

Submission  
No 184

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

**Name:** Name suppressed

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Partially  
Confidential

The Western Harbour Tunnel “Concept” and its “intergration” with the Beaches Link Tunnel should be “reviewed”.

The FOLLOWING may be “in-confidence” or “commercial-in-confidence”.

1. The “intergration” of the “Bio-diversity Corridor” (Greener Places Concept) is a challenge?” ( intergrating Green Infrastructure with Grey Infrastructure ) - “Transport Tunnel solution “ (its a “GREENER PLACES” strategy, that the Chief NSW Govt Architect, Peter Poulet says should be considered as “essential infrastructure”) so using “innovation” to find a “SPACE” to locate an “elevated vegetated roof” over the existing RMS road Corridor “is a challenge?” that can “connect fragmented nearby existing bushland patches’- /( Lower North Shore Bushland Patches ).
2. *Australia has a “poor history on Native Fauna Extinctions” over the last 200 years. The importance of Urban Wildlife to quote from Lunney and Burgin (2004) summarises one aspect to this question. ‘Conservation of wildlife in the urban environment is important as this is where the bulk of the population live and subsequently where they form ideas and gain knowledge about our natural environment’. It is also important for species to be able to move between good areas of habitat via corridors to recolonise, migrate and encourage genetic variation. Lunney is a Native Fauna expert/Professor at Sydney Uni (He drafted the SEPP 44 – Koala in circa 1994 for NSW Planning Dept ).It can help reduce “Urban Heat Island Effect” by planting “extra Tree Canopy” or “understorey”.*
3. So the “Bio-diversity” – Native Fauna- can assess small ground moving fauna, and gliding and birds for improved “habitats” in the Lower North Shore ( to improve the Bushland Habitats between Lower North Shore and Northern Beaches. ( The Bushland Habitat in 1949 has been reduced significantly even in Warringah’s - Barrenjoey Peninsula, to 8% tree canopy in circa 1990.) So the proposed “Burley Griffin elevated bushland corridor” is “off-setting” part of the 50 year period of “Urban Growth” in the Northern Beaches that has reduced the “Bushland Habitat” within the Urban Area. ( But created the Urban Growth demand for a better Transport solution- be it a Rail Line/s or Road Tunnel to Northern Beaches?).
4. *So in the Lower North Shore the “Wildlife Habitat Solution” is difficult as the area has “increasing Urban Growth in St Leonards area, with multiple 20 storey towers near the Rail Station ( replacing low rise housing ). So the “ Urban Uplift “ could have assisted in funding the missing “Wildlife Corridors” ? ( in the Lower North Shore ). So its using RMIT UNIVERSITY’s Centre for Urban Research’s Current Project – ONSETS as the funding solution for improved bio-diversity solutions.*
5. The “concept” is to “use the Burley Griffin Design Theory in Castlecrag area to place the road “into the landscape” (but creating a multi-species Wildlife Corridor near the “ Significant Urban Heritage of the Walter Burley Griffin designed Castlecrag Estate ).
6. The “second” Green Space Innovation is to “restore” the “Historical Loss of Green Space in the North Sydney area with the construction of the Warringah Expressway access to the Sydney Harbour Bridge. Thus the 2021 era, “rectification” could be a Vegetated Green Roof (for increased “Green Space for Humans) From circa North Sydney Oval to North Sydney Town Centre area). The “ONSET” funding could come from increased “Office Tower Space”

in Lower North Shore area (within the “innovation HUB area of Sydney” that includes the old ABC GORE HILL studio site. (now with its increased Urban Planning Capacity ?).

7. This “alternative tunnel option” should provide a “lower cost per kilometre” (plus provide a Regional Vegetated Green Roof linking fragmented Harbour-side Bushland)? (Instead of using the “Beaches Tunnel” that “exists via both the Spit Bridge Route and Wakehurst Parkway Route and “bottom of Middle Harbour Tunnel”.)
8. The “International Civil Engineering Consultants “ Jacobs and “SBP”?, both have expertise in High Speed Rail and under-water tunnels. JACOBS has an “agreement” with the Sweden Govt to assist with the Upgrade of Regional Rail to a Higher Speed Rail Line.
9. So having Both a ROAD TUNNEL and Rail Tunnel solution has been a “SOLUTION” used for a major under-water TUNNEL from Denmark to Germany. So adapting this to “NSW” could assess both the RAIL and Road capacity, rather than just focussing on the ROAD SOLUTION which now “focusses” on “selling the infrastructure project “ to private corporations.
10. So the “WESTERN HARBOUR TUNNEL” concept is “Adapted” to have both a RAIL ( or Higher Speed Rail) project plus a ROAD TUNNEL ( that could be a “low-emission powered” vehicle solution ).
11. So this “expertise” could be adapted to the NSW area, or an Australian Civil Engineering Consultancy could do the “task”
12. So under a 2050 era “review” of the Western Harbour Tunnel concept, assessing the overall capacity to meet a Net Zero Emissions target, requires a “lowering of the emissions. The Northern Beaches Council has a proposal to REDUCE GHG emmissions by 30% by 2040 ( or 2050 ) but this is a challenge to achieve if New Car sales are 1% electric.
13. That is hard to achieve if only 1% of car sales are “Electric Cars”. ( Compare to Norway with over 50% of new cars are electric, and the Central city of Oslo is car-free, but free-access to bicycles ?)
14. So focussing on Low-emission Mass-Transport, using “Electric Busses” and “Faster Electric or Hydrogen Powered Trains” could be assessed in “detail”.
15. The Fast Train “concept” could travel from WHITE BAY to North Sydney area, then travel to “FRENCH”S FOREST REGIONAL AREA”. (then it could travel to Central Coast and Newcastle which now has a proposed International Airport ).
16. This could be a “staged project” with the “Train Line” being installed after the “Train Tunnel” is built within the Western Harbour Tunnel route. ( There is “Spare capacity within the City Circle Line” ).
17. As there is a “Concept for a Container Port at Newcastle” ( Hunter Jobs Alliance) the option of “freeing up the Freight Rail Capacity to Greater Sydney “ could be assisted by increasing

the passenger rail capacity ( perhaps using a Faster Passenger Rail Service ? ) \*Jacobs Engineering is assessing HSR in SWEDEN.

In Italy they have installed a HSR Freight line South-North to reduce the use of Truck Freight.

18. The “Beaches Tunnel” does not need to travel thru the bottom of Middle Harbour, so the “alternative method” can use the “Inner West Tunnel” “West-Connex solution” which is a low tunnel thru an Urban Area (via the Eastern Valley Road Corridor?).
19. Then it enters the Northern Beaches via Warringah Road and Roseville Bridge area ( or a NEW BRIDGE adjacent to the existing Roseville Bridge ).
20. This “alternative tunnel option” should provide a “lower cost per kilometre” (plus provide a Regional Vegetated Green Roof linking fragmented Harbour-side Bushland).
21. The Western Harbor Tunnel was “opposed” by a RNSH medical expert as “defective in Air Quality standards” so improving the “air quality” by using Low Emission Fast Trains, and Electric Busses, then asks it is possible to have “Low Emission Trucking?” (Hydrogen Powered Trucks or Electric Powered used in LA wharfs) or should it convert to Fast Electric Rail Freight? – This is a “Technically Different method” to improving the “Air Filtration of the Tunnels” as proposed by the Community Experts.
22. Northern Beaches Council has a Local Housing Strategy 2040 that allows for an extra circa 12,000 dwellings, so this could generate an extra circa “25,000” trips to work outside the area. So has the “Beaches Tunnel” been “under-designed” for future transport demand.
23. THE LOWER NORTH SHORE RESIDENTS GROUP – that includes residents from Cammeray and Neutral Bay thought that the Beaches Tunnel should have a Better Mass Transit option. After travelling on both the Inner West Light Rail and the B-Line to Mosman Area, the “preferred travel option is the Inner West Light Rail”. So converting the Northern Beaches Route to a Light Rail or Metro Rail (like as now proposed for Sydney/Pymont to Westmead?)
24. THE “BETTER MASS TRANSIT SOLUTION” COULD CONNECT WITH the New North Sydney Metro Rail Station, and extend North to the Northern Beaches at DEE WHY ( In tunnel the full length ( except for a high Level Bridge option over The Spit ) This allows the RAIL TUNNEL to be near Military Road Level ) This future Bridge can be “inspired by the “Bridges” built in Scotland, Switzerland, Canada, and Spain. So that provides a range of Viaduct Bridges, and Cantilever Bridges. So creating a World Heritage Bridge may take greater skill than “available using Standard Merchant Bank “Urban Infrastructure”.
25. THE LOWER interest rate environment should change the Govt “solution” to “sell infrastructure to corporations” for “short-term gain” ? ( Asset re-cycling of the Mike Baird era ? ( a former Merchant Banker?).
26. *Fast rail network to transform Australia – The Option Here in 2021 is to use the HSR expertise of Jacobs, and the Consultant for the “Beaches Tunnel” that internationally has HSR expertise. Also Australian consultants like GHD may have Rail Expertise that can adapt, GHD may be involved in a proposed WA Hydrogen Battery project. So has Professor Andrew McNaughton “missed” the potential solution of High Speed Rail to Newcastle thru*

*White Bay( as the potential Eastern Sydney Terminal instead of Central Station Sydney ? It is possible to connect the White Bay Station to the future Pyrmont Station and Martin Place ?The White Bay Station is “Well Connected to the WestConnex Road Network, and could provide a Large Regional Parking Station on-site, that Central Station CBD cannot )*

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*The NSW Government will start work on a fast rail network in the next term of government, linking regional centres to each other and Sydney, significantly slashing travel times across the State.*

*Four potential routes have already been identified and High Speed Rail expert Professor Andrew McNaughton has now been appointed to confirm the most appropriate routes, train speeds and station locations.*

*Premier Gladys Berejiklian said a fast rail network will give people greater choice about where they live and how they commute to work.*

*“We know a fast rail network will transform NSW unlike any other project and we will make it a reality,” Ms Berejiklian said.*

*“We need to make it easier for people to consider moving to regional NSW and there is no better way to do that than building a fast rail network.”*

*The four routes identified by the Government are within 300 kilometres from Sydney:*

- Northern Route including the Central Coast and Newcastle.*
- Southern Inland Route including Goulburn and Canberra.*
- Western Route including Lithgow, Bathurst and Orange / Parkes.*
- Southern Coastal Route including Wollongong and Nowra.*

