

7 Gourlay Ave
Balgowlah
NSW 2093

1 March 2021

Department of Planning, Infrastructure and Environment
Via submissions portal

Re: Beaches Link Tunnel Submission

We are providing this submission in our capacity as long-term citizens of Balgowlah, as parents with two boys who will be attending the Northern Beaches Secondary College Balgowlah Boys campus throughout the construction of this project, and in our professional capacities both as an independent climate risk consultant, and as a project manager with direct experience with major NSW public infrastructure tunnelling projects.

Our observations and recommendations are summarised as follows:

1. Reduction of Climate Impacts: This project will only exacerbate climate change and work against NSW's emissions reduction targets including its 2030 interim target and net-zero by 2050 commitment, unless it is designed as a tool for clear tool for positive climate action.

Greenhouse emissions are cumulative due to the longevity of emitted gases such as carbon dioxide in the atmosphere: every additional tonne of GHGs matters. It is not simply a case of turning off the tap and having the climate revert to normal.

The UN Intergovernmental Panel on Climate Change (IPCC) has warned of material risks in exceeding 1.5 degrees of global average temperature increase (including many detrimental outcomes for Australia). Even at around 1 degree of global temperature increase Australia is already experiencing many deleterious impacts. The IPCC has advised that the only way to achieve that target (the more ambitious of the Paris Climate Agreement targets, to which Australia is a signatory) is to achieve a 50% reduction in emissions (from pre-Covid levels) by 2030 and net zero no later than 2050 (<https://www.ipcc.ch/sr15/>).

The UN's recommended 2030 target is considerably more aggressive than the NSW Government's current target, and the NSW Government is currently derelict in its responsibility to ensure the safety and prosperity of both current and future generations by not aligning with the UN's advice. It is highly likely that the level of ambition will be raised in coming years.

That means that all NSW government projects must minimise construction and operational emissions.

The Beaches Link Project EIS estimates cumulative construction emissions of 1.5 million tonnes of GHG emissions (Appendix X) and additional cumulative emissions of over 100,000 tonnes per

annum in operation. This is utterly incompatible with NSW's net zero target and the urgency with which emissions must be curtailed. It is grossly irresponsible for any public project to be contributing to a net *increase* in emissions.

As such, for this project it is strongly recommended that:

- a. Public transport be prioritised across the route. Dedicated public transport lanes must be provided in both East and Westbound tunnels and on all approaches to the tunnels, particularly:
 - i. Wakehurst Parkway from the portal to and from Warringah Road
 - ii. Sydney Road from West St (i.e. where Sydney Rd becomes 3 lanes in each direction) to the new turnoff at Maretimo St
 - iii. Burnt Bridge Creek Deviation
 - iv. Exits to the freeway
 - b. Incentives must be provided for zero emission vehicles (battery electric - BEV - and hydrogen fuel cell vehicles - HFCVs) including use of priority lanes and material tolling discounts (on top of what should be state-wide incentives such as GST and stamp duty waivers, registration discounts and so on applying to zero emission vehicles).
 - c. All government administered bus services using the tunnel should run BEVs or HFCVs.
 - d. Park and ride B-Line carparks along tunnel approaches should have EV charging facilities provided as standard.
 - e. NSW has a fantastic opportunity to mandate the use of BEVs and/or HFCVs for all construction vehicles from road headers to utes, which could stimulate demand and supply of such vehicles. The target should be to eliminate the use of traditional fossil fuels during construction of the project. The project could become an international showcase.
 - f. Aggressive targets must be set to reduce the project's concrete and steel emissions by at least 50% when compared with traditional sourcing. For example, the project could pioneer steel sourcing from mills using green hydrogen, and concrete made from less emissions intensive alternatives (for example, refer: <https://theconversation.com/sustainable-cement-the-simple-switch-that-could-massively-cut-global-carbon-emissions-144837>).
 - g. All electricity used by the project must be purchased from 100% renewable generators; similarly for operational uses including park and ride EV charging stations.
 - h. All residual construction and operational emissions must be offset by purchasing high quality carbon credits.
2. Air Quality and Noise: Having worked adjacent to a major TfNSW excavation and tunnelling site for several years and been personally responsible for air quality, noise and vibration monitoring, we are deeply concerned about air quality and noise affecting the health and educational outcomes of our sons, their fellow students at Balgowlah Boys', staff and other nearby residents at the Balgowlah site. We have several specific concerns:

- a. Traditional dust suppression methods are often poorly supervised. We have seen many visible dust plumes rising from TfNSW project sites during demolition and excavation activities, with supervisors neglecting their duties. The dust travels a fair distance on prevailing breezes and settles on all surfaces. It impacts building cooling towers; gets into ventilation systems and creates a visible layer of dust.

Bureau of Meteorology wind rose data for Sydney suggests that Nor West and Northerly breezes will blow dust from the Balgowlah site towards the Balgowlah Boys campus around 35% of the time (http://www.bom.gov.au/cgi-bin/climate/cgi_bin_scripts/windrose_selector.cgi?period=Annual&type=9&location=66037)

The NSW Government has been slow to understand the deadly nature of respirable crystalline silica (RCS), which is an inevitable by-product of excavation and tunnelling in Sydney. In years to come RCS exposure will come to be seen as dangerous as asbestos (<https://www.cancer.org.au/cancer-information/causes-and-prevention/workplace-cancer/silica-dust>).

We have no confidence that controls will be adequate to avoid some level of danger to the school community. The school facilities have been neglected for decades and there are virtually no air filtration systems – certainly nothing that would protect students and staff from RCS. This should be comprehensively addressed prior to the commencement of demolition activities.

- b. This danger will be exacerbated when the boys are using the Balgowlah Oval for sports and recreation activities. The school grounds are largely bereft of outdoor areas and it is essential that safe access to Oval facilities be maintained throughout the works.
 - c. While vibration is unlikely to be a material concern at the school, airborne noise will be, particularly if hammering is used for the cut & cover excavation and landscaping works in the golf course and Oval sites. Having lived through proximate hammering as adults, we understand its adverse impacts on productivity and health, and are concerned at the effects it will have on student concentration and learning outcomes.
3. We share these and other concerns raised by the Balgowlah Boys Parents & Citizens association in its submission:
<https://static1.squarespace.com/static/5c883f24809d8e0d6d15d0fb/t/603ac5afe6e7b15cb2f00833/1614464435123/NBSC+Balgowlah+Boys+P+and+C+Beaches+Link+EIS+Submission+-+FINAL.pdf>
 4. Many have raised concerns with operational air quality outcomes in Balgowlah given the use of unfiltered stacks. We note that our recommendations to incentivise the use of BEVs and HFCVs in the tunnel would also hasten the goal of a majority of vehicles using the tunnel having zero tail pipe emissions. This would obviate public concern with stack emissions in a win for community health concerns and a safe climate future.

We urge you to take these considerations and recommendations into account in setting conditions for this project.

Yours sincerely

[sent electronically]

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Citizen of Balgowlah
Parent of children at Balgowlah Boys
Climate Risk Consultant
Property Project Specialist

cc:

James Griffin, NSW MP for Manly

Sarah Mitchell, NSW Education Minister

Matt Kean, NSW Energy and Environment Minister

Zali Steggall, Federal MP for Warringah