

Community Consultative Committee Details

CCC / Project Name:	NorthConnex Air Quality Community Consultative Committee (NCX AQCCC)	Reporting Period:	January 2023 – December 2023
Independent Chairperson:	Margaret Harvie	Proponent Contact:	Sonja Shand

1. Executive Summary

NorthConnex established the Air Quality Community Consultative Committee ('AQCCC,' or the 'Committee'), in mid-2017, in accordance with the Project Conditions of Approval B8. The Committee meets four times a year and is required to continue to operate for up to two years from the opening of NorthConnex, which occurred on 31 October 2020. Following a technical incident in mid-2023, and in consultation with Transport for NSW and Department of Planning and Environment, it was agreed to retain and extend the leases of the ambient air quality monitoring stations (AQMS) and continue the role for the CCC.

The AQCCC has, until the end of 2023, continued with four community representatives participating in meetings. The Committee also invites representatives to attend including from The Hills Shire Council, Parramatta City Council, Hornsby Shire Council and Kuring-gai Council. In addition, there is participation and representation from project representatives including Transport for NSW (TfNSW), NorthConnex Company Pty Ltd, NorthWestern Roads Group, and Transurban. Linked to the finalisation of this CCC, representatives from the Environment Protection Authority (EPA) and Department of Planning and Environment (DPE) also attended meetings held in 2023.

Margaret Harvie is the independent chairperson for the AQCCC since May 2022.

During 2023, the Committee had in-person meetings with the option of attending online. Committee members remained actively engaged and provided positive inputs and contributions to the AQCCC throughout 2023.

2. CCC activities in 2023

Four meetings were held in person on-site at the NorthConnex Motorway Operations Centre at West Pennant Hills, with some members and participants joining virtually. The minutes from each of the meetings held during 2023, noting dates and attendance, are included in this report as **Appendix 1**.

Key activities and matters discussed at meetings in 2023 included:

- Review of ambient air quality data obtained from 6 monitoring stations (AQMS) (shown on map page 10).
- Discussion to determine the decision-making criteria and stakeholder communication process for decommissioning the AQMS. The EPA were invited to observe this decision making and to be party to presentation of results of data collection and analysis.

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- NorthConnex representatives’ presentation of ambient and in-tunnel air quality monitoring data and explanation of how air data is being collected and continually monitored through 13 in-tunnel sensors. Air quality monitoring data was compliant with exceedances reported to Department of Planning and Environment (DPE).
- An overview of the operation of the NorthConnex tunnel system and ongoing inspection and maintenance regimes for motorway operations.
- No reported community concerns/ complaints have been raised in relation to air quality attributable to the project.

The minutes of all meetings were agreed and finalised and are publicly available and published online on the NorthConnex website,
<https://www.northconnex.com.au/about-northconnex/environmental-approvals/aqccc>.

3. Key issues

The focus of 2023 has been updating Committee members regarding NorthConnex operations and air quality monitoring data and reviewing the process for decommissioning of the AQMS. This process for decommissioning will recommence in 2024 in consultation with DPE. Committee input was sought on the nature of stakeholder consultation that would be suitable for the decommissioning of the AQMS. Information was provided for the Committee, and responses provided to committee member questions and issues about operational air quality monitoring and compliance requirements. The following table provides a summary of the key issues for the Committee:

Issue	Actions Taken	Status
Condition of Approval B8	The Committee sought clarity on when the tenure for committee service will end or if it will be extended.	The Committee were advised that the decision about continuation of committee is in consultation with the Chair and DPE Secretary. In 2023, the Committee agreed to continue for the reasons outlined. Representatives from EPA and DPE were invited to join as observers.
Condition of Approval E7 - Ambient Air Quality Monitoring	Monitoring results shall be made publicly available and shall be subject to an independent audit at six-monthly intervals (or at a longer interval if approved by the Secretary).	Real-time reporting of air quality data is published on NorthConnex website. Monthly reporting is being provided and is accurate. The independent air quality consultant reviews data and provides a six-monthly audit report.
Condition of Approval E7 - Ambient Air	Monitoring stations shall be established subject to the landowner’s and occupier’s agreement.	Leases have been re-extended for ambient air quality stations in all locations. TfNSW are paying for the leases for these stations at a cost of \$5,000 per annum per station. NorthConnex Company and Transurban will

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<p>Quality Monitoring</p>		<p>look at the data from all monitoring stations. An independent air quality consultant will review the monitoring data.</p>
<p>Condition of Approval E7 - Ambient Air Quality Monitoring</p>	<p>The Proponent, following consultation with the AQCCC, shall review the need for the continuation of the ambient monitoring stations after a period of two years from commencement of operation. Any recommendation to close the stations shall require the approval of the Secretary in consultation with the EPA.</p>	<p>NorthConnex Company is commissioning a report and ongoing data monitoring review through an Independent Air Quality Consultant to review the AQMS data. The Consultant is suitably qualified, experienced and has been endorsed by the Secretary.</p> <p>At this time the AQMS have been continued at the request of DPE.</p>
<p>Condition of Approval E13 – Ventilation outlets and E18 – Public access to monitoring data</p>	<p>There is an ongoing issue with ventilation monitoring data unable to be displayed on the NorthConnex website. The data is being collected and is available in an excel spreadsheet format but is not published through the online system.</p>	<p>NorthConnex Company have kept the committee updated and are continuing to work with LLBJV, the construction contractor, to resolve this issue. It is anticipated this will be resolved in 2024.</p>

4. Focus for 2024

The focus for 2024 will be on the process for decommissioning the AQMS and the Committee will:

- Be provided with updates regarding Air Quality Audit results, air quality monitoring, online data, and technical updates.
- Be provided with a presentation and briefing on the ambient air quality monitoring stations data report and decommissioning approval process.
- Consider the dissolution of the AQCCC in accordance with relevant Minister’s Conditions of Approval (B8).

The *nominal* calendar of meetings for 2024 is as follows:

Meeting 1: 18 March 2023

- Update: Air Quality Monitoring
- Briefing: Technical update
- Discussion: Air Quality Data Monitoring Independent Review

Meeting 2: 20 May 2024

- Update: Air Quality Monitoring
- Briefing: Technical update
- Deliberation: Stakeholder Consultation for decision to decommission AQMS

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Meeting 3: 19 August 2024

- Update: Air Quality Monitoring update
- Update: Transport for NSW Determination
- Briefing: AQMS Decommissioning

Meeting 4: 18 November 2024

- Briefing: tbc
- Site visit: NorthConnex Operations Centre and tunnel drive (tentative)
- Conclude the Committee (to be determined)

These nominal dates for 2024 and the proposed topics are to be presented to the CCC members. Further opportunity for Member input is available prior to each meeting when a draft Agenda is prepared and distributed.

Signature of Chair:	
Date:	18 December 2023

**Appendix 1
Meeting Minutes**

meeting minutes

Meeting	NorthConnex Air Quality Community Consultative Committee (AQCCC)	Meeting No.	23
Location	In-person and online meeting	Time & Date	Monday 27 March 2023 5pm – 6.30pm
Independent Chair	Margaret Harvie		
Attendees: Committee members	<ul style="list-style-type: none"> • AQCCC community representative: Frank Hutchinson • AQCCC community representative: Edward Caruana • AQCCC community representative: Graham Strauss • The Hills Shire Council representative: Daniel Giffney (Environmental Health Coordinator) • Parramatta City Council representative: Stuart Pike (Team Leader, Health) • Hornsby Shire Council: Ryan Moore (Environmental Protection Manager) • Transport for NSW: Sonja Shand (Senior Motorway Partnerships Manager, Western) • NorthWestern Roads: Daniel Lovett (Safety, Environment and Stakeholder Manager) 		
In attendance	<ul style="list-style-type: none"> • Transurban: Scott Tinsley (Environment Manager) • Transurban: Ryan Wells (Head of Environment) • NorthWestern Roads: Tracey Baker (Community and Stakeholder Specialist) • Todoroski Air Sciences: Aleks Todoroski (role) 		
Apologies	<ul style="list-style-type: none"> • AQCCC community representative: Patricia Macloud • Hornsby Shire Council representative: Aaron Harding (Manager Regulatory Services) • Ku-ring-gai Council representative: Joanna Assad (Coordinator Environmental Health Services) • Ku-ring-gai Council representative: Michael Azzi (Team Leader Compliance, Health & Building at Ku-ring-gai Council) • Environment Protection Authority representative: Stuart Clark (Senior Operations Officer) • Environment Protection Authority: Katie Purdy (Operations Officer) 		

Item	Subject	Action
1.0	<p>Welcome and Acknowledgement of Country</p> <p>The meeting was opened at 5:00pm, when the Chair welcomed participants, acknowledged Aboriginal land and paid respects to Aboriginal people. Apologies were recorded. The Chair invited all attendees to introduce themselves to the group. The group welcomed Mr Aleks Todoroski from Todoroski Air Sciences as guest presenter. Mr Ryan Wells from Transurban was also welcomed as observer to the meeting.</p> <p>Minutes of previous meeting and action items</p> <p>As no questions or comments had been received regarding the Draft Minutes from the previous meeting, it was agreed that these could be adopted and finalised.</p>	Chair to issue final Minutes from preceding meeting.

Item	Subject	Action
	<p>The following action items will be addressed at this meeting:</p> <ul style="list-style-type: none"> Review of ambient air quality monitoring stations (AQMS) and discuss the decision-making criteria and stakeholder communication process involved in decommissioning, Hear from Todoroski Air Sciences who are joining to present preliminary air quality data monitoring results. <p>Declaration of interests</p> <p>The Chair invited any declarations of interest. No declarations were put forward.</p>	
2.0	<p>Project Progress Update</p> <p>Air Quality Monitoring and general update</p> <p>Mr Daniel Lovett provided an update of NorthConnex operations.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> NorthConnex is developing a communications approach for the physical removal of the air quality monitoring stations which includes liaison and arranging site meetings with respective Councils. 	<p>Progress update to be provided for the group at the next meeting.</p>
3.0	<p>Air Quality – operational performance</p> <p>Mr Daniel Lovett provided an update on the real-time reporting of ventilation outlet air quality data. The publishing of ventilation data on NorthConnex website is continuing to be resolved through a change management process with the contractor. A software build will be required later this year. Monthly reporting is still being provided and is accurate.</p>	<p>Update to be provided at the next meeting regarding real time reporting of ventilation outlet air quality data.</p>
4.0	<p>Air quality Independent Consultant Presentation to Committee</p> <p>Mr Aleks Todoroski of Todoroski Air Sciences presented preliminary findings of air quality monitoring data for the NorthConnex Air Quality Independent Environmental Audit per condition E7 (Attachment 1). Mr Todoroski has 30 years of experience in air quality.</p> <p><i>Key points of presentation:</i></p> <ul style="list-style-type: none"> The data review required at least 12 months of ambient air data (from AQMS) and 2 years of operational data to assess predictions against the Environmental Impact Statement (EIS) and characterise air quality. Data is from monitors placed in north and south areas (see map Attachment 2). Preliminary review of data considered variables and challenges of bushfires in 2019/2022, reductions and changes in traffic conditions from Covid-19 restrictions on public movement, and weather conditions (drought and increased rainfall). Mr Todoroski discussed that NOX is the best pollutant to analyse and characterise trends in traffic related emissions and showed the group cumulative plotted data from all monitoring stations of all ambient particulate matter. It was noted that seasonal trends and exceedances are normal in NOx and NO2 data. Mr Todoroski explained that PM2.5 (fine particulate matter) does get exceeded due to bushfires, dust 	<p>E7 Condition to be provided with the minutes (see attachment 1).</p> <p>Location map of AQMS to be provided with minutes (see attachment 2)</p>

Item	Subject	Action
	<p>storms and other events. Mr Todoroski also explained that Sydney enjoys some of the cleanest air in any major city in the world, and has some of the most stringent criteria, especially for PM2.5.</p> <ul style="list-style-type: none"> • Preliminary review and assessment of initial data and decision criteria shows: <ul style="list-style-type: none"> ○ Tunnel is performing as designed, with further modelling and analysis of air quality data to review trends needed. ○ General trend of decreasing air pollutant levels ○ Significant improvement of air quality at the Thornleigh AQMS (as would be expected from reducing trucks and heavy vehicles off Pennant Hills Road) ○ Air extracted from the tunnel is dispersing well (wind). No signs of concentration or discernible impact from ventilation outlets (northern and southern) <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • The group provided feedback on their positive observations and understandings of the preliminary data presented. It was noted that the overall trends illustrate an improvement in traffic conditions which correlates to air quality improvement at Larchmont Place and Thornleigh, as examples. • The group discussed how congestion and vehicle movement contribute to air quality impacts. Mr Todoroski provided information to assist in understanding. • Mr Graham Strauss asked how the data correlates to the EIS and Mr Todoroski advised that more analysis is needed. • Ms Sonja Shand explained that AQMS have been removed under similar processes and conditions including the M4 East. There is a measurable improvement of air quality on Pennant Hills Road since the tunnel opening. <p><i>Recommended decision criteria:</i></p> <p>The Chair facilitated a discussion with the group on the decision criteria using assessment criteria that was offered by Mr Todoroski for the removal of AQMS. This included discontinuing of the AQMS on the basis of:</p> <ul style="list-style-type: none"> • No evidence of air quality worsening due to NorthConnex tunnel operating. • Evidence of air quality improving due to the operation of the NorthConnex tunnel. • No discernible change in air quality or tangible impact due to the operation of the NorthConnex tunnel. • Other measures in tunnel in place <p><i>Next steps:</i></p> <p>Mr Todoroski will finalise a report that will be circulated to the group prior to the next meeting. The report will assist in making a final decision and the committee will seek consensus about the removal of the AQMS at the next meeting. Following this, Transport for NSW will then consult with EPA and DPE Secretary. Deliberation commences toward a final decision and determination by August 2023.</p>	<p>Chair to circulate the final report to the group prior to the next meeting.</p>

Item	Subject	Action
5.0	<p>Other business</p> <p>Sydney experienced a blackout from a severe storm event in February which required NorthConnex tunnel to close due to power outage. Mr Edward Caruana asked how the tunnel is managed or if the ventilations fans still operate when there is loss of power in an emergency. Information was provided on NorthConnex emergency operational procedures in place for a safe and controlled closure of the tunnel to traffic during an emergency.</p> <p>Group members stated they were glad to be part of the closing stages for AQCCC and noted the benefits of the NorthConnex tunnel and improvements with reduced traffic and vehicle emissions on Pennant Hills Road for the community.</p> <p>The Chair invited the AQCCC to put forward any issues or questions for the next meeting.</p> <p>The next meetings scheduled for 2023:</p> <ul style="list-style-type: none"> • 29 May (deferred from 15 May 2023) • 14 August 2023 (with this proposed to be the final meeting for the group) <p>The meeting closed at 6.30pm. The Chair thanked members for their participation.</p>	<p>Members to diarise meeting dates.</p>

FINAL

meeting minutes

Meeting	NorthConnex Air Quality Community Consultative Committee (AQCCC)	Meeting No.	24
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Location	In-person and online meeting	Time & Date	Monday 29 May 2023 5pm – 6.10pm
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Independent Chair	Margaret Harvie
Attendees: Committee members	<ul style="list-style-type: none"> AQCCC community representative: Frank Hutchinson AQCCC community representative: Edward Caruana AQCCC community representative: Graham Strauss The Hills Shire Council representative: Daniel Giffney (Environmental Health Coordinator) Parramatta City Council representative: Stuart Pike (Team Leader, Health) Transport for NSW: Sonja Shand (Senior Motorway Partnerships Manager, Western) NorthWestern Roads: Daniel Lovett (Safety, Environment and Stakeholder Manager)
In attendance	<ul style="list-style-type: none"> Environment Protection Authority representative: Stuart Clark (Senior Operations Officer) Transurban: Scott Tinsley (Environment Manager) NorthWestern Roads: Tracey Baker (Community and Stakeholder Specialist) Todoroski Air Sciences: Aleks Todoroski (Independent Air Quality Consultant)
Apologies	<ul style="list-style-type: none"> AQCCC community representative: Patricia Macloud Hornsby Shire Council: Ryan Moore (Environmental Protection Manager) Hornsby Shire Council representative: Aaron Harding (Manager Regulatory Services) Ku-ring-gai Council representative: Joanna Assad (Coordinator Environmental Health Services) Ku-ring-gai Council representative: Michael Azzi (Team Leader Compliance, Health & Building at Ku-ring-gai Council) Environment Protection Authority: Katie Purdy (Operations Officer)

Item	Subject	Action
1.0	<p>Welcome and Acknowledgement of Country</p> <p>The meeting was opened at 5:00pm, when the Chair welcomed participants, acknowledged Aboriginal land, and paid respects to Aboriginal people. The Chair thanked committee members for attending and reviewing the draft working report that had been circulated on behalf of Todoroski Air Sciences. Apologies were recorded. The Chair welcomed Mr Aleks Todoroski from Todoroski Air Sciences as guest presenter, and Mr Stuart Clark from the EPA as observer to the meeting.</p> <p>Minutes of previous meeting and action items</p> <p>As no questions or comments had been received regarding the Draft Minutes from the previous meeting, it was agreed that these minutes could be adopted and finalised.</p> <p>The following action items will be addressed at this meeting:</p>	<p>Chair to issue final Minutes from preceding meeting.</p>

Item	Subject	Action
	<ul style="list-style-type: none"> • Seek group consensus and a decision to recommend decommissioning of the ambient air quality monitoring stations (AQMS) based on the air quality monitoring data and draft report presented, • Discuss the stakeholder determination process involved in decommissioning, • Hear from Todoroski Air Sciences who are joining to discuss the draft air quality monitoring data report. <p>Declaration of interests</p> <p>The Chair invited any declarations of interest. No declarations were put forward.</p>	
2.0	<p>Project Progress Update</p> <p>Air Quality Monitoring and general update</p> <p>Ms Sonja Shand noted there had been no complaints received about air quality. Mr Daniel Lovett provided an update of NorthConnex operations.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • No operational air quality issues have been reported nor any affect from hazard reduction activity on air quality data. • NorthConnex is progressing with its preliminary approach for the physical removal of the air quality monitoring stations which includes liaison and arranging site meetings with respective Councils. 	<p>Progress update to be provided for the group at the next meeting.</p>
3.0	<p>Air Quality – operational performance</p> <p>Mr Daniel Lovett provided an update on the real-time reporting of ventilation outlet air quality data. The publishing of ventilation data on NorthConnex website is continuing to be resolved. A software build will be required later this year. Monthly reporting is still being provided and is accurate.</p>	<p>Update to be provided at the next meeting regarding real time reporting of ventilation outlet air quality data.</p>
4.0	<p>Air quality Independent Consultant Discussion on Draft Report to Committee</p> <p>Mr Aleks Todoroski of Todoroski Air Sciences discussed his report "NorthConnex Continuation of Ambient Air Quality Monitoring Review (Draft 8 June 2023)" that was been prepared to assist in the review of the need for the continuation of the ambient monitoring stations after a period of two years from commencement of operation in accordance with NorthConnex condition of approval E7 (Attachment 1).</p> <p>Mr Todoroski has 30 years of experience in air quality.</p> <p><i>Key points of presentation:</i></p> <ul style="list-style-type: none"> • Data are from monitors placed in the northern and southern areas of the NorthConnex catchment (see map Attachment 2). • Included in the draft report is an analysis and comparison of findings with the Environmental Impact Statement (EIS) criteria. It was noted by Mr Todoroski that the overall traffic numbers are consistent with EIS predictions, and emissions are generally within the EIS predictions. This information has been added to the draft report following a request by Mr Graham Strauss for the comparison to be included. 	<p>E7 Condition to be provided with the minutes (see attachment 1).</p> <p>Location map of AQMS to be provided with minutes (see attachment 2)</p>

Item	Subject	Action
	<ul style="list-style-type: none"> • The variables in data from challenges of bushfires in 2019/2022, reductions and changes in traffic conditions from Covid-19 restrictions on public movement, and weather conditions (drought and increased rainfall) have been normalised to give, as best as possible, a clear picture. • Mr Todoroski explained all normalised and non-normalised data are included in the report. Further, Mr Todoroski highlighted the process flow for monitoring and decision making which is shown in Attachment 3 as extracted from page 6 of the draft report. • Data shows: <ul style="list-style-type: none"> ○ Tunnel is performing as designed, based on analysis of air quality data. ○ General trend of decreasing air pollutant levels shows a reduction in NO2 and NOX near Pennant Hills Road. It was noted this overall trend illustrates a significant improvement in air quality, with Thornleigh cited as an example (as would be expected from reducing trucks and heavy vehicles off Pennant Hills Road) ○ Air extracted from the tunnel is dispersing well. No signs of concentration or discernible impact from ventilation outlets (northern and southern). <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • The group asked questions about the report and provided feedback on the data presented. Mr Frank Hutchins commented on whether upward trends in data are from ambient air pollution or traffic, and it was explained that the upward trends are likely from normal traffic, which are the same levels predicted in the EIS. • The group sought clarification on the data analysis process for normalising of data. Mr Todoroski agreed to include an explanation in the final draft report for DPE. • In-tunnel monitoring will continue. In addition, there are controls and reporting protocols in place for air quality exceedances. <p><i>Next steps:</i></p> <p>Mr Todoroski will finalise the draft report to</p> <ul style="list-style-type: none"> • Outline that emissions are generally within the EIS predictions • include criteria and process for normalising data in data analysis <p>This report will be provided to Transport for NSW.</p>	<p>Process flow chart from page 6 of the report to be provided with minutes (see attachment 3)</p>
<p>5.0</p>	<p>Decision on decommissioning AQMS</p> <p>The Chair facilitated a discussion with the group for a decision and recommendation for the removal of AQMS. This included discontinuing of the AQMS based on:</p> <ul style="list-style-type: none"> • No evidence of air quality worsening due to NorthConnex tunnel operating. • Evidence of air quality improving due to the operation of the NorthConnex tunnel. • No discernible change in air quality or tangible impact due to the operation of the NorthConnex tunnel. 	<p>Chair to send the amended draft report (based on AQCC comments) to Transport for NSW. This will then go to DPE for determination. EPA will be consulted.</p>

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Item	Subject	Action
	<ul style="list-style-type: none"> • Other measures in tunnel in place (monitoring, controls, protocols) <p>Mr Edward Caruana said that the report shows how the significant improvements in air quality pre and post tunnel and stated he is supportive of decommissioning. Mr Frank Hutchison and Mr Graham Strauss were also supportive and happy with the recommendation.</p> <p>Mr Daniel Giffney from The Hills Shire Council advised the group that the Council had been happy with the process and is supportive of discontinuing the ambient monitoring.</p> <p>Ms Sonja Shand provided the group with an outline of the process for seeking a determination for decommissioning through the Department of Planning (DPE). Following this meeting, the final draft report and supporting recommendation will be submitted to Transport for NSW who, as the proponent, will consult with EPA and DPE Secretary.</p> <p>The AQCCC agreed that the ambient air quality monitoring stations can be removed, based on the evidential data provided and summarized in the NorthConnex Continuation of Ambient Air Quality Monitoring Review, Todoroski Air Sciences (Draft 8 June 2023)</p>	
5.0	<p>Other business</p> <p>The Chair thanked the AQCCC for their contribution to the meeting.</p> <p>The next meeting scheduled for 2023:</p> <ul style="list-style-type: none"> • 14 August 2023 (with this proposed to be the final meeting for the group) <p>The meeting closed at 6.10pm. The Chair thanked members for their participation.</p>	Members to diarise meeting date.

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Attachment 1
Ministers Condition of Approval
Condition E7

Air Quality — Monitoring

E7 The Proponent shall monitor (by sampling and obtaining results by analysis) the pollutants and parameters specified in Column 1 of Table 8 at the following locations as a minimum:

(a) two ground level receptors near the northern ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet;

(b) two ground level receptors near the southern ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet; (c) one location along Pennant Hills Road, at a location suitable for detecting any impact on air quality along Pennant Hills Road; and **Ambient**

(d) one location away from any of the locations at (a), (b) and (c) suitable for providing background ambient air quality reference data for the project area.

All monitoring stations shall be established subject to the landowner's and occupier's agreement. The Proponent must use the sampling method, units of measure, and sampling frequency specified in Table 8.

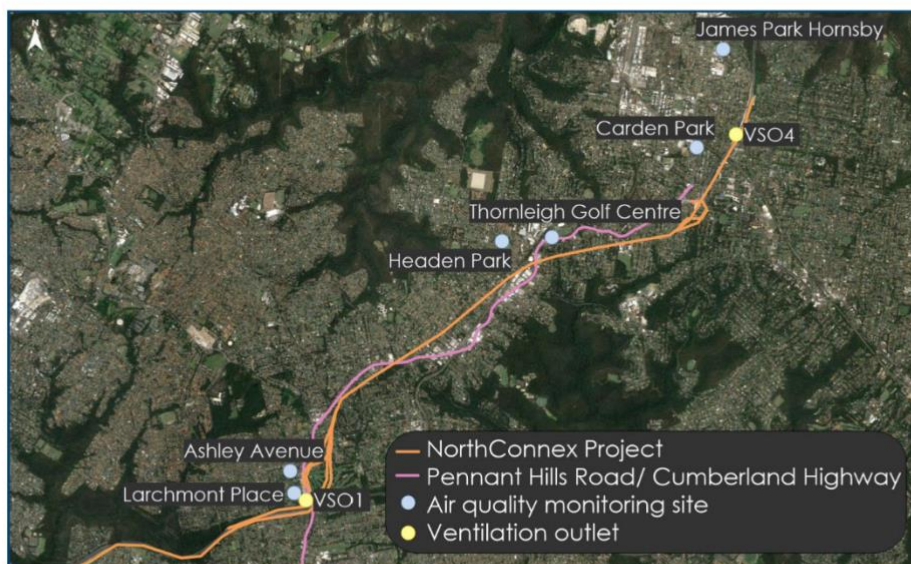
The Proponent shall commence monitoring for at least twelve continuous months prior to operation. The locations are to be agreed to by the AQCCC. The Proponent shall meet all operating costs associated with the stations.

The Proponent, following consultation with the AQCCC, shall review the need for the continuation of the ambient monitoring stations after a period of two years from commencement of operation. Any recommendation to close the stations shall require the approval of the Secretary in consultation with the EPA.

The establishment and operation of the stations is to be undertaken in accordance with organisation Australian standards and undertaken by an organisation accredited by NATA for this purpose and approved by the Secretary in consultation with the EPA and the AQCCC. The quality of the monitoring results shall be assured through a NATA accredited process prior to the data being considered as a basis for compliance/auditing purposes.

Monitoring results shall be made publicly available and shall be subject to an independent audit at six-monthly intervals (or at a longer interval, if approved by the Secretary). The auditor shall be approved by the Secretary in consultation with the EPA and the AQCCC, and the auditor's report shall be directly provided to the Proponent and the AQCCC.

Attachment 2
Location Map of Air Quality Monitoring Stations



Map courtesy Todoroski Air Sciences

Attachment 3
Ambient Air Quality Monitoring Decision Process

2

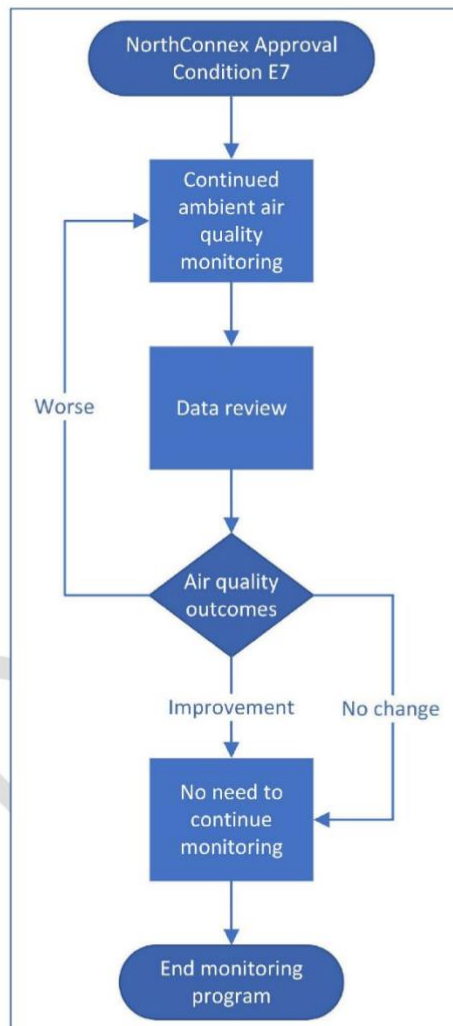


Figure 1-1: Continued ambient air quality monitoring decision criteria flow chart

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meeting minutes

Meeting	NorthConnex Air Quality Community Consultative Committee (AQCCC)	Meeting No.	25
Location	In-person and online meeting	Time & Date	Monday 14 August 2023 4pm – 5.50pm
Independent Chair	Margaret Harvie		
Attendees: Committee members	<ul style="list-style-type: none"> • AQCCC community representative: Patricia Macloud • AQCCC community representative: Frank Hutchinson • AQCCC community representative: Edward Caruana • AQCCC community representative: Graham Strauss • Hornsby Shire Council representatives: Aaron Harding (Manager Regulatory Services), Ryan Moore (Environmental Protection Manager) • Ku-ring-gai Council representatives: Joanna Assad (Coordinator Environmental Health Services), Michael Azzi (Team Leader Compliance, Health & Building at Ku-ring-gai Council) • The Hills Shire Council representative: Daniel Giffney (Environmental Health Coordinator) • Transport for NSW: Sonja Shand (Senior Motorway Partnerships Manager, Western) • NorthWestern Roads: Daniel Lovett (Safety, Environment and Stakeholder Manager) 		
In attendance	<ul style="list-style-type: none"> • Environment Protection Authority representatives: Julian Thompson (Manager Regulatory Operations), Stuart Clark (Senior Operations Officer) • DPE representative: Rob Sherry – (Acting Director Compliance) • Transurban: Scott Tinsley (Environment Manager) • Transurban: Erin McKnight (Community Engagement Advisor, NSW), Emily Divitaris (Senior Manager Communications and Community Engagement) • NorthWestern Roads: Tracey Baker (Community and Stakeholder Specialist) • NorthWestern Roads Group NorthConnex Manager: Thomas Burke (guest presenter) • Todoroski Air Sciences: Aleks Todoroski (Independent Air Quality Consultant) 		
Apologies	<ul style="list-style-type: none"> • Parramatta City Council representative: Stuart Pike (Team Leader, Health) 		

Item	Subject	Action
1.0	<p>Welcome and Acknowledgement of Country</p> <p>The meeting was opened at 4:00pm, the Chair welcomed participants, acknowledged Aboriginal land, and paid respects to Aboriginal people. The Chair thanked committee members for attending and acknowledged the purpose of the meeting was to discuss a tunnel event with the group.</p> <p>The Chair welcomed Mr Aleks Todoroski from Todoroski Air Sciences as guest presenter. Additionally, Mr Stuart Clark and Mr Julian Thompson from the EPA, Mr Rob Sherry from DPE, and Mrs Erin McKnight and Mrs Emily Divitaris from Transurban, as observers to the meeting.</p> <p>Apologies were recorded.</p> <p>Minutes of previous meeting and action items</p> <p>As no questions or comments had been received regarding the Draft Minutes from the previous meeting, it was agreed that these minutes could be adopted and finalised.</p>	<p>Chair to issue final Minutes from preceding meeting.</p>

Item	Subject	Action
	<p>The following action items will be addressed at this meeting:</p> <ul style="list-style-type: none"> • <i>Hear from NorthConnex representatives about a tunnel technical event on 14 June 2023</i> • <i>Todoroski Air Sciences to present on the air quality monitoring since the event and current air quality outcomes.</i> <p>Declaration of interests</p> <p>The Chair invited any declarations of interest. No declarations were put forward.</p>	
2.0	<p>Project Progress Update</p> <p>Overview of technical event and Air Quality Monitoring update</p> <p>Mr Thomas Burke (guest) presented information and provided advice to the group in relation to a technical fault with the ventilation fans that occurred on 14 June 2023.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • Presentation and overview of how the NorthConnex tunnel system architecture works. • Discussion on the ongoing inspection regime for tunnel and motorway operations and real-time monitoring of in-tunnel, ventilation, and ambient air quality. • Group members asked questions relating to operational redundancy and it was explained that NorthConnex is designed with redundancy in its operating systems. NorthConnex continues to operate safely and remains open for travel in both directions. 	<p>Progress update to be provided for the group at the next meeting or prior if there is information to report.</p>
3.0	<p>Air Quality – operational performance</p> <p>Mr Scott Tinsley provided the group with an update on tunnel operational performance and air quality monitoring following the fault.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • Overview of the process for ongoing air quality monitoring and tracking and reporting of data. • It was also noted that at the time of the technical issue there were no exceedances recorded for air quality within the tunnel, exiting the ventilation outlet, or at ambient air quality monitoring stations along the corridor. 	<p>Update to be provided at the next meeting regarding reporting of operational air quality monitoring.</p>
4.0	<p>Air Quality Independent Consultant Presentation and Discussion</p> <p>Mr Aleks Todoroski of Todoroski Air Sciences presented an overview of his independent review looking at air quality monitoring. Mr Todoroski has 30 years of experience in air quality.</p> <p><i>Key points of presentation:</i></p> <ul style="list-style-type: none"> • Additional monitoring has been conducted by Todoroski Air Sciences since the technical fault to look at the ambient air quality. <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • Group members asked questions about traffic flow variables and reporting of additional monitoring data. Mr Todoroski explained how traffic data is used to continually monitor air quality and that a report is being finalised, based on the data and guidelines. • In tunnel, ventilation outlet, and ambient air quality monitoring will continue. In addition, one additional temporary ambient air monitoring station has been installed at Wahroonga. 	

Item	Subject	Action
	<ul style="list-style-type: none"> • NorthConnex has operating procedures that are followed for monitoring air quality. <p><i>Next steps:</i></p> <p>Mr Todoroski will finalise a report recommending that ambient air quality monitoring continue. This report will be provided to Transport for NSW.</p>	
5.0	<p>Discussion on continuing the AQCCC</p> <p>The Chair facilitated a discussion and invited the group and attendees to put forward questions or comments.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • Group members discussed the timeline for when the report will be available. It was agreed to provide an update at the next meeting, or prior if information is available. • Ms Sonja Shand advised the group that extension of leases including with Councils for six ambient air quality monitoring station had commenced. • The Chair sought feedback and asked the committee members if they were willing to stay on as members of the AQCCC given the potential extension of time. All members expressed interest and agreed to continue. • The Chair summarised the next steps and the communication approach which includes: <ul style="list-style-type: none"> ○ Continuation of the AQCCC given the ambient air quality monitoring stations will continue to operate. ○ Completion of the Todoroski Air Sciences report and submission to TfNSW. ○ A communications plan outlining the communications approach has been developed and is being submitted to TfNSW. 	
5.0	<p>Other business</p> <p>The Chair thanked the AQCCC for their participation in the meeting and encouraged members to put forward any questions.</p> <p>The next meeting scheduled for 2023:</p> <ul style="list-style-type: none"> • 13 November 2023 <p>The meeting closed at 5.50pm.</p>	Members to diarise meeting date.

DRAFT

meeting minutes

Meeting	NorthConnex Air Quality Community Consultative Committee (AQCCC)	Meeting No.	26
Location	In-person and online meeting	Time & Date	Monday 13 November 2023 5pm – 6pm
Independent Chair	Margaret Harvie		
Attendees: Committee members	<ul style="list-style-type: none"> AQCCC community representative: Patricia Macloud AQCCC community representative: Frank Hutchinson AQCCC community representative: Edward Caruana AQCCC community representative: Graham Strauss Hornsby Shire Council representatives: Aaron Harding (Manager Regulatory Services), Ryan Moore (Environmental Protection Manager) Parramatta City Council representative: Stuart Pike (Team Leader, Health) Transport for NSW: Sonja Shand (Senior Motorway Partnerships Manager, Western) NorthWestern Roads: Daniel Lovett (Safety, Environment and Stakeholder Manager) 		
In attendance	<ul style="list-style-type: none"> Environment Protection Authority representative: Stuart Clark (Senior Operations Officer) Transurban: Scott Tinsley (Environment Manager) Transurban: Erin McKnight (Community Engagement Advisor, NSW) (observer) NorthWestern Roads: Tracey Baker (Community and Stakeholder Specialist) NorthWestern Roads Group NorthConnex Manager: Thomas Burke (guest) Todoroski Air Sciences: Aleks Todoroski (Independent Air Quality Consultant) 		
Apologies	<ul style="list-style-type: none"> Ku-ring-gai Council representatives: Joanna Assad (Coordinator Environmental Health Services), Michael Azzi (Team Leader Compliance, Health & Building at Ku-ring-gai Council) The Hills Shire Council representative: Daniel Giffney (Environmental Health Coordinator) Environment Protection Authority representatives: Julian Thompson (Manager Regulatory Operations) DPE representative: Rob Sherry – (Acting Director Compliance) (observer) 		

Item	Subject	Action
1.0	<p>Welcome and Acknowledgement of Country</p> <p>The meeting was opened at 5:00pm. The Chair welcomed participants, acknowledged the meeting was being held on Aboriginal land, and paid respects to Aboriginal people. The Chair thanked committee members for attending.</p> <p>The Chair acknowledged Mr Aleks Todoroski from Todoroski Air Sciences as guest and Ms Erin McKnight from Transurban, as an observer to the meeting.</p> <p>Apologies were recorded.</p> <p>Minutes of previous meeting and action items</p> <p>As no questions or comments had been received regarding the Draft Minutes from the previous meeting, it was agreed that these minutes could be adopted and finalised.</p> <p>The following action items will be addressed at this meeting:</p> <ul style="list-style-type: none"> <i>Air Quality monitoring, operational performance, and technical update</i> 	<p>Chair to issue final Minutes from preceding meeting.</p>

Item	Subject	Action
	<p>Declaration of interests</p> <p>The Chair invited any declarations of interest. No declarations were put forward.</p>	
2.0	<p>Project Progress Update</p> <p>Air Quality Monitoring update and technical update</p> <p>Mr Daniel Lovett provided an update of air quality monitoring noting 9 exceedances were reported due to bushfire smoke from hazard reduction burns conducted by Rural Fire Service.</p> <p>Thomas Burke (guest) provided an update in relation to a technical fault with the ventilation fans that occurred on 14 June 2023.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • <i>Group members asked questions about how NorthConnex responds to air quality exceedances. Information was provided and it was explained that an operational protocol applies for in-tunnel events and ambient air quality monitoring stations detect out-of-tunnel air quality events.</i> • <i>NorthConnex reports exceedances as soon as it is notified (generally within 24 hours) to TfNSW who lodge the exceedance with DPE.</i> • <i>A process has commenced to replace blades on ventilation (axial) fans in advance of the arrival of replacement fans in March / April 2024. NorthConnex is continuing to liaise with, and update, Transport for NSW and DPE. NWR is also reporting monthly to DPE regarding progress on the axial fans.</i> • <i>Removal of Ambient Air Quality Monitoring Stations remains a decision for DPE and this will be considered in 2024.</i> 	<p>Progress update to be provided at the next meeting.</p>
3.0	<p>Air Quality – operational performance</p> <p>Mr Scott Tinsley provided the group with an update on tunnel operational performance and presented data from temporary monitoring stations in place at Wahroonga.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • <i>Instances of exceedance (based on criteria) in ambient air quality data are a result of bushfire smoke</i> 	<p>Update to be provided at the next meeting regarding reporting of operational air quality monitoring.</p>
4.0	<p>Air Quality Independent Consultant - Discussion</p> <p>Mr Aleks Todoroski of Todoroski Air Sciences presented a brief update on his independent review looking at air quality monitoring data. Mr Todoroski has 30 years of experience in air quality.</p> <p><i>Key points of discussion:</i></p> <ul style="list-style-type: none"> • <i>Additional data review has been conducted by Todoroski Air Sciences since the technical fault to look at the ambient air quality and data from a temporary ambient air monitoring station installed at Wahroonga. The review of data is continuing.</i> • <i>Group members asked questions about traffic and hazard reduction variables. Mr Todoroski explained there is significant safety and redundancy in design.</i> • <i>NorthConnex has operating procedures that are followed for monitoring air quality.</i> 	<p>Update to be provided at the next meeting regarding ambient air quality monitoring.</p>

Item	Subject	Action
5.0	<p>Other business</p> <ul style="list-style-type: none"> • An overview and presentation of the NorthConnex Emergency Field Exercise and Training night held on 18 October 2023 was provided to the group. This included an insight into a multi-agency first-responder response to a staged in-tunnel incident. <p>The Chair thanked the AQCCC for their participation in the meeting.</p> <p>The next meeting scheduled for 2024:</p> <ul style="list-style-type: none"> • 18 March 2024 <p>The meeting closed at 6.01pm.</p>	<p>Members to diarise meeting date.</p>

**NorthConnex Air
Quality Community
Consultative Committee**

Annual Report 2023

