Dear Sir/ Madam,

I would like to submit to you my concerns regarding the WestConnex M4-M5 Link MOD-3

Of great concern is the realization that all the assessments and assurances in the EIS for the M4-M5 Link regarding the impacts of Rozelle Interchange Project, are now questionable given a significant error in the original design ie. the lack of ventilation tunnels to take the polluted air from the tunnel to the controversial air vent.

This omission was admitted to in community consultation meetings but it was apparently not picked up in the original design despite multiple experts using those plans to predict the environmental impacts of the project.
It now appears those assessments such as tunnel air quality outcomes were based on incorrect modeling data.
One hopes that this is the only omission or error in the project plans.

I have some serious concerns about the design details of the tunnel cavern complex as proposed in the M4-M5 Link Mod 3 Report.

Concern: Depth and consequent noise and vibration

The Modification Report describe how the proposed ventilation tunnel, with its caverns and fans, will come as close as 8 meters below the surface.
The report claims that the caverns will be at depths of greater than 15 metres. This is not the case according to the WestConnex online tunneling tool which shows parts of the cavern only 12 metres deep

In the previous M4-M5 Link EIS it was predicted that the ventilation facility and substation above ground would have noise exceedences of up to 12 db.
Relocating the fans underground will still produce that amount of noise and adding in the issue of ground borne vibrations.
The noise levels have just been relocated not reduced.
Because sound travels faster through solids that through air the effects could even be exacerbated unless the caverns are at a greater depth.

Extraordinarily no operational noise mitigation measures are given in the Modification Report.
Claims of noise reduction made in that report tare unsubstantiated as the Operational Noise and Vibration Review will not prepared until AFTER planning approval.

To place these huge fans at the depths proposed without scientific assurances on its operational noise and vibration levels is disregarding totally avoidable ramifications on the residents' health and wellbeing.

Increasing the depth of the tunnels and chambers would help mitigate the noise and vibration issues the current design imposes on the residents.
The Modification Report dismisses alternative designs in a couple of lines and incompletely addresses the issues that made these designs less desirable.
One alternative mentioned was to put the ventilation chamber 40 meters deep – this was dismissed with threats it would entail up to 8 months of rock hammering (the current plan using road headers will take around 7months.
Were any other depths considered

Solution : increasing the depth of ventilation system or at least the caverns .

Concern: Size of underground footprint and consequent noise and vibration

While the Modification Report claims loud and often that this Modification is a benefit by reducing the above ground footprint – there seems less concern with underground.

The size of the underground footprint of this proposed modification matters enormously to the residents living above the caverns and ventilation tunnel.

The proposed underground caverns are much larger than the approved above ground buildings as detailed in the original M4-M5Link EIS.
It detailed the ventilation facility was to be 10 x 50 metres, while the substation was 4 metres high.

Now under the proposed modification the ventilation cavern is to be 25 metres wide, 15 metres wide and 70 metres long, while the substation is 20 metres wide and 10 metres high and 65 metres long.

These are significantly larger areas than the original above ground buildings.

When their size is combined with the inadequate depth tunneling the residents who now face living above mechanical fans and a high electricity hotspot hold major concerns. Not only do we fear mental and physical health effects, but also a significant value loss to our properties.

In addressing the claims the design will have the benefit of increased greenspace – it is noted that WestConnex has no responsibility for, nor can it deliver on it. That lies with the Residual Land Management Plan and in fact it seems unlikely parkland is in the future given that:

"In relation to the Proponent's intent for the land fronting Victoria Road between Springside Street and Byrnes Road to be returned as passive open space, once construction is

completed. Whilst the Department encourages open space delivery in urbanised contexts, in this particular case, the Department does not support the use of any remaining land in this location for the purposes of pocket parks in lieu of any other design solution being found." M4-M5 Link EIS p84

Solution : reduce cavern size

Concern : Location and consequent noise, vibration and construction issues

It appears that the proposed modification is designed with no consideration given to minimising tunneling under people's homes when there appears to be other alternatives Instead the vast caverns and the 340 metres of wide tunnel wends it' s way "dog leg ' fashion under the maximum number of homes.

Given this is part of a major State Infrastructure project that has proudly claimed its innovative plans to layer tunnels one above the other it is odd that a more creative and less invasive design could not have been found. In other places in the M4-M5 Link, and even in the Rozelle area there is layering of tunnels with sometimes only 1.5 metres between them. Isn't it therefore possible to integrate the ventilation system below the road tunnels themselves.

It is clear from the Modification Report that this design got the tick of approval not based on 'best practice' but on expediency and ultimately profits. This conclusion is bolstered by the short shrift given to alternatives in the Modification proposal.

"Commissioning of the entire project would begin at Iron Cove Link. Tunnelling of the proposed new ventilation tunnel and caverns from Iron Cove would work to potentially allow the project to commence commissioning two to three months early. Starting commissioning earlier would give the project more opportunity to finish early and more certainty that it would finish on time. "(P.67 M4-M5 Link Mod 3 Main Report)

The residents should not be held ransom by WestConnex's desire to meet the financial rewards for their construction deadlines at the cost of a community's wellbeing.

Solution Call for redesign