

Submission
No 391

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

Name: Name suppressed

Date Received: 10 June 2021

Partially
Confidential

Submission to

Impact of the Western Harbour Tunnel and Beaches Link

From

Kirkwood Street, Seaforth, NSW, 2092

10 June 2021

We do not support the proposal for the reasons supplied on the attached document.

Our Home:

Our property, our family home, as are many on Kirkwood street, is one that has considerable amount of time, effort, money and emotional/social energies invested in it.

Over the years the property has been fully renovated, upgraded and extended to a 3 bedroom + study with two large living areas; addition of a new timber deck and dining area, swimming pool and spa; new substantial shed; sola power, gas lines, large areas of under house storage and water tanks.

This has been complemented by significant time and effort put into the grounds including addition of retaining walls, new grass coverage and paving and tiling in both front and back, replacement of fences both front and back, planting of new trees, shrubs, flowers and vegetable/herb garden.

It was our plan to live here for many, many years to come – to maintain the house as a family home, welcoming our elderly parents and one day, hopefully others such as grandchildren.

The beauty of living in this street is, or was, apparent to those who have the good fortune to live here, and indeed anyone who may have planned to live here in the future:

- Vision of coverage of trees from the front and back entrances and windows of the house ('Loss of View');
- Watching and listening to the wondrous bird life in both areas;
- Limited traffic noise from Wakehurst Parkway as the trees 'cushioned' vehicle movement;
- Comfortable village/community feel with neighbours, bowling club members, dog walkers, bushwalkers, those playing and spectating at sports on the two adjacent ovals, golfers, cyclists etc.

Impact of the Northern Beaches Tunnel on the VALUE of our home:

It is our view that the current status of our home and its value to both ourselves and the greater community is now in 'limbo' and definitely losing value over the proposed Northern Beaches Tunnel.

For the period of construction, our family home will be almost fully **enclosed by activity at all times** – support site to the south, support site directly behind the back fence, drilling and tunnelling behind and under the property, 'cut and cover' to the north and northeast. Added to this will be noise, dust, parking issues, and major disturbances with local roads and traffic.

We are at cross-roads at whether to continue to upgrade the property to enjoy it as we wish; or whether to succumb to a 'what's the point?' attitude as the area is going to be completely transformed into a calamity/construction zone; or to actually consider selling and moving on to avoid at least five years of disruption and loss of quality of life over that period.

It is however unlikely there would be many interested buyers for our home at its current value in light of the proposed project, as I imagine prospectors would not be in favour of moving to a new home with a 5-year construction project of this magnitude. Noise, traffic, air quality, parking, drilling and digging and an eventual 4-lane highway and ventilation stacks are not desirable attributes for any potential buyer, nor for anyone who lives here.

There is little doubt that we will be substantially disadvantaged financially, emotionally and socially (friends and extended family are already showing horror at the thought of visiting due to the above factors) from the project and for us, having to contend with a new fence, construction sheds, lay down areas, loss of wonderful, aged trees and plants 'loss of view', noise, dust, drilling, ventilation outlets and general **Construction Fatigue** – is truly soul destroying.

CURRENT TREES AT THE BACK OF KIRKWOOD STREET (our outlook) – large mature trees and shrubs providing critical homes for birds and native wildlife, as well as cushioning noise, providing a fire break and generally providing a wonderful landscape for all to enjoy



HEALTH concerns to all four major inhabitants of our home:

Our family home consists of 4 major family members – **three of which are required to attend night work** with their jobs. This includes a Nurse, a Veterinary Surgeon and a fire protection Sprinkler Fitter (who regularly undergoes months on end of projects whereby night shift is required at sites such as Sydney airport).

I have grave concerns of fatigue and the quality of sleep when these family members are needing to rest and sleep through day-time hours – with noise, drilling, traffic control, communications and the movements of constant truck and other machinery – how will they be able to maintain the required rest and sleep in order to fulfil their work duties safely and adequately?

The remaining family member – **myself – has a long history of anxiety, sleep apnea and sleep deprivation seizures.** This can be substantiated by my medical records and specific medications from neurologists, GPs, hospital visits (some via ambulance due to seizures caused by epilepsy/sleep deprivation) and psychologists.

Family members driving home late at night or before day-break both for work and other social activities having to allow and contend with road closures and other works, plus lack of parking near the family home also adds to the worrying.

Definitions of ‘Construction Fatigue’ and other conditions associated with large projects

***Fatigue** is more than feeling tired and drowsy fatigue is mental and/or physical exhaustion that reduces your ability to perform your work safely and effectively.*

***Fatigue** doesn't only impact on workers' mental and physical health, it can also impact on the health and safety of those around them.*

Safe Work Australia (<https://www.safeworkaustralia.gov.au/fatigue>)

***Fatigue** is a state of feeling tired, weary, or sleepy that results from prolonged mental and physical work, extended periods of anxiety, exposure to harsh environment, or loss of sleep.*

<https://www.ncbi.nlm.nih.gov/>

***Fatigue** is a condition that can result from excessive work, inadequate or disturbed sleep, physical exertion, mental exertion, or prolonged waking times. Fatigue can be, in some cases, a natural response to the mental and physical effort of everything we do. Adequate sleep is essential for reducing fatigue and promoting recovery. <https://www.worksafe.qld.gov.au/>*

Construction noise is one of the major environmental noise issues in NSW – not only from building works but also from demolition, remediation, renewal and maintenance. Construction can generate high noise levels that can adversely affect:

- **Sleep**
- **Concentration, and thus learning performance**
- **Mental and physical health.**

People's reaction to noise from construction will depend on the time of day that works are undertaken. Residents are usually most annoyed by work at night-time as it has the potential to disturb sleep. Noise

from work on evenings, Saturday afternoons, Sundays and public holidays can also be annoying to most residents as it may interrupt leisure activities.

<https://www.environment.nsw.gov.au/resources/noise/09265cng.pdf>

The main sources of **community noise** include: **transport (road, rail and air traffic), industries, construction, public works**, and the neighbourhood. This broad definition enables us to consider not only the direct impacts environmental noise has on health, but also its impacts on sleep disturbance, cognitive effects and annoyance. In 2011, WHO quantified the burden of disease due to environmental noise exposure. Health end points included cardiovascular disease, cognitive impairment, sleep disturbance, tinnitus and annoyance.

Annoyance is defined as 'a feeling of displeasure associated with any agent or condition, known or believed by any individual or group to adversely affect them' (Berglund et al. 1999). Noise annoyance is a **feeling of resentment, displeasure, discomfort, dissatisfaction or offence caused by noise interference**. It is a well-established construct in the study of environmental noise and is considered an important end point for measuring the impact of noise in exposed populations.

Sleep disturbance is a common complaint of noise-exposed populations and has the potential to affect health and quality of life. Sleep parameters can be measured in terms of immediate effects, after-effects and long-term effects. Immediate effects include arousal, sleep stage changes, awakenings, body movements, total wake time and autonomic responses. After-effects include sleepiness, daytime performance and cognitive deterioration. Long-term effects include self-reported chronic sleep disturbance.

Higher levels of arousal lower the probability of falling asleep or continuing sleep. Because of its arousal potential, **sound can prevent a person falling asleep, affect sleep quality and cause awakening.**

Studies in adults have found that noise exposure relates to an increase in reported psychological symptoms such as anxiety and depression, rather than to clinically diagnosable psychiatric disorders. Noise from mechanised industry creates problems both for indoor and outdoor settings. The noise is generally due to **machinery and often increases with the power of the machines.** The noise generated by machinery may contain mainly low or high frequencies, tonal components, be impulsive or have unpleasant and disruptive temporal sound patterns. Rotating and reciprocating machines produce sound that includes tonal components. Air-moving equipment tends to create noise with a wide frequency range. Examples include fans and steam pressure relief valves, as well as operations involving **mechanical impacts**, such as stamping, riveting and **road breaking**. Fixed sources of industrial and other noise include: extractive industries – oil, gas and mining, manufacturing, **construction**, agriculture, military and power generation.

<https://www1.health.gov.au/>

Major Concerns based on the 'EID'

Beaches Link and Gore Hill Freeway Upgrade Environmental Impact statement

(marked in Blue and highlighted in bold for impact)

"We know building a project of this scale and significance does not go without impact"

"It is inevitable that delivery of a project of this scale within a heavily urbanised environment would have some adverse impacts, particularly during construction"

(a) Environmental Assessment – Flora and Fauna:

The EID clearly indicates significant changes to natural environment due to the construction and on-going development of the Northern Beaches Tunnel.

Although the document states: Based on the results of the environmental investigations carried out for this environmental impact statement, it is considered that matters of national environmental significance and the environment of Commonwealth land are not likely to be significantly impacted by the project; there are other areas which are highlighted in the report which indicate otherwise.

From discussions held today on the on 9/2/2021 – 15.44 hectares of native material and up 17.4 hectares vegetation alongside Wakehurst Parkway is to be removed.

Native vegetation occurs in the northern parts of the construction footprint on either side of the Wakehurst Parkway (Seaforth to Frenchs Forest) and to a lesser extent, next to the Burnt Bridge Creek Deviation (Balgowlah). Construction of the project would require removal of:

- 15.44 hectares of native vegetation and native revegetation **of which 1.38 hectares is consistent** with the Duffys Forest Ecological Community in the Sydney Basin Bioregion (listed as Endangered under the Biodiversity Conservation Act). Note **of which is consistent**
- 5.48 hectares of other vegetation comprising native plantings, exotic plantings, and weeds and exotics. **The project would remove a small number of individuals of threatened flora species and impact on potential habitat for threatened fauna species.**

There is potential for short-term noise impacts on the **Grey-headed Flying-fox camp fauna in the vicinity of the Wakehurst Parkway** during excavation activities and **Little Penguins** that may occur in Middle Harbour on occasion.

Potential direct impacts on threatened marine species in Middle Harbour, such as the **Black Rockcod** and **White's Seahorse**, **would be low**. Potential impacts on **marine mammals and marine turtles would also be low**.

(b) Environmental Assessment – Biodiversity (terrestrial and marine) impacts:

There is potential for indirect impacts to groundwater dependent ecosystems due to groundwater drawdown.

Potential underwater noise impacts on marine fauna may occur as a result of dredging and piling activities in Middle Harbour.

(c) Environmental Assessment – Increased risk of fire:

Operational facilities along the Wakehurst Parkway were assessed as having a medium or high bushfire risk level. The difference in bushfire risk ratings is largely as a result of greater consequences should there be the occurrence of bushfires.

Hazards & Risks lists the materials to be housed in support construction sheds, which reads as a cocktail of fuels, chemicals, reagents etc. This structure directly backs on to residential properties and given the already significant impacts of this project, the location of these structures poses not just a health hazard **but also a fire risk.**

(d) Traffic and transport

The EIS constantly refers to the advantages of the Northern Beaches Tunnel and its positive impact on the local communities, stretching from The Spit Bridge to Palm Beach.

For those of us (and by this I refer to the small community at the northern end of Kirkwood Street) living in direct, immediate vicinity with not only the construction zone, but also the complete tunnel with its widened roads, cleared bushland and ventilation stacks, the concerns to our immediate community are vast and quite disastrous.

“Better access to jobs and businesses, with direct access to the new Northern Beaches Hospital at Frenchs Forest, and better access to businesses on the Northern Beaches from Greater Sydney”

Comment: These areas of ‘better access’ are clearly of benefit to those Sydney-siders who do not have to undergo the years of construction and destruction to the local area. They do not appear to apply to Kirkwood Street at all.

Road closures would be carried out to minimise impacts on the community, particularly during peak periods.

During construction, **temporary impacts** would include:

- **Increased heavy vehicle movements around work sites, and localised increases in traffic volumes and traffic delays**
- **Temporary, full or partial closures of roads within** the Gore Hill Freeway and Artarmon area, Burnt Bridge Creek Deviation and **Wakehurst Parkway** for short periods of time to carry out key construction activities which are located within the road corridor
- **Minor adjustments to some bus stops along the project alignment**, and some potential short-term adjustments to bus priority infrastructure on Burnt Bridge Creek Deviation may be required (with minor impacts on bus services)
- **Temporary adjustments to shared user paths, pedestrian and cyclist facilities** along the project alignment
- **Traffic volumes during the night period along Judith Street at Seaforth and Woodbine Street at North Balgowlah are forecast to increase noise levels by more than 2 dB(A), which could potentially result in exceedances of the road traffic noise criteria.**

(e) Noise and vibration impacts during construction

Some early work, barge movements, worker transport and deliveries, and some rock breaking will need to be carried out outside of standard construction hours.

Most of the surface construction for the Beaches Link component of the project would be carried out between **7am and 6pm Monday to Friday** and between **8am and 1pm on Saturdays**.

Tunnelling activities would be carried out 24 hours a day, seven days a week underground, supported by surface-based activities within purpose-built acoustic sheds which would be designed to minimise construction noise impacts for the local community. Spoil haulage temporary construction support sites would generally occur between **7am and 6pm Monday to Friday and between 8am and 1pm on Saturdays**. Generally, no work on Sundays or public holidays.

Construction of the Gore Hill Freeway Connection surface road works, and surface works associated with the tunnel connections at Burnt Bridge Creek Deviation at Balgowlah and **Wakehurst Parkway at Seaforth/Killarney Heights would require extensive out of hours work**, to minimise traffic disruptions and maintain safety for workers and road users and the public.

Airborne noise from the project temporary construction support sites would generally be within the noise management levels **with the exception of early works, site establishment (including cofferdam construction), site restoration works and out of hours concrete deliveries, when the noise management levels may be exceeded at some receivers for short periods**.

Airborne noise levels from surface road works would generally be within the relevant noise management levels, **with the exception of the operation of high noise generating equipment such as rock-hammers or concrete saws or when noisy works occur close to sensitive receivers, and works required outside of standard construction hours**.

The use of rock-hammers for tunnelling activities **has the potential to exceed noise management levels at various locations**.

Some receivers have the potential to experience vibration levels above the human comfort criteria when rock-hammers are operating nearby

Receivers along the Wakehurst Parkway may experience an increase in maximum noise level events and the number of events compared to the existing situation. This is due to the widening of Wakehurst Parkway resulting in both the northbound and southbound carriageways moving closer to those receivers. **The magnitude of maximum noise levels events would increase where lanes (and traffic) moves closer to sensitive receivers**.

“The predictions for the use of rock hammers in the tunnel show the following: • Up to 531 residential receivers could be exposed to ground-borne noise levels above 45 dB(A). The potentially affected residential receivers are **mainly within Seaforth and in particular NCA 53.3 (north of Frenchs Forest Road)**.”

Construction airborne noise Table 10-27 provides a summary of the number of residential receiver buildings predicted to experience airborne noise levels above noise management levels. Up to 18 residential receiver buildings are predicted to experience noise levels greater than 75 dB(A) during standard construction hours when rock hammers, chainsaws and mulchers are in use as part of the site establishment and early works. **During standard construction hours, up to 54 residential receiver buildings within Seaforth are predicted to experience noise levels above the noise management level during site establishment, early works, and site restoration works**.

(f) Ground movement

Ground movement would occur as a result of the construction of the project or associated components. Ground movement may occur as a result of removal of existing rock ...

(g) Geology, soils and groundwater impacts

Pre-construction building/structure condition surveys would be prepared for properties (and heritage assets) **within the zone of influence of tunnel settlement** (for example within the 5millimetre predicted surface settlement contour and within 50 metres of surface works) and within the minimum working distances for cosmetic and structural damage due to vibration. **Within three months of the completion of construction activities that have the potential to impact on the subject surface/subsurface structure, a post condition survey would then be offered to property owners of buildings where a pre-construction building condition survey was carried out. Any property damage caused by the project would be rectified.** An Independent Property Impact Assessment Panel, comprising geotechnical and engineering experts, would be established prior to the commencement of works to independently verify building condition survey reports, resolve any property damage disputes and establish ongoing settlement and vibration monitoring requirements. The Panel would be independent of both Transport for NSW and property owners.

Acquisition matters are referred to in **(i) Land use and property impacts of this report.**

(h) Dust and other contaminants entering our property and home

As with any building work, creating some dust is unavoidable.

This project is situated to a number of areas that are considered to have a **'moderate' or high' contamination risk.**

As the project would deliver an underground motorway, there would be a redistribution of vehicle emissions associated with a reduction of traffic on surface roads. For much of the community this would result in no change..... **however, for some areas located near key surface roads, a small increase in pollutant concentration may occur.**

Wakehurst Parkway south (BL12), Wakehurst Parkway east (BL13) and Wakehurst Parkway north (BL14) construction support sites: **Medium risk of dust settlement, human health and ecological impacts as a result of demolition activities. High risk of dust settlement, human health and ecological impacts as a result of earthworks, construction and track-out activities.**

Dust emissions containing contaminants **There is the potential for dust emissions to contain contaminants mobilised through the disturbance of contaminated soils, and other hazardous materials (such as asbestos fibres or organic matter) during demolition of buildings and other structures.**

Hazards & Risks lists the materials to be housed in support construction sheds, which reads as a cocktail of fuels, chemicals, reagents etc. **This structure directly backs on to residential properties and given the already significant impacts of this project, the location of these structures poses not just a health hazard but also a fire risk.**

(i) Land use and property impacts

The project has been designed to minimise the need for property acquisition. The need to reduce these impacts has been balanced with temporary and permanent impacts to areas of open space.

For the Beaches Link component of the project, 41 properties would require permanent acquisition and five properties would require temporary lease. Of the 41 properties that would be permanently acquired, 37 would be full acquisitions and four would be partial acquisitions. Eight properties required for the project are already owned by Transport for NSW.

(j) Parking and transport for tunnel staff, vehicles and supplies

Car parking areas for construction workers would be provided at the **Wakehurst Parkway south Wakehurst Parkway east and Wakehurst Parkway north** construction support sites.

Worker parking would be maximised within the constraints of the respective temporary construction support site. Parking for site vehicles associated with the realignment and upgrade of the Wakehurst Parkway **would be managed** as the works sites move and would be contained within the relevant work sites. The number of car parking spaces would be determined during construction planning. Notwithstanding, the construction workforce **would be encouraged to use public transport where feasible**, with key bus corridors including Warringah Road and Forest Way. Where public transport availability to temporary construction support sites is limited, **shuttle bus transfers** may also be provided from public transport centres where required.

Transport - Throughout discussions we were constantly advised that workers would be able to access the site via shuttle buses and public transport.

As of the beginning of 2021, there was an abrupt change to bus services alongside the Wakehurst Parkway and there is no bus service alongside Wakehurst Parkway any longer except an hourly 141 to Manly. The former 169 corridor, with a service running both day and night, covered transport to and from the city through to Manly via Seaforth, Wakehurst Parkway, Dee Why and Brookvale and then back via Military Road, was a huge and needy service and no longer exists.

Kirkwood and Judith Streets already have parking issues with commuters, school children, bowling club members, sports events at Bantry Oval and Seaforth Oval; bike rides; and those who feel the need to leave their trailers and caravans in the streets for unlimited amounts of time, sometimes up to months or years. This is on top of the already congested parking of the residents.

(k) Sewerage Line running parallel alongside the back fence

It seems perplexing that this has not been highlighted so far – how will the fence or noise barrier be able to be situated and built on top of the sewerage line?

(l) Lay Down Area

I would appreciate more information regarding the Lay Down Area and the size and exact location of the sheds, as buildings of this magnitude will reduce light, require further land clearing, restrict privacy and be a major 'eye-sore'. Of major concern is also **the materials to be housed in support construction sheds ... cocktail of fuels, chemicals, reagents etc. This structure directly backs on to residential properties and given the already significant impacts of this project, the location of these structures poses not just a health hazard but also a fire risk.**

Summary – Kirkwood Street, Seaforth

The below summarises the major concerns for my home, family, our health – physical, social, mental, and our financial status.

- Construction Fatigue / Loss of view stress / Annoyance stress.
- Noise issues of trucks and other construction areas – drilling, earthmoving, transport of materials and waste, communication items.
- Level of noise in relation to buildings, infrastructure, site management as well as those of the workers – hazardous and destructive for those who may need to work night shift and try to sleep/rest during daylight/construction hours.
- Lights – flashing and still, especially at night-time – extreme hazard for those who suffer from seizures.
- Possible damage to our home, yards and pool/spa areas.
- Air quality from construction - hazardous.
- Times of construction and access to the site for anyone working in any capacity.
- Level and concentration of buildings, infrastructure, site management etc.
- Level of lighting in relation to buildings, infrastructure, site management etc.
- Times and access of people working within that site and their capacity.
- Parking on Kirkwood Street for residents and visitors PLUS restriction of parking for tunnel workers on the site who will want to park close to the site (and our house).
- Limited and changed access in and out of Kirkwood and Judith Streets and Wakehurst Parkway for residents and our visitors.
- Lack of public transport for workers and residents – as pointed out there is little to almost public transport routes along Wakehurst Parkway except an hourly 141 to and from Manly.

Conclusion

We, of Kirkwood Street, Seaforth, do not support the proposal in its current format.

This construction site and the tunnel are immediately situated behind our back fence, an area currently used a fire-break and shelter haven for birds and native animals. For many years we have assisted in the care of this area ourselves with constant mowing, removal of fallen trees and branches, weeding and raking, contributing to the value of that native landscapes and being able to enjoy its benefits.

There is no doubt that a project of this extent – both in its construction stage and after completion - will have extreme short and long terms effects on our property and our general health as well as a significant lower level of worth of the property itself, not to mention the devastation made to local fauna, flora, marine life and water courses.

Kirkwood Street, Seaforth NSW 2092