

10.11. Western Harbour Tunnel Project - proposed location of air quality monitoring station for Cammeray

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ENDORSED BY	Marcelo Occhiuzzi, Director Planning and Environment
ATTACHMENTS	<ol style="list-style-type: none">1. Minutes of The Plateau Precinct Meeting - 24 June 2025 [10.11.1 - 5 pages]2. 250414 Western Harbour Tunnel AQCCC Minutes - Meeting 1 April 2025 [10.11.2 - 4 pages]3. 250527 Western Harbour Tunnel AQCCC Minutes - Meeting 2 May 2025 [10.11.3 - 8 pages]4. 250620 Western Harbour Tunnel AQCCC Minutes - Meeting 3 June 2025 [10.11.4 - 3 pages]
CSP LINK	Outcome 1 – A healthy environment with thriving ecosystems and strong climate resilience E3. Build climate resilience

PURPOSE:

The purpose of this report is to inform Council about the process carried out by the Western Harbour Tunnel Project's Air Quality Community Consultative Committee to select a preferred location for an air quality monitoring station. This selection is required by the project approval conditions before Transport for NSW seeks Council's approval as the landowner.

EXECUTIVE SUMMARY:

- The Western Harbour Tunnel (WHT) road project was approved by the NSW Government in January 2021.
- One of the conditions of the WHT approval is that two air monitoring stations must be installed at suitable locations near the Cammeray ventilation outlet at least 12 months prior to the operation of the road. One is already installed adjacent to the Cammeray Croquet Club.
- An Air Quality Community Consultative Committee (AQCCC) was established in early 2025, as required by Condition E2 of the WHT approval and is required to provide input and advice on the location of air quality monitoring stations and related issues.
- The AQCCC includes representatives from Transport for NSW (TfNSW) , Inner West Council, North Sydney Council, local community members, independent experts, the Environmental Protection Authority, and the tunnel operator. Council staff attend in an advisory capacity only.
- The AQCCC's role is a consultative one, and it does not have regulatory or decision-making powers.

- The AQCCC considered various sites to accommodate the required air quality monitoring station. The Committee preferred a site at Bellevue Street adjacent to the freeway in Cammeray as it is technically suitable and appears to have community support, despite the loss of four short-stay parking spaces.
- The site selection process included technical, planning, constructability, and community impact criteria, with community feedback actively sought and incorporated.
- Air quality monitoring is required to operate for a minimum of two years post-the project's opening to traffic, as per Conditions E26 and E27 of the approval.
- Condition E27 requires that the location of the monitoring stations must be informed by the AQCCC and subject to landowner's and occupier's agreement.

RECOMMENDATION:

1. THAT the report be noted.

2. THAT Council note that staff are currently working through the details of the implications of the use of the Bellevue Street site including the loss of parking, potential leasing arrangements, function of the road and other matters with Transport for NSW, and that a further report will be brought back to Council with such details and with recommendations as to the issue of landowner's agreement.

Background

The Western Harbour Tunnel (WHT) road project was approved (SSI-8863) by the NSW Government in January 2021 as a Critical State Significant Infrastructure Development (“the approval”).

For the Cammeray part of the project, Condition E26 of the approval requires TfNSW to establish *two ground level receptors near the Cammeray ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet*. It is noted that one of these was previously installed between Cammeray Park and the Cammeray Croquet Club.

Condition E2 of the approval requires that TfNSW *must establish an Air Quality Community Consultative Committee (AQCCC) to provide advice prior to and during operation* of the road project. One of the functions of this Committee is to *review and provide advice on the location of the ambient air quality monitoring stations required under Condition E26* as well as other functions associated with monitoring reporting, compliance and complaints as they relate to ambient air quality.

Condition E27 of the approval requires that *the location of the monitoring stations must be informed by the AQCCC and subject to landowner’s and occupier’s agreement*.

The Western Harbour Tunnel (WHT) Air Quality Community Consultative Committee (AQCCC) was established in early 2025 and is a voluntary, advisory body and is not a decision-making or regulatory body.

The AQCCC meets approximately four times per year, with meetings scheduled to continue for two years after the WHT opens to traffic (planned for late 2028). The committee includes representatives from TfNSW, Inner West Council, North Sydney Council, local community members (three representing the North Sydney Community), independent experts, the EPA, and the tunnel operator.

There are two ventilation facilities for WHT. One of these is at City West Link, Rozelle (built as part of the Rozelle Interchange project), and one on the Warringah Freeway, north of Ernest Street, Cammeray (to be built as part of WHT Stage 2). These elevated facilities are designed to eject tunnel air high into the atmosphere, where it dilutes and is planned to become indistinguishable from background air quality levels.

Air quality monitoring stations are required to be operational at both locations for at least 12 months prior to tunnel opening and for a minimum of two years post-opening, as per Conditions E26 and E27 of the approval. Monitoring locations must allow for comparison with pre-construction data and validate predicted air quality outcomes from the Environmental Impact Statement (EIS).

Report

The AQCCC has met three times to date, with meetings held on:

- Meeting 1 - 1 April 2025
- Meeting 2 - 7 May 2025
- Meeting 3 - 4 June 2025

The next meeting (Meeting 4) is scheduled for early November 2025.

At these meetings, various sites for the location of air quality monitoring stations in Cammeray have been discussed, with 15 potential sites considered. The site selection process involved technical, planning, constructability, and community impact criteria, with community feedback actively sought and incorporated. Sites were evaluated using a multi-criteria scoring system, including “Community Receptor” (public exposure) and “Community Disruption” (impact on amenity).

The site selection process progressed through three design stages and involved key stakeholders, including Transport for NSW, the Asset Maintainer, the Independent Certifier, and the Air Quality Independent Reviewer.

Sites considered included:

- **Ernest Street:** Existing EPA Ambient Air Monitoring Shelter; technically suitable and the proposed location of one of the subject air quality monitoring stations.
- **Grassmere Road:** Large grass verge near the freeway; community concerns about proximity to the existing Ernest Street site and similar wind conditions.
- **St Leonards Park:** Not recommended on technical grounds.
- **Bellevue Street:** Technically suitable, adjacent to the freeway; would require removal of up to four short stay parking spaces.

Community representatives of the WHT AQCCC preferred Bellevue Street or St Leonards Park over Grassmere Road, raising Bellevue Street as a potential site. At the 4 June 2025 AQCCC meeting, Bellevue Street was identified as technically suitable, with the main drawback being the loss of up to four parking spaces.

Images of the existing NSW EPA Ambient Air Monitoring Station (image 1) and the subject parking spaces at Bellevue Street (image 2) are included below.

Cammeray community representatives indicated the parking loss associated with the air quality monitoring station being accommodated at Bellevue Street, was acceptable, as the spaces are often used by contractors and are not close to shops. The Plateau Precinct meeting on 24 June 2025 also raised no objections to the Bellevue Street proposal.

On this basis, the Bellevue Street site is likely to proceed as the AQCCC recommended option for the second air quality monitoring station, as it provides a balance of technical performance and community expectations/acceptance.

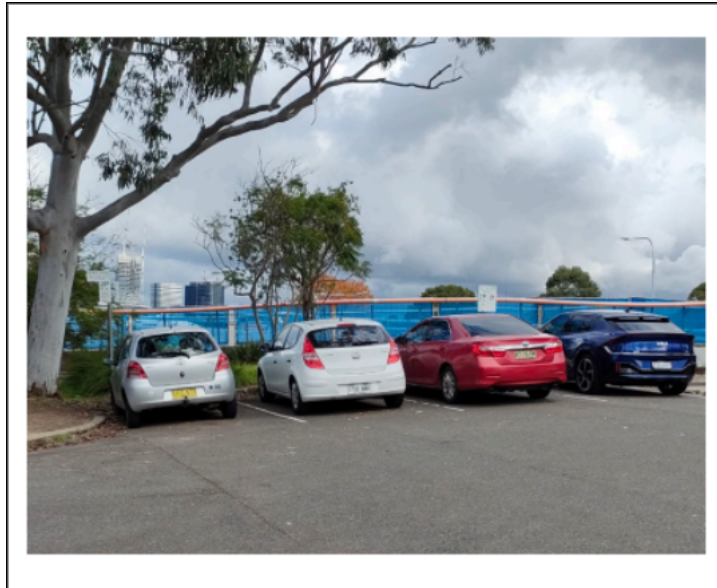


Image 1 – Bellevue Street four parking spaces



Image 2 - Existing NSW EPA Ambient Air Monitoring Station – adjacent to the Cammeray Croquet Club

Landowner's Agreement

The installation and operation of air quality monitoring stations for the WHT project is a requirement of the approval, provided the locations are selected through the required consultation and review process.

In accordance with the relevant condition of approval, however, Council's agreement as the landowner is required for any proposed monitoring station location that affects Council-managed land or assets, such as the community-preferred Bellevue Street site.

Council staff are currently working through the implications of the Bellevue Street site accommodating an air quality monitoring station similar to the one pictured above in image 2.

It is noted that the community representatives on the Committee have indicated (at the AQCCC meeting of 4 June 2025) that the loss of parking would likely be acceptable to the community, given they were short stay 2 hour spaces and currently generally inaccessible for local use as they were frequently taken by construction contractors. In addition, the Plateau Precinct Committee noted that there were no objections to the loss of four carparking spaces at the southern end of Bellevue Street.

Council has commenced discussions with TfNSW regarding the implications of accommodating an air quality monitoring station at this site for a period of approximately three years.

At the next AQCCC meeting, members will be informed of Council's process to seek landowner agreement to utilise the subject land, and that the matter will be required to be reported to Council for its consideration.

A subsequent report will be presented to Council once the preferred location has been finalised and the process for TfNSW seeking AQCCC advice and approval is complete.

Consultation requirements

Community engagement has been undertaken through the AQCCC process and precinct consultation, but more localised information/consultation will be required to be conducted.

Financial/Resource Implications

There are no direct financial implications for Council.

PLATEAU PRECINCT MEETING

Tuesday 24 June 2025, Start 6.30pm

St George Community Housing Common Room

Amherst Street Cammeray

MINUTES

ATTENDANCE: 24 people attended the meeting:
LK, KB, PB, MB, CD, CS, P, JT, CH, JA, BF, MZ, AH, KM, CdeJ, BD, SWm, MM, AR, MR,

GUEST SPEAKER: Bo Karaula - Waste Management Co-Ordinator
Shivaan Kumar - Waste Management officer

VISITORS: SW - Secretary of Anzac Precinct
SL - North Sydney Council Administration Support Officer

1 WELCOME TO ATTENDEES

2 GUEST SPEAKERS INTRODUCED:

Bo Karaula:

- NSC employs 4 people waste team and 2 in the recycling center at Artarmon.
- 37,000 Dwellings are serviced with red and yellow bins.
- Current contract with waste management provider expires in 2029,
- The new contracts for waste, processing and disposal, will be let out in 2027. Prior to that council will survey residents on waste disposal needs and preferences.
- North Sydney has large itinerant population and a tenancy rate of 45%, requiring weekly pickup of household or green waste (to limit dumping of rubbish and associated costs).
- Resident surveys confirm preference for fortnightly cleanups.
- Green waste pickups: 110,000 per annum resulting in 23,000 tonnes of material.
- Waste destination: bulky waste sent to landfill apart from scrap metal.
- Previous general waste reduction and recovery schemes were successful in diverting waste from landfill.
- In 2018 EPA set new guidelines for waste separation and reuse, however the process was discontinued due to the presence of microplastics. Now all general waste goes to landfill. Current recovery rate from waste and recycling is 37%. Many Councils including NS will struggle to get to a recovery rate of 55-60%.
- EPA has set recovery target of 80% by 2030, with heavy penalties for noncompliance.
- The 6-month food waste trial in 2022 was initially successful. Participation rate, particularly in high density areas dropped off due to the 'yuk' factor and difficulty of separating rubbish.
- Food waste pickup is unlikely to be included until 2029, however it will be an essential part of waste recovery in the future in order to reach the mandated target.
- Additional waste services: the Bower for pickup of furniture, the Recycle Smart Scheme and the Community Waste Center at Artarmon for items listed on website. The Coal Loader at Artarmon has sustainability information and courses.

SWm: Sticker on bins with list of acceptable items was useful.

Sivaan: coordinator of recycling at Community Waste Center, Artarmon

- NSC manages facility on behalf of Lane Cove, Willoughby, Mosman, Ryde and Hunters Hill
- Facility is open 5 days a week.
- Staffed by 2 people.
- Facility accepts paints, aerosols, batteries, white goods, textiles, e cigarettes, smoke alarms.
- Electrical waste such toasters and small appliances can be left for kerbside pickup service. E-waste must be taken to Artarmon facility.
- The federal government subsidises e-waste recycling while recycling of other small electrical items are paid for by resident rates.
- The lease at Community Recycling Center expires in 2028
-

SWm: Q: Is Council making money from green waste service?

BK: A: No, Council does not make money nor is waste a part of the circular economy.

KB: Q: Why is e-waste often picked up from the kerbside by waste contractors?

SK: A: Please contact Council if this happens. Usually, contractors place a sticker on non-acceptable items.

SWm: BBQs are picked up and crushed. How can we make better use of the metal?

Q: Is it possible to get help with heavy loads at the Artarmon Facility?

SB: A: There are time constraints on the 2 workers at the facility who currently handle 100-200 visits per day.

KB: Q: How does NSC waste management compare to other Councils?

BK: A: The demographics of North Sydney and the waste systems are like the City of Sydney Council.

MR Q: How much of waste if food organics waste?

BK: A: About 35% of red bin waste is organic, contributing to green house gas emissions.

Q: Will Council provide a third bin if food organics are introduced?

BK: A: Many multi-dwelling properties do not have space for additional bins. Council must make other provisions in new and existing properties for the collection of food waste. The focus in multi-unit dwellings will be on sorting food from other waste organics.

SWm: Our unit has a worm farm. Should they be encouraged?

BK: A: Yes, but this requires an interested person for system to work efficiently. An incentive for worm farms could be introduced though waste charge will still apply.

MR Q: How will residents be able control fruit flies?

BK: A: Council will provide a 'caddy' container for collection.

BS: There is an opportunity for resource capture from sorting organics from waste but it must be user friendly.

SWm: Q: Can Food waste caddy be attached to General waste bin?

BK: A: Yes, it's possible.

CS: Q: Is it possible to get a smaller red bin?

BS: A: Yes, a 60 Lt is available, but it does not have wheels.

SWm: Speakers thanked.

3 PREVIOUS MINUTES – 22 April 2025

MOTION: The minutes of the general meeting held on 22 April 2025 were confirmed as read and correct. It was noted that the meeting commenced at 6.35pm not 6.30pm.

MOVED BY: SWm

SECONDED BY: KB

4 WHT and WFU

As a member of the Air Quality Committee SWm provided an update on the location of air quality monitors, noting that members of the committee are consulted on relevant matters but are not involved in decision making.

- Air quality will be monitored near the ventilation stack for one year before it's completion and two years after.
- Air filtration of the stack will not be included during construction or after completion because it has not been included for any ventilation stack in the state. Reason: expense.
- Currently one air quality monitor is located near Cammeray Croquet Club. The other, at the suggestion of SWm, will be located at the southern end of Bellevue St. This location will capture air quality in the vicinity of local schools and residences and is also exposed to the prevailing wind conditions.

CdeJ: Q: What does the air quality monitor look like?

SWm: A: Unit is not bigger than a car and fits into the landscape. The units can be seen online or at the Cammeray Croquet Club. The monitor will result in the loss of four car parking spaces. It was agreed at the committee meeting and the CPM that the loss of spaces was acceptable.

CH and KM: Q: What will happen if the results from the Air Quality Monitor are problematic?

SWm: Q: Results will be evaluated against the project Conditions of Approval E2, E26 and 27.

Residents are also taking readings with personal monitors.

Q: Will air quality only be evaluated at the end of three years and what can be done in the meantime?

SWm: A: The EPA will regularly monitor and publish the air quality readings.

MR: Q: Will EPA take notice of readings from personal monitors?

SWm: A: It will depend on the quality of the reading.

CdeJ: Q: Is moving residents out of properties the only option when air quality is poor or are there other measures, like a (noise)wall, to control pollution and noise?

SWm: A: There will be noise and dust for the duration of the WHT work site, however there will be less dust when the WFU is completed. The earth wall is much bigger than originally intended. TfNSW will not commit to the final amount or height of dirt wall. Noise walls along the WFU section of the works will not be built until 2026.

MZ: Q: What can be done about the dust pollution? How is it being monitored?

SWm: A: A dust monitor is in place.

Q: Does TfNSW have a list of acceptable personal monitors? How are complaints addressed?

SWm: A: Please contact EPA or project team though it appears that complaints from residents are not addressed.

CH: Q: Is there a map of the overall project?

SWm: A: Sections of the work are shown on TfNSW website.

Q: Is it possible to facetime with TfNSW to address issues?

KM: A: Approach TfNSW and read Cammeray Voices

SWm: A: The best approach is to contact TfNSW phone number with specific complaints and always ask for a reference number.

Q: Who is responsible for the noise walls?

SWm: A: The contractor for WFU.

MM: Q: Will there be a noise wall?

SWm: A: There will be a noise wall coming from the Miller Street on ramp and finishing just past the viaduct. It will be approximately 2 storeys high

NB: There was no objection at the meeting to the loss of for car parking spaces at the southern end of Bellevue Street.

Please visit the direct links below for further details.

<https://caportal.com.au/rms/whf>

<https://caportal.com.au/rms/whf/faqs>

<https://caportal.com.au/tfnsw/tunnel-air-quality/tunnels-and-ventilation>

PB: Would Council install a speed hump on Warringah Road north at the approach to the roundabout on Amherst Street.

5 OLYMPIC POOL

SWm and KB: update

- The council employees will operate all facilities at the pool.
- Practical Completion will be at the end of October.
- Fit out of the facilities will be completed 10-12 weeks later.

MM: Q: Is there a proposal for the development of Cammeray carpark?

SWm: A: For now, nothing is proposed on the Council owned carpark. Also, Cammeray is not within the NSW Planning Low to Medium Rise development zone.

6 ANNUAL GENERAL MEETING

SL: All positions become vacant at the AGM and nominations are accepted.

SWm was nominated by CH and accepted by MR as Chair of the precinct.

KB stepped down as Secretary. KM nominated by MR as the new Secretary and seconded by SWm.

Meeting ended 7.55pm

Next meeting 26 August 2025

Transport for NSW

Tuesday 1 April 2025
5:00pm – 7:28pm
Level 9, 60 Miller Street
North Sydney NSW 2060

Minutes (WHT) AQCCC Meeting 1



Chair RH, Ethos Urban

Attendees

Community Representatives

- DS, Community Representative – Southern Portal
- MY, Community Representative – Southern Portal
- SK, Community Representative – Southern Portal
- NC, Community Representative – Northern Portal
- SW, Community Representative – Northern Portal
- SB, Community Representative – Northern Portal

Councils

- North Sydney Council Representative
- Inner West Council Representative

Transport for NSW

- SP, Transport for NSW
- AM, Transport for NSW
- SH, Transport for NSW
- CW, Transport for NSW

Independent Experts

- GG, Northstar Air Quality Pty Ltd

Design and Construct Contractor

- CS, ACCIONA
- AJ, ACCIONA
- HG, ACCIONA
- VM, ACCIONA
- AM, ACCIONA

Operator

- JT, Ventia
- CF, Ventia

Apologies

- N/A.

Item	Actions
1.1 Welcome, Apologies, Acknowledgment of Country	
The Chair:	
	<ul style="list-style-type: none"> • Opened the meeting with an Acknowledgement of Country and welcomed attendees to the first meeting of the Western Harbour Tunnel (WHT) Air Quality Community Consultative Committee (AQCCC), noting that there were no apologies received.
1.2 Introductions	
The Chair:	

- Provided an overview of the organisations represented on the AQCCC and invited individuals to introduce themselves and their role or interest in the project.

1.3 General Information, Role of AQCCC, Terms of Reference, Declaration of Interests

The Chair:

- Provided an overview of the general administration of the AQCCC, including the expectations of members to attend at least 75 per cent of scheduled meetings, RSVP attendance in advance and not make statements to the media or other public communications on behalf of the group.
- Outlined the role of the AQCCC to act as a consultative and advisory body for the project that allowed Transport for NSW and partners to seek feedback from the community on air quality related matters, including the review of operational, compliance and audit related documentation.
- Advised that the location of air quality monitors represented an important early opportunity for community representatives to have input.
- Highlighted the focus on air quality issues and the expectations of behaviour set out in the AQCCC Terms of Reference.
- Explained the importance of declaring any Conflicts of Interest, noting that these may change over time, and invited members to declare any potential conflicts. None were received.

Questions received from community representatives included:

- Whether there was a minimum quorum size for the AQCCC to operate. The Chair confirmed that there was no specific requirement within the Terms of Reference or Conditions of Approval, but that meetings will be scheduled to be as productive as possible and encourage maximum participation.

1.4 Western Harbour Tunnel – Project Overview, EIS, Tunnel Ventilation

The Chair invited Transport for NSW representatives to present an overview of the Western Harbour Tunnel project which included:

- A summary of the assessment process and outcomes of the Environmental Impact Statement.
- Explanation of tunnel ventilation systems and the role played by portals and outlets.
- The approach taken to modelling expected emissions in the EIS and the air quality monitoring approach that will be taken to validate that model.
- The role of the Chief Scientist & Engineer, Chief Health Officer and the Advisory Committee on Tunnel Air Quality (ACTAQ) in reviewing the EIS and design of the project.

Questions and comments received from community representatives included:

- How tunnel ventilation accommodates high volumes of slow moving or stationary traffic during peak times or incidents.
- The importance of considering cumulative impacts from multiple projects and infrastructure operation around the portal areas in Rozelle and Cammeray.
- That the Chief Scientist's Report be circulated to group members when published.
- Confirmation that electric vehicles, whilst not responsible for fuel

Transport for NSW to circulate the Report of the NSW Chief Scientist and Engineers review into tunnel air quality once published (May 2025).

emissions, did contribute to air quality issues though the production of tire residue and brake dust.

1.5 Role of AQIR

The Chair invited the Air Quality Independent Reviewer (AQIR) to provide a presentation, which covered:

- The role of an AQIR in guiding design of the project, the monitoring regime implemented and independently reviewing results, and ad hoc resolution of any disputed air quality issues.
- Provide further detail on the design of Western Harbour Tunnel's ventilation systems including the Rozelle and Cammeray ventilation outlets, as well as the function of axial and jet fans and air quality monitoring stations.

Questions received from community representatives included:

- Whether independent experts across different major projects. coordinated and collaborated on their review and findings with regards to air quality monitoring.
- Discussion on the relative height of the Cammeray ventilation outlet.
- How the concentration of safe tunnel emissions is influenced by the height and velocity of ventilation at each outlet.
- Clarification on the square metre space requirements for each monitoring station.

1.6 Potential Monitoring Sites

The Chair invited ACCIONA representatives to provide a presentation which covered:

- An overview of proposed approach to air quality monitoring.
- The considerations and constraints governing site selection.
- The process for selecting and confirming the location of air quality monitoring stations.
- Preliminary technical assessments and potential locations identified in Rozelle and Cammeray.
- How the community can input into the criteria for considering the suitability of potential air monitoring station locations.

Questions and feedback received from community representatives related to:

- Topography as a relevant factor in selecting monitoring locations.
- The importance of considering community usage and community experience of an area in terms of getting a representative picture of impact on the public.
- The relative impact of tree proximity on monitoring accuracy.

Noted

ACCIONA
to update at
next
meeting

ACCIONA agreed to consider the feedback provided in finalising their criteria and present a list of monitoring locations and their relative performance against that criteria at the next meeting.

2.0 Any other business and next meeting

- The Chair invited Transport for NSW to propose the next meeting date. Based on feedback from community representatives, Wednesday 7 May was selected as the date of the next meeting to be held at the same location.
- The Chair invited any other items raised by members, and several community representatives specifically praised the quality of the session and the contribution from the project representatives.

Noted

Noted

-
- The Chair thanked members and closed the meeting at 7.28pm.
-

Transport for NSW

Weds 7 May 2025
5:00pm – 7:00pm
Level 9, 60 Miller Street
North Sydney NSW 2060

Minutes

WHT AQCCC Meeting 2



Chair **Ross Hornsey, Ethos Urban**

Attendees

Community Representatives

- Dejan Simovic, DS, Community Representative – Southern Portal
- Marguerite Young, MY, Community Representative – Southern Portal
- Susan Kath, SK, Community Representative – Southern Portal (Online)
- Nicole Creenaune, NC, Community Representative – Northern Portal
- Stephanie Wiseman, SW, Community Representative – Northern Portal
- Steven Baxter, SB, Community Representative – Northern Portal

Council Representatives

- Fiona Mulcahy, FM, North Sydney Council
- Mario Mouxouris, MM, Inner West Council (Online)

Transport for NSW

- Simon Pigozzo, SP, Manager, Environment and Sustainability, Transport for NSW
- Andrew Mattes, AM, Senior Manager, Sustainability (Air, Emissions, Energy), Transport for NSW (Online)
- Steph Hager, SH, Senior Communications Officer, Transport for NSW

Independent Experts

- Gary Graham, GG, Independent Air Quality Reviewer, Northstar Air Quality Pty Ltd
- James Grieve, JG, Principal Consultant, ERM

ACCIONA

- Charles Scarf, CS, Environment and Sustainability Manager, ACCIONA
- Cameron Weller, CW, Modification Manager, ACCIONA
- Ashkun Jalili, AJ, M&E Design Manager, ACCIONA
- Hari Ganesan, HG, Senior Design Engineer, ACCIONA
- Amanda Muir, AM, Communications & Stakeholder Engagement Manager, ACCIONA
- Victor Mui, VM, Mechanical Engineering Graduate, ACCIONA

Tunnel Operator

- Catherine Fletcher, CF, Community and Stakeholder Engagement Manager, VENTIA

Apologies

- Joanna Trube, JT, Environment & Sustainability Manager, Ventia
- Ian Sharpe, IS, Environmental Protection Authority
- Sarah Thomson, ST, Environmental Protection Authority

Item	Actions
1.1 Welcome, Apologies, Acknowledgment of Country	
<ul style="list-style-type: none"> • The Chair (RH) opened the meeting, thanking all attendees for joining the second WHT Air Quality CCC meeting and acknowledged the Traditional Custodians of the lands on which the meeting was held and on which participants were located, and paid respect to Elders past and present. • New committee members/attendees were introduced, including Fiona Mulcahy (FM) from North Sydney Council and James Grieve (JG) from ERM 	

- Apologies were noted from the two NSW EPA representatives (IS and ST).
- The Chair reminded members to declare any changes to their conflict-of-interest status. No new conflicts were declared by attendees.
- Housekeeping: Basic meeting housekeeping was addressed. The location of facilities was pointed out and attendees were advised to be mindful of after-hours building security when exiting (a minor alarm incident occurred at the last meeting). It was noted that some participants were joining online; a brief technical pause was taken to resolve audio issues for remote attendees before proceeding.

1.2 Minutes of Meeting 1

- Confirmation of Minutes: The Minutes from Meeting 1 were distributed to members after that meeting. No comments were received from members and the Minutes of Meeting 1 were accepted as a true and accurate record.
- Update on Action Items: The Chair noted that the NSW Chief Scientist & Engineer's Tunnel Air Quality Review report (discussed in the previous meeting) had been published in May 2025 and a presentation and discussion on the Report had been included in the agenda. No other outstanding action items remained from Meeting 1.

1.3 Questions from Community

- Prior to the meeting, the Chair had called for any specific issues or questions from community representatives to be included in the agenda.
- Questions were received relating to the project's Conditions of Approval for air quality, particularly concerning the modelling predictions and potential need for tunnel filtration. ACCIONA representatives spoke to each of the submitted questions, confirming that air quality modelling for the project was carried out to cover both the opening year (2027) and 10 years post-opening (2037), as stipulated in the Conditions of Approval. These are the same time horizons that were modelled in the Environmental Impact Statement (EIS).
- It was clarified that Transport for NSW is the proponent for the Western Harbour Tunnel project (as it is a NSW Government project). The project's planning approval was issued by the NSW Minister for Planning (on the recommendation of the Department of Planning).
- The Conditions of Approval include a specific clause (Condition E32) to address any potential failure of the air quality model. If post-opening monitoring determines that the tunnels ventilation outlet is a significant contributor to any exceedance of air quality criteria, the project will be obligated to implement additional air quality mitigation measures
- Given that the project proponent (Transport for NSW) is a government body, and the approval authority is also government, community representatives sought assurance that any required corrective actions (such as adding filtration) could be considered independently. The project team reiterated that compliance with the ministerial conditions is mandatory, and that the Secretary of the Department of Planning can enforce Condition E32 if necessary.
- A further question submitted on notice on tunnel air filtration and current ambient air quality around the Rozelle area (and how it might change) was deferred to Andrew Mattes (AM) to address during his presentation later in the meeting

1.4 Potential Monitoring Locations

- The Chair invited ACCIONA representatives to present on the potential air quality monitoring locations and their assessment of suitable sites near each ventilation outlet in Rozelle and Cammeray.
- Feedback provided by the community at Meeting 1 had been incorporated into the site selection process and an extensive suite of evaluation criteria had been used to assess potential monitoring sites with a traffic light scoring evaluation. The team provided a printed table showing all criteria and scoring for each potential site against across categories.
- This scoring approach illustrated the trade-offs for each location, noting that some criteria would be more influential than others in determining the outcome. Notably, a Community Receptor criteria was introduced to consider how frequently an area is used by the community (to ensure monitoring in a location relevant to public exposure), and a Community Disruption criteria to gauge how a monitoring station might impact local amenity.
- For example, a technically ideal site located in the middle of a popular park or sports field would score poorly on community disruption, as installing a large monitoring unit there for several years could inconvenience users. **However, in discussion, community representatives agreed that immediate amenity and construction impact was less of a consideration compared to a site's technical functionality and performance as an air quality monitoring station.**
- The committee was informed that many potential sites around Rozelle had already been explored for the Rozelle Interchange project. In that earlier process, numerous locations were considered and ultimately two sites were chosen for permanent monitoring in consultation with the project's AQCCC. Other Rozelle-area sites were rejected due to planning or land constraints (among other reasons). The WHT team largely built on top of those findings and did not revisit previously discounted sites. Instead, they looked for any new options in Rozelle that might not have been previously examined. In Cammeray, by contrast, there was no pre-existing long-term tunnel monitoring network, so the team had more "blank slate" options and assessed a broader set of locations in that area.

1.5 Planning Assessment

- The Planning Assessment criteria examined how easily a site could be secured and approved for use with sites ranked favorably if they were on public land (e.g. council land or existing project land) or otherwise readily accessible to the project. Land requiring acquisition of private property, negotiating new leases, or complex development approvals ranked lower as these could delay implementation or prove infeasible. For example, if a site was within a school or a sensitive community area, additional planning approvals and stakeholder agreements might be needed, affecting its viability.

1.6 Technical Assessment

- This Technical Assessment used detailed dispersion modeling to predict pollutant concentrations from the tunnel's ventilation outlets and determine which sites would best perform from an air quality validation perspective.
- The model output was visualised as isopleth maps (concentration contour maps) over the surrounding area. From these, the team

identified zones where the highest incremental pollutant levels due to the tunnel could likely occur (given worst-case meteorological conditions).

- For the Rozelle outlet, the two existing stations (one near the City West Link/James Craig Road area, and one near Victoria Road/Anzac Bridge approach) were included in the assessment since the WHT's southern ventilation outlet will be in the same general vicinity. The WHT team also examined additional nearby locations that might capture the outlet more directly (for instance, slightly closer to the new outlet structure). In total, five Rozelle-area options were assessed (including the two existing stations).
- For the Cammeray outlet, the team identified a longer list of potential northern sites and evaluated each. These included locations both west and east of the Warringah Freeway, at various distances. The technical scores differentiated sites that were very near the model-predicted hotspot versus those further away. The outcome was a ranked list of Cammeray area sites by how well they could capture the outlet impact (combined with other criteria).
- All sites were also assessed against the Air Quality Independent Reviewer's technical criteria – meaning a candidate had to be capable of measuring compliance with all relevant air quality standards. If a site could not practically host the necessary equipment or provide reliable data for those metrics, it was not considered viable. This was largely a pass/fail filter and all sites in the final list were technically capable of hosting a compliant monitoring station.
- It was noted that the Independent Air Quality Reviewer, had defined specific technical performance criteria for the monitoring sites. Each candidate location had to allow accurate measurement of pollutants in compliance with relevant air quality standards (covering 1-hour, 24-hour, and annual average concentrations).

1.7 Constructability Assessment

- The Constructability Assessment examined the practical feasibility of deploying a monitoring station at each potential site. This included on-site logistics, safety, power supply and communications at the location. Each air quality station requires continuous power and periodic maintenance access. Sites without nearby power would require installing new connections, adding cost and complexity. Easy road or footpath access for technicians and the physical space and ground conditions were evaluated. Sites that are too small, steep, or densely vegetated were less preferable.
- Community impact during Installation was also considered in terms of how installing or operating the station might disturb local residents or activities. Sites in more industrial or infrastructure-dominated spots (e.g. edges of parks, road reserves) had been preferred. If two sites were equal technically, the one with less residential impact was given priority. In some cases, sites that scored well technically had their potential downgraded due to constructability or community issues.
- Safety considerations were also noted, and the constructability review concluded that the top-ranked sites on both sides are feasible to build and operate. No insurmountable issues were identified for those locations.

1.8 Conditions of Approval Assessment

- The formal Conditions of Approval require:

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- At minimum, two ambient monitoring stations to be operational – one near each tunnel ventilation outlet. These will be situated to maximize their ability to detect any impact from the tunnel emissions, as required.
 - Each station's location is within proximity to its respective ventilation outlet, satisfying the intent to monitor the actual tunnel plume. The Rozelle station will be located in the vicinity of the Rozelle interchange where the southern outlet is, and the Cammeray station will be near the northern outlet structure.
 - The monitoring locations need to allow direct comparison to EIS predictions. By capturing pollutant levels in the areas of highest expected impact, the data can be used to verify whether the tunnel is performing as predicted by the dispersion model (or if there is any variance).
 - Where possible, the chosen sites have historical monitoring data. This is already the case for Rozelle (existing stations with multi-year datasets) and was a consideration in Cammeray (though the options there for existing data are limited to the NSW Air Quality Monitoring Network's nearest stations). Having baseline data means the project can compare both before and after tunnel opening, along with cumulative impacts of other tunnels in the immediate area.
 - Monitoring duration: The ambient stations will operate for at least 12 months before the tunnel's opening and at least 2 years after opening.
 - The proposed monitoring locations will fully comply with the Conditions of Approval related to air quality monitoring. The approach has been reviewed by the Air Quality Independent Reviewer to ensure all obligations are met. No variances or exceptions to the conditions are being sought.

1.9 Recommendations

- Based on the multi-criteria assessment, ACCIONA presented the preliminary recommendations for monitoring station locations based on sites that scored strongest across all criteria (technical, planning, constructability, etc.).
 - Rozelle: The recommended location for the Rozelle ventilation outlet is to utilize the existing long-term monitoring sites established by the Rozelle Interchange project, as it closely aligns with the WHT outlet and has a robust baseline dataset. Other Rozelle options considered did not outperform this site with two alternatives rejected outright due to multiple red flags (e.g. being too far from the outlet or difficult to implement).
 - Cammeray: The analysis identified two top-performing sites on the north side, both located on the western side of the Warringah Freeway in Cammeray. These two sites are relatively close to each other (geographically) – one is roughly north-west of the outlet and the other southwest. Both are in areas predicted to receive the highest concentrations from the outlet plume and had favourable scores on planning and constructability factors.

There was extensive feedback and discussion from community representatives during the discussion, which included several concerns they asked to be noted:

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- How the air quality modelling is influenced by topography, potential recent changes to topography or built form since it was produced such as the impact of larger earth mounds around the Cammeray construction site. Air quality experts present reassured community representatives that the model would still reflect the current reality and that built form changes described would not have a material impact to local dispersion patterns.
 - Very significant alterations would be needed to noticeably change the airflow in a way that affects pollutant concentrations. Separate planning conditions require consideration of future developments for example, a new building could impact dispersion, that is assessed through those mechanisms.
 - It was asked whether smaller or more mobile monitoring stations could be used. The project team explained that the station size is dictated by the monitoring equipment and standards. Each station must house a range of technical equipment and calibration systems in a controlled environment that meet Australian Standards for ambient air quality monitoring systems.
 - Several members questioned why only two monitoring stations (one at each outlet) are planned, given the size of the project and the perceived potential impacts. They noted that additional monitors could capture impacts in different directions and that the cost of monitors is relatively small compared to the overall project cost. (Note, this was an assumption only, and not validated with any data.) The project team reiterated that the approval mandates a minimum of two sites per ventilation outlet, both the Transport for NSW and independent technical experts have advised that two well-sited monitors will be sufficient to validate the model and detect any significant tunnel contribution.
 - It was accepted that adding more stations could provide more data, but the team must also consider practicalities (each station requires resources to install, maintain and operate to regulatory standards). Ultimately, if the two stations confirm the model predictions (i.e. no meaningful difference from background levels), it demonstrates the tunnel is performing as expected, making additional stations unnecessary.
 - Community members observed that both recommended northern sites are on the same side (west) of the freeway, potentially leaving the east side less monitored. The project team acknowledged this and explained that the model's highest impact zone is on the west, which drove the selection. One of the assessed east-side options (referred to in the meeting as "Site I" – St Leonards Park) had been given a poor score due to community disruption concerns. It was in a park and would have impacted recreational space. That site was not recommended initially, however, the committee felt that an east-side location might still be worthwhile if it better captures dispersion in that direction, even if it has some drawbacks. Members indicated they would be willing to tolerate community impact for a monitor if it means more comprehensive coverage. This should be raised with the community by the AQCCC community representatives.
 - It was clarified that the recommended sites would be subject to further review and consideration of the additional options discussed. The committee will revisit this at the next meeting after the project team has had the opportunity to review any additional sites the community would like to put forward.
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Community representatives to nominate additional sites via email to the Chair.

ACCIONA team to review additional monitoring sites nominated and respond at the next meeting with updated recommendations.

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- Representatives were asked to send their recommendations through to the chair within a week.
 - Additional sites nominated (including by correspondence after the meeting) included:
 - *North side*
 - Bellevue Street, Cammeray alongside the Warringah Freeway
 - St Leonards Park (currently listed as Site I)
 - Grasmere Road (currently listed as Site H)
 - Anzac Park, noting that some tree or vegetation removal might be necessary.
 - *South side*
 - Callan Park
 - Hinsby Park
 - Johnston Street, Annandale
 - Cohen Park near the corner of Railway Pde and Brennan Street
 - Grey Street Reserve in Annandale Street near Rose Street
 - A vacant block (between houses) on Annandale Street closer to Annandale North Public School.
 - Community members were thanked for their input into the discussion, with the Chair noting that several new ideas had emerged that could improve the outcome, and these will be taken on board by the project team.
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1.10 Tunnel Air Quality Review - Report Overview (Andrew Mattes, Transport for NSW)

- Andrew Mattes provided an overview of the recently published Tunnel Air Quality Review by the NSW Chief Scientist & Engineer. This review, which was mentioned in Meeting 1, examines air quality aspects of road tunnels across Sydney, including the Western Harbour Tunnel, and had just been released in late April 2025.
 - The review was overseen by the state's Advisory Committee on Tunnel Air Quality (ACTAQ), chaired by the Chief Scientist & Engineer. It comprised three independent studies, each led by leading independent experts, to answer the overarching question of whether additional tunnel emission controls (like filtration) would yield health benefits. These components were: (1) a detailed analysis of tunnel emission dispersion modelling and monitoring data (to validate predictions and assess real-world impacts), (2) a comprehensive review of the health effects of pollutants from tunnels in the context of Sydney's air quality, and (3) an examination of the effectiveness and feasibility of tunnel air filtration technologies.
 - The review found that while filtration technology for road tunnels does exist and can remove pollutants from exhaust air, it comes with an extremely high cost and with limited real-world improvement in air quality.
 - The Review also by extension supports the current tunnel ventilation design for Western Harbour Tunnel and recommends continued reliance on well-designed ventilation outlets, strict compliance monitoring, and broader initiatives to reduce vehicle emissions over time (such as the transition to electric vehicles and improving traffic flow).
 - A member asked if there is any scenario in which filtration might be revisited for this project. AM pointed to Condition E32 which is
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Noted.

effectively a trigger that if the tunnel, once operational, was shown to significantly worsen local air quality, then filtration or other treatment would need to be considered. However, given the weight of evidence from the review this scenario is considered highly unlikely. The monitoring is there as a safeguard, but all expectations are that results will be well within acceptable levels (as seen with other similar road tunnels in Sydney).

2.0 Any other business and next meeting

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| <ul style="list-style-type: none">• No additional business items were raised by the community representatives or project team.• The Chair expressed appreciation to all attendees for the constructive and detailed discussions, noting that the meeting had run over time but that several important action items and suggestions emerged (particularly regarding monitoring locations).• It was that Meeting 3 will be held in approximately one month’s time (June 2025), to allow the project team time to evaluate the additional monitoring location suggestions and to report back on their findings. | <p>Transport for NSW to confirm meeting dates via email.</p> |
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Transport for NSW

Wednesday 4 June 2025
5:00pm – 7:00pm
Level 9, 60 Miller Street
North Sydney NSW 2060

Minutes

WHT AQCCC Meeting 3



Chair **Ross Hornsey, Ethos Urban**

Attendees

Community Representatives

- Dejan Simovic, DS, Community Representative – Southern Portal
- Marguerite Young, MY, Community Representative – Southern Portal
- Nicole Creanaune, NC, Community Representative – Northern Portal
- Stephanie Wiseman, SW, Community Representative – Northern Portal
- Steven Baxter, SB, Community Representative – Northern Portal

Council Representatives

- Fiona Mulcahy, FM, Team Lead, Environmental Health, North Sydney Council
- Mario Mouxouris, MM, Team Leader Environmental Health / Acting Manager, Health & Building, Inner West Council

Transport for NSW

- Simon Pigozzo, SP, Manager, Environment and Sustainability, Transport for NSW
- Steph Hager, SH, Senior Communications and Stakeholder Engagement Officer, Transport for NSW
- Kerry Radford, KR, Senior Environment & Sustainability Officer, Transport for NSW
- Charles Giuttari, CG, Construction Director, (Mechanical & Electrical), Transport for NSW

Independent Experts

- Gary Graham, GG, Independent Air Quality Reviewer, Northstar Air Quality Pty Ltd
- James Grieve, JG, Principal Consultant, ERM

ACCIONA (Western Harbour Tunnel contractor)

- Charles Scarf, CS, Environment and Sustainability Manager, ACCIONA
- Ashkun Jalili, AJ, M&E Design Manager, ACCIONA
- Hari Ganesan, HG, Senior Design Engineer, ACCIONA
- Victor Mui, VM, Mechanical Engineering Graduate, ACCIONA
- Amanda Muir, AM, Communications & Stakeholder Engagement Manager, ACCIONA

Environmental Protection Authority

- Sean Allison, SA, Senior Operations Officer, Environment Protection Authority

VENTIA (Tunnel operator)

- Catherine Fletcher, CF, Community and Stakeholder Engagement Manager, Ventia
- Joanna Trube, JT, Environment & Sustainability Manager, Ventia

Apologies

- Susan Kath, SK, Community Representative – Southern Portal

Item	Actions
1.1 Welcome, Apologies, Acknowledgment of Country	
<ul style="list-style-type: none"> • The Chair (RH) opened the meeting, thanking all attendees for joining the third Western Harbour Tunnel AQCCC meeting and opened with an acknowledgement of country. • No updates to conflicts of interest were declared. 	

- New committee observers were introduced: Sean Allison from EPA, and Kerry Radford and Charles Giuttari from **Transport for NSW**.

1.2 Minutes of Meeting 1

- Confirmation of Minutes: The Chair noted that the Minutes had been circulated and comments were being incorporated. A finalised set of minutes will be issued after this meeting.

Transport for NSW to reissue updated minutes from Meeting 2.

1.3 Issues Raised by the Community

- The Chair noted that no additional issues had been raised for discussion, but that additional email related to potential new site locations had been received and would be dealt with in ACCIONA's presentation.

1.4 Potential Monitoring Locations – Update

- ACCIONA presented updated assessments of the additional air quality monitoring sites requested by community representatives following the last meeting.
- Five Rozelle sites (D-H) and one Cammeray site (O - Bellevue Street) were evaluated.
- Rozelle Sites:
 - Sites D, E, F are subject to significant constraints due to existing park infrastructure and impacts on vegetation.
 - Sites G, H: Not recommended due to legal and planning constraints and anticipated low influence from the outlet.
 - Potential sites put forward in Callan Park were considered too far from the ventilation outlets to be viable.
- Cammeray Sites
 - Site O (Bellevue Street) was noted as technically very suitable but may be influenced by road emissions from Warringah Freeway. A large drawback was noted that it would require the loss of up to 4 parking spaces.
 - Site I (St Leonards Park) was not recommended as it performed poorly from a planning, constructability and **technical** point of view.
- Community representatives noted that the loss of parking spaces from utilising Site O would likely be acceptable to the community, given they were short stay 2-hour spaces and currently generally inaccessible for local use as they were frequently taken by construction contractors.
- It was agreed that Stephanie Wiseman (SW), northern portal, would raise the item at her upcoming precinct committee meeting and report back if there was any community concern about the loss of spaces.
- On this basis, Site O may proceed as the preferred option on the basis it provides a balance of technical performance and meeting community expectations.
- The Chair noted for the minutes the strong desire from the community for additional air quality monitoring stations beyond the minimum of 2 locations required by the project's Conditions of **Approval**. This sentiment was particularly noted on the Rozelle side, where there was an acknowledgment that maintaining existing monitoring station locations was valuable, but that they should be supplemented with an additional location for this project.

Community representatives to confirm whether sensitivity to parking space loss at Bellevue Street.

ACCIONA and Transport for NSW team to issue finalised

1.5 – 1.6 Recommendations and Technical Assessment

- Based on the Review of potential locations, the recommendation for Rozelle is to utilise the existing Quirk Street & The Crescent monitoring stations. The recommendation for Cammeray will be to proceed with the NSW EPA Shelter and Grasmere Road unless the Bellevue Road location is confirmed by SW as more suitable for community outcomes and the issue with parking loss is acceptable.
- Discussions around the technical assessment of locations included the impact of local wind patterns on monitoring performance.
- Confirmation of other existing monitoring facilities within the area was requested and whether data from these would be incorporated into the analysis by the project's Independent Air Quality Experts. It was agreed a map of existing monitoring facilities would be provided to the group. This was provided by Acciona after the meeting and can be accessed at the following link: [Air Quality Monitoring Stations Map](#)
- Community representatives were thanked for their input into the discussion, with the Chair noting that the Bellevue Street opportunity was a good validation of the value that can be provided by the AQCCC.
- **It was requested that ACA & Transport provide the AQCCC members with the “exec summary” page of the document that is provided to the DPHI outlining the final recommendations as well as the reasoning other options (such as Anzac Park – Location N) were not pursued further.**

monitoring
sites to
members.

2.0 Any other business and next meeting

- No additional business items were raised by the community representatives or project team.
 - It was confirmed that the next Meeting no. 4 **will be held once the proposed ambient air quality goal protocol is drafted for discussion and is tentatively in November 2025.**
 - The project team time to evaluate the additional monitoring location suggestions and to report back on their findings.
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Transport for
NSW to confirm
meeting dates
via email.