11th November 2020

Appendix to Correspondence Titled

“Why you must not waste $15bn on the Western Harbour, Warringah Freeway and Beaches Tunnels projects”

* **Sydney is at toll road saturation point[[1]](#footnote-1)**

We should be aiming to stimulate spending and support workers not limit their access to jobs by making travelling to work prohibitively expensive or more difficult. Cash back schemes do not address the growing cash flow issue workers are experiencing as we recover from the recession. Underwriting private toll road contracts whilst locking into 50 years of increasing toll costs is not an effective or fair use of taxpayers funds particularly when the community sees little benefit. The EIS confirms that tolls will likely be applied to all Northbound Harbour crossings and states that *“The potential introduction of northbound tolling where it currently does not exist, may add expense to businesses, employees and customers crossing Sydney Harbour.”*

In addition, it appears that toll gantries will be applied to the Warringah Freeway tolling local trips. These tolls unfairly ask non-users of the Western Harbour Tunnel to pay for it. It is estimated that a return trip from the Beaches will cost at least $20 per day. Few people are going to be able to regularly afford that cost. There are also concerns about the projects stated goal of increasing heavy vehicles along the route (by at least 15%) and the potential that heavy vehicles may end up on local, congested roads due to toll avoidance[[2]](#footnote-2). The alternative is mandating that truck drivers use the toll roads (as per NorthConnex) thereby pushing up our cost of goods and services. The Committee for Health and Community Services Published recommendations regarding future toll roads in 2017. A key recommendation was “That any private toll road proposals adopted by Government should have been assessed against the benefits and costs of the comparable public transport option and they be published within the business case”[[3]](#footnote-3) Based in the EIS this appears to have bene overlooked.

* **Committing to these projects puts $15bn where it is least needed**

In the short term, projects with far higher priority have been identified by Infrastructure NSW and Australia[[4]](#footnote-4)– many of those in regional NSW and the West. According to ABS data the areas being serviced by these tunnels are far more advantaged than others. The bushfire affected regions on the South Coast, for example are far more disadvantaged than the North Shore of Sydney and Beaches even pre-fire and recession[[5]](#footnote-5). Investment is needed in our current circumstances where it will do the most good in terms of weathering the recession.

In the medium term, there is no doubt that the Northern Beaches and North Shore need better transport solutions. Public transport alternatives to the Northern Beaches have not been comparatively scoped despite the requirement to do so under NSW Planning (SEARS) requirements. Investing in innovative new transport options would boost local public transport manufacturing (possibly: Newcastle, Gosford, Beaches, Artarmon) and provide long term jobs and exportable products into the future.[[6]](#footnote-6)

* **Our work patterns and population “shape” are changing; the Business case needs to be reassessed**

The Benefit Cost Ratio (BCR) for these projects was already questionable before Covid based on outdated information. Post-Covid no additional analysis has been done. Given changed work patterns[[7]](#footnote-7), already out of date trip data, the very high community impact and still yet to be fully scoped risks it is likely that the already strained BCR is unworkable. It is not clear if the true costs of contamination handling (in residential areas and across the harbour) and health impacts associated with the project have been factored in to the BCR. A recent article[[8]](#footnote-8) in the SMH *“Covid-19 to reshape Sydney in the biggest way since the Spanish Flu as population stalls”* demonstrated that our population modelling will need to change both in terms of numbers and distribution. The shape of our city is changing and therefore the shape of our projects should change too. Narrowly bypassing the city only to further congest a growing urban centre for a price tag of $15bn does not make sense in our emerging reality.

* **These projects are not "shovel ready" as claimed**

The Western Harbour and Warringah Freeway EIS consultation earlier this year has attracted widespread objection from community, schools, councils and a long list of queries from government departments[[9]](#footnote-9). Responses have very recently been returned by Transport for NSW which stated that *"no design changes"* were made based on community consultation despite the community being assured that their input would inform better outcomes. None of the serious issues raised during the EIS consultation have been addressed publicly. It is clear that non-impacted communities consulted in the early stages of design have directed the design of the project rather than those impacted.

Over the past 2 or so years, thousands of letters have been written to the Members for North Shore and Willoughby, a 10,000+ petition[[10]](#footnote-10) originating in the Premier’s electorate was lodged to the NSW Legislative Assembly asking that the project to be stopped and significantly amended (30/7/20) and North Sydney Council has launched a public campaign[[11]](#footnote-11) against major aspects of the project due to detrimental impacts, to it’s CBD, green space and air quality. It is clear that this is not a popular project for valid reasons however it is an understatement to say that the community do not feel listened to. Our petition and letters have been continuously dismissed[[12]](#footnote-12). The Beaches Link EIS has not yet been released for public comment. The EIS and summary business case released by Infrastructure NSW[[13]](#footnote-13) (September 2020) makes it clear that the Western Harbour and Beaches link projects are not stand-alone projects. You can’t invest in one without giving tacit approval of the other. Investing in the Warringah Freeway or Western Harbour Tunnel now would be an ossification of due process and would further exacerbate community distrust in the project.

* **The business case appears to be based on out of date data**

The EIS is based on traffic data from 2011 and 2016. According to RMS data, trips had already fallen along the route prior to Covid [[14]](#footnote-14) and regardless of efforts by government to re-invigorate cities, commentators and senior executives (many whom live in the area) agree that work from home is here to stay, at least in part. In addition, population projections in terms of number and distribution are changing considerably. The project assumes “The population of Sydney is forecast to grow from six million to eight million people over the next 40 years”[[15]](#footnote-15)

The already out-dated trip data and our new post Covid reality renders the business case void. In fact, the SEARS requirements had already expired as it is over 2 years old[[16]](#footnote-16). An update of the business case data is needed which takes into account commuter mode shift due to new public transport initiatives ie B2 Line, South West Metro and post Covid impacts. The Federal Government has also committed funds in their recent budget to Smart Motorway project between Anzac Bridge and the Warringah Freeway and the impact of this project should also be considered. The review into the impacts of Westconnex completed by the Public Accountability Committee in December 2018 recommended the government ensure all future projects “*have a detailed options analysis*” and “*ensure that this analysis is independently peer reviewed in accordance with the requirements of the Infrastructure Investor Assurance Framework.[[17]](#footnote-17)* An independent review must be completed to ensure a $15bn+ investment in this project represents the best value for money to the tax payer.

* **The EIS demonstrates that the project is not a congestion solution.**

Transport for NSW consistently claim that the project will relieve congestion however the EIS demonstrates that it will create increased on many local roads especially around the Warringah Freeway. The EIS states that numerous congested intersections across the Lower North Shore will reach failure point (82.5% stay the same, get worse or fail in the am peak) including those on Military Rd. Extreme flow management changes are required to plug two tunnels into one of the busiest expressways in Sydney. This will necessitate widespread rat running through local streets as local options to access various Harbour crossings are drastically reduced. The community has tried to summarise the impacts on a map but they are so complex and extensive that is difficult to do so clearly.[[18]](#footnote-18) The access issue is exacerbated by the fact that the only local entry point to the Western Harbour Tunnel and eventually Beaches Link locally will be via Berry St, one of the busiest streets in North Sydney. The Lower North Shore is a key business centre in and of itself and Sydney’ largest schools precinct -there are a large number of commuters moving across the freeway from home to schools and work that are not considered a priority by this project. It appears as though in scoping the project the enormous movement across the freeway generated by the school/sport run and links to local business was not fully understood – this is not surprising as communities away from the project footprint were heavily consulted with and those close by were almost entirely excluded from earlier stages of design.

At the time Beaches Link was first announced, Peter Debnam, stated a train line would be considered if the population grew by 100,000 people on the Beaches[[19]](#footnote-19). According to ABS data[[20]](#footnote-20) the population of the Northern Beaches at the time in 2002 was 231 708. The Northern Beaches Council[[21]](#footnote-21) predicts that the population will be at 309 333 within ten years of the tunnels opening – well above the 100,000 increase, at a growth rate of 13.14%. The EIS however accounts for a more accelerated growth rate and subsequent vehicle journey’s, it can only be assumed that this is factoring in value capture and accelerated growth on the beaches due to building the tunnel. “*In the Western Harbour Tunnel and Beaches Link operational road traffic model area, daily VKT is forecast to increase by 23 per cent and daily VHT is forecast to increase by 40 per cent by 2037.”[[22]](#footnote-22)* Given the increased public transport options on the Beaches the VHT increase can only be accounted for by significant population growth assumptions being built into modelling. Whether that is not going to be the case post Covid stands to be seen however the beaches may well be insulted from the population freeze as people seek a sea change and continued flexible work arrangements.

It is clear that the criteria to consider mass transit, 100,000 additional people, will be met at some point in the short to medium term future. Planners believe that building a road tunnel now will prevent investment in viable, clean mass transit system due to a need to service decades long toll contracts. Transferring commuters into mass transit, particularily if growth is slow, serves as competition to the toll road.

Note: Mr Debnam also stated that "*Where ventilation is required it will be done with community consultation. We are committed to the installation of air scrubbers.”* No such scrubbers or filtration devices have been considered and community outrage regarding this fact has not been listened to. Despite the initial clear acknowledgment that a road project through the chosen residential route and Sydney’s largest school zone would necessitate air treatment without question.

* **Local congestion is the problem; pushing more cars onto local streets is not the answer**

According to Nigel Turner, Strategic Transport Planner for North Sydney Council “*Most traffic using Warringah and Military Road have local trip origins and destinations, at 49.3%, Northern Beaches employment containment is the highest in the North District”.* Diversifying job centres across Sydney fits with the Greater Sydney Commissions vision. However supporting that diversification should be encouraged with strong public transport network rather than toll roads in and around the city. These projects do nothing to address locally generated congestion across the Lower North Shore and in fact will exacerbate this problem and growing our overall vehicle reliance. Interestingly, there are more trips Northbound in the Sydney Harbour Tunnel during weekdays than Southbound[[23]](#footnote-23) This project will clearly exacerbate the traffic problems flowing North and already high levels of congestion locally. The Grattan Institute states that: *“Sydney’s toll roads have not been designed to manage congestion”[[24]](#footnote-24)* We need congestion solutions that recognise and address the real problems rather than more toll roads which simply convert more traffic into toll revenue to build more toll roads.

According to the Metropolitan Strategy 2006 the *“CBD and North Sydney will remain a core generator of economic growth and high value jobs, with a forecast by 2031 of around 440,000 jobs”.* These projects are focussed on providing a bypass of the Sydney CBD but ignor the issue of congestion around the North Sydney CBD, across the Lower North Shore and Inner West. All business centres should be considered as part of an integrated network solution. Particularly given the increased trend to work locally. The Western Harbour Tunnel very narrowly bypasses the central CBD but pushes more traffic into North Sydney via it’s only access point – the Warringah Freeway. Interestingly, RMS traffic counters demonstrate a higher volume of traffic travelling North in the Harbour Tunnel rather than South during the am peak.[[25]](#footnote-25) If anything the Warringah Freeway should have been bypassed not reconfigured to be a thoroughfare for through traffic to the detriment of highly congested local roads, schools zones and job centres. The Warringah Freeway rebuild project is a proxy bypass of the North Shore without actually providing a bypass. The bypass is achieved by restricting local access. The divide the Warringah Freeway created when built is only exacerbated by this project and East to West access to the job centres of North Sydney, Crows Nest, St Leonards and Chatswood is significantly diminished if not cut off due to flow management.[[26]](#footnote-26)

* **The projects do not significantly address congestion on Harbour Crossings**

The EIS technical working paper on operational traffic states that the Western Harbour Tunnel *“would relieve congestion on the Sydney Harbour Bridge and Sydney Harbour Tunnel”* In terms of harbour crossings congestion the EIS shows that the Harbour Bridge traffic will return to roughly the same level as today. Granted this does not factor in population growth/ induced demand however these roads are already highly congested so there is a public expectation (based in part on the project marketing statements) that some congestion relief from today’s levels will be seen rather than simply addressing future growth:

* + Bradfield Highway (BH) 2016 = 143,000 to 2037=145,000 both directions daily,
	+ Cahill Expressway (CE) 2016 = 39,000 and 2037 = 38,500 southbound
	+ Warringah Freeway 2016 = 380,000 to 2037 = 449,000

The project documents state that *“Overall, forecast demands across Sydney Harbour under the ‘Do something cumulative’ scenario (ie including Beaches Link) show that there would be a small increase in traffic demand across Sydney Harbour and some diversion from the Sydney Harbour Tunnel to the Western Harbour Tunnel as result of changes to travel patterns to and from the Northern Beaches.”* [[27]](#footnote-27)

A modest increase in demand needs to be seen in the light of a 15% increase in heavy vehicles induced to use the route through the Lower North Shore and a significant increase born by the already congested Warringah Freeway. It is clear that the focus is on building freight capacity rather than busting congestion and addressing car reliance. Both capacity and congestion could be addressed via a bypass of the Warringah Freeway with a public transport and/or freight solution. The wisdom of developing this route into a major freight corridor and thoroughfare is questionable given the diesel pollution implications around schools and homes. We should be looking for solutions which balance the needs of freight, commuters and communities rather than serve one purpose at the expense of others.

One argument to proceed rests on the stub that is already being built at Rozelle. During the Inquiry much was said about completing a proper and transparent business case review due to fears about the viability of the Western Harbour Tunnel however this advice was clearly not listened to.[[28]](#footnote-28) [[29]](#footnote-29)One mistake should not be allowed to generate another, however. With the population shift, work from home changes and Smart Motorway initiative there is a need to re-review the traffic modelling for the Rozelle and Anzac Bridge area as this may now be substantively different. Scoping additional public and active transport solutions may also help to alleviate any problems created by WestConnex. Clearly transferring traffic flow into the Warringah Freeway is not the answer and would simply compound the mistakes made to date.

* **The travel time savings claimed are highly improbable and therefore the BCR is highly questionable**

Travel time savings quoted are impossible based on km's travelled and speed limits even if 13% population growth is factored in. For example, the project documents claim a 20 min time saving between North Sydney to Leichardt - the current average peak hour trip time North Sydney to Leichardt is 20 mins. It seems extraordinary that a 100% increase in trip time would be predicted it the project did not go ahead therefore supporting the claim that 20mins could be saved from future projections. The claims made against the project must be able to be validated as they are the key to any possible economic benefit.

According to a Business Case Summary published in September 2020 the BCR for the Western Harbour Tunnel and (Warringah Freeway Upgrade) sits between 1.2 and 1.3. According to the summary *“Standard transport benefits account for 80% ($10,007 million) of total benefits. The majority of the standard transport benefits are savings in travel time and increases in reliability”* however the statement that follows that *“A western bypass of the CBD will remove through traffic* ***and improve journey times for all vehicles accessing North Sydney*** *and the CBD’[[30]](#footnote-30)* is not correct*.* Journey times for vehicles accessing North Sydney are not always improved according to the EIS. For example, the EIS states: “Bus travel times for trips travelling between Warringah Freeway and Military Road would remain largely unchanged. The introduction of the Beaches Link Tunnel would not substantially change traffic conditions for these routes..”[[31]](#footnote-31) Several bus trips modelled in the peak become considerably longer for example, Sydney Harbour Bridge to Amherst Street increases from 13.14 mins to 21.17mins.

The journey time savings claimed appear extremely unrealistic. Given that the combination of high tolls and small travel time savings was cited as the key reason for the financial failure of the last four toll roads built in Australia (Sydney’s Cross City Tunnel and Lane Cove Tunnel, and Brisbane’s Airport Link and Clem7), it is critical that the trip time savings are validated.

Additionally, concerned communities on the Northern Beaches have completed an extensive business case review with expert input and have written to various MP’s demonstrating that the Beaches Link component is not financially viable.

* **These projects do not build up Australian Industry and create the local mix of long term jobs that are needed**

In a recent SMH article the NorthConnex project manager stated the following in relation to delays: *"It is a complex number of systems here and a lot come from overseas. There are some experts from overseas that can't come to this country right now but remotely they're doing their bit."[[32]](#footnote-32)* Much of the expertise needed to build mega tunnels comes from overseas and the remaining jobs are not within industries experiencing the greatest downturn. According to the National Institute of Economic and Industry Research job losses to June 20 in the Willoughby LGA have been in the Professional, Scientific, Technical, Retail and Information Media sectors. Investing in projects which require a high level of overseas expertise (or investment) also increases completion and cost related risk and will not make the best use of recovery investment.[[33]](#footnote-33)

In addition, contracts are continuously awarded to overseas companies. Whether we have the expertise to build these projects ourselves and therefore whether this is the best use of more than $15 billion in recovery funding is questionable? Post-Covid the shortlist selected to build the Warringah Freeway “Upgrade” project included German, Spanish, French and Chinese companies. The recent Metro Station Overdevelopment was awarded to a French company and the Sydney Gateway project has been awarded to a Chinese/ French partnership.

* **There is an unacceptable level of project risk and a high risk of cost blow outs**

The EIS documented a long list of risks and many aspects of the plan are yet to be scoped. Risks include, but are not limited to, unknown geology along the sensitive Sydney foreshore, a high risk of disturbing contaminants in Sydney Harbour, contaminants found along the length of the Warringah Freeway, traffic management plans not yet formulated in a complex, densely populated and sensitive area, noise attenuation costs due to high noise impacts and probable damage to thousands of 100 year old homes - the route tracks some of the oldest residential areas in Sydney. Mr Constance stated in a press release that “*Project costs will only be finalised when construction contracts have been awarded.”[[34]](#footnote-34)* Whilst this may be considered to be standard practice by the government it is not the degree of rigour the public expects nor is it good business practice, particularly mid-recession. Current operators and contractors have publicly stated that they will no longer bid for high risk projects with unknown costs due to previous cost blow outs and legal issues.[[35]](#footnote-35) Transferring risk to the tax paper via poorly scoped and risk assessed projects is not acceptable.[[36]](#footnote-36) [[37]](#footnote-37)

The Beaches Link will see a legacy landfill site used as the major dive site at Flat Rock Gully[[38]](#footnote-38). This site is similar in age to the St Peters site[[39]](#footnote-39) but in a natural gully which has been lovingly rehabilitated over generations and is an important urban bushland and freshwater corridor. There seems to be little documentation on file at local council or with the EPA but local knowledge confirms the historical dumping of medical waste from North Shore Hospital, refrigerant from a refrigerant factory, asbestos, chemicals associated with the quarry at a time with these tip sites were unregulated. Disturbing the tip site presents risk to both residents, users of the area and workers.[[40]](#footnote-40) Given it is a flood zone, remnant bushland site, borders 7 residential suburbs and is a very large catchment leading into Middle Harbour this will be an expensive site to safely mitigate (if that is at all possible) and rehabilitate. Recent projects such as West Gate Tunnel in Melbourne[[41]](#footnote-41) and WestConnex (St Peters)[[42]](#footnote-42) have seen major contamination issues delay and create legal issues in and around contaminated sites as well as significant health concerns for residents. The Northside Storage Tunnel[[43]](#footnote-43) also lies along this gully and runs through suburbs to be tunnelled under (Naremburn, Artarmon and Northbridge) This is a significant sewage system (500 Million Litres of sewage overflow). There is an ongoing major overflow failure in the area which has sent raw sewage down into the valley, into the creek and out into Middle Harbour via Tunks Park. Given the health and environmental risks to an area dense with residents and playing fields serving thousands of children, further damage to the sewage system is of great concern to the community.

The cumulative risks associated with this site are so significant that decision makers should not allow it’s usage as a dive site for this project. Not in the least because it contains parks at top and bottom used continuously by local schools and sporting groups i.e.) Australia’s largest Netball club of 10,000+ members meeting adjacent to the site. With no-where to relocate to due to overdevelopment and park shortages across the area thousands of children will miss out on sport for 5-10 years or risk significant noise, dust, traffic, diesel pollution and the potential for contamination (gaseous or liquid leachate) impacts whilst playing sport. Areas around the sports fields are still settling with sink holes occasionally occurring and flooding. Given the sports fields and dive site are connected to the same fill there is a risk of considerable movement disturbing pockets of contaminants that will be very difficult to detect and manage.

* **The route selected impacts the highest density of sensitive receivers of any project to date**

The route chosen follows Sydney’s largest school’s precinct with 10,000+ children directly impacted, and it is estimated upwards of 40,000 children being indirectly impacted i.e.) travel through or attend activities in the project zone between Rozelle and Balgowlah. The route impacts schools and pre-schools, hospitals, nursing homes and parks in highly dense areas of Sydney where green space, amenity and fresh air is already under considerable strain due to many coinciding projects and increased development.

The EIS models that local PM2.5 pollution levels will reach twice the maximum daily average by 2027. Regardless of whether that pollution comes out of tail pipes or stacks those levels are unsustainable and unsafe around thousands of school children. The government has a duty of care to address this, not make pollution worse by any measure. In fact stringent policies and programs are needed to reduce the pollution across inner residential areas of Sydney.

During the design phase Doctors from the Sydney Children's Hospital wrote to the Premier[[44]](#footnote-44) and Health Authorities expressing their objections - these concerns have not been addressed. The health risk assessment failed to adequately account for the number of children living or going to school across the route. Whilst this does not change the analysis at a single point it does have a significant implication with regard to drawing an averaged conclusion. The health costs of failing to address growing pollution levels above national standards in such a high-density and sensitive area is considerable.[[45]](#footnote-45) The theoretical statement often quoted in project documentation that “*well designed tunnels have a minimal impact on surrounding air quality*” is misleading. A statement of theory should not be used in place of actual data that predicts and monitors air pollution as modelling inputs are highly dependent on local variables. Contrary to the impression this statement gives the EIS documentation confirms that air quality will be negatively affected around our most sensitive receivers and at key sport grounds. Additionally, the most recent tunnel built (NorthConnex) requires building restrictions up to 2.8kms away from stacks - modelling which predicts air quality above criteria. Building restrictions would not be required if air quality risks were negligible.

To see a map of schools and other receivers impacted click here:

<https://www.google.com/maps/d/u/0/embed?mid=1MZFwhRjtOo1juqhogCSb2JOZ_uynRAwM&ll=-33.817931532761776%2C151.19430168336982&z=13>

To see a map demonstrating the extend of construction impacts from the Western Harbour Tunnel/ Warringah Freeway:

<https://b373bb7d-84c9-4e32-a5a1-dcb4b84c93f9.filesusr.com/ugd/4b0485_cd0d2ddd6311418591612cf1f2c053a3.pdf>

* **The health risk assessed is based on missing inputs and skewed data**

The health risk assessment is based on a number of assumptions including that a) background data obtained across Sydney represents local background pollution b) that local traffic will decrease c) that community receptors chosen represent an even distribution of sensitive receivers d) that the community agrees with the level of risk determined acceptable by the proponent.

The health risk assessment admits the following *“Three project-specific monitoring stations for Western Harbour Tunnel and Beaches Link program of works were established by Roads and Maritime in 2017. One of these was at a background location, and the other two were at locations near busy roads. Given the date of deployment, the time period covered was too short for these to be included in the development of background concentrations and model evaluation*.” In other words, the project team failed to gather the promised background data and data sets away from the project have been used. Given the project is being executed in some of the busiest residential areas of Sydney in it’s largest school zone and the general monitors are many suburbs away this is very problematic. The data collected was presented in the EIS but not used as part of the air quality analysis. The background data indicates collected from the three monitors appears to indicate levels well above acceptable criteria. Any increase above already poor background levels is unacceptable and the government has a duty of care to ensure it addresses this and does not make pollution worse.

The risk assessment assumed that local traffic levels will not increase contrary to data presented or omitted from the EIS e.g.) the main arterial roads away from the Warringah Freeway - Willoughby Rd and Military Rd traffic studies were not included in the traffic study area. Community receptors were chosen as part of the risk assessment but do not represent all schools in the area with one point representing several schools (ie several thousand children) whilst another represented no sensitive receivers. The conclusion that air quality is ‘on average’ only minorly affected is a skewed conclusion – the risk assessment should be redone for each and every school in the immediate area and outlying receptors (who are not actual receptors of the project eg Roseville) should be excluded from the conclusion. Regardless increased levels of pollution at one or more schools should not be averaged out but addressed. WHO states that there is no safe limit of PM2.5 and every incremental increase does harm, particularly to children.

The Health risk assessment states that *“No fixed level of risk could be identified as acceptable in all cases and under all regulatory programs...,the acceptability of risk is a relative concept and involves consideration of different factors”* [[46]](#footnote-46) Given that this project has been imposed on the population, the health impacts are irreversible, individuals will not be compensated, there is little advantage to impacted areas, the project area contains a high proportion of children and alternative public transport options would not present the same risk - the 1 in 10.000 health risk stated by the proponent as tolerable is not acceptable. The morbidity risks presented in areas surrounding the project are also unacceptable and cannot be aggregated with a reduced risk found well away from the project footprint which appears to have occurred.

Given that long tunnels are relatively young in Australia there are few (if any) longitudinal health studies completed to date monitoring the health effects of stack dispersion on populations, studies certainly have not covered the known burden of disease or the impact on all age groups. Conclusions so far have been cautiously optimistic but inconclusive at best and have called for ongoing monitoring and research. Modelling and air quality monitoring, which is a sample only and notoriously problematic, is relied upon heavily to evidence safety however monitoring results are indicative only. Given Australia has some of the poorest vehicle emissions standards, a high reliance on diesel and a growing fleet of old vehicles this lack of evidential health research is concerning. When combining increasing vehicle emissions with smoke events and the possibility of incinerators across Sydney the air pollution implication, especially for children are alarming. According to the Public Health Unit Study into a cancer cluster around the M5 the report stated “*We found a small increase in lung cancer incidence in the area surrounding M5 East tunnel and stack in the six years post opening compared to the six years immediately before lung cancer incidence and all cancer incidence in Turrella and the surrounding area. … None of the above reasons would on their own completely discount the possibility of the increase in lung cancer incidence being truly associated with air pollution from the M5 East tunnel stack and portals. However, taken together they make a causal association between air pollution from the M5 East tunnel and lung cancer unlikely. The Public Health Units for the relevant health districts should continue to monitor”[[47]](#footnote-47)* It’s not clear if any ongoing longitudinal health monitoring and assessment is being done and in the absence of clear evidence the precautionary principle should be applied in and around Sydney’s largest school’s zone.

There also appears to be no risk assessment of the ambient air quality risks if there is to be an incident in the tunnel; accidental or otherwise. Any gaseous compounds, smoke or other would be emitted straight out of unfiltered stacks and over local communities densely populated with schools. Fire suppression systems may address this to an extent, but that will be dependent on the nature of the incident. This should be fully risk assessed.

* **The unfiltered mega stacks put high-rise development at risk several kilometres around stacks**

A large amount of high-rise residential development is being planned and approved for North Sydney, St Leonards and Crows Nest. These developments are within 3 kms of the proposed 30 x 30mtr unfiltered stack at Cammeray. According to both the EIS and NorthConnex Air Quality Process Report[[48]](#footnote-48) pollution from these stacks can be harmful to health up to several kilometres away and strict height limits are set for future developments due to health and safety concerns. This would indicate that we cannot safely have both buildings at heights of 40mtrs (ie 12 stories) and above and a mega unfiltered tunnel stack in the same area? And certainly not developments with open balconies, roof gardens and windows such as are planned. Local public and private schools that sit at elevation above the stacks have also expressed health concerns regarding the additional pollution dosage indicated in the EIS due to their relative placement to the stack but those concerns have not yet been addressed by Transport for NSW’s response.

**The EIS modelled that air pollution will reach unacceptable limits**

The proposed design does not move the pollution away from schools as suggested by our local representative, in fact the stacks have been moved closer to younger children i.e. public schools during the course of the design. The alignment with the Warringah Freeway creates more traffic around residential areas along Sydney’s largest school zone. More than 26 schools containing 500-1000 children each will be directly impacted. There are dozens of child-care centres and preschools also impacted. The health impacts on our young children from increasing vehicle pollution is unacceptable. Doctors from the Children’s Hospital as well as researchers from the World Health Organisation have repeatedly warned us about the health impacts of increased pollution from roads and there is no safe level of PM2.5[[49]](#footnote-49). The WestConnex Inquiry found that stacks should be filtered, and tunnels built overseas have treated air. It is unacceptable that we are proposing to build inferior infrastructure which poses a risk to our children’s right to health.[[50]](#footnote-50)

A hoped for conversion to EV’s should not be the determining factor in placing an expressway near children. Given a lack of funding commentators are predicting a continued slow uptake with years before a material difference is seen in terms of emissions. The Chief Scientist stated *“it should also be noted that as exhaust emissions decrease, non-exhaust emissions (such as those from brake and tyre wear) will become relatively more important”* in relation to PM2.5 some of the most harmful pollutants to children. If the traffic in and around children continues to increase and there is a continued reliance on diesel based heavy vehicles there will continue to be a significant pollution impact.

* **Construction impacts are high due to the construction methods and route selected**

The Western Harbour EIS confirms that there will be 6000 construction vehicles daily moving dusty spoil, contaminants and dangerous goods between 12 construction sites across the busy route for a period up to 10 years[[51]](#footnote-51). The impacts have now been staged over a longer period with the Warringah Freeway rebuild to commence first. The Beaches Link EIS is yet to be released but impacts will compound the number of vehicle movements, noise, dust and timeframes with much work continuing in the same location in and around Cammeray.[[52]](#footnote-52) For residents of the Inner West the Western Harbour Tunnel will compound the impacts they have experienced due to WestConnex with Rozelle and surrounds again heavily impacted. The harbour will be crossed a its arguably most contaminated point and an immersed tube design has been selected necessitating dredging. Given the size of the twin road tunnels the environmental impact is far more extensive than a public transport option. The route runs through several parks, two tip sites, extensive areas of contaminated land, heritage areas, The Coal Loader, Sydney’s largest school zone, connects at two points into one of Sydney’s busiest roads, cuts under densely populated residential areas, sensitive foreshore environments, protected bushland and waterways i.e. Manly Dam, aboriginal sites, mangrove areas and gully’s that act as echo chambers. It seems a higher risk, higher impact route could not have been selected in Sydney. The risks and impacts are unreasonable and incongruent with the projects unsubstantiated benefits.

* **The projects threaten Sydney Harbour and our few remaining urban natural and indigenous sites**

The risks to Sydney Harbour (and Middle Harbour) due to the decision to dredge the contaminated Harbour floor have been well documented.[[53]](#footnote-53) With regard to the Harbour the EIS has confirmed threats to Seahorse, Fish, Micro Bats, Sea Eagles and other endangered species and sensitive habitats. Precious bushland which supports endangered and native species and holds significant cultural heritage is also at risk. The bushland and habitats around Wakehurst Parkway[[54]](#footnote-54) and at Flat Rock Gully is particularly significant and risk being destroyed or damaged due to clearing, run off, noise, dust and contamination. Of particular concern is the legacy landfill site at Flat Rock and the impact that gaseous and liquid leachate may have on the surrounding bushland, playing fields, waterways and Middle Harbour. Powerful Owls, Wallabies, Echidna, Fish and other bird species all call this precious and increasingly rare urban habitat home.

* **The distribution of benefits vs costs is inequitable; disadvantaging those already struggling**

The project benefits the wealthiest in our community whilst the poorest will absorb both the construction cost and long-term costs of additional pollution[[55]](#footnote-55) and congestion. The most impacted areas are generally the least wealthy in the Inner West and along the Freeway- these areas house contain nurses, teachers, administrators and service people attracted to the area for work and schooling and who under current circumstances are struggling to pay mortgages[[56]](#footnote-56) and rents in an expensive area. This is not a case of the minority taking on the costs for the majority however as more than 80,000 people live in suburbs directly impacted on the Lower North Shore alone, the majority of people live within the project corridor with up to 8000 people per square km[[57]](#footnote-57). The construction costs are not born by the few who will benefit in Mosman (although there is only a 15% reduction in traffic to Military Rd stated) and Manly but by communities such as Rozelle, Balmain, North Sydney, Crows Nest, Cammeray, Naremburn, Artarmon, Seaforth and Balgowlah. These suburbs will see next to no benefit and will experience a significant degradation of amenity and liveability. Throughout the EIS an assumption has been made that local communities will benefit from less congestion however the evidence (Traffic Appendices) indicates the opposite in and around the expansive project footprint. We can only assume that the continued insistence that “local” traffic improves is related to flow through traffic away from the direct area of impact. There has been no traffic analysis presented within the EIS to back the claims i.e. Willoughby and Military Roads were not part of the traffic study. All local councils have raised serious objection/concerns as a result of their own transport analysis regarding impact on local traffic and businesses. It’s illogical to withdraw multiple levels of access from the Warringah Freeway and claim that local traffic and trip times substantially improve.[[58]](#footnote-58)

* **Compounding financial pressures along a highly residential route represents a significant mental health risk**

Properties stand to significantly devalue due to a wide band of substratum acquisition across a predominantly residential route, a degradation in visual amenity due to the very visible 30 x 30 metre pollution stack and 5-10 years of widespread heavy construction impacts. Cammeray has the highest job seeker rate on the North Shore and many families many are over extended. The North Shore is in the grips of a mental health crisis, particularly amongst our young people. Now is not the time to inflict such a high impact project on thousands of residents – particularly children. Transport for NSW confirmed in their response to submissions that "*residents and communities near the project may experience stress and anxiety due to uncertainty about potential property impacts, property acquisition and proposed changes that may be associated with the project*" This is not acceptable mid-pandemic.

* **The road tunnel proposal is far from a sustainable, climate friendly congestion solution.**

The Western Harbour EIS confirmed what we all know: a road tunnel is not a sustainable option; the tunnels directly contribute to emissions and ultimately increase vehicle reliance. The route significantly threatens biodiversity, green spaces, increases hard surfaces/heat, produces mass diesel emissions from construction vehicles, destroys hundreds of trees, risks run off contamination in sensitive foreshore waterways and ultimately increases carbon emissions. Transport emissions are second only to energy emissions in Australia which is our fastest growing emissions sector[[59]](#footnote-59). The EPA States that: “*The transport sector is the fastest growing component of NSW-generated greenhouse gases…..the sector is a significant source of greenhouse gas emissions for NSW because of its growth rate and the size of its contribution to total emissions, which was 20.8% in 2016*.”[[60]](#footnote-60)

Some of the statistics from the Western Harbour EIS are as follows: 1M+ Litres of water used per day (majority potable) will be used in construction, $6M Tonnes of spoil will be trucked through local streets, 600 trees will be destroyed, contaminated spoil will be dried out at White Bay, non-contaminated spoil will be dumped at sea, 1477 ktCO2e will be produced during construction and 143 ktCO2e operational emissions will be produced per year by 2037.By 2035 73.7 ktCO2e will be released due to electricity usage alone required to operate the tunnels.[[61]](#footnote-61) Ultimately it is widely recognised by planners that building more road capacity in urban centres increases car reliance via a process of induced demand. This is contrary to the goals stated in the Transport Strategy 2056 Plan which seeks to decrease vehicle reliance and emissions in Sydney.

* **It appears that due process has not been followed in assessing the business case or consulting with community**

The NSW Auditor General’s Performance Audit of the NorthConnex project in 2017[[62]](#footnote-62) reported to the Office of Premier and Cabinet that several key steps had been missed in assessing the business case and a conflict of interest had failed to be identified. It appears that key steps may have again been missed with regard to this project. It appears that funds were released from the Restart NSW Fund prior to a business case review (reportedly in May 2020) by Infrastructure NSW[[63]](#footnote-63). The Inquiry into WestConnex [[64]](#footnote-64) found that greater transparency with the public regarding business cases should be employed for all future projects. The community has twice submitted freedom of information requests for the documents and twice been denied. The Leader of the Government was censured in the Upper House for not providing the business case after a year of requests and statements regarding why it could not be provided.[[65]](#footnote-65) Both the process for approval and the business case itself requires far greater scrutiny and transparency. The Health and community services committee recommended that: *“That the NSW Government publish the strategic and final business cases for the Western Harbour Tunnel and Beaches Link, appropriately redacted of commercial in confidence information, to enable an informed debate on the proposals identified.”[[66]](#footnote-66)* To date the public have not been provided with the business case.

Consultation has been extremely constrained by a number of factors. The design consultation did not include consultation with the most impacted communities until the community complained to the Premier. Whilst three consultations were scheduled, they were last minute therefore not accessible to all. The EIS was finally released as Covid restrictions first came into force. The community wrote to local members (Member for Willoughby and North Shore) requesting that the consultation be postponed – however this was denied by the Department of Planning on the day submissions were due.

Disappointingly job ads have been posted, works commenced and shortlisted companies have been published well prior to project approval. Concerningly one job advertised stated that a key role was to: “a*voiding compensation claims and minimizing negative comments to maintain the projects integrity*” [[67]](#footnote-67) This does not suggest a robust project and willingness to work in the best interest of the community.

Recently the industry received an announcement that the Warringah Freeway portion of the project would be tendered and commenced separately, the community have not been notified of this change. The EIS for the Western Harbour Tunnel and Warringah Freeway was combined so it is impossible for the community to understand what impacts to expect and when. Given that there is a risk that the project overall may not attract funding or circumstances may further change surely a separate business case assessment/BCR should be completed? It is doubtful that the Warringah Freeway works have a BCR that would stand up on their own, particularly given the poor local trip outcomes.

* **Toll Road Tunnels owned by private operators provide little to no return on investment to taxpayers**

With a history of road tunnels being under-valued and sold off to private operators who retain the profits, which are underwritten by the government, it is widely understood that toll roads provide little return on investment to taxpayers.[[68]](#footnote-68) Due to toll stress, cash back schemes are often offered which effectively recycles money from the taxpayers pocket. There is growing discontent in the community that these projects favour private operators whilst penalising the public. Taxpayers funds need to be used to the public benefit now more than ever. Sydney now has the largest and most expensive toll road system worldwide and the public provide only very select congestion improvements. Sydney also transports 80% of freight be road. In August 2020 the Chief Scientist published a study called **“**Opportunities for prosperity in a decarbonised and resilient NSW” and recommended *“Movement of passengers and freight transportation to more efficient modes. For example, mode shifting from heavy road vehicles and air modes to rail.”* Because *“Each train that runs during peak hour is estimated to reduce road traffic by 800 cars, with up to $9 in congestion costs saved per person that moves from car to rail”.* Continuing to build toll roads to service our freight system does not fall in line with this recommendation.[[69]](#footnote-69)

* **Public and Active Transport Corridors, that have already been assessed positively, should be funded**

If public transport is offered people will use it, this has been evidenced via the success of the newly opened Northwest Metro and Northern Beaches B-Line introduced November 2017. Average daily traffic on Spit Road on RMS live traffic website peaked in 2017 at 66,000 vehicles and by 2019 it had fallen to 59,900 due to B-Line patronage.

In 2009 the NSW government completed a metro study which looked at 16 potential corridors. The highest potential peak passenger rating went to the Dee Why to Central route via Chatswood with 25,681 passengers predicted; 1000 passengers per km of corridor.  This route would result in 32,774 less vehicle kms travelled (VKT) bringing significant pollution and congestion benefits to commuter suburbs. This route/ congestion solution needs urgent reconsideration.

# It is true the Northern Beaches have been waiting years for a solution however it is only in recent times that this has morphed into a toll road solution. Bradfield originally planned a train line to the beaches, Christie recommended a Metro Line (“Long Term Solutions for Rail Paper” published in June 2001), Premier Baird in 2016 stated that a “train line needs to be considered” [[70]](#footnote-70) and the same year a Metro line under Military Rd was announced by not followed through.

* **Covid has given us a pause to re-imagine the Sydney of the future**

The cost of the tunnel at A$1b per km versus the cost of the metro at A$230m per km does not stack up or represent value for money. Infrastructure NSW’s State Infrastructure Strategy 2012-2032 *“concluded that Northern Beaches Link (road tunnel) is a lower priority for Government funding support because of the lower traffic volumes, the lack of through traffic, limited population growth on the Peninsula and the limited role of Military Road in the freight distribution network.”[[71]](#footnote-71)*

Pre-Covid we saw the appetite for public transport in Sydney grow exponentially. [[72]](#footnote-72) During Covid we have seen a sustained shift to flexible work arrangements and active transport. The Beaches community have increasingly indicated that they are ready for clean mass transit options. In December 2018 the Northern Beaches council completed consultation on their *Move - Northern Beaches Transport Strategy 2038.[[73]](#footnote-73) They found “Considerable support for new public transport options of light rail, metro and trains, despite concerns it will result in higher density development. There was a prevailing response that transport needed to “catch up” with population and housing growth already happening and ‘get on the front foot’ with its plans.”* As a result of community feedback the council has set goals to reduce car use by 23% and overall car emissions by 15% - it is not clear how this is possible with the vehicle increases needed to fill the tunnel capacity and provide adequate toll revenue? Zali Steggall completed a recent survey of supporters: less than half now support the toll road tunnel option. We strongly believe that the publication of, what will no doubt be, a very extensive environmental impact statement for the Beaches Link will lower that support further as climate and environmentally aware beaches residents come to understand the tunnels full implications.

The technology exists to bring a quiet, carbon neutral rail solution to the Beaches which services both commuter and possibly freight destinations longer term. Supporting innovation in this sector would provide an opportunity to employ university and technical staff to work in partnership with the manufacturing industry and develop new technology such as solar and hydrogen options[[74]](#footnote-74). This would see the Beaches lead the way into the future whilst supporting local manufacturing and local jobs. Providing a future focussed solution for a climate aware electorate along an alignment that has already been heavily investigated by the government presents a positive job generating opportunity. Investment in innovation is a far more positive use of tax-payers funds and would inspire the younger generation rather than fill them with a sense of more of the same as we come out of Covid.

Many are asking whether another costly toll road is really what we need right now [[75]](#footnote-75) and independent planners increasingly believe the Western Harbour and Beaches Tunnel Projects should not be built.[[76]](#footnote-76) The government has had several options presented to them by qualified engineers and planners …now is the time to revisit these options. A combination of public and active transport would free up road space for freight and provide for a healthier and less impactful link.

* Military Rd Metro Extension[[77]](#footnote-77)
* Chatswood to Dee Why Metro[[78]](#footnote-78) Rail[[79]](#footnote-79) Trackless Tram [[80]](#footnote-80)
* Chatswood to Balgowlah Light Rail and longer-term Sydney Heads Freight/ Commuter Rail linking to Gosford (Ted Nye engineer, Sydney Harbour Tunnel)[[81]](#footnote-81)
* Invest fully in the long-held plan to link up Beaches, Neutral Bay, Willoughby, North Sydney and Lane Cove Cycle Network i.e Inner suburbs loop to the city freeing up road space and build the ramp to the bridge[[82]](#footnote-82) Consider skyway cycleways to provide safer passage and more usable cycleways where there are steep gradients.
* Commit to renovation of the Glebe Island Bridge to act as an active transport/ light rail crossing of the harbour linking to the proposed Parramatta Cycleway.[[83]](#footnote-83)
* Analyse the results of the B2 Line, South West Metro, active transport networks, Smart Motorway and post-Covid trends before deciding if the expensive and high impact Western Harbour Tunnel toll road is necessary or viable.

As stated recently in the Daily Telegraph: it’s time to pause and re-imagine Sydney[[84]](#footnote-84). We need to put the $15 billion dollar Western Harbour Tunnel (including Warringah Freeway) and Beaches Link on a firm pause. Why not release the Beaches Link EIS for consultation but include a full analysis of viable public and active transport alternative solutions? Hold the environmental, climate, trip time and health comparisons in clear view and let the public decide. You might be surprised and a less expensive “Beaches Link” may emerge. A Beaches Link in line with your plans for a more efficient, green and liveable city. Urban centres that have a sense of place rather than feel like they have been run roughshod over by a toll roads. In the meantime, directing investment to sectors and locations where jobs are needed and will build a better future would be a far better use of tax payers funds mid-recession.

*Written by Stop the Tunnels, Willoughby. We are a community group made up of local residents, experts and specialists researching the impacts and cost/benefits of the Western Harbour and Beaches Link Tunnels. We are advocating for sustainable transport solutions for Sydney that create the best possible city of the future. We are particularly concerned with the impacts on children and what a generation of children are being asked to give up and what they will have to take on in future, for the sake of these projects. We believe in government accountability, transparency and partnership at all levels of planning and we are not politically aligned.*

*Please contact:* *stopthetunnels@gmail.com* *for more information.*

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