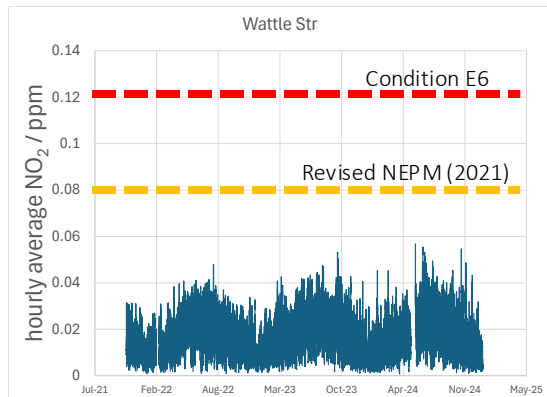
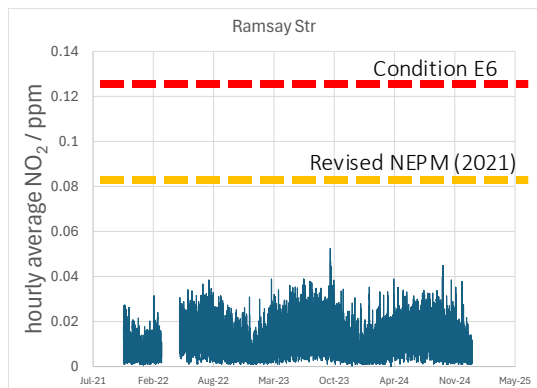
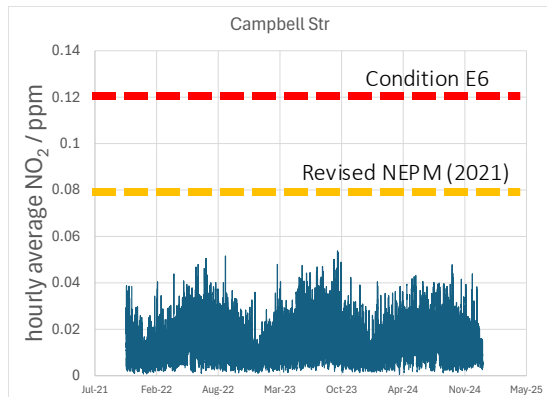
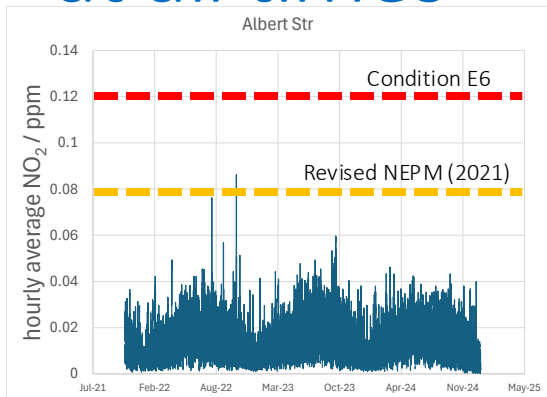
Average Fine particulates (PM_{2.5})



Exceedences of daily PM_{2.5} NEPM only occurred on days where it was exceeded across Sydney (hazard-reduction burns)

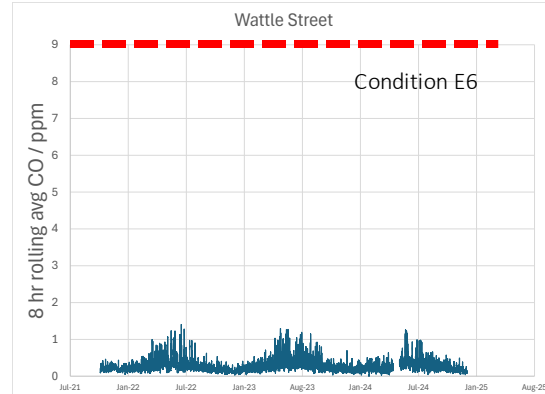
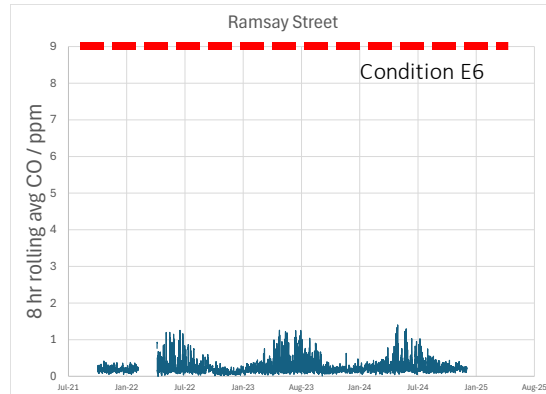
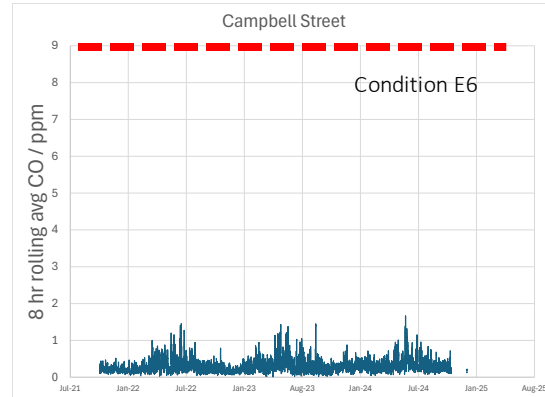
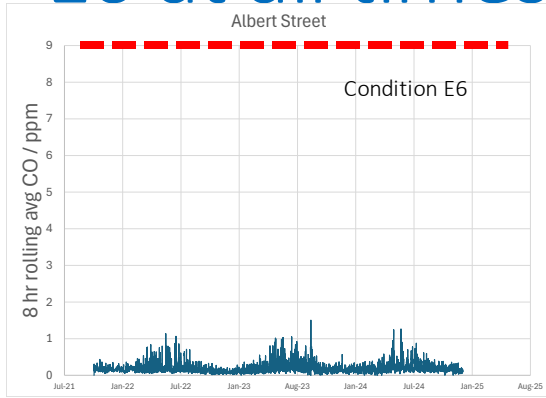


Hourly average NO₂ well below Condition E6 at all times



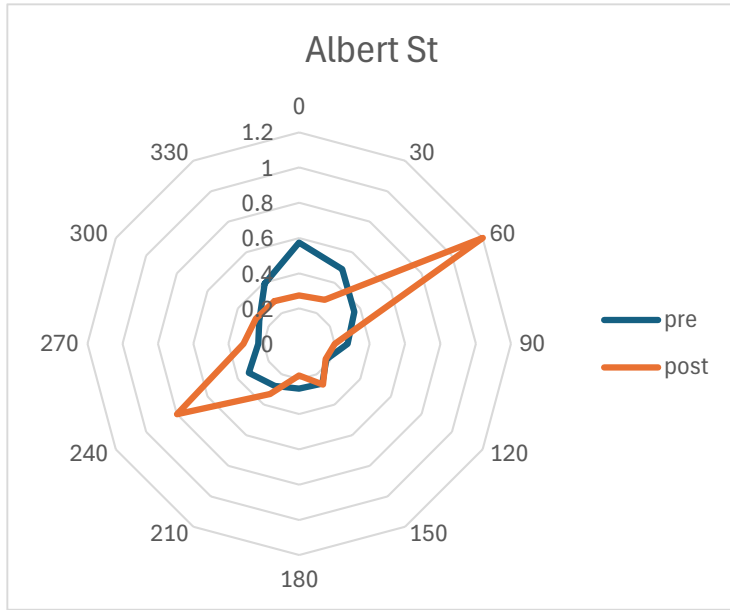
From hourly

8-hr rolling-average CO far below Condition E6 at all times



From hourly

Very-short-term impacts of the outlets



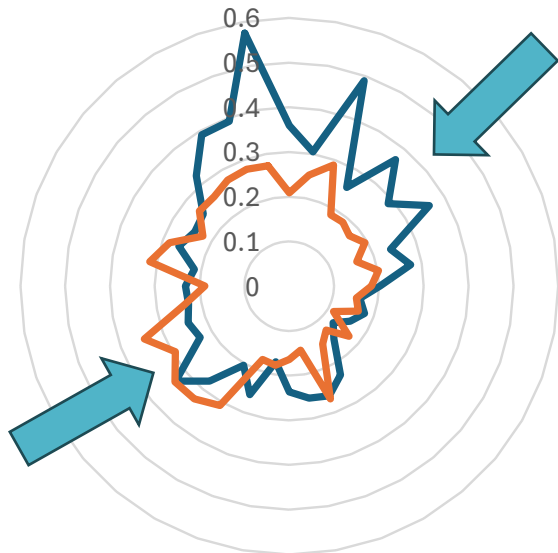
Charts show maximum 5-minute NO_x levels in 12 wind directions

Blue = construction, red = post-opening

Outlet impact would show up as orange line OUTSIDE the blue line

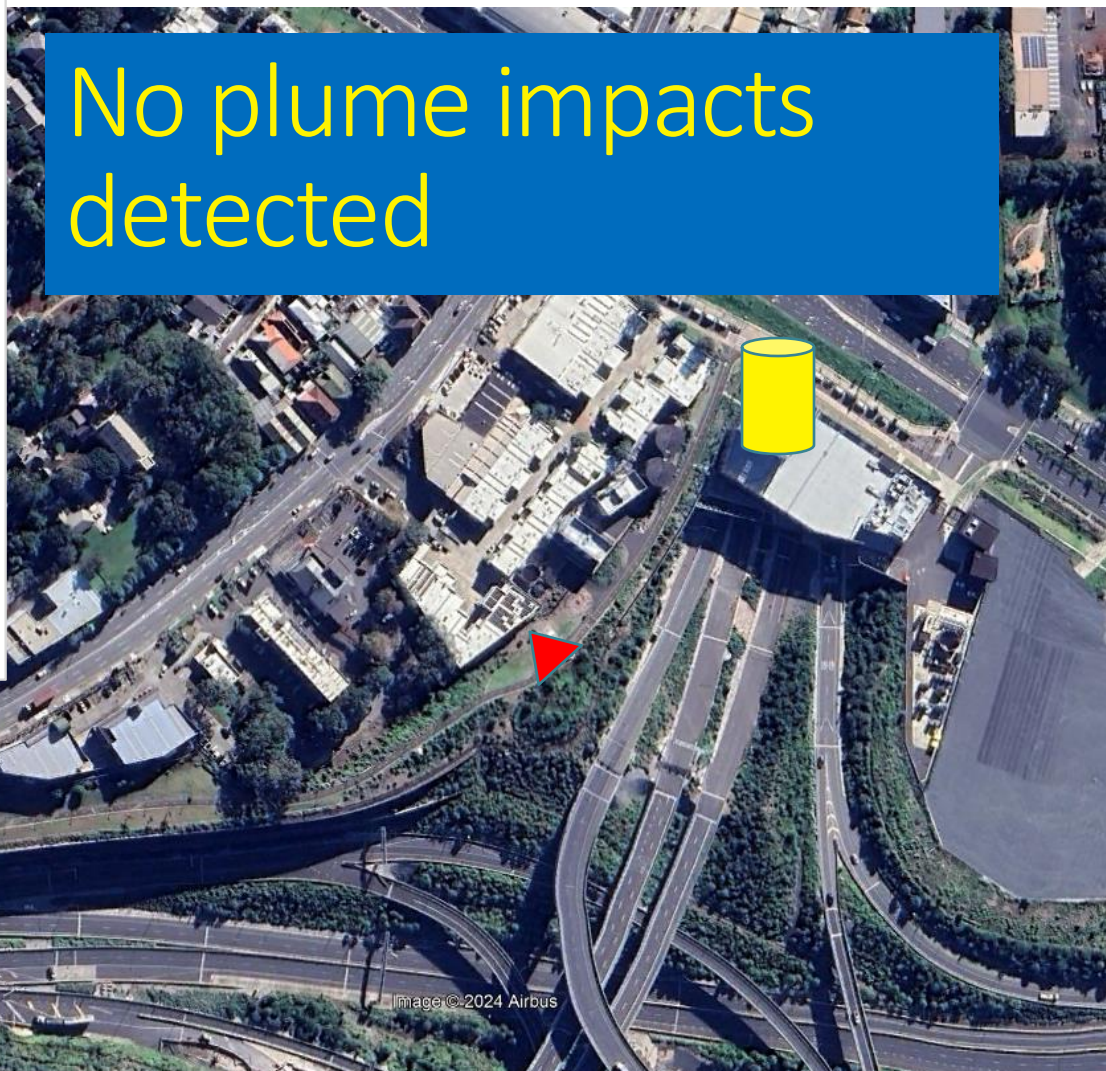
In this HYPOTHETICAL example there is impact from outlets in ENE and WSW winds

Albert St



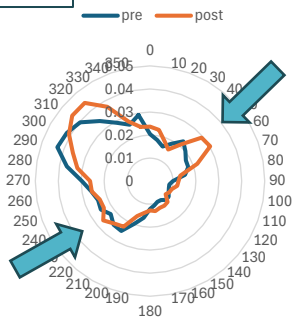
— pre
— post

No plume impacts detected



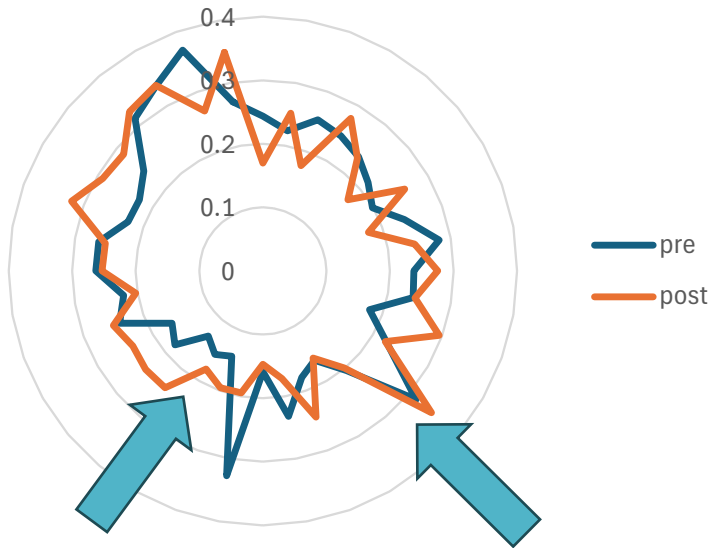
average

Albert Str



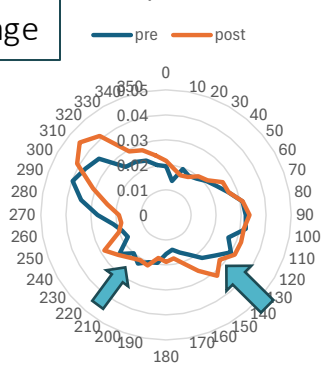
— pre — post

Campbell St

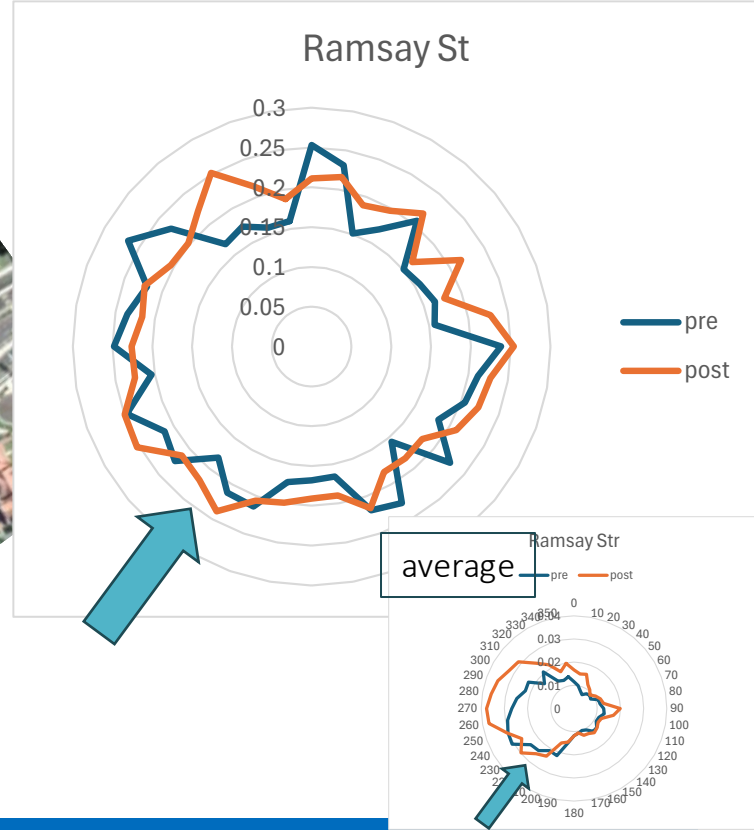


average

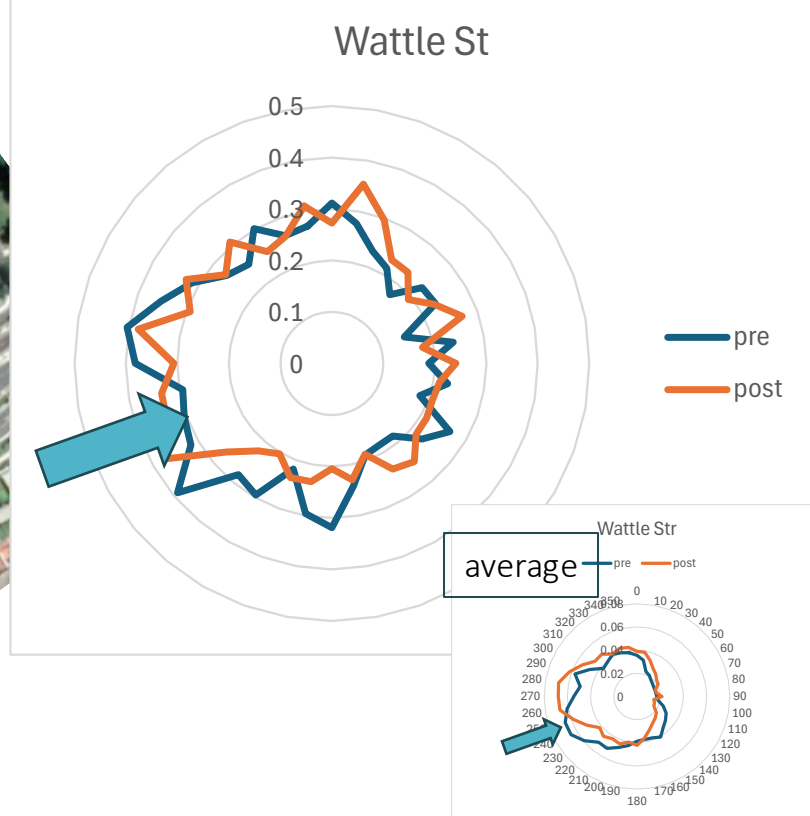
Campbell Str



No plume impacts detected



No plume impacts detected



No plume impacts detected

No impact of portal emissions at Wattle St monitor

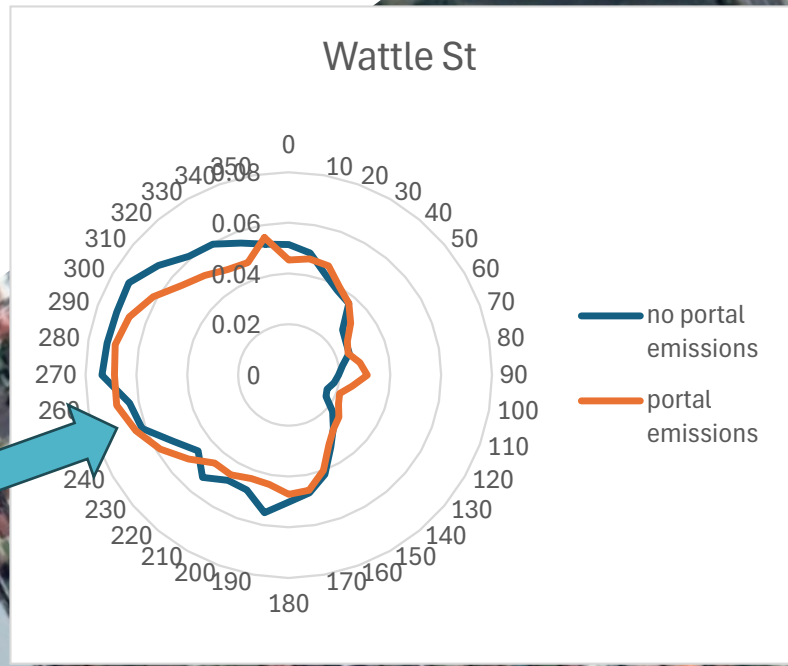
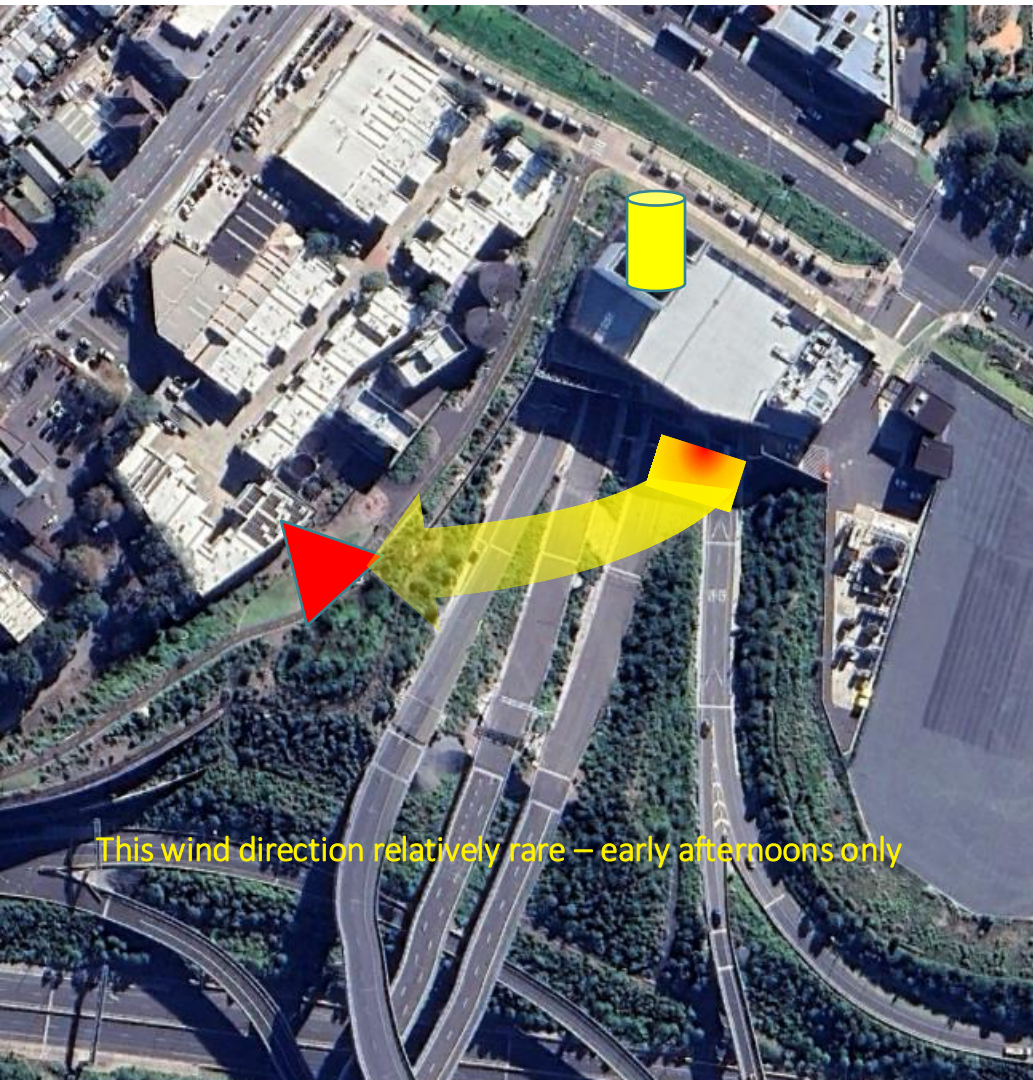
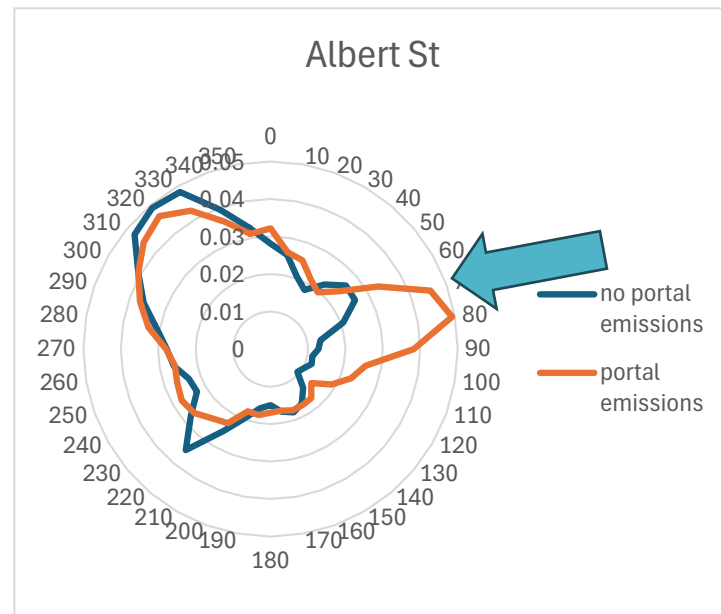


Image © 2022 Maxar Technologies

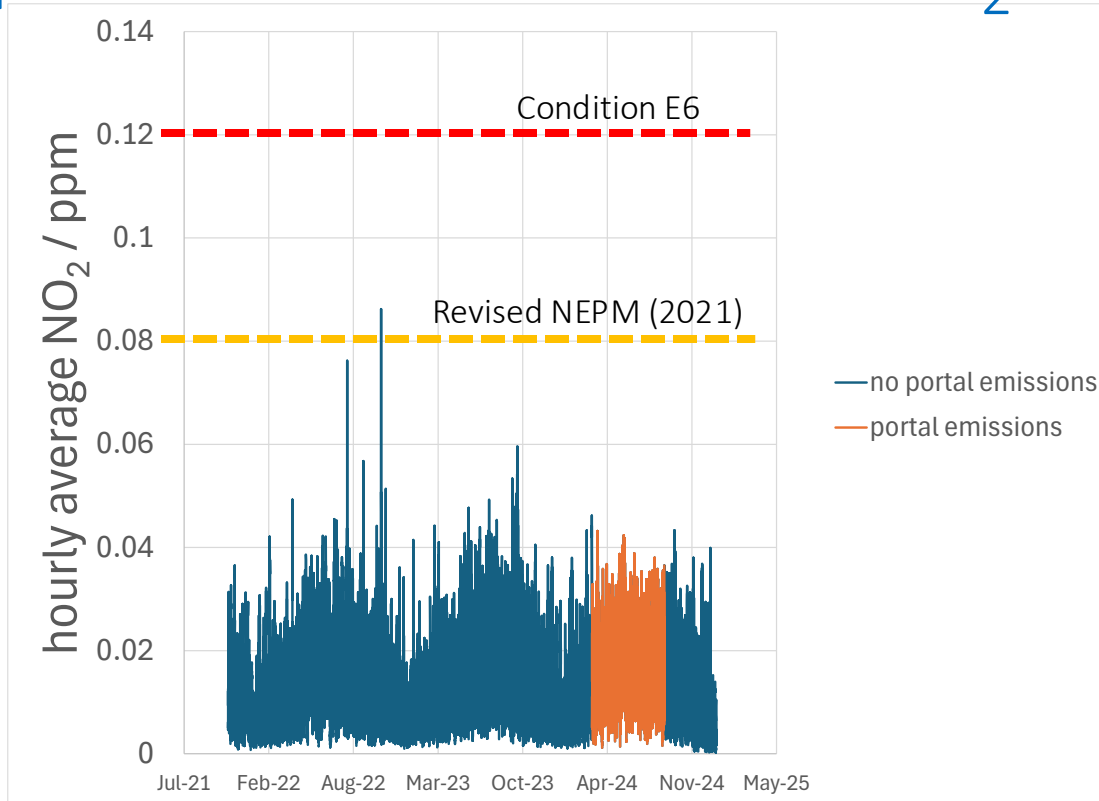
NO_x increased at monitoring site in ENE winds during portal emissions



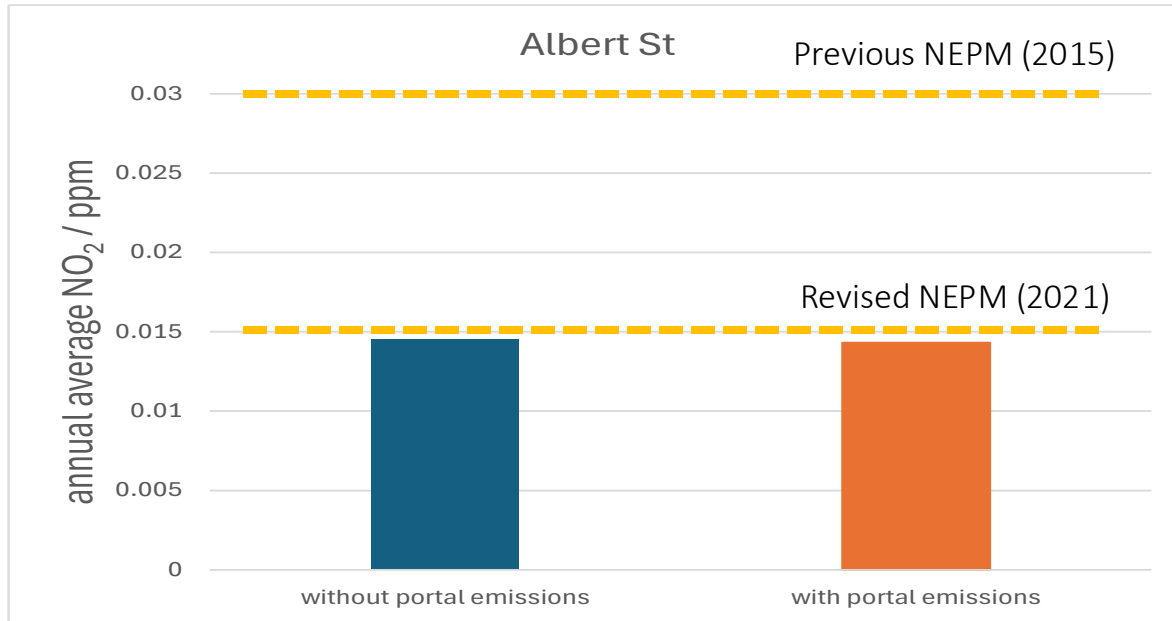
This wind direction relatively rare – early afternoons only



Portal emissions made no difference to state of compliance with short-term NO₂ Guidelines



Portal emissions made barely detectable difference to compliance with long-term NO₂ Guidelines



Conclusions

Long-term worsening in $PM_{2.5}$ levels is unrelated to the project (bushfires?)

Slight worsening of NO_2 in late 2023 appears temporary and unrelated to the project (weather-related?)

Overall, levels of traffic pollution unchanged

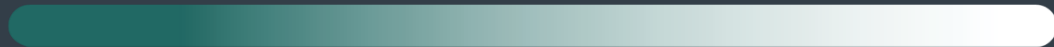
No impacts of the outlets on local air quality detected

Highly localised and relatively rare impact of portal emissions observed at Albert Street – Not significant in terms of Conditions or NEPM.

Questions



Next Steps



Ongoing engagement update



ENVIRONMENT / ENVIRONMENTAL DOCUMENTS

Environmental Documents

info@westconnex.com.au
NSWmotorwayenquiries@transurban.com

Genevieve Neich – WestConnex Community and Engagement Lead - 0456 741 426

M4-M8 Link - Environmental Protection Licences and Monitoring Data



M4-M8 Link Conditions of Approval Documents



[In Tunnel Air Quality Monitoring Report](#)

January 31, 2025 - 2.2 MB



[Vent Outlet Air Quality Monitoring Report](#)

January 15, 2025 - 1.5 MB

-
- Dr Ian Longley's presentation of 2 years of validated air quality data forms the basis of the decision on whether the AQCCC is to be disbanded, having met its MCoA requirement to operate 2-years post-opening. Additionally, it will support the determination of whether WestConnex has met its obligations towards ambient air quality monitoring.
 - Dr Ian Longley will issue a report based off his findings which will highlight the analysis of two-years of validated air quality data, available since the M4-M8 Link opened in January 2023.
 - This will be presented to the Department of Planning, Housing and Infrastructure (DPHI), alongside the AQCCC Annual Report prepared by the Committee's Independent Chair.

E26 The Proponent must commence monitoring for at least 12 continuous months prior to operation and continue monitoring for at least two (2) years following the commencement of operation, unless otherwise approved by the Secretary. At the conclusion of the two (2) year operational monitoring period, the Proponent must review the need for the continued use of ambient monitoring stations in consultation with the AQCCC and EPA. Closure or discontinued use of an ambient monitoring station will require the approval of the Secretary.

- **Ambient monitoring for the M4-M8 Link commenced in November 2021 and has continued uninterrupted since then.**
- **Presentations by Ian have shown no impacts of the outlets on local air quality detected since the connection opened to traffic in January 2023.**
- **For the ambient exceedances that were recorded throughout the monitoring, our independent specialist has determined that none were the result of tunnel operations.**
- **Both In Tunnel and Vent Outlet monitoring will continue for the life of the project.**
- **Real time data, validated reports and audit reports will continue to be published on the Linkt Website**
- **WestConnex would like to propose that Ambient air quality monitoring can now conclude.**

E2 Prior to finalising the detailed design of the CSSI and establishing the ambient air quality monitoring stations required under Condition E24, the Proponent must establish an Air Quality Community Consultative Committee (AQCCC) to provide advice prior to and during the operation of the CSSI.

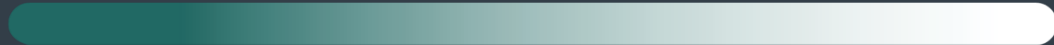
The AQCCC must:

(d) provide advice on the dissemination of monitoring results and other information on air quality issues. The AQCCC may comprise the same members of the AQCCC established under CSSI approvals for the WestConnex M4 East and New M5 projects (SSI 6307 and SSI 6788) in relation to the ventilation outlets located in Haberfield and St Peters.

The AQCCC must operate for up to two (2) years after commencement of operation, or as otherwise approved or directed by the Secretary, in consultation with the Chair.

WestConnex believes that the purpose and goal of the M4-M8 Link AQCCC has been successful in serving its project purpose and has now met this obligation.

Questions



Any other business /
Close

