

10 September 2014

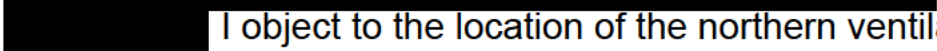
Director - Infrastructure Projects  
Department of Planning and Environment  
Number: SSI 13\_6136  
Major Projects Assessment  
GPO Box 39  
SYDNEY NSW 2001

**PLEASE NOTE: I have included my personal information as a form of introduction, as I believe it is beneficial in allowing you gather information regarding perspective and content. I DO NOT wish this information to be made public and request that it is blacked out, specifically my name, address and phone no. I am agreeable to my name being on a general list of submitters.**

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 object to the location of the northern ventilation being on the corner of Bareena and Woonona Ave, Wahroonga, for reasons listed below:

- I am concerned about the potential impacts to heritage items including:
  - Visual impacts
  - Economic impacts
  - Social impacts

One only has to see the isolated historic homes sandwiched between apartment blocks along the Pacific Hwy in the Upper North Shore falling to wreck and ruin, in order to witness the accelerated deterioration that loss of community and social fabric initiates.

- The perception of the area as synonymous with a pollution stack will discourage buyers, impacting property

prices, and subsequently, the motivation to maintain heritage listed buildings. Visibility of the stack will be a reminder of local air pollution. The heritage conservation areas on either side of the current stack location should be respected. The heritage chapter of the EIS has inconsistencies and in some cases uses out-dated significance assessments as the basis for investigation of impacts. In addition, the low legibility of the document, cross referencing to technical papers are not interpreted and difficult to read maps make it difficult to clarify points of confusion.

- I am concerned that the location of the northern ventilation for NorthConnex will impact negatively on the quality of air that I breathe, despite assurances by NorthConnex that there will be a net negligible impact.
- In July 2012, the WHO classified diesel soot as a carcinogen. Of particular concern to me is an association between impaired lung development in children and emissions from traffic. Particulates from tunnels and volatile compounds including benzene may produce an increased lifetime risk for cancer.
- All the health research indicates that young children are particularly vulnerable to exhaust emissions. Within a 1.5 km radius of the proposed stack, there are numerous schools, childcare centers/pre-schools. I would like to see precise numbers provided by the statisticians as to how many children attend childcare, preschool, K – Yr. 12, daily within 2 km of the northern ventilation stack, so that the risk factors for adverse health impacts on those most vulnerable are appropriately assessed.
- I am concerned that the many thousands living, working and attending school within 2km of the northern stack will be forced to bear a greater health burden to benefit those along Pennant Hills Rd. All citizens are of equal value and no child's health should be 'traded' for that of another.
- I am concerned that if the northern ventilation is approved in its current location the community will feel that their concerns have not been addressed. This in turn may lead them to think that they have no influence over their own exposure to air pollution, leading to anxiety, stress and

anger. This may be as detrimental to the health of my family as the stack itself.

- I am particularly concerned about ultra-fine particulates [PM0.1], which emanate from the combustion processes of diesel exhaust. Ultrafine particles, which are invisible to the human eye, are not monitored, as there is currently no compliance standard set for them. This regulatory gap in air quality monitoring needs to be closed before the community can be assured that these pollutants are not impacting health.
- There is extensive research showing health effects of PM10 and PM2.5, but as yet, limited studies of the effects of PM0.1, which are seen as being of most concern for their effects on health. I therefore feel that the State government has a duty to apply the Precautionary principle in relation to the stack location due to scientific evidence that has come to light in the past decade proving diesel emissions to be carcinogenic.
- I am concerned that this project is being rushed and Transurban have not undertaken a satisfactory health risk assessment. Residents in the area require the following information for postcodes Wahroonga 2076 and Hornsby 2077, to inform a base-line for comparing the current air quality situation with the NorthConnex project's projections of air quality impacts:
  - 2012/2013 asthma data
  - 2012/2013 lung cancer register data
  - 2012/2013 COPD data
  - AQI data (including PM2.5 and PM0.1) collected at the proposed sites for the portals and within 1km and 2km of the ventilation stacks.
- The proposed site for the northern ventilation is located in a valley making it particularly susceptible to morning inversion effects. There is a high possibility that stack emissions will be trapped underneath, exposing thousands of children and residents to air pollution above permissible levels whilst on their way to school and work. I am concerned that the ventilation stack will deposit a lot of the pollution in the same pattern, meaning the effects at ground level will be permanent and cumulative.

- I am concerned about the gradient at the northern portal. Fuel consumption is accelerated and emissions increase as trucks go uphill. A horizontal tunnel would be optimal for reducing the likelihood of accidents and emissions
- The height of the northern stack is 23M but only 15M above ground level. The air quality expert for NorthConnex has informed me that while a taller stack is optimal, the height was reduced to make it visually more acceptable to the community. He was nevertheless confident that 15M above GL was sufficient. I am concerned that the height is insufficient but in voicing this, Transurban may use it to their advantage and simply increase the height of the stack...so it is a no win situation.
- The nearest regional Air Quality Index (AQI) readings have been recorded at a sports field in Prospect and Lindfield, Prospect being approx. 20km away from the proposed location. These readings are not suitable as a benchmark for establishing the effects of the northern ventilation on air quality local to the proposed stack location. A local benchmark should be established to enable appropriate modeling of air quality changes.
- I have read that almost all conventional air dispersion-modeling approaches are not designed to look at any period shorter than an hour. Therefore they are not reflective of the impact plume of looping or downwash on a small area.
- I am concerned that current approaches to air monitoring may under-represent the impacts on health of ultrafine particles and the effects associated with the short-term experience of odor due to plume looping
- I am concerned that downwash in the wake of the stack may occur during periods of high winds; potentially dispersing undiluted tunnel emissions at ground level.
- The NorthConnex EIS appears to be quiet 'generic'. Dispersion modeling is not site specific. Local residents should be provided with area specific detailed information

on the proposed dispersal of NorthConnex pollution and ventilation methods before they can be fully informed of the health impacts of the project.

- I am concerned that Current dispersion models are not always accurate in their ability to assess dispersion from stacks especially in urban areas with differences in topography and levels.
- No clear evidence exists to show that monitoring such as that carried out to assess compliance with air-quality goals, can reliably predict the size, nature and course of adverse health impacts.
- This NorthConnex proposal will only add to the already poor air quality in this area, which already has a high exposure to air pollution due to being located at the M1/Pennant Hills Rd/Pacific Highway intersection. Currently, a greater percentage of traffic feeds from the M1 onto the Pacific Hwy in Wahroonga than left to Pennant Hills Rd. There is a high probability that NorthConnex will not solve this issue. I would like to see alternative solutions addressing this explored as well as area specific air monitoring of background ambient air.
- The 2011 census data shows the majority age bracket in Wahroonga to be between 0 and 14. The land size of homes and close proximity to many great schools attracts many young families who attend the multitude of schools within a 2km radius of the stack. Wahroonga, which is currently known for its leafy green streets and family demographic, will become synonymous with air pollution. It will destroy the lifestyle and heritage of this community. Concern regarding air pollution from the northern stack is not an issue that will simply 'go away', rather it will escalate in the years before and after the opening of NorthConnex in 2019/20, possibly affecting school patronage and eroding the family demographic of the area.
- In a study of the pollution affects of the M5 East tunnel (NSW Health, 2012), it was stated that the ventilation stack was an important source of air pollution in the area within a 2 km radius, contributing 23% of NOx and 17% of

PM10. Local residents have lobbied for several years to get improvements in the ventilation, and in the reporting of health concerns relating to the M5East. These ongoing health concerns place undue stress on families and communities. I would like to see NSW Planning not repeat past mistakes.

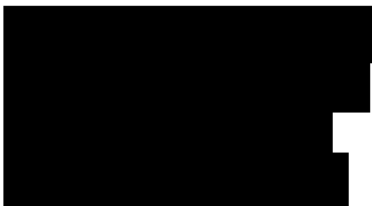
- There currently appears to be a contradiction in both state and federal government policy-making, given that in April 2014 the state and Commonwealth governments agreed to have a national clean air agreement in place from July 2016. This was to include tighter reporting standards on air pollutants. Given that NorthConnex is being designed/built with the knowledge that vehicular traffic is one of the main sources of air pollution in our cities, I would like NSW Planning to accept the science/studies of the past decade.
- To address my concerns, I request that the following actions are undertaken:
- I would like the OEH to NOT approve the project in its current design due to the impact it will have on the Wahroonga heritage conservation area. Alternative locations for the northern ventilation should be explored.
- I would like the OEH to perform a detailed assessment of the direct and indirect impacts the northern ventilation will have on the heritage listed homes and heritage conservation areas of Wahroonga, especially social, economic and visual impacts.
- It is known that a stack distributes the health burden of tunnel emissions. However, if the residential or workplace population near the portals is close to zero, then portal emissions may be preferable to stack emissions in a residential area. I would like to see alternative options explored, including extending the tunnel further north and perhaps using portal emissions in a non residential / bush area. I would like to see NSW Planning do an Independent Options Assessment to assess alternative locations for the northern ventilation stack and portals.
- I would like the State government to apply the

Precautionary principle in light of evidence that diesel emissions are carcinogenic and either filter the stack or relocate it to an industrial area, where it is further from schools.

- I would like to see precise numbers provided by the statisticians as to how many children attend childcare, preschool, K – Yr. 12, daily within 2 km of the northern ventilation stack, so that the risk factors for adverse health impacts on those most vulnerable are appropriately assessed.
- I would like the following information provided to residents in the postcodes of Wahroonga 2076 and Hornsby 2077 so that we may be informed as to a base-line for comparing the current air quality situation with the NorthConnex project's projections of air quality impacts,
  - 2012/2013 asthma data
  - 2012/2013 lung cancer register data
  - 2012/2013 COPD data
  - AQI data (including PM2.5 and PM0.1) collected at the proposed sites for the portals and within 1-km and 2-km of the ventilation stacks.
- I would like to see NSW planning undertake an independent assessment for the provision of filtration.
- I would like NSW Planning to NOT approve the project 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.

Thank you for your time

Yours Sincerely

A large black rectangular redaction box covering the signature and any accompanying text.

