

COMMUNITY VOICE



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community organization**

12th 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 our submission in response to the exhibition of the Environmental Impact Study for NorthConnex M1/M2 tunnel/s project.

We do recognise some points in favour of the tunnels in terms of reducing congestion and pollution on Pennant Hills Road and reducing the bottleneck effect of 21 sets of traffic lights. However, we advise there are some fundamental issues that just do not add up in terms of community and user health and insufficient in-depth accurate study and projections.

We strongly believe the NSW Government has a duty of care and must demand best practice methods and outcomes, especially for such long tunnels and particularly due to the location of the northern emissions stack amid dense population, together with the absence of filtration and the low height of the stacks. Our specific concerns include the following:

1. **Placement of the northern ventilation stack in the centre of a densely populated residential area in Wahroonga is an appalling precedent/practice and contrary to the precautionary principle and Government's duty of care.**
2. **To locate a short stack in a densely populated valley area that will expose over 9,000 school children, as well as multiple aged care facilities, hospitals, businesses and homes to concentrated pollutant particulates is an extremely bad if not unconscionable precedent.**
3. **The relatively short northern stack, in the valley location, will not extend above the temperature inversion level, so will inevitably logically result in the trapping of concentrated pollution particulates below the temperature inversion layer and subject the population to far greater health impacts.**
4. It is of equally great concern that In particular, **unfiltered ultrafine particulates, will do the most sustained damage to peoples lungs and respiratory system.** In particular children who breathe more/faster due to sporting exertion.
5. As stated by Professor (Dr) Richard Chard [Adult and Paediatric Cardiothoracic Surgeon and Clinical Associate Prof of University of Sydney Department of Surgery who practices among other places at the SAN Hospital]
 - **Concentrated unfiltered air over nearby communities is a widely known serious health issue based on longstanding medical research;** and
 - Serious lung contamination would be created for truck drivers & other motorists.

6. **Multiple large scale research studies that suggest the impacts of air pollutants on health are serious.** These include increased death from heart disease, increased risks of lung cancer, stroke, poor lung growth in children, increased asthma, and recent research suggesting low birth weight for pregnant women, increased autism, and congenital heart defects.
7. **The absence of filtration is especially dangerous due to the likely concentration of damaging pollution** (especially ultrafine particulates that do the most damage to lungs and respiratory system).
8. **The most damaging scenario in health terms is through repeated or prolonged ingestion exposures** - both for surrounding residents and motorists and truck drivers during repeated tunnel use and/or traffic stoppages.
9. **Though satellite based modeling has been used, it does not present sufficiently accurate 3-D detail. Far greater topographical and microclimatic detail is required** to ensure NorthConnex and the Government observe a best case level of duty of care, given the placement of the northern stack in a densely populated residential area.
10. **Amateur weather stations located in or near Wahroonga** have been checked and these strongly contradict general wind and weather assumptions made.
11. **Using data gathered at distant locations is simply inaccurate and unacceptable.** By comparison, in a legal scenario, this detail would be considered inadmissible. As a result, there is a strong suspicion in the general community that the data is being “fudged” to create a plausible illusion of acceptability.
12. Many engineers, doctors and members of the community have been stressing **accurate topographical and meteorological data is absolutely essential.**
13. **Health impacts must be independently modeled and assessed** in relation to the current NorthConnex option.
14. The NorthConnex development should be subject to **a condition of approval for post installation testing.**
15. **However, the best and simplest solution is to move the exit/entry point further north,** to allow a more level entry/exit that will greatly reduce vehicle.
16. Health studies must be implemented over a sustained period of years if not decades.
17. **The lessons of the M5 and Epping tunnels must be learned.** Also, best practice examples from around the world, including Japan which has many tunnels and hence has accumulated a great deal of knowledge and expertise in this regard.
18. **Portal Emissions:** The current ventilation plan involving portal emission avoidance by reversing the flow within a short distance of the portals by using reverse fan direction and then scavenging the emissions to be directed up the stack, is questionable even at low traffic volumes and low pollution levels.
19. The combination of realistic estimation of pollutant load and the surrounding traffic congestion likely to be common at both ends of the tunnel, combined with low wind and temperature inversions during peak hours particularly, means that **portal emissions are likely to occur.** If they do so they are **likely to cause serious exposure to the local population around the portal.** Given the demonstrated toxicity even at low concentration of the M2.5 microparticulates (let alone ultrafines, NO₂ and CO), underlines **the need for portal emissions to be eliminated under all conditions for protection of the local communities.**
20. **The option of an orbital road from approximately Richmond to the Central Coast would be the most ideal option.**

Associated Problems:

21. **The Duffy Avenue/Sefton Road/Chilvers Road/The Esplanade route is the main well-used back route** between Hornsby and Pennant Hills.
22. **The location of the Thornleigh NorthConnex depots will therefore greatly hamper traffic in the area. The impact of 300 workers cars** as they arrive and depart for their shifts **will be substantial.**
23. **A detailed traffic plan covering the Thornleigh sites and their surrounding locality needs to be made**, to be carefully formulated by traffic consultants who are familiar with the area.
24. **The unintended impacts on the adjoining local traffic networks must be thoroughly gauged. Moderation of impacts** of traffic, dust and noise during the preparation, construction and operation of the two Thornleigh sites at Trelawney Street and Pioneer Avenue **will be necessary.**
25. Proximity of the Duffy Avenue/ Pennant Hills Road intersection to the Trelawney Street Tunnel Support Facility and the Pioneer Avenue Site Compound has the potential to make current traffic problems in the area much worse
26. Intersection of Pennant Hills Road with Duffy Avenue is already a bottleneck intersection. Any additional traffic banking up in Duffy Avenue could severely affect residents leaving Westleigh. Egress of traffic turning right out of Duffy Avenue onto Pennant Hills Road is already problematic during peak hours caused by traffic travelling south blocking access to the intersection. Due to the bank up, vehicles turning out of Pioneer Avenue onto Duffy Avenue have visibility and exit problems, especially during peak hour. Pennant Hills Road needs to be marked "keep clear" - up to Trelawney Street.
27. Pioneer Avenue - Car park for workers vehicles
The access/egress impact of trucks during the demolition of selected buildings could cause difficulties. There is no spare street parking during the day in Pioneer Avenue. The idea of entry to the site via Pioneer Avenue and exit via Lymoore Avenue is a possible solution but potential congestion at the Lymoore Avenue/Sefton Road intersection needs to be thoroughly investigated.
28. **We recommend you refer to the Thornleigh Neighbourhood Residents Group submission offering recommendations to moderate the considerable impacts.**

In summation, due to the significant health concerns of the current project design, we respectfully urge the Department of Planning does not approve the project in its current form.

Further, we strongly urge that at the very least an alternate northerly location for the ventilation stack be established, perhaps in the less critical industrial area north-east of Hornsby CBD. This area would allow a lower gradient and pollution output - well away from dense residential areas, schools, day school centres, multiple aged care facilities, hospitals, businesses and homes. We think it likely that not relocating the northern stack could be considered by many in the community, a dereliction of duty in terms of health outcomes and future costs.

Community Voice – Hornsby Shire
Per - Kim Mullins, Convenor
PO Box 2158
Hornsby Westfield, NSW 1635
kmullins@aapt.net.au