

Submission
No 447

**INQUIRY INTO IMPACT OF THE WESTERN HARBOUR
TUNNEL AND BEACHES LINK**

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Date Received: 18 June 2021

Partially
Confidential

Submission to NSW Parliamentary Enquiry into the Impact of the Western Harbour Tunnel and Northern Beaches Link.

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10 June 2021

SUMMARY

1. Tunnel under Louisa Road houses is dangerously too shallow and close to house foundations.
2. Houses may suffer not minor but major structural damage.
3. Confidential data obtained from Contractor to support the above two points. (Attached)
4. NSW Government exposed to risk of very high damages claims from expensive waterfront homes.
5. For safety, the proposed tunnel under Long Nose Point peninsula should be moved 60 metres further south, under Snails Bay, which will still allow the same exit point at the Waverton – Balls Head end.

As the owners of the house and land and the residents at Louisa Road Birchgrove, I and my wife wish to object strongly to the proposed construction of road tunnels at shallow depths directly below our house. The tunnel roof would be only 26 to 27 metres below the foundations of our house, and almost all the other houses neighbouring. I will explain this depth figure below.

Additionally to further weaken the surface rock geology, approximately directly under Louisa Road is a proposed additional north-south oriented branch tunnel for "Maintenance and Sub-station".

Crucially, I also have access to engineering data by the construction consortium that states that possible land settlement along the route of the tunnel between the Rozelle interchange and the WHT will be 20-25 mm. Copy of this report is below.

Settlement would not be a gentle and even lowering of the surface. It would be uneven in both location and timing. Settlement of even half that amount would cause catastrophic damage to the houses along Louisa Road. These are waterfront properties, mostly modern, which are almost all suspended concrete slab and brick construction, each one with a current market value around \$7 - 10 million, some more and the NSW Government would be ultimately responsible.

The tunnel depths that WestConnex and their contractors are advertising are not only relatively shallow anyway, as they have acknowledged at a public display at Balmain Town Hall, but they are also intentionally misleading because the depths published by WestConnex are measured from road level to bottom of the tunnel. The top of the bored tunnel is at least 6 metres higher and almost every house in the long narrow rocky peninsula that is Louisa Road is founded two

floor levels, or 6metres, below the road. That means that the real tunnel depths they propose are around 12 metres shallower than they claim, a very significant difference.

SOLUTIONS SUGGESTED

1. Tunnel goes 30 metres deeper and longer to achieve desired gradients.

OR

2. Tunnel moved further south, out under Snails Bay and not under the houses.

Please note that the planned services branch tunnel under our house extends approximately 50 metres south under Snails Bay, so why can't the whole tunnel be further south under the Bay and not directly under the houses?

Settlement Data

6.8.3 Total settlement

Ground induced settlement were predicted within WHTBL-WH10-TU-MEM-0066[4]. Predicted surface settlement contours were developed incorporating the settlement from stress redistribution in rock and the settlement induced by groundwater drawdown. A summary of the maximum predicted surface settlements is in Table 6.6.

Table 6.6 Summary of maximum predicted surface settlement

Location	Maximum calculated surface settlement		
	Stress redistribution induced settlement (mm)	Groundwater drawdown induced settlement (mm)*	Total settlement (mm)
The Coal Loader	25–30	< 5	25–30
Rozelle ventilation tunnels	5–10	5–10	15–20
Victoria Road access decline	10–15	10–15	25–30
Berrys Bay access decline	5–10	< 5	10–15
Mainline tunnels between Rozelle and Western Harbour crossing (undrained section)	10–15	5–10	20–25
Mainline tunnels between Rozelle and Western Harbour crossing (tanked section)	25–30	< 5	25–30
Mainline tunnels between Western Harbour crossing and Warringah Freeway	35–40	< 5	35–40
Warringah Freeway portal	50–55	< 5	50 –55
Cammeray ventilation tunnels	5–25	<5	5–25