12 September 2014

Director - Infrastructure Projects Department of Planning and Environment Number: SSI 13\_6136 Major Projects Assessment GPO Box 39 SYDNEY NSW 2001

## NorthConnex Application Number: SSI 13\_6136

Please find below my submission in response to the exhibition of the EIS for NorthConnex.

Firstly I would like to state I **object** to the project as described in the EIS.

I acknowledge that every tunnel ever built in Sydney has raised community objections, and that in every case the community has been ignored. The Minister involved in this decision will have to consider the consequences of her action if caution is replaced by party politics and she approves this project. The medical evidence has been presented, the modelling has been proven inaccurate, and the Minister will be held accountable for her decision.

In light of recent media coverage relating to politics, I am not confident that the obvious and right decision will be made, and I acknowledge that it behoves me as a responsible member of society, to address the flaws in the EIS as I see them.

Regarding the NorthConnex tunnel EIS, my concerns are about the following issues and I request that these concerns be considered by the Department of Planning.

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# A tunnel cannot be justified, not on the basis of terrain, nor on the basis of traffic.

Australia is rich in many resources, land is one of them. We have a lot of land. Long tunnels are justifiable when roads need to traverse geological obstacles, such as mountains, or when there is little available land to carry the traffic load. That is not the case here. This tunnel is a single purpose tunnel, taking only 'through-traffic' off Pennant Hills Road; that is, traffic going from the M1 to the M2. All other traffic, that is traffic turning off Pennant Hills Road to Castle Hill, Dural, Beecroft, Pennant Hills, Carlingford, Pymble and the CBD, as well as local traffic, and all trucks carrying dangerous goods, or old trucks with smoky exhausts, all these must continue to use the surface road. This tunnel is unlikely to solve any traffic issues because by the time it is built, there will be more traffic, and the relief provided by this tunnel will not be enough. This tunnel is specifically designed and of no use other than its' single purpose – to feed traffic from the M1 to the M2, to feed Transurban Tolls. **Solution:** The Department must recommend that this project is NOT APPROVED in its current form as it clearly does not meet the principles of Ecologically Sustainable Development as required by the Environmental Planning and Assessment Act.

The proposed tunnel project cannot deliver the promised solution. Pennant Hills Road needs urgent attention. A 5 year building process is not a timely measure for a road situation as urgent as this. Our Minister needs to take immediate short term measures to address the dangers of this road, combined with an immediate start on long term resolutions for these problems; i.e. start building the ring-road or bypass road, and move the heavy haulage trucks away from built up areas. This tunnel completely ignores the traffic problem on Pacific Highway, which is understandable as that problem does not tie in with a Transurban Toll-road. The exorbitant cost of this tunnel will, however, preclude the Minister from being able to allocate any funds to roads in this area for many years to come, which means the Pacific Highway will continue to be a nightmare for decades. **Solution:** Review the design to locate stacks away from residential areas, and include filters in exhaust stacks.

**Placement of the northern ventilation stack in a residential area.** The EIS proposes the placement of the northern stack in a densely populated residential area in Wahroonga, where 9,300 school children will be exposed to the pollution from the stack. There are also many aged care facilities, hospitals, businesses and homes. The EIS uses the term 'sensitive receptors' for the more vulnerable people in the community; the children and the elderly. A single day of 'groundstrike' or 'thermal inversion' has the potential to be fatal for some of our family, friends and neighbours. Northconnex have countered community concerns over the placement issue by creating a page on their website to show that other stacks are close to homes:

http://www.northconnex.com.au/docs/Tunnel\_ventilation\_outlets\_in\_Australia.pdf

however, most of us have access to Google Earth, and it is quickly evident that whilst there are homes close to some of the existing tunnel vents, none of the stacks are in a purely residential area or an area focused on schools and medical facilities such as Wahroonga. The other critical factors are the topography and the meteorology of the areas, and the length of the tunnel. The Harbour tunnel is used as an example, but the proposed Northconnex tunnel has six times the capacity of the Sydney Harbour

tunnel, the harbour tunnel stack is over 80M high, in a very windy location on the harbour; the water surrounding it on three sides is the flattest possible terrain. It is a shamefully misleading comparison. **Solution:** An independent options assessment process should be undertaken to assess alternative locations for the ventilation stack and portals.

Plume Dispersion modelling fails to take local conditions into account. The EIS places the northern ventilation stack in a valley in Wahroonga where low wind conditions are normal. Still atmosphere results in poor dispersion and consequently the stack emissions will expose the community to high levels of tunnel exhaust. I am sure you are familiar with the science of plume dispersion, it is basic science which Steve Cornish condescendingly described as "very hard for people to get," (Hornsby Advocate July2014) People in the community 'get' the fact that it's usually very still. Weather is a daily phenomenon and most people 'get' thermal inversions, too, they are a regular phenomenon in the area, and the problem with the dispersion of pollutants during these conditions is pretty readily understood. There are members of the community who collect meteorological data as a 'hobby'. Others in the community fly aircraft, both the passenger type and the model type. A person only has to hang the washing out to appreciate the lack of air movement. It's not hard to get. Generally, people in the broader community have a sound understanding of the type of conditions that cause stack emissions to stagnate and fumigate the surrounding area.



The fire in the Burnley tunnel was on such a day, the emissions were made visible by the addition of smoke, and the photo clearly shows that the surrounding area was fumigated. The tunnel pollutants are generally invisible, but they are deadly nevertheless.

A chimney, or stack, in a valley needs to be taller than the surrounding land to be effective. In Wahroonga that would mean a monstrosity amongst homes!



http://commons.wikimedia.org/wiki/File:Termoelektrarna\_Trbovlje\_in\_Sava\_IMG 2581.jpg

To drive this point home, Dr Gerda Kuschell, NorthConnex's air quality expert at NorthConnex's Hornsby forum on 29 July stated "...in an urban environment, what's this big deal about dispersion? What do I mean by that? Well, looking at cases of good dispersion, and that would be an example of where you have a very open area with a lot of wind going through, (umm) the emissions are very well dispersed. If you have those emissions you probably wouldn't see much of a change. The box that constrains the emissions - from your topography, from your meteorology – is quite large.

A diagram showing a large clear box headed "Good Dispersion" and smaller greyed box headed "Poor Dispersion" was then shown.

However, if you look at a situation for poor dispersion, and this can happen if you've got a built up, (you know) canyon in an urban environment between buildings, or you've got a topography with valleys, or it's a very calm situation, then for the same amount of emissions the box is much smaller because the emissions can't disperse as freely, so that's the concept around dispersion."

Ref: <u>http://www.northconnex.com.au/video\_gallery.php</u> Northconnex Air Quality Public forum, at about the 17min mark.

In a nutshell, the proposed exhaust stack is not expected to perform in dispersing the high pollutant loads as:

The stack is too short

There is too low a temperature difference between exhaust air and ambient air The wind velocity is too low

The distance between the stack and residences is too short

The location is subject to regular down wash

It is the total loading in tonnes, not concentration, which matters. The stacks will expose us to at least 25 times the load of pollutants we currently experience from the freeway. Bio accumulators (we the people, the sensitive receptors) filter the pollutants with our lungs. This re-concentrates the toxins and carcinogens over time, bringing about severe health issues that such stacks are well known for.

**Solution:** Review the design to locate stacks away from residential areas, and include filters in exhaust stacks.

Any amount of pollution is bad; there is NO SAFE LIMIT for POLUTION. A growing and substantive body of medical evidence show vehicular emissions have an adverse and serious effect on health. These include increased death from heart disease, increased risks of lung cancer (the World Health Organisation has classified diesel emissions as a carcinogen), stroke, poor lung growth in children, increased asthma, and recent research suggesting low birth weight for pregnant women, increased autism, and congenital heart defects. These studies confirm air pollutants have prothrombotic and inflammatory effects on humans which cause the above health problems. These adverse health effects occur even at the levels set by our national Environmental Protection standards. I support the submissions of Doctors Raymond Nassar, Richard Chard and Elizabeth Johnson and the other 257 doctors who expressed concerns over the medical issues relating to the health hazards associated with tunnel emissions. Solution:

- 1. Revise the air quality and human health impact assessment to address the issues raised.
- 2. A long term health study on children and residents in areas impacted by stack discharges be included as part of the conditions of approval.

The project includes future provisions for portal emissions in densely populated areas, which will result in emissions remaining at ground level, and hence exposing the local population to a very heavy dose of pollutants. NorthConnex's claim that there will no portal emissions from current proposal is not verified, and there is no clear indication of the consequential action or requirements if the reality does not match their EIS (gu)estimation/prediction.

**Solution:** 1. An independent review of the ventilation system is undertaken to ensure that NorthConnex's claim of no portal emissions is justified.

**Diesel emissions appear to be understated**. The NorthConnex tunnel is being designed for heavy freight to bypass Pennant Hills Rd, and the traffic mix of B-double trucks, light trucks and light vehicles appears to be severely understated. Diesel emissions have been classified as carcinogenic by the World Health Organisation, and also contain a larger number of fine particles which penetrate deep into lung tissue, to remain there causing irritation and severe lung problems in the same way asbestos fibres cause damage. I support the submissions made by CAPS (Community Against Polluting Stacks) on this issue.

**Solution:** Review the design to locate stacks away from residential areas, and include filters in exhaust stacks.

**In-tunnel Air Quality.** The air quality within the tunnel is shown in the EIS to have exceedences above standards for pollutants such as NO2, and haze from particulate matter at the ends of the tunnel.

I support the submissions made by CAPS (Community Against Polluting Stacks) on this issue.

**Solution:** Review the design to locate stacks away from residential areas, and include filters in exhaust stacks.

Portal emissions from NorthConnex in the future are banned and this becomes part of the conditions of approval, and portals are monitored to ensure these requirements are met.

**Air Quality Modelling.** There are multiple flaws in the air quality modelling of the northern stack in the EIS. These include:

- a. Extrapolation of meteorological data from other weather stations which do not reflect the local meteorology, local topography, and the valley location.
- b. The use of a coarse topographical model
- c. The failure to consider polluted intake air from the Pennant Hills/M2 interchange as part of the project contribution to air quality at Wahroonga
- d. the background air quality being based on air quality at Lindfield and Prospect and the lack of any actual data on  $PM_{2.5}$ ; all  $PM_{2.5}$  concentrations have been estimated or modelled.

I support the submissions made by CAPS (Community Against Polluting Stacks) on this issue.

**Solution:** 5. A comprehensive air quality monitoring program is developed and implemented.

A full and transparent options assessment process was not undertaken to assess alternative designs for the project. There are alternatives for locating the stack and portals in non-residential areas. I support the submission by Lin Ma for a 'cut and cover' extension to the northern end of the tunnel to position the stack in bushland to the north. Other alternatives should be investigated, and in the absence of transparency on the project to this stage, which leaves me uninformed of other proposals evaluated, I suggest that possible alternatives include:

8.1 A more useful tunnel, built in 3 or more parts, so that it can be used by traffic diverting off the route at 3 or 4 points along the way. The current 'single purpose' tunnel is a ludicrous waste of money, it lacks foresight and planning, and will have no purpose once the ring road is built. The current option will take 5 years before there is any possible favourable impact on Pennant Hills Road, and will hugely exacerbate the on Pennant Hills Road problem for the 5 year construction period.

8.2 An option that addresses the congestion on the Pacific Highway between Wahroonga and the Harbour Bridge equally to the problem on Pennant Hills Road, as addressing only half the problem will reduce available options to resolve the remaining Pacific Highway problem.

8.3 A viable option appears to be to address the immediate problems with short-term solutions such as staggered school start times, truck curfews, reduced intersections to improve traffic flow etc, and build the ring road sooner to provide a long term solution.

**Solution:** Review the design to provide a more versatile solution, and decide on either an unsolicited proposal or a SSI or CSSI, no combination of privileged status as that leaves NO transparency, public input or redress. Furthermore, there must be a reasonable timeframe for community response

to large infrastructure projects, so that important aspects and details are not overlooked.

**Filtration.** I am concerned that the justification for not providing filtration for the stacks is cursory and unconvincing. I have read widely on the subject of tunnel stack filtration, and object to the 'out of context' quotes used by Northconnex in their public handouts, and throughout their EIS. I believe the filtration issue is intentionally presented in an unfavourable light by Northconnex because filtration is an ongoing expense and maintenance item as well as a capital outlay at the design and build stage. There is a lot of literature which indicates that filtration is effective and widely used when stacks are built near residential areas. The M5 filtration debacle is much referenced and Northconnex refer to other articles which refer to the M5 experience, creating a circular self-fulfilling argument.

I support the submissions made by CAPS (Community Against Polluting Stacks) on this issue.

**Solution: 1.** To undertake a Life Cycle Analysis and assessment for the provision of filtration

2. Review the design to locate stacks away from residential areas, and include filters in exhaust stacks.

**Community Consultation.** The community was invited to email Northconnex if we information", "would like further see page three on http://northconnex.com.au/docs/Community\_Update\_3.pdf I took up this offer on several occasions, but whilst I did receive a reply, the content of the reply was insubstantial and/or irrelevant. I offer an example at Attachment 1. The community consultation can be better described as community aggravation. The community has been supportive of each other in maintaining a civil, sensible, and enquiring approach to the project, endeavouring to understand the issues, but our sincere efforts have been met with condescending and discrediting responses in the media from both the Northconnex staff and politicians. I have attended the Community Information evenings, the Air Quality Forum, and a Drop-in session, and have found the Northconnex team to be uninformative, unhelpful, and at times downright untruthful at these events.

**Solution:** 1. A better process must be established to ensure that community consultation is effective and builds trust and support. The greater community is paying almost ONE BILLION DOLLARS toward this project, and deserves transparency, respect and financial justification.

2. The Submissions Report/Preferred Project be re-exhibited to allow the community to respond to the revised information contained in the report.

In closing I reiterate that I fully endorse and support the submission lodged by the community group CAPS; Community Against Polluting Stacks, and the submissions by the Doctors Raymond Nassar, Richard Chard, Helen Ward, Kirthana Sharma and Elizabeth Johnson and the other 255 doctors who expressed concerns over the medical issues relating to the health hazards associated with tunnel emissions.

I request that the Department address my concerns and that the necessary actions are undertaken.

This project has been a huge burden on community resources and time. The Department of Planning must now ensure that ALL regulations are complied with, and as the EIS for this project has been shown to fail to meet some of the DGRs this project cannot be recommended and cannot be approved.

Name withheld Wahroonga

Encl.: email correspondence (originals can be forwarded on request)

From: Sent: Tuesday, 29 April 2014 7:38 PM To: Enquiries NorthConnex Cc: MP Barry O'Farrell; Paul Fletcher Subject: Air Quality information please

Dear NorthConnex Project Team,

Your Air Quality factsheet states that "Ventilation outlets on other road tunnels have shown impact on local air quality cause little, if any, increase in exposure for people living nearby."

I would like to believe this statement but my research has only deepened my concern about the effect the NorthConnex Exhaust Outlet will have on the suburb around it. On what basis exactly do you make this claim?

Please send me both digital and hardcopies of reports, both summaries and full details, research papers and data to support your claim, so that I can be reassured that there is no cause for concern.

This matter is extremely important to me. Please include all data, as gathered at 'other road tunnels' and what exactly that impact was, i.e. exactly what the increase in exposure for people living nearby was. If the information you forward does not do so, please also define exactly what 'nearby' means as used in your statement. Please also outline how you consider the specifications for the NorthConnex tunnel relate to the conclusions drawn by the research from other tunnels.

I appreciate your undertaking to respond to community enquiries, and I look forward to a full and speedy response that will allay my concerns with concrete facts.

Regards



-----Original Message-----From: Enquiries NorthConnex [<u>mailto:enquiries@northconnex.com.au</u>] Sent: Friday, 9 May 2014 12:09 PM To: **Section** Subject: RE: Air Quality information please

Dear

Thank you for your email 29.4.14.

We note your concern about health impacts from the NorthConnex ventilation outlet.

A detailed air quality assessment and a health impacts assessment study is being carried out as part of the environmental assessment of the project. The findings of these studies including technical papers will be provided in the Environmental Impact Statement that will be placed on public display on 30 May 2014 for a period of 45 days.

The Environmental Impact Statement outlines the key features of the NorthConnex project and assesses its potential environmental impacts during construction and operation. Importantly, it also outlines recommended measures to minimise and manage any potential impacts.

The EIS and details on how to make a submission will be uploaded on the Department of Planning's website <u>www.majorprojects.planning.nsw.gov.au</u> after 30 May, 2014. Submissions can also be made electronically after this time.

During the display period you will be invited to make a formal submission to the Department of Planning who are the approval authority for the project.

There will be further community drop-in sessions along with a dedicated air quality forum during the display of the Environmental Impact Statement.

This date and location of the drop-in sessions and air quality forum will be announced and advertised in the next few weeks.

Further to your concern about the following statement: "Ventilation outlets on other road tunnels have shown impact on local air quality cause little, if any, increase in exposure for people living nearby."

The following links will direct you to air quality information and monitoring data for other road tunnel projects in Sydney.

http://www.lanecovemotorways.com.au/airquality.htm

http://www.crosscity.com.au/AirQuality.htm

http://www.rms.nsw.gov.au/roadprojects/autoupdate/m5eastcurrentairqualitydat a/currentdata.html

Further information about NorthConnex is available at <u>www.northconnex.com.au</u>. Regards

NorthConnex Project Team <u>www.northconnex.com.au</u> Project information line: 1800 997 057 (free call) Email: <u>enquiries@northconnex.com.au</u>

**Collection Statement** 

Transurban and the Westlink M7 shareholders respect people's privacy. Where you have provided your personal information to us in relation to the NorthConnex project, your personal information will be used solely for the purpose of providing you with information regarding the NorthConnex project, including to send you project and community updates. We may disclose your personal information to other Transurban Group entities and third parties working with us on the NorthConnex project for this purpose. Otherwise Transurban and the Westlink M7 shareholders will not disclose your personal information without your consent unless authorised or required by law. We will always take steps to ensure your personal information is kept secure and is handled in a way that is consistent with the Australian Privacy Principles. Our privacy policy explains how we collect, use and disclose personal information, including how to contact us with access or correction requests or if you wish to make a complaint about how your personal information has been handled. Our privacy policy is available on our website at www.transurban.com/privacy or you can ask one of the project information representatives to send you a copy by mail.

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#### From:

Sent: Monday, 12 May 2014 11:29 PM To: Enquiries NorthConnex Cc: 'The Premier of NSW'; 'Brad Hazzard'; 'Chantelle Fornari-Orsmond'; 'Dominic Crinnion'; 'Duncan McDonald'; 'Jennifer Anderson'; 'Lee Rhiannon'; 'Mehreen Faruqi'; 'Michael Young'; 'MLC Duncan Gay'; 'MP Barry O'Farrell'; 'MP Gladys Berejiklian'; 'Paul Fletcher'; 'Peter Duncan AM'; 'Pru Goward'; 'Richard Hammond'; 'Rob Stokes'; 'Alan Jones'; North Shore Times; Hornsby Advocate Subject: RE: Air Quality information please, do not defer to the EIS.

Dear Northconnex team,

Thank you for your response to my email, but there seems to be some confusion about my requests. I shall rephrase them, and hope to be clearer.

Context for the question: You have made the statement "Ventilation outlets on other road tunnels have shown impact on local air quality cause little, if any, increase in exposure for people living nearby."

My Question is: On what basis exactly do you make this claim?

This is not a future statement, this is a statement you have already made in public documents handed out at the information meetings. I'm not asking for the results of the studies done for the EIS. I want the data that backs up this 'pre-EIS' claim. This information must be readily available or you wouldn't have made such a sweeping statement in writing and in public. It would not be legally possible for a large corporation like yourselves to make such claims based on research that has not yet been done. It is poor form to publicly pre-empt the outcome of a study before it is carried out.

Request 2: Please forward this data in both digital and hardcopies of reports, both summaries and full details, research papers and data to support your claim. i.e. a snail mail version as well as an email.

Request 3: I have then asked you for a description of the comparative tunnels from which the data is sourced. This is where you are able to put in some words to cover any apparent anomalies in the data by describing how the tunnel surveyed differs from the Northconnex tunnel. I assumed the data is from overseas tunnels, but if you now believe that the existing Sydney tunnels are comparable, perhaps you can arrange for interested community members to visit one of the stacks at one of the Sydney tunnels. A Sunday afternoon visit would be great, and would answer a lot of questions.

You have referred me to the M5, Crosscity tunnel and Lane Cove tunnel data. I had viewed this information already, but your representatives at the public meetings were at pains to point out that the data for those tunnels was not applicable as tunnelling technology and design has changed considerably. This leaves me a little confused. You said not to look at M5, Crosscity tunnel and Lane Cove tunnel data, so I ask for the correct data, and you refer me to the data you said not to take note of.

Request 4: Please describe how the Northconnex tunnel is comparable to, or different from, the M5, Crosscity tunnel and Lane Cove tunnel, as far as Air Quality is concerned. This is a new request, aimed at resolving my confusion after receiving your response.

Request 5: I have asked you simply to define a word as used in your public documentation, as the meaning is vague, and I would like to understand correctly what you are saying. It's a simple word, "nearby". In the context of your literature, it should be very straightforward to assign a value to this vague word.

All these are reasonable requests in my view, and with a budget as large as the one assigned to this tunnel, there should not be any problem finding a new graduate who is able to gather the information and respond to this straightforward request. You did after all invite me to email if I "would like further information", see page three on <a href="http://northconnex.com.au/docs/Community\_Update\_3.pdf">http://northconnex.com.au/docs/Community\_Update\_3.pdf</a>

I look forward to having my question answered, and the information I have requested forwarded to me. Please do not defer to the EIS. That is not what this email is about.

Regards,

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Dear **Thank you for your email on 12.5.14** 

The air quality assessment will address the Director General requirements nominated as follows:

An assessment of construction and operation activities that have the potential to impact on local and regional air quality. The assessment should provide an assessment of the risk associated with potential discharges of fugitive and point source emissions, and include:

• details of the proposed methods to minimise adverse impacts on air quality during construction, particularly in relation to mobile plant.

• Air quality impact assessment and air dispersion modelling conducted in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2005) where there is a risk of adverse air quality impacts, or where there is sufficient uncertainty as to the potential level of risk, including a particle assessment addressing PM10 and PM2.5 values, consideration of impacts from dispersal of TSP, CO, NO2 and other nitrogen oxides, volatile organic compounds (eg BTEX), details of the proposed mitigation measures to address air quality in tunnels and in the vicinity of portals and any mechanical ventilation systems (ie ventilation stacks), including details of proposed monitoring.

• Consideration of the requirements of Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (enHealth, 2012).

The Environmental Impact Study will respond to these requirements, describing both the methodology and the results.

We acknowledge you have made several requests for immediate access to the results of the air quality assessment. This information will not be available until the Environmental Impact Statement is placed on public display.

In your earlier emails you mention your concern about the impact of the M5 on air quality in Sydney. A link to the M5 and other Sydney road tunnels was provided to assist you with access on-line information, not because this information is descriptive of NorthConnex.

Regards,

NorthConnex Project Team <u>www.northconnex.com.au</u> Project information line: 1800 997 057 (free call) Email: <u>enquiries@northconnex.com.au</u>

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requests or if you wish to make a complaint about how your personal information has been handled. Our privacy policy is available on our website at <u>www.transurban.com/privacy</u> or you can ask one of the project information representatives to send you a copy by mail.