I have strong objections to the Beaches Link Tunnel project on a number of grounds.

1. Transportation

The whole basis for justifying the need for the Tunnel is flawed. The data gathered on current and future motor vehicle movements was out of date when it was used as the basis for supporting the Beaches Link Tunnel. The data was gathered before the introduction of the B-Line bus service. the Dee Why – Chatswood express bus service and the enhanced Fast Ferry services. Pre COVID 19, the NSW Government has acknowledged the success of the B-Line in attracting commuters and taking cars off the road – the full commuter car parks on the B-Line route were testimony to that.

More recently, the changes to commuter habits resulting from COVID 19, where more people are expected to adopt flexible working arrangements, particularly working from home, should require a complete re-think of what are the best options for transportation on the Northern Beaches. The change in working patterns is supported by a 2021 NSW Treasury paper on Sydney's Urban Structure and House Prices which forecasts less people needing to and willing to commute to the CBD and a recent study by NSW Innovation and Productivity Council suggests that there will be an increase in remote working.

This is also supported by Unispace, an Sydney based company which operates in all States and 25 countries, which reports that "The remote working revolution has helped both employer and employee to the realisation that focus work no longer needs to take place in a large office." And predicts that "Additionally a reduced office capacity is inevitable with employees already indicating they will work from home at least 1 day a week post pandemic." (Article Feb 15, 2021 - The vaccination alone won't deliver the post-Covid office -Steve Quick, Global CEO, Unispace). If that is valid, there will be at least a one fifth (20%) reduction in commuting which will impact on the need for, and viability of, the Tunnel.

Any conclusions drawn from the data gathered by RMS/TfNSW are invalid. More viable and sustainable public transport and less private cars is just common sense. The project, however, prioritises personal vehicle use which is simply not a workable transport solution for the Northern Beaches. Induced demand generated by the Tunnel will soon mitigate any benefits.

Other concerns raised by the community with regard to negative impacts on pollution, local streets, rat runs, congestion, more traffic are confirmed by the EIS and the project will deliver these negative outcomes.

The success of the B-Line should surely suggest that better public transport has a major role to play before committing to a tolled motor vehicle Tunnel. The EIS is, unfortunately, silent on any comparative public transport analysis.

With the lead times involved and the pace of technological change, what will be the options for public transport in 2029 when the Tunnel might be nearing completion? We already have electric driverless trams/trains, which are surely a better option for a Tunnel than the current proposal which will only encourage more use of private motor vehicles.

The Beaches Link Tunnel will do nothing to alleviate congestion further up the Peninsula and, as a result of encouraging commuters to get back into their cars (induced traffic growth), will certainly exacerbate current congestion issues.

TfNSW should be required to review the Business Case for the Beaches Link Tunnel in the light of a thorough examination of the transport needs of the whole Northern Beaches local government area conducted in conjunction with Northern Beaches Council sharing the major elements of the review with the community of the Northern Beaches with appropriate opportunity for comment and input before the finalisation of the preferred plan.

2. Environment

The land on which Balgowlah golf course is situated is Crown Land which was dedicated in 1875 to "public recreation and access to water" and is now to be decimated for over 5 years as a Tunnel construction site. The construction of the Beaches Link Tunnel will result in major environmental damage to the Burnt Bridge Creek corridor and Balgowlah area.

This was pointed out to RMS in late 2019 by environmental scientist, Dr Judy Lambert, AM, BPharm, BSc(Hons), PhD, GradDipEnvManag, GradDipBusAdmin in her appraisal of the Tunnel proposal which was part of the submission by Balgowlah Golf Club Ltd to RMS. She identified the golf course and creek as "a valuable stepping stone and the possibility of endangered species along the creek bank". She recommended that "further major disturbance such as would result from construction of the proposed Link Road **should not be permitted**. As an absolute minimum, the proposed Link Road should be referred to the Commonwealth for determination as a matter "likely to have significant impact on Matters of National Environmental Significance."

Despite no acknowledgement from RMS at that time, the EIS now confirms this and says: 'the creek is 'a vital ecological corridor of regenerated habitat that provides a range of important habitats for a diversity of local flora and fauna' (EIS, Appendix O, pg 45) and confirms the water losses' could impact ecosystems reliant on the water within these creeks.' (EIS Appendix N, pg x).

This is borne out by Northern Beaches Council whose experts report in their draft submission in response to the EIS: "The EIS trivialises what would be significant hydrological and ecological impacts to Burnt Bridge Creek. Up to 96% reduction in base flow would result in the permanent loss of (bedrock) run habitat and associated biotic communities would also disappear. The creek would essentially function as a storm water channel".

Located as it is, in the highly urbanised area of Balgowlah and adjoining areas including Manly Vale, Balgowlah Golf Course and Burnt Bridge Creek is an important habitat 'stepping stone' for wildlife in the area. The trees and other vegetation both on the golf course between the fairways and along the adjoining creekline provide habitat for a diversity of species and the potential for the golf course to provide important connectivity to larger areas including Manly Dam reserve and Garigal National Park is very apparent.

The destruction of over 500 habitat trees, most of which are native species, including some significant specimen trees, with their own microclimates and unique ecosystems and the destruction of creek-line vegetation together with disturbance to the creak and its water quality will significantly disrupt wildlife in the area and may further endanger already listed threatened species.

Northern Beaches Council recognises the worth and value of trees with its Urban Tree Canopy Plan. There, Council stresses the need to 1) Protect existing urban trees and 2) Maintain the existing urban tree canopy cover. Council reports that "The trees of the Northern Beaches are integral to the character, heritage and natural beauty of our area." Council also notes that "Larger trees provide greater benefits than smaller trees so it makes sense to manage and protect our existing larger established tree population to prevent canopy loss where possible,"

The land is a valuable habitat and refuge for over 40 different species of birds that are increasingly pushed out of expanding urban areas outside of the golf course. Other Native animals also feature prominently on the golf course and in the riparian creek bank zone. Long nose Bandicoots, Bush Rats and Possums are resident on the course with Eastern Water Dragons frequenting the course and the water features. The dam on the golf course is used extensively by the water birds and also is home to eels, fish and the Eastern Long Necked Turtle. Burnt Bridge Creek is home to the Common Eastern Froglet, eels and fish with the endangered Grey Headed Flying Foxes using the "pool" at the end of Dudley Street.

All native mammals, birds, reptiles and amphibians (as well as their young and eggs) are protected in NSW, even if they are not threatened species.

Implementation of the current TfNSW plan for the Balgolwah Golf Course site will see the habitat for this range of diverse native animals and birds destroyed with the resultant mortality of many animals.

This environmental destruction is all to take place in an area where a Tunnel Exhaust Stack is to be located which will increase the volume of harmful particulates in the air.

Claims by TFNSW that 90% of the open space will be returned at the conclusion of the project are just not correct, unless you include the land taken up for the "link road: and the land that results from the demolition of 40 houses in Dudley Street. Even then, it will not be the same open space – the mature trees will have gone, the habitat will have gone, the birds and other native animals will have gone!

With the EIS and Northern Beaches Council both supporting the value of the Burnt Bridge Creek corridor as identified in the earlier independent report, how can TfNSW continue to advocate the wholesale destruction of the Burnt Bridge Creek environmental corridor?

As Dr Lambert recommended,

"Proper assessment of likely impacts will require detailed surveys conducted at different times of the year (to take account of seasonal variations and migratory movements) as an essential before any modification or loss of the habitats is permitted."

And As an absolute minimum, the proposed Link Road should be referred to the Commonwealth for determination as a matter ''likely to have significant impact on Matters of National Environmental Significance.''

3. Pollution and Risks

I have a grandson attending Balgowlah Boys Campus and another one who will be attending in 2 years time. For me, the associated risks to my grandsons' health from Tunnel emissions and Tunnel construction are far too great. I hold the NSW Government responsible for any short term and long term injuries and health impacts to those boys from the ill-conceived planning that surrounds this so called "significant project". I reluctantly think that TfNSW must already be well aware of its short comings in regard to the risks to the residents of the local area and students (and parents/grandparents of students) of Balgowlah Boys in particular and it has sought to hide vital information from the public in the EIS.

For example, the TfNSW's artist's impression in the EIS of what the golf course site will look like after the project is completed, **does not show Balgowlah Boys Campus at all** – it has been "omitted" from the picture. I suspect that this was deliberate because TfNSW did not want people to realise just how close the unfiltered ventilation stack (that vents 7 kilometres of tunnel) is to the school. This ventilation outlet from a 7km tunnel is not designed to World's (or even Australia's) best practice and poses significant health risks to local school children and residents.

The size of the unfiltered ventilation stack is not shown in true perspective in the EIS impression – it appears much smaller than it will be – again, probably deliberately. Interestingly, the Tunnel entrance and ventilation stack were moved closer to Balgowlah Boys school only in the most recent designs, giving residents no opportunity to comment or object.

In September 2017, Candy Bingham, Deputy Mayor, Northern Beaches Council, reported on results of studies carried out by a Seaforth residents group on likely tunnel emissions.

The study found that toxic fumes from the Balgowlah exhaust stack will be trapped over Balgowlah and neighbouring suburbs as it's located in a topographical low point that is notorious for trapping smoke and other emissions. These emissions would therefore build up over Balgowlah, gradually spreading out over the "valley" that extends from Manly to Brookvale and North Curl Curl – a densely populated area with at least 12 schools and many kindergartens and day care centres.

The results were duly reported to RMS but, despite such warnings, seem to have had no impact on the planning other than to move the exhaust stack further away from Seaforth Public School and closer to Balgowlah Boys Campus!

Despite a universal acknowledgement of the dangers of exhaust emissions, at an RMS so called Community Consultation and Information session at Manly Warringah Leagues Club, I was told by a young RMS engineer that the fumes being emitted from the unfiltered exhaust stack of the 7 kms tunnel were "cleaner than the air we breathe at ground level" – "it's scientifically proven"!

Balgowlah Boys Campus, which has about 1,000 students, sits right on top of the proposed construction site on the corner of Maretimo Street and Sydney Road in Balgowlah – as such the school will be significantly and adversely affected by the proposed project. These adverse impacts from construction and heavy truck and machinery movements cover both the construction and operational phases of the proposed works for some 5 - 7 years which will severely impact on the students in terms of noise, dust, safe access, disruption, road safety, and mental and environmental health.

Of particular concern is construction actions severely disrupting learning activities and adversely affecting the concentration and learning of students, teachers and staff in the school. This is of additional significance for Year 12 students sitting the Higher School

Certificate exams. Noise and dust from construction activities will also restrict students using the informal open spaces of the campus before school, and during recess and lunch breaks.

Traffic congestion will be experienced on Sydney Road and adjoining streets such as Maretimo Street during the construction phase. Students accessing the school on foot and bicycle, and by school and public buses and private vehicles, will experience traffic delays and reduced safety for pedestrians and cyclists in the vicinity of the intersection of Sydney Road and Maretimo Street.

The routes of trucks moving spoil and other construction materials to and from the construction site will pose additional concerns for the safety of staff, students and parents using the intersection of Sydney Road and Maretimo Street. Mixing 1,000 students with hundreds of truck movements each day seems a recipe for disaster.

I can't believe that the Department of Education accepts such threats to the students and staff of Balgowlah Boys Campus – but perhaps politics over-rules any such concerns.

4. Community Consultation (or lack of it)

Claims that there was "extensive community engagement" prior to the public announcement of the Reference Design for the Beaches Link Tunnel are just not true. Many residents east of Burnt Bridge Creek Deviation were not contacted by RMS before the leaked and formal announcements of the Beaches Link Tunnel in late July 2018 and were not included in any prior consultation process.

Similarly claims by TfNSW that "we have made significant design changes based on what we have heard from the community" are not true and many residents feel disenfranchised with the process.

In the early stages of development of this project, a Confidentiality Agreement was imposed by RMS (as it was at the time) to apply during discussions/negotiations between RMS and Northern Beaches Council staff on the preliminary design of the tunnel and on the decision by the RMS to take over the Balgowlah Golf Course site and use it as a construction site.

At the time, RMS had no intention of consulting with the golf club and local residents on its intention to take over the course as a construction site. Because the golf course land is Crown Land (ie owned by the State Government), the government felt it could do with it whatever it wants – subject to a few regulations that it already controls. By declaring the Beaches Link Tunnel Project a State Significant Infrastructure Project, the government did not have to consult with the community, but it did have to inform the Council because the Council was the manager of the land and leased it to the golf course.

The incentive for the Council was the proposal by the government to convert the construction site at conclusion of the project into sports and recreation fields – to be owned by the Council.

With the eventual release of the details, the local community has been aghast at the impact that the Tunnel will have on the Seaforth/Balgowlah area – both in terms of the disruption during the construction phase, as well as the ongoing traffic, health and environmental impacts of the Beaches Link Tunnel once it becomes operational.

These concerns led several Community groups to work together to conduct research, engage with RMS, local councilors, State members, the community at large and others. Several public meetings were held in the area and these public forums illustrated the serious concerns that the community has with both the process that has been followed to deliver the reference design; the design itself; and the impacts of the project.

Community concerns and alternative designs for the Balgowlah Tunnel portal were developed and shared with RMS/TfNSW all to no avail – most of the time, not even an acknowledgement. Throughout the process there has a lack of meaningful or timely consultation with the local Community.

We are now given an EIS that is thousands of pages over eleven volumes to digest over a relatively short COVID affected period which includes the Christmas and New Year holiday periods – again you suspect deliberately to push through this proposal over community wishes and concerns..

Minister for Planning, Rob Stokes, has refused approaches for an extension to the period to review the EIS on the grounds that the time given to review was the same as the length time given to residents in January 2020 to review the EIS for the Western Harbour Tunnel - even though this was pre-Covid and there were extensive and convenient face-to-face public community consultation sessions at convenient locations.

For the Beaches Link Tunnel, TfNSW substituted the community consultation sessions with online Virtual Briefing Sessions which were highly unsatisfactory as many residents did not have the resources to access them - and for those who did found that less than half the questions asked at the sessions were actually answered.

The State Government and TfNSW appear to have little interest in what the public actually want, instead being driven by political expediency and potential income from an asset that can be sold.