

12 September 2014

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

Via online form:

[http://majorprojects.planning.nsw.gov.au/index.pl?action=view\\_job&job\\_id=6136](http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6136)

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

My submission to the NorthConnex EIS is below.

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

I am particularly concerned about the health impacts from air pollution associated with tunnel exhaust stacks and portals in built up suburban areas. My concerns extend to other planned tunnels including WestConnex.

The negative health effects associated with air pollution are well-documented as are the health effects associated with diesel fuel. Of particular concern is the health of the elderly, young children and people with chronic conditions.

I note that prominent members of the medical community have spoken out about the health effects of air pollution and some have particularly identified potential health concerns associated with NorthConnex.

Specifically I am concerned about:

1. Placement of the northern ventilation stack in the centre of a densely populated residential area in Wahroonga, where 9,300 school children will be exposed, as well as multiple aged care facilities, hospitals, businesses and homes.
2. The placement of the northern ventilation stack in a valley in Wahroonga where there are often low wind speeds, which will result in poor dispersion and exposure to community to high levels of tunnel emission.
3. I am highly concerned about the 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. These studies confirm air pollutants have prothrombotic and inflammatory effects on humans which cause the above health problems.
4. I am concerned about the project including future provisions for portal emissions in densely populated areas, which will result in emissions remaining at ground

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level, and hence exposing the local population to pollutants. I am also concerned that NorthConnex's claim that there will no portal emissions from current proposal cannot be verified.

5. I am concerned about the large amount of diesel emissions which will be emitted from the NorthConnex tunnel, as it is being designed for heavy freight to bypass Pennant Hills Rd. 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 and remain there causing inflammation.
6. I am concerned about the air quality within the tunnel which is shown in the EIS to have exceedences above standards for pollutants such as NO<sub>2</sub>, and haze from particulate matter at the ends of the tunnel.
7. I am concerned about the 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<sub>2.5</sub>
8. I am concerned that a full and transparent options assessment process was not undertaken to assess alternative designs for the project. Unlike other tunnel projects in Sydney there are alternatives for locating the stack and portals in non-residential areas.
9. I am concerned that the justification for not providing filtration for the stacks is cursory and unconvincing.

To address my/our concerns I request that the following actions are undertaken:

1. The air quality and human health impact assessment need to be revised to address the issues raised above.
2. An independent options assessment process should be undertaken to assess alternative locations for the ventilation stack and portals.
3. To undertake a Life Cycle Analysis and assessment for the provision of filtration
4. A long term health study on children and residents in areas impacted by stack discharges be included as part of the conditions of approval.
5. A comprehensive air quality monitoring program is developed and implemented.
6. An independent review of the ventilation system is undertaken to ensure that NorthConnex's claim of no portal emissions is justified.
7. Portal emissions from NorthConnex in the future are banned.
8. The Submissions Report/Preferred Project be exhibited to allow the community to respond to the revised information contained in the report.

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9. The Department does 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.