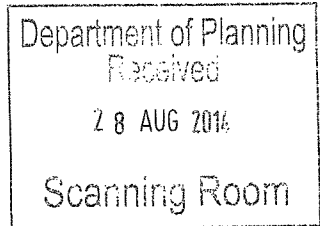


26 August 2014

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



Dear Sir/Madam

NorthConnex Application Number: SSI 13_6136

Please find below our submission in response to the exhibition of the EIS for NorthConnex.

Whilst we are supportive of the Governments intent to improve the operation of our road network and in general a proposal such as that of NorthConnex, we would like to state we object to the project as it is currently described in the EIS.

We have a high level of concern regarding the following issues and request that these be considered by NorthConnex and the Department of Planning. In regards to the NorthConnex tunnel, 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. We are 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. *We believe evidence of this is during recent rains, there has been a high level of black "carbon like " dust deposited on flat surfaces around our property. We suppose the source of this is existing particles originating from current road traffic along the existing freeway.*
4. We are concerned about the project including future provisions for portal emissions in densely populated areas, which will result in emissions remaining at ground level, and hence exposing the local population to pollutants. We are also concerned that NorthConnex's claim that there will be no portal emissions from current proposal – *how can this be the case unless extraction fans are ran*

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continuously at optimum speed and a negative pressure relative to the pressure outside the tunnel portal is maintained in all conditions? At this stage this cannot be verified and detailed wind tunnel trials of fully functionally scale models would be required to conclusively demonstrate this under a range of changing weather/atmospheric conditions.

5. We are 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. We are concerned about the air quality within the tunnel which is shown in the EIS to have exceedences above standards for pollutants such as NO₂, and haze from particulate matter at the ends of the tunnel. We are aware that other smaller road tunnels in Sydney experience similar problems. We are *also very aware that several tunnel operators run the tunnel extraction fans at less than optimum speed or configuration to save power cost and this exacerbates the problem.*
7. We are 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) *Does modeling accurately reflect the normal and minimum operating configuration of extraction fans that will be ACTUALLY used by the tunnel operator.*
 - e) the background air quality being based on air quality at Lindfield and prospect and the lack of any actual data on PM_{2.5}
8. We are 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. We are concerned that the justification for not providing filtration for the stacks is cursory and unconvincing.

To address our concerns we 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, *including actual modes of operation of extraction equipment by the operator in all weather and traffic conditions.*
2. An independent options assessment process should be undertaken to assess alternative locations for the ventilation stack and portals. We would prefer the

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- proposal to extend the tunnel and move the portal north along the existing road route of that currently proposed and achieve an "at grade" solution.
3. To undertake a Life Cycle Analysis and assessment for the provision of filtration. *We would strongly support the fitting of a suitable filtration system to the ventilation stack regardless of location.*
 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 *and that a specific bond or insurance policy be established to insure against any long term health impact and compensation for residents who might be impacted. The operator be required to warranty that there will be no adverse health effects during the life of the tunnel on residents living in proximity to the tunnel stacks or portal.*
 5. A comprehensive air quality monitoring program is developed and implemented. *Minimum standards are set for the safe operation of the tunnel*
 6. An independent review of the ventilation system is undertaken to ensure that NorthConnex's claim of no portal emissions is justified. *The reviewer provides the appropriate level of "reliability" to underpin the reviewers findings, including warranties.*
 7. *Minimum operating standards/procedures be defined for the operation of the tunnels and stack associated extraction systems to guard against less than optimum operation by the operator to reduce OPEX.*
 8. *Unfiltered Portal emissions from NorthConnex in the future are banned.*
 9. The Submissions Report/Preferred Project be exhibited to allow the community to respond to the revised information contained in the report.
 10. 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.

Yours sincerely



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