

Director – Infrastructure Projects  
 Department of Planning and Environment  
 Major Projects Assessment  
 GPO Box 39  
 SYDNEY NSW 2001

**NorthConnex Application Number: SSI 13\_6136**

This is a submission in response to the EIS on exhibit by NorthConnex preferred contractor Lend Lease Bouygues joint venture.

I object to the project as described in the EIS. I am a resident of Wahroonga and my home is about 50 meters from the proposed northern portal and ventilation stack of the NorthConnex tunnel.

I am concerned about the impacts on health of the local community by the tunnel emission and noise generated by ventilation turbines in the stack as follows:

1. The 9Km NorthConnex tunnel has only two ventilation stacks at the two portals at both ends. The emission from 9 Km traffic is dispersed through the ventilation stack and at the exit portal continuously round the clock, non-stopping into the local area. I am concerned that the large amount of pollutant emissions in hundreds of tons by a faulty design will have a permanent hazardous effects on the environment.
2. The proposed northern ventilation stack and portal is located in the centre a densely populated residential area in Wahroonga. It is in close vicinity to homes, schools, age care facilities, parks and local business. The stack and portal to the closest home is less than 100 meters. The local community including residents, school children, and local workers will be exposed to the continuous emission from the tunnel stack and portal.
3. Large scale research studies suggest that air pollutants have a hazardous impact on human health, including increase death from cardiovascular diseases, increased risks of lung cancer, induced asthma, autism, poor lung development of children, low birth weight for pregnant women and congenital heart defects.
4. The NorthConnex project claims that it aims to divert at least 5,000 heavy duty trucks from the Pennant Hills road to the tunnel. World Health Organisation has found that the emission from the diesel engines of the trucks are carcinogenic and also contain fine particulates which penetrate deep and causing health issues when breath in by human. I am concerned that the more successful of the NorthConnex to divert more trucks into the tunnel, the more hazardous the tunnel emissions will be.
5. NorthConnex claims there will be no portal emission. I am concerned that this cannot be verified and there is no monitoring. Should it happens, the portal emissions will remain at ground level, and the local residents will be exposed to high concentrated pollutants.
6. In order to keep the air quality within the tunnel within the acceptable level, large volume of air have to be pumped out through the ventilation stack. I am concerned that the intake of fresh air in the tunnel is not adequate along the 9Km tunnel as fresh air is drawn into the portal by vehicles and moved along the tunnel by tunnel jet fans. There is no fresh intake of air along the tunnel other than the entrance portal, the further inside the tunnel travelled, the more pollutants generated by the vehicles, as there is no dilution by fresh air. Besides, NorthConnex claims that tunnel remissions are propelled through the stacks for dispersion in the atmosphere. I am concerned that in order to be effective, powerful turbine engines (similar to jet engines)

may have to be used and these will create unacceptable noise pollution for the residents in vicinity to the ventilation stacks.

7. NorthConnex provides modelling of the northern stack in the EIS. There are multiple flaws in the modelling, including:
  - a) Extrapolation of meteorological data from weather stations which never simulates the local meteorology, topography in particular the valley terrains of Wahroonga.
  - b) The background air quality data were based on Lindfield and Prospect instead of local locations and this is non-scientific and unconvincing with a high margin of errors.
8. NorthConnex claims that applying filtration for stacks is ineffective to reduce the pollutants. Have they investigate and collect enough data from tunnels with filtration stacks to support their claims? I am concerned that the claim is not well proved and unconvincing.
9. NorthConnex claims that some ventilation stacks in Australia are very close to residential areas and poses no health issues. However, NorthConnex does not provide adequate data based on continuous monitoring of the health impacts to local residents, and also the difference in design and quantity in emission volume of various stacks comparable to the present design.
10. I am concerned that the NorthConnex current design considers cost effectiveness in priority to environmentally responsibility as well as long term impacts.

To address my concerns, I request that the followings have to be undertaken:

1. The air quality and human health impact assessment need to be reviewed and revised to address the issues raised above.
2. An independent process should be undertaken to assess the relocation of the ventilation stacks and portals away from densely populated areas.
3. An independent assessment on the provision of filtration in stacks to determine whether this should be included in the design.
4. An independent assessment of the ventilation system to ensure that the air quality within the tunnel is acceptable and NorthConnex's claim of no portal emission can be justified.
5. Portal emission from NorthConnex should be banned as condition of approval.
6. Continuous monitoring of air quality and health impacts on local community including residents, business workers and school children in the vicinity of the ventilation stacks should be included as condition of approval.
7. The Submission Report be exhibited to allow the community to respond to the revised information contained in the Report.
8. The Department should not approve the project in its current design as it does not meet the standards of Ecologically Sustainable Development as required by the Environmental Planning Assessment Act.

Submission by:

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