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

34 Karril Avenue
Beecroft
NSW 2119
10/9/2014

Dear Sir / Madam,

PROPOSED NORTHCONNEX M1 / M2 TUNNEL PROJECT - Application Number - SSI 13_6136

I **object to many aspects of the NorthConnex M1/M2 Tunnel proposal**, *however I am in favour of the tunnel, but wish to raise the follow issues.*

1. Traffic Issues

General

There is no doubt that there will be an increase in traffic and greater traffic congestion during the construction phase of this tunnel system. These suggestions are put forward to ease an almost impossible situation. *As I live in Beecroft I have not concentrated on the Northern exit situation.*

Condition of Trucks

The critical nature of the numerous trucks that will be using the vital transport arteries of the M2, Pennant Hills Rd, etc means that every endeavour must be made to prevent breakdowns and accidents. Not a day goes by that there is not a truck breakdown on Pennant Hills Rd. Some would say that there are more than five (5) per day, the economic cost can be calculated by others but it is substantial.

The haulage of spoil will extend over many (3/5) years and kilometres involving more than 1,500 extra trucks/vehicles on the road. RMS should be able to insist that in the haulage contract(s) that only brand new trucks or trucks less than 1 year old be used on this project, no trucks older than 3 years (or less) be allowed on the project. Naturally being a RMS project very strict monitoring of truck condition would be a given.

Cement Trucks Supply for Tunnel Lining, Roadway, etc.

If it is not already covered in the huge amount of paper work that NorthConnex has generated. I believe that all cement should be mixed on site(s) to minimise the amount of traffic. Naturally small sites such as Coral Tree Drive, Pioneer site (next to a Cement plant), etc would not fall into this category. Obviously bulk supplies of sand, cement, etc would need to be delivered to sites.

Pioneer Ave Compound

Pioneer Ave and Duffy Ave is a bottle neck NOW. The distance between Pioneer Ave and Pennant Hills Rd along Duffy is too short to clear traffic. I suggest some alternatives (none very satisfactory):

- No access or egress from Pioneer Ave into the NorthConnex Compound
- Use of additional (temporary) coordinated traffic lights Pioneer/Duffy intersection
- Is it possible to add slip lane from Duffy Ave turning north into Pennant Hills Rd
- Better coordination between existing Duffy Ave and Phyllis/Loch Maree Ave traffic lights

Trelawney St Compound

The solution of routing North bound trucks into Phyllis Ave seems to be fraught with danger and delays to an already choked Pennant Hills Rd.

Wilson Rd Compound

The current traffic plan is not a very satisfactory solution but it may be the best given the location of Wilson St Compound. If after spoil locations are finalised trucks have to travel south, a temporary set of coordinated traffic lights could be a safety measure at Wilson St Compound exit for trucks crossing three lanes of a busy highway.

Southern Interchange Area

The current traffic plan turns the Copeland Rd, Eaton Rd and Pennant Hills Rd into a congestion point with few solutions. I understand that NorthConnex is reviewing the construction traffic from this location.

Obervations I would make are:

- It is beyond belief that the project would route trucks/vehicles (106/48per day) through suburban streets that are already full with “rat run” traffic.
- To partially unclog the Copeland Rd intersection I suggest temporarily closing Copeland Rd to all traffic at Pennant Hills Rd. This traffic would be routed via Beecroft Rd, Hull Rd, Hannah St or Cardinal Ave.

2. Air Quality

This is without doubt the weakest link in the whole EIS process.
This EIS has all the hall marks of a rushed project:

- The rush is politically driven.
- The rush is to fulfil the wishes of our Prime Minister to be known as “The Infra structure Prime Minister” (his words).
- The rush is to make the current state Liberal Government seem to be the go ahead state government of Australia just before a March election.
- It was obviously issued before the project was ready (observe all the changes, unknowns and make it up as we go).
- It is hard to tell who is the father of this half cocked proposal, Is it NSW Now The new state of business”, Transurban, or the Australian Government? Somehow the M7 crowd have a foot in the door!

The main problem stems from an unbending/inbred mindset of the old RTA squad’s obsession with NO FILTRATION, it goes without saying that they stuffed up on the M5, the long term health results of the other shorter tunnels are yet to emerge. **It would seem that RTA should be before ICAC for some of the dirty deeds they have engaged in over filtration.**

Observations I would make (I have not been privy to their modelling) include:

- Modelling is proving to be notoriously unreliable, refer Climate Warming modelling for one outstanding example; it changes monthly with or without peer review. RTA’s modelling on M5 set world records for inaccuracy.

- Details of connecting the southern tunnel exhaust via a small tunnel under Pennant Hills Rd seem sketchy, design on the run of a half cooked project to meet political/financial issues.

- No mention is made of dangers from fine particulates (less than 2.5microns) that can be breathed into the lower part of the lung and because of its small size transfer to the blood stream and cause serious health issues. Imminent groups of doctors are warning about this problem. There is no rebuttal from NorthConnex. Will filtration catch these extreme fine particles? It is accepted scientifically and medically that there are no safe levels of diesel emissions which are a Group 1 carcinogen.

- Claims that overall vehicle emissions are improving enough to allow the proposed stack arrangements do not stand up to logic, past experience or common sense. The concentrated pollution of a 3 lane 9 km tunnel is now to be redistribution in a limited area around the stacks with variable success depending on many factors such as terrain, stack height, wind speeds and direction.

- Despite legislation, control of vehicles that emit excess emissions are very rarely policed, it is only now that M5 is using cameras to detect vehicles that are obviously flouting emission limits. No meaningful tests are performed on all new cars at point of sale or old cars at registration to ensure they meet the applicable standards. How was this covered in the modelling?

- NorthConnex claim that their "design was not possible a decade ago", well the jury is still out on that hyperbole.

- Air Quality Information Page 4, Point 1 One of their prerequisites (starting points) is to "ensure good quality air within the tunnel". At the Southern end "fresh" air input to the northern tunnel will be mixed with polluted air from the southern stack under certain conditions. Note that the NorthConnex EIS indicates a 30% increase in pollution {0.13 v 0.10 ug/m3} at the Southern ventilation outlet compared to the Northern Stack (refer Figure 8 & 9 of Air Quality Information) after the tunnel is in use (2029).

- Air Quality Information Page 4, Point 2 Requires "effectively disperse pollution higher in the atmosphere than the road side". The EIS does not prove that the now 9km concentrated pollution will be effectively dispersed (under all condition) high into the atmosphere to meet best practice requirements. Others will nominate the hospitals, schools, old people's homes etc that will be affected.

- Air Quality Information Page 4, Point 3. It does not say how high the pollution will be sent up into the atmosphere from the stacks, or likely worse case dispersion patterns or what is their standard for "highly diluted and have a negligible impact to local air quality". What is their definition of "local"? Yes late information claims exit speeds of 19m/s or 70km/h.

- Much is made of the intention to discharge the polluted air through the stack at 13 – 19m/s. Given that the stack is only 15m above Pennant Hills Road, calculations indicate that the particles will be ejected to a height of between 23m and 33m above Pennant Hills Road. That will only be sufficient for them to be dispersed by prevailing winds if there is wind and it is strong enough. The weather history graph showing the wind speed and direction at West Pennant Hills measured on the 24th August 2014 indicated

  - that there was no wind until 9am and
  - what wind there was, came from the west.
  - Wind speeds of less than 2m/sec (i.e. about 8km/hour) are not considered sufficient to disperse pollution from the stack. Only a very few gusts on this day were in excess of 8km/hour.

- [redacted]

  The EIS does **not contain all** available information that is relevant for a fair assessment and understanding of the project, and it is more than misleading **– it is patently incorrect.**

- Air Quality Information Page 5 Figure 6 The use of 2008 data is too old; they inform us that their consultants are on top of all pollution issues, they are using data 6 years behind the times. It is good but dated background information only. The berthing of cruise ships at Balmain (where there is no power) requires the ships to constantly run their diesel generators, (filtered?). Domestic solid fuel burning would be far less with Heat Pump air conditioning that cools as well as heats, gas water heaters replaced with solar. Mischievous at best.

- Air Quality Information Page 5 It is inconceivable that the EIS reflects or meets the Health Assessment Guidelines. The EIS makes great store on the point that future pollution will be less along Pennant Hills Rd than the present. It is bleedingly obvious that if you concentrate all the existing pollution at either ends of the tunnel there will be less pollution than at present at say Thornleigh. It is the sort of pap that you feed to the non thinkers.

- Air Quality Information Page 6, Figure 7 uses 2029 as a reference year, i.e. 15 years out, how did they model this? Most vehicles may be powered by hydrogen in 2029. Not very useful information addition to the conversation unless you want to obfuscate the real issues, extremely mischievous.

- Air Quality Information Page 7, NorthConnex claim they will monitor air quality for "a minimum of 12 months" before and after the tunnel goes into use, this is not good enough considering the health implications. It should be permanent to meet best practice.

- Air Quality Information Page 8 Here we have the greatest lie of all. "Filtering technology ... would not deliver any measurable benefits to the surrounding community". Currently the proposed Northern and Southern locations ends of the tunnel receive a small percentage of the pollution the Pennant Hills Rd. Under NorthConnex's proposal 100% of concentrated pollution of the 9km tunnel in one direction is to be emitted via the very low stacks at either end. If filtration was added (depending on its quality) a very large percentage of particulates would be trapped at the base of the stacks and not exhausted into the surrounding community. This filtered pollution would be collected and disposed without adding/redistributing air born pollution.

- NorthConnex are fond of making statements such as "Tunnels do not create new emissions". Most thinking soles would not make such an unqualified statement. NorthConnex do not qualify their statement that their unique tunnel design concentrates and emits the pollution, admittedly diluted with some "fresh" air input under three differing scenarios to the two ends of the tunnel. They do not go on to guarantee no adverse health effects to citizens living "near" the exhaust stacks or drivers in the tunnel. In fact the very high usage of electricity will increase pollution at other locations.

- **Composition of Particulate Matter and its Effects on Health**

✓ For Minister Duncan Gay to give us statistics saying that 7% of particulate matter comes from vehicles and 50% comes for wood fire heaters is mischievous in the extreme.

✓ What is missing in the NorthConnex EIS and public debate is the fact that not all Particulate Matter has the same chemical composition.

✓ Diesel exhaust is a mixture containing over 450 different components, including vapours and fine particles coated with organic substances. Over 40 chemicals in diesel exhaust are considered toxic air contaminants overseas. Exposure to this mixture may result in cancer, respiratory effects, and other health problems.

✓ Weight-for-weight diesel particles are more than 40 times as carcinogenic as tobacco smoke.

✓ In June 2012 the WHO declared diesel fumes to be a Level-1 Human Carcinogen i.e. proven evidence of carcinogenicity in human beings http://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf

✓ What is happening at the exit portals and stacks of all Sydney tunnels is morally wrong. Passive smoking is banned in public spaces and in cars where children are present, but a substance that is 40 times more carcinogenic is being allowed to spew out over Sydney suburbs where children run and play.

✓ The argument that the polluted air is being sent up into the atmosphere to be "dispersed" means that this substance, which is 40 times as carcinogenic as tobacco smoke, is being spread over the whole of Sydney. Given that it is acknowledged that there are no safe levels of exposure to diesel emissions, this is a disgraceful indictment on Australian governments both State and Federal.

Requirement 1

- That NorthConnex is made to investigate the best quality air filtration system using the latest in world class technological design and to install this system in all four ventilation outlets of the M1 – M2 twin tunnels. i.e. Southern Ventilation Stack, Northern Ventilation Stack, Wilson Road Emergency Outlet and Trelawney Street Emergency Outlet.

  Requirement 2
- That all Sydney tunnels are retrospectively fitted with well-designed and well-maintained air filtration systems.

I am no expert in road tunnel filtration however I have read the SCAPS Submission 2 "**Summary of additional concerns in relation to the proposed NorthConnex tunnel."**
http://nebula.wsimg.com/6665fc104fd3d437bc98696cbf00e29f?AccessKeyId=CA93FE078AAC6EA10773&disposition=0&alloworigin=1
This submission raises both technical and ethical questions that will haunt both Governments who do not respond to the concerns of the community.

3. Visual Perceptions

Whilst it is appreciated that the project has gone a considerable way to minimise the visual pollution of the necessary permanent and temporary buildings, the appearance of commercial/industrial quality buildings needs some architectural softening to blend in further with their environments. NorthConnex needs to try harder than the proposed sketches suggest.

4. Nature of the Proposal

Having worked for the State Government I know that PPP are not good for the Citizens but excellent for the Contractors, PPP must be watched closely.

I am concerned that the proposal put forward, that is, the *Unsolicited Bid*, does not appear to take account of best practice from either a health or a technology perspective. Current international research and practical application provide clear evidence that this Bid is not world's best practice – nor does it appear to take full account of Governments' (State and Federal) 'Duty of Care' obligations under their respective Work, Health and Safety Legislation.

This tunnel will be the longest urban road tunnel in the World. Australia has an opportunity to be a World Leader, yet NorthConnex is proposing a project that falls short of contemporary best practice. Why are the governments of Australia, both State and Federal, allowing infrastructure in Australia that does not take account of known international advances in technology?

Regards

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