

SUBMISSION 2: ADDITIONAL CONCERNS IN RELATION TO THE PROPOSED NORTHCONNEX TUNNEL

Application number - SSI 13_6136

This is an objection to many aspects of the proposed NorthConnex tunnel.

1 THE LOCATION OF THE NORTHCONNEX SOUTHERN VENTILATION FACILITY

A simple search of the NSW Land and Property Titles and confirmed by the Hills Shire Council, revealed that the RMS owns FOUR blocks of land in the exact position where the Stack needs to be. Speakers at the NorthConnex Air Quality Forum spoke of the importance of the topography in the placement of the ventilation facilities. In the NorthConnex proposal the southern ventilation facility is at the lowest point of the M2 intersection where it is surrounded on three sides by hillside cuttings. In this location the “discharge point” will barely be above the adjacent high ground. **This is NOT the most suitable position for the outlet when land that is more suitable is already owned and available.**

Requirement 1:

That the Government ensures that the southbound ventilation facility ie the Stack, be properly filtered and located at the south-west corner, on the RMS owned land, at the edge of the Pennant Hills Golf course. In this location, the southbound tunnel can be efficiently, effectively and economically filtered and ventilated.

2 LESSONS LEARNED FROM THE PROBLEMATIC M5 EAST TUNNEL

The M5 East tunnel has been described as one of the dirtiest tunnels in the world. NorthConnex has decided not to filter the Pennant Hills twin tunnels as it ‘did not represent value for money’ basing their argument on the \$65 million cost of the M5 system. Clearly the \$65 million cost of the installation in the M5 does not provide any guidance as to the likely cost of a system such as would be appropriate for the NorthConnex tunnels. The problematic M5 East filtration system DOES NOT mean, that State and Federal Governments allow the proposers of this unsolicited bid to have no filtration system at all. What it SHOULD mean, is that in the interests of Australian citizens’ health, well-being and safety, the Government requires Transurban to investigate systems that are working more effectively, efficiently and cheaply in other countries.

Requirement 2:

That as a condition for any further progress in the planning process, Transurban must be required to issue an international registration of interest by suitably qualified and experienced filtration suppliers for the design, supply, installation and commissioning of an efficient filtration system for the NorthConnex tunnel.

Sufficient of the results of the registration should be made public to enable an assessment of the actual cost and likely impact of the use of such equipment on both the economics of the tunnel operation and its long term health and environmental impacts.

3 THE CASE FOR FILTRATION OF SYDNEY TUNNELS

- There are **no safe levels of exposure to diesel emissions** which are a Group 1 carcinogen.
- Governments, both state and federal, have a duty of care to the public.
- The precautionary principle of duty of care to the public health must be regardless of cost.
- Medical evidence is overwhelmingly clear that long term exposure to air pollution increases death rates;
- Exposure to particulate pollution is associated with reduced lung function growth in children which persists into later life, even when exposure stops. The damage for growing lungs is permanent.^{1/2/3}
- Exposure to traffic-related air pollution during pregnancy and during the first year of life is associated with autism.
- There is an overwhelming amount of documented medical evidence on the adverse effects of air pollution on human health

¹ Dockery DW, Cunningham J, Damokosh AI, et al. Health effects of acid aerosols on North American children: respiratory systems. *Environ Health Perspect* 1996; 104: 500-505.

² Raizenne M, Neas LM, Damokosh AI, et al. Health effects of acid aerosols on North American children: pulmonary function. *Environ Health Perspect* 1996; 104: 506-514.

³ Spengler JD, Koutrakis P, Dockery DW, Raizenne M, Speizer FE. Health effects of acid aerosols on North American children: air pollution exposures. *Environ Health Perspect* 1996; 104: 492-499.

Filtration is best practice. Filtration provides identifiable health benefits. Filtration systems are operating successfully in First World countries and they can equally successfully operate in Australia. Care for the welfare of its citizens is the mark of a progressive society. Governments set the standards of a progressive society; these high standards appear to be lacking in this Unsolicited Bid, and this needs to be addressed.

Requirement 3:

That Air Filtration Systems must be included in this twin tunnel proposal;

In addition, this project must be forced to comply with the National Plan for Clean Air recommendations when they are introduced in late 2014.

4 PROPERLY DESIGNED FILTRATION SYSTEMS

The first basic ventilation (transverse) system for highway tunnels was installed in the Holland Tunnel in the America in 1927. The transverse design has been regarded as the safest and most reliable ventilation system for decades.

If you examine the results from well-considered, well-engineered filtered tunnels in Norway, Japan and Spain, their assessments indicate particulate matter removal of greater than 80% up to 95%+. Why do we not bring in overseas expertise as appropriate? Furthermore, there are modern designs that indicate that a properly filtered, longitudinal air filtration system could make the process more efficient and cheaper. Why do we not learn from relevant overseas experience? That does NOT mean New Zealand expertise where the population and road traffic is neither comparable nor relevant.

Of particular note is the fact that First World countries are continually striving to improve the percentage of air pollutants removed from their tunnels using a combination of ventilation and filtration. Why is the State of NSW and Australia satisfied with merely dispersing the pollutants rather than removing them? Why is the Australian Government satisfied with standards that do not appear to be comparable with those used by technologically advanced countries?

Requirement 4:

That Australia investigates expertise and technology in countries where they have been successful in removing 95% of harmful emissions.

That Ventilation Facilities at both the northern and southern intersections **must be** filtered using this modern technology.

5 ONGOING MONITORING OF SURFACE AIR QUALITY AT THE TUNNEL PORTALS

Given the experience of the M5 East Tunnel, the decision to monitor air quality on the surface along Pennant Hills Road for only 12 months (particularly in the vicinity of the portal exits), clearly needs to be revisited as does transparency around the results. It would be cheaper if the air monitoring system was set up on RMS land at both interchanges and at the two emergency facilities at Wilson Road and Trelawney Street. The system could be easily automated and therefore ongoing if on RMS land.

NorthConnex are happy to state loudly and frequently that OVERALL the air quality along Pennant Hills Road will be improved but we reiterate our contention **that a decrease in diesel emissions from location 'A' should not mean an increased concentration at location 'B', particularly given that the World Health Organisation (WHO) listed diesel emissions as a Group 1 carcinogen.**

Requirement 5:

That independent, on-going monitoring of air quality around the tunnel exit portals must be undertaken for the life of the tunnels, to ensure that the air quality remains of the highest standard. This will guarantee that the long term health effects of the tunnel can be appropriately assessed.

6 FLOODING PROBLEMS DOWNSTREAM OF THE SOUTHERN INTERCHANGE – IMPACT OF THE WATER TREATMENT PLANT

A further concern is the potential impact on those properties downstream of Blue Gum Creek. A number of properties already have flooding problems when there is excess rain. Clarification needs to be provided regarding the volume of water that will flow into Blue Gum Creek from the water treatment plant adjacent to the Southern Stack.

Will the water leaving the tunnel storage plants be absolutely pollutant free? What guarantees are there? Who will be responsible for monitoring the purity of the water discharged from the storage treatment facility downstream?

Requirement 6:

That an independent organization should monitor the toxicity of the water and the rate at which it is released into Blue Gum Creek.

Every care should be taken to avoid flooding the homes located close to the creek.

7 SOUTHERN INTERCHANGE - DETENTION BASIN: LISLE COURT RESERVE

The RMS are in the process of compulsory acquisition of the Public Reserve on the Northern side of the M2 behind the residences of Lisle Court and Savoy Court, West Pennant Hills, (Lot 15, DP 841778), for the purpose of extending the detention basin on the Western end of the Reserve.

This Public Community facility is well used by local residents and their children for numerous activities. It is valued for being separated from local roads with access only via two pedestrian laneways and is therefore safer, particularly for small children.

Requirement 7:

That any extension to the existing detention basin must be minimised as far as possible so that it does not unduly encroach on this Council Reserve. Furthermore, it is imperative that the residual land, after completion of the works, is not denied to the local community.