

Submission
No 389

INQUIRY INTO IMPACT OF THE WESTERN HARBOUR TUNNEL AND BEACHES LINK

Organisation: Baringa Bush Community Garden Inc., Seaforth

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Submission to the NSW Parliamentary Inquiry into the Impact of the Western Harbour Tunnel and Beaches Link

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Background and context: The Baringa Bush Community Garden (BBCG) is a dynamic local community hub within Baringa Bush Reserve in Seaforth. Local residents work together to grow organic fruit and vegetables, to showcase urban farming, to run a community-scale composting program, to remove invasive weeds and to regenerate the surrounding native bush. As the garden is not fenced and is sited next to a playground, its grounds and picnic shelter regularly attract both local and out of area visitors. The garden is entirely volunteer-run, self-funded and insured. It is situated on land rented for a nominal fee from Northern Beaches Council. The garden has **100 + financial members**, with additional families composting, and runs an annual Spring Fair attracting approximately **400-500 people** and occasional workshops.

The garden is designed to enhance the area's natural environment in line with Northern Beaches Council's Local Strategic Planning Statement, *Towards 2040*, which identifies **the Baringa Bush Reserve as of importance as wildlife corridor and for connectivity with Burnt Bridge Creek**. The garden is aligned with NBC's vision of 'reconceptualising bushland as an asset for its intrinsic values and for the services it provides, including carbon and stormwater capture and pollution management' and its goals of retaining and expanding native vegetation and maintaining or enhancing ecological functions.

The proposed pathway of the tunnel to the Wakehurst Parkway exit will run under almost directly the garden, placing in within the vibration zone and as most of the garden's members live within walking distance, the proximity of both construction sites means members and the garden itself will be substantially impacted both during construction of the Beaches Link tunnel and during its operation.

Given the location of the garden and its community, this submission relates to the Beaches Link tunnel only. Our submission is based on BBCG's response to the EIS.

The BBCG community thanks the Committee for this opportunity to describe the impact on the garden and its members.

Submission

Members of the BBCG, and the Committee, have met to consider the Beaches Link project based on the details given in the EIS and have identified numerous negative impacts. They cannot all be detailed here, so key negative impacts have been selected. These are:

1. **The project will cause extensive damage to our irreplaceable natural environment and puts numerous ecosystems at risk, including the endangered grey-headed flying foxes roosting along Burnt Bridge Creek.**
2. **The project is incompatible with NSW's stated goal of zero emissions by 2050 and various Council and NSW government policies and goals to reduce car use and to promote active transport, sustainability and liveability**
3. **The project fails to demonstrate the tunnel will reduce travel times, largely due to forecasts of additional congestion and slower local travel around the tunnel entrances and long-term trends linked to additional land releases and development.**

BBCG is aware of numerous local organisations, individuals and school P&Cs currently preparing submissions. Given our environmental brief we will focus on several relevant impacts. However, **we wholeheartedly oppose** the Beaches Link tunnel in its current form and support submissions from the Save Manly Dam Catchment Committee, Viable Transport Solutions and the Australian Conservation Foundation (Northern Beaches).

Terms of Reference (j) the impact on the environment, including marine ecosystems

1.1 Burnt Bridge Creek Catchment

The proposed construction and operation of the tunnel will result in ground water drawdown beneath the Burnt Bridge Creek and a reduction in base and surface flows. Potential impacts would be experienced where maximum total flows would be reduced by 69 and 96 per cent respectively after 100 years of operation. **This would directly impact flora, fauna and downstream receiving waters, meaning the entire water system from Seaforth to Manly Lagoon and to the beaches of the Manly area will potentially be impacted.** The Burnt Bridge Creek catchment, including the Baringa Bush Community Garden, will also suffer substantial permanent ground water draw down. We understand this will be necessary to prevent flooding of the tunnel. **The ground water that would otherwise support the catchment and creek systems would be continuously pumped away as wastewater, leaving the Burnt Bridge Creek with significantly less water, or as the EIS models show virtually no water.**

This EIS states: 'The freshwater creek runs for about four kilometres and **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*. This includes a camp of endangered grey-headed flying foxes that rely on the creek and the retention dam in Balgowlah Golf Course for water. Northern Beaches Council says of the Burnt Bridge Creek Reserve: 'The reserve is significant in terms of both **ecological and community values**. Ecologically the riparian corridor **provides a habitat link**

between the coast and natural areas further inland. The protection and enhancement of the native riparian vegetation in the reserve is crucial for the movement of wildlife.'

Yet, the EIS pays little attention to such a significant impact on this creek system, despite international and Australian research that highlights risks to ecosystems when tunnel construction affects ground and surface water. *'Any changes in the ground water environment or any disturbances to the water balance of catchments may cause environmental impacts detrimental to the surrounding vegetation'* (Gokdemir et al, *Advances in Water Resources*, 133, 2019). Modelling is, however, challenging and to assess the impact of tunnelling vegetative, atmospheric and hydraulic parameters must be combined. The EIS provides no scientifically robust analysis of the impacts across the catchment, within the creek and its riparian zone and downstream to Manly Lagoon and the Manly beaches.

The EIS says: 'While these reductions could be considered significant, in particular for Burnt Bridge Creek and Quarry Creek, they are unlikely to result in a complete loss of aquatic habitat. Pools would be retained and there would still be high flows within the waterways immediately after rainfall events.'

Such a conclusion has no scientific basis and gives us little confidence. **The removal of 96% of the water from a creek that supports aquatic life and a diverse riparian zone, including many species that rely on access to its waters, will have devastating impacts for ecosystems from Seaforth to Manly.** It also fails to consider or investigate the implications of reduced water flow for the Manly Lagoon including reduced oxygenation and the impact on its aquatic life. The pools the EIS mentions would essentially be stagnant and, therefore, unable to support many forms of life.

By contrast Northern Beaches Council's experts, in their (first) draft submission noted: **'The EIS trivialises what would be significant hydrological and ecological impacts on Burnt Bridge Creek. The creek would essentially function as a storm water channel...** Other impacts include the effects of ground water drawdown on riparian vegetation and other terrestrial flora and fauna (protected flying foxes etc) reliant to some degree on available freshwater or aquatic communities.' The EIS **fails to assess** impacts downstream on Manly Lagoon including on endangered ecological communities. In a later iteration, NBC highlighted the need for a wide range of mitigating measures, which were not outlined in the EIS.

While the EIS suggests further studies but these are not defined or detailed. It is very worrying that the EIS states: Where unacceptable ecological impacts are predicted, **feasible and reasonable mitigation measures** to address the impacts should be identified, incorporated into the detailed design, and implemented during construction. This **does not constitute a commitment to do anything, as 'feasible and reasonable' are subjective terms and required design changes to protect this water systems may be judged as not feasible.**

It appears the EIS has been rushed and that none of the necessary detailed studies have been done to even understand the environmental impacts of the ground water draw down, nor the

subsequent work needed to design means of preventing serious ecological damage across an entire catchment and watercourse.

The vulnerable flora and fauna – who rely on these waters - are greatly valued by the local community as is the cool, riparian zone and its walking and biking path. Of particular concern is:

Grey-headed flying fox roost: Balgowlah’s flying foxes are a nationally and state protected endangered species relying on Burnt Bridge Creek and the water retention dam at Balgowlah Golf Course. They are a wonderful sight as they depart to forage along the upper reaches of the creek every evening. Their camp lies in the vegetated area between Balgowlah Road and Burnt Bridge Creek Deviation, about 120 metres from the construction footprint. Potential noise impacts are noted in the EIS. The solution is listed as ‘Where feasible and reasonable, noise BL intensive works with the potential of impacting the Grey-headed Flying-fox camp (ie demolition involving rock hammering or resurfacing works) should be programmed to avoid September to February’. (19.6) The key issue here is the wording. ‘Where feasible and reasonable’ is not a requirement to protect this endangered species, it is an invitation to make a subjective judgement that may be swayed by financial priorities.

The NSW Government, through Save our Species, lists the key threats to Grey-headed flying foxes as **loss, fragmentation and degradation of habitat**, and widespread pervasive factors such as impacts of climate change and disease.

The Beaches Link project will hasten the loss of this endangered grey-headed flying fox colony through loss of habitat, the de-watering of the creek and the removal of the water retention dam at Balgowlah Golf Course.

RECOMMENDATION 1: That detailed studies be conducted to assess the impact of ground water draw down across the Burnt Bridge Creek catchment (Seaforth and North Balgowlah) including on native flora and fauna and on private gardens and mature street trees - and that engineering solutions such as tunnel linings and tanking be assessed as a possible means of avoiding ground water depletion.

1.2 Other substantial and permanent environmental impacts and losses - The EIS details
substantial widespread damage to sensitive ecosystems and otherwise protected reserves during construction, as well as permanent losses that will be felt long into the future. In addition to the dewatering of Burnt Bridge Creek, this includes the felling of almost 2,000 trees from the Manly Dam catchment in areas of known risk biodiversity (including endangered species), the removal of hundreds more trees along the creek and at the Balgowlah Golf Course and the risk to Middle Harbour posed by the dredging of contaminated sediment and unavoidable sediments plumes across the Harbour. Some 23 endangered species will be impacted across the project.

We have far too much firsthand experience with the impact of major developments on wildlife in this area. The Northern Beaches Hospital development forced wildlife onto roads and further south into ever smaller areas of bush, leading to a significant (and ongoing) number of deaths at the

intersection and along Wakehurst Parkway. Given the constraints of reduced habitat, car strikes are already regular occurrences. The fines meted out to contractors for breaches of environmental conditions during the NB Hospital roadworks, and for the Mona Vale Rd upgrade, highlight the extremely high risk to fauna – and the failure of project managers to protect them as required. It is simply not possible to reduce and fragment habitat without forcing wildlife leading to deaths or forcing fauna out onto roads and into contact with people or to reduce their food and shelter sources to the extent they become chronically stressed. The destruction of such valuable bushland at Manly Dam and the widening of the Wakehurst Parkway will kill endangered wildlife, expose the bush to ‘edge effects’ allowing weeds to invade and lead to contaminated runoff from the ridge, threatening water quality in the dam.

The EIS foreshadows the loss of invaluable and unique flora and fauna with only cursory and ineffective measures proposed to offset the devastating impacts of the construction and operation of the Beaches Link tunnel. Where ‘biodiversity offsets’ are proposed, we have no confidence these will limit net environmental losses. Offsets have no effect locally, so cannot make up, for example, for the felling of one of the last patches of endangered Duffy Forest, now one of the rarest forest ecosystems on the planet. For local endangered species that die in situ, there will be no other population somewhere else. TfNSW confirmed in an online briefing session that offsets for trees lost could not be achieved in the vicinity of Manly Dam and Burnt Bridge Creek. Ineffective replanting around the Northern Beaches Hospital has resulted in the death of many trees counted as offsets.

2. Compromising NSW Climate change/emissions reduction goals

NSW climate change goals – The Beaches Link tunnel contradicts the NSW Government’s commitment to zero emissions by 2050. The construction of the tunnel alone will generate an additional 1,521,365 t CO₂-e, adding 1.3 % to the state’s annual greenhouse gas emissions (see EIS, Appendix X, pg v.). Once operational, the EIS calculates the tunnel will contribute 0.04% of states total emissions per year – just from the one road. This is made up of emissions from powering tunnel operations (approx 60%), and individual vehicle emissions (only 40%), exacerbated by the lack of dedicated public transport within the tunnel. Construction would contribute approximately 1.3% of NSW yearly emissions.

The project will also lock in a private car and truck based model of transport for the northern beaches, when the only effective way to reduce congestion is to put more people in fewer vehicles. This will occur while petrol and diesel continue to dominate due to the extremely slow uptake of EVs in Australia and infrastructure to support them. Australian governments at every level have rebuffed calls for policy incentives or levers to drive EV adoption. Instead, Australia’s highest selling vehicle, dual cab utes, are incentivised due to a FBT exemption, thereby driving up diesel and petrol emissions. **In the first quarter of 2021, diesel passenger car, SUV and LCV sector jumped 20.7 per cent** over the same period in 2020. The World Health Organisation classified diesel exhaust as carcinogenic in 2012. Similarly, increased congestion and vehicle movements during tunnel

construction will expose local students, residents and workers to elevated levels of vehicle exhaust (primarily diesel) and particulates over many years.

Although the proportion of EVs will increase over time, confidence in their role in solving air pollution problems is also misplaced when particulate pollution is investigated. Studies in the UK, where both new diesel and petrol vehicle sales will be banned by 2030, show harmful particulate pollution from tyre and brake wear can be ‘1,000 times worse than vehicle exhaust’, especially from larger SUVs and light commercial vehicles, such as those dominating Australia’s vehicle markets. This well documented risk was recently acknowledged by Planning Minister Stokes. On May 21, 2021 he was reported as saying:

“Mr Stokes said electric vehicles were heavy and “torque-y” and created a lot of wear and tear on roads. He also said the weight contributed to the amount of particulate matter they expelled.

“Because EVs are so heavy, those particulates from brakes and tyres can actually be more significant than from existing petrol- and diesel-powered vehicles,” he said.”

In addition, a long term study of a mass die off of salmon in urban streams in Washington State found that storm water contaminated by microparticles from tyre wear contained toxic chemicals responsible for the fish deaths (<https://www.emissionsanalytics.com/news/pollution-tyre-wear-worse-exhaust-emissions>). Given the proximity of the Beaches Link tunnel’s stacks to the **sensitive Manly Dam catchment and Burnt Bridge Creek** – and the lack of containment for runoff from the proposed widened Wakehurst Parkway – we can expect increases in such toxic pollution in local waterways, potentially negatively impacting local ecosystems including multiple endangered species. (<https://www.sciencedaily.com/releases/2020/12/201203144228.htm>)

RECOMMENDATION 2: That the Beaches Link project be considered in terms of its long term impact on climate change, taking into account:

- NSW Planning Minister, Rob Stokes warning Sydney becoming ‘enslaved’ to private cars. Mr Stokes was quoted in the SMH saying: *the government needed to influence people’s decision-making when it came to transport, and provide better walking, cycling and public transport options across the city.*
- The NSW Productivity Commission’s recent report Rebooting the Economy, **recommended (8.4):** As a first response, investigate a package of light-touch options to reduce congestion. This should include measures that promote good driving behaviour, encourage off-peak travel and make targeted investments at specific congestion pinch points. No later than three years following implementation comprehensively assess reductions in congestion and broader impacts on transport networks. Contingent on evaluation of the package of light-touch interventions conduct a Gate 1 strategic assessment for cordon charging in the Sydney CBD and other congestion hotspots. pg 25, Recommendations

2. Terms of Reference

- (b) the adequacy of the consideration of alternative options, and

- (g) the extent to which changes in population growth, work and travel patterns due to the COVID-19 pandemic have impacted on the original cost benefit ratio

Given the substantial environmental, health and community cost of the tunnel, it is essential that a compelling case is made for its construction. BBCG does not believe a compelling case had been put forward. We are unable to consider the business case as this has not been made publicly available. This is, in itself, a major flaw in the project from a community standpoint – governments should always be transparent and accountable when spending very large sums of public money, particularly if these monies increase the public debt for future generations.

BBCG believes Transport or NSW's (TfNSW) claims of big savings in travel times are disingenuous.

TfNSW has made optimistic claims of time savings for northern beaches residents with the completion of the Beaches Link Tunnel such as 10% less traffic travelling along Military Road, and 33% less traffic travelling on Spit Road – from Spit Bridge to Spit Junction in Mosman by 2037. However, this forecast was developed in 2016 and does not factor in many more recent developments, so exaggerates congestion and, hence, improvements in travel times. First, increased bus transport capacity (e.g. the Dee Why to Chatswood Express Bus Service), the popularity of the B-line service and, since COVID-19, the growing adoption of WFH or hybrid work models. Although the EIS argues that traffic is 'back to normal' across Greater Sydney and speculates that traffic flow will continue to grow, there is no evidence presented for this assumption.

Conversely, the EIS fails to take into account ongoing 'social distancing' on buses which mean they are currently running at below capacity. Some of our members have told us they are currently driving only until the post vaccinations/post-COVID period and will return to public transport. Likewise, the EIS does not take into account the sudden reductions in bus services across the Seaforth/Balgowlah area before Christmas, which has greatly limited public transport options for many workers and school children, forcing some people back into cars.

Much research points to the popularity and expected long-term adoption of some form of WFH including hybrid work models reducing the number of commuting days. For example, the ADAPT survey of 220 of Australia's largest corporate and government organisations (Sept, 2020) found they expect 43% of employees to be away from the office on any given day and while commuter numbers will bounce back, 'they will be nowhere near the level before March, 2020'. When considered with the fact that over half of all residents (53%) of the Northern Beaches LGA work within the local area, there are many potential confounders to the models and projections presented in the EIS. The interview with Planning Minister, Rob Stokes, published on February 26 (SMH) is also at odds with the private car-based toll road community model of the Beaches Link tunnel. He confirmed pandemics have always had an impact on planning and architecture, and Sydney would be reshaped by COVID-era changes. Mr Stokes said the draft Design and Place SEPP,

which will apply to state significant developments, would encourage cycling over cars, ensure more people have access to green space, prioritise sustainability and take into account working from home. This coincided with Infrastructure Australia reporting a 200% increase in people moving out of cities and adopting remote working models (ABC). Likewise, the Northern Beaches Council Transport Strategy aims to have achieved a 30 per cent reduction in trips by car by 2038 by prioritising active transport and public transport.

The EIS also reveals that local congestion will worsen, not only during construction (this issue will be widely discussed in other submissions) but once the tunnel is operational, due to congestion on roads around tunnel entries and the creation of multiple new rat runs. For Frenchs Forest (7.7.1), for example, a reduction in travel speeds of 13% is forecast in 2037, indicating that the same communities forced to suffer through so many years of construction at either end of the Wakehurst Parkway – and to endure the loss of so much of their natural environment – will actually end up worse off. On the subject of travelling time ‘savings’, the CSIRO has reported that pollution is regulated in the M5 East Tunnel by lowering traffic speed when pollution/car volumes are high.

The EIS (4.3.2) dismisses alternative to the tunnel projects. It claims that ‘travel demand management measures’ – such as flexible working arrangements, public transport etc – would ‘require considerable changes in social attitudes, travel behaviour and government policy’.. ‘and ‘can take many years to achieve’. Evidently, this section was developed well before COVID-19. As is now widely acknowledged and outlined above, Australians have demonstrated that such changes can be implemented effectively and rapidly. The EIS also ignores recent surveys revealing the preferences of residents. For example, Warringah MP Zali Steggall’s Transport Survey (2019) found only 38 per cent of residents Manly, Fairlight, Balgowlah, North Balgowlah, Seaforth, Allambie Heights and Frenchs Forest supported a car tunnel but that the majority of residents wanted better public transport, including a Dee Why to Chatswood public transport corridor.

The bigger picture: In 1983 the original Warringah Corridor transport inquiry (Kirby) ultimately rejected the proposal to build a freeway connected to the Warringah Expressway. The inquiry found in favour of developing public transport/mass transit for two key reasons. 1. That additional road capacity would be accompanied by development that would increase the population of the northern beaches and, 2. in the absence of an effective mass transit system that population increase would put more cars on the road, and the new freeway would soon become congested, eroding any promised saving in travel times. Such scenarios have been documented over and over again in cities all over the world. The EIS acknowledges that increased housing development would accompany the building of the Beaches Link tunnel, thereby increasing traffic. As no dedicated public transport lane or service is factored into the design it is reasonable to conclude that any early benefits would be quickly eroded as more cars came onto the road. The EIS also fails to address the reality that the tunnel is two-way. Given the serious limitations on parking and congestions along the northern beaches’ coastline, particularly during summer weekends, what provisions have been made for a mass influx of cars? Likewise, what provision has been made for accommodating many more private cars in the CBD and managing congestion as they exit the tunnel. The EIS provides no

reassurance that the interface of the tunnel with surrounding road systems and local communities had been considered.

RECOMMENDATION 3: Given that information revealed in the EIS does not make a persuasive case for the construction of the proposed six lane private vehicle, tolled Beaches Link Tunnel, members of the BBCG ask TfNSW to focus its attentions on alternative options. This includes public transport using existing infrastructure, light rail and/or road models with a smaller environmental footprint and dedicated mass transit services that will provide a genuine reduction in congestion.