Brief Comments on the WestConnex M4 EIS

I strongly object to the WestConnex project on the following grounds:

Traffic Estimates

- The Traffic and Transport Assessment, the Air Quality Assessment and the Human Health Risk Assessment all rely too heavily on the WestConnex Road Traffic Model (WRTM), which in turn relies on population and employment growth forecasts and on induced traffic modelling. Given recent issues with toll-road forecasts [AECOM and Arup (pending), as reported in The Australian, 22 September 2015], the WRTM model would need to be extremely robust, because that there are so many (often unpredictable) variables
- Given the above and that the main case for the project (ie it will improve traffic congestion), the Air Quality Impact Statement and the Human Health Risk Assessment all heavily rely on the WRTM, an independent, separate review of the WRTM modelling is required
- If the WRTM has seriously under-estimated traffic forecasts along the surface of Parramatta Road, the veracity of two important assessments, the Air Quality Assessment and the Human Health Risk Assessment will be questionable
- The WRTM does not reveal the current trip types in the Parramatta Road Corridor - this has to be sourced from the Sydney CBD to Parramatta Strategic Transport Plan (September 2015, p14). This source shows that local trips (less than five kilometres) make up 85% of all trips that start and finish in the Corridor, that trips between five and ten kilometres (intermediate trips) make up the majority of all trips into, out of and within the Corridor. Thus, any significant increased population within the Corridor will have to add to the number of local and intermediate trips, and these people will not use the M4 tunnel because they are effectively doing short trips - they will be on the surface of Parramatta Road.

Air Quality

- The EIS does not meet the Secretary's Environmental Assessment Requirements (SEARS) in a number of areas, notably
    - the assessment of worst case scenarios for ambient air quality from traffic forecasts does not include a scenario for much higher traffic flows on the surface of Parramatta Road in 2021 and 2031 and beyond
    - the assessment of worst case scenarios for ambient air quality from induced traffic congestion at locations near tunnel entrance and exit portals was not considered
    - justification for in-tunnel air quality control measures, including filtration should have been provided to support the proposed measures, yet two of the most recent tunnels built overseas, the Madrid M30 Ring Road and the Hong Kong Wanchai tunnel (both utilising air purification systems in their design) are not seen as best practice for the WestConnex project with no justification given
    - details of proposed tunnel design and mitigation measures to address air quality in the vicinity of portals is not addressed, especially for a worst-case scenario where surface traffic on Parramatta Road is not reduced by the completion of the project

- Air quality data collected for the thirty one (31) community receptors used to indicate changes in air quality component PM2.5 (one of the most dangerous components) shows the majority of those sites already experience readings above the current standard (average 24-hour of 25ug/m3) and that the project will not improve readings at most sites by 2021 and 2031. Thus the project not only ignores the current health dangers of elevated PM2.5, but will add to levels in several locations.
- The air quality emissions and dispersion model used, the GRAL (Graz Lagangian), is claimed to maintain a balance between conservative estimates and over-conservative estimates of key inputs. As the EIS states .."There is an inherent uncertainty in each of the methods used to estimate emissions and concentrations and there are clearly limits to how accurately any impacts in future years can be predicted" (Volume 1A, Section p 9-11). How can local residents be assured that the model has not under-estimated the key inputs to emissions concentrations, when a key risk factor - that of higher than estimated traffic flow on Parramatta Road after 2021 - was not included as a "worst-case" the model?
- The GRAL model did not include independent testing for PM2.5, stating that this was not possible given time constraints of the data collection model (Volume 1A, Section p9-13). This is of concern, given that it is known that finer particles (<=PM2.5) can remain suspended in the air and be carried over large distances and have the potential to cause impacts in areas far from the source (Senate Standing Committee On Community Affairs Inquiry Into The impacts On Health Of Air Quality In Australia, NSW Environment Protection Authority Submission, September 2013, p13). The modelling should not be so rushed by the project's timeframe that data testing for PM2.5 is not included in the GRAL model.
- The process of a separate EIS for each stage of the project is a flawed one, given that the air quality impacts (and thus the health impacts) will be considered in isolation from each other, rather than as an entirety. Each stage of the project will, over time, induce more traffic and thus add to the total pollution in the locality. Some parts of the areas already experience PM2.5 and NO2 levels above current standards(let alone the new NEPM standards) and could thus experience even higher levels following completion of all stages. Given there are currently no standards for non-vehicle emissions (eg road surface emissions), any induced traffic will add to this dangerous source of as well.

Human Health

- As the Human Health Risk Assessment states .... "*in such a complex project, there are inherent uncertainties in each of the methods used to estimate emissions and concentrations, and there are limits to how accurately any impacts in future years can be predicted*". These comments are ignored in the Air Quality Impact Statement, which glosses over such uncertainties and claims negligible impacts on air quality as a result of the project.
- The only two health studies conducted on tunnels in Sydney, on the Lane Cove and M5 tunnels, recommended that further, more appropriate studies be conducted; yet none have been conducted to date, despite NorthConnex and WestConnex being much longer tunnels, with possibly more health impacts. The RMS and NSW Health do not appear to be serious about utilising all the international and national research available relating to the serious health effects of traffic emissions on residents living near major roads. The NSW

Environment Protection Authority's submission to the Senate Standing Committee on Community Affairs Inquiry into the Impacts on Health of Air Quality in Australia (March 2013) outlines the dangers of traffic emissions and states that one of its strategies for exposure reduction has been to introduce planning policies to reduce exposure of sensitive land uses (such as residential) to high emission sources, such as busy roads (p16). There is no evidence of such planning policies being understood and informing the WestConnex proposal

Noise and Vibrations

- Given the experience at the West Pennant Hills end of the NorthConnex project site construction works, independent monitoring equipment needs to be set up in all localities that will be impacted by vibrations from preparatory work sites as well as from tunnel boring operations, prior to work commencing.
- all residents living within 500 metres of the construction sites should be given the opportunity to apply for a house condition report so that any cracking in walls and foundations can be detected if caused by construction activity

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