Northern Beaches Tunnel – Application Number: SSI_8862 3

Submission from:

Mark & Carolyn Morrison

72 Kirkwood Street, Seaforth, NSW, 2020

We do not support the proposal in its current form for the reasons which are outlined in the attached document.

27 February 2021

Beaches Link Tunnel Project:

Introduction

The EIS outlines significant impacts on human communities and the natural environments due to this project. I hope the following concerns can be addressed and better outcomes can be achieved.

We have lived in this street for 16 years and an association with this area for 58 years having grown up locally in Seaforth & Forestville. When we moved to this street - when land that was earmarked for the original Castlecrag bridge had been abandoned and the land reserved for this was sold off for housing. Burnt Creek Deviation was constructed with a view to a new Spit Bridge (why is this still not an option?), our belief was that the pristine environment of this area would be kept or at the worst the Wakehurst Parkway maybe a dual road. The current project has been measured and extrapolated from 2016 data, that is in and of itself now questionable as many factors have since changed – the business case for this type of construction has not been measured against a newer 'normal'.

Our local area:

The home we have is surrounded by an amazing ecosystem. In the last few years we have seen so many native species within 100 meters of our home, these include:

Wallabies
Echidnas
Sulphur Crested cockatoos
Black cockatoos
Monitor Lizards (Goannas)
Owls
Green Tree Snakes
Red Bellied Black Snakes
Blue Tongue Lizards
Eastern Water Dragons
Bandicoots
Flying Foxes
Frogs
Red and Blue Rosellas
Rainbow Lorikeets
Tortoises
Kookaburra
Scrub Turkeys
Possums

Many of the above will be severely impacted for years and some will not survive!
There is particular concern over the two dams originally built to contain the overflow from the water tanks at the north end of Kirkwood street, much of the local wildlife depends on these dams. Both areas are close to the construction site and there seems to be no real plan to protect them.

The effect on local streets (Judith and Kirkwood) is going to be substantial.

- These streets are narrow and already have very-little parking available.
- The work site we were told could have hundreds of workers.

- The on-site parking will not be sufficient – already acknowledged by TNSW.
- The cancellation of the 169 bus route means that there is no public transport to the proposed sites.
- There is no plan to protect resident parking
- We were told that it is up to the residents to negotiate with the council if we want to have our streets protected - this should not be our responsibility.
- Other similar projects residents have been forced to park more than one kilometre from their homes. That is not acceptable!
- Our home is between Seaforth oval and Bantry Bay oval. On days when sport is being played there is little available parking. It would be impossible to add hundreds of vehicles to this already space poor environment.
- Other similar projects have shown that clauses must be written into the contract or the residents will not protected. Large penalties must be in the contracts and must be enforced. Many previous projects have also demonstrated non-compliant parking is rampant.
- We have also been informed that a new power supply will have to be run up Kirkwood St to supply the project. We don't know if the road will be dug up or the footpath, or how it will be done - no one seems to know! This will also impact the serviceability of our roads for parking.

The effects on our health

Our health is already being affected. Our anxiety and stress levels are already having an impact on our quality of life. This is due to the government handling of this project. Whilst community consultation is promised we have found it difficult to get direct answers. We get vague and incomplete responses. For example: a layover shed for a few bollards turns into a three story building housing fuel, gases, toxic chemicals and a 24 hour workshop. Being directly adjacent to the shed and only a metres from 2 major construction sites we will be subjected to noise, dust and vibration at unacceptable levels for the duration of the project. We both have significant health issues that would be put at risk by the project.

How long will this be for? At this stage we know that there is a year and a half planning projected to commence in Q1/2 2023 plus six years of construction. Projects of this type generally run twenty to thirty percent over time. This means that we will have close to ten years of our lives being impacted negatively!!!
We are both in our fifties and have significant health issues. We feel that these issues should not have to be listed in a public submission, we can provide numerous specialists reports to support this. There appears to be no plan to provide alternative accommodation or respite during the construction.

The EIS has made researching the project difficult. It is over ten thousand pages and has taken many hours to go through each chapter to find the paragraphs relevant to our area. This has taken substantial time and has been stressful particularly since the EIS was put up in December, during a COVID outbreak on the Norther Beaches, at Christmas and with only a short window to really grasp the impact…seems quite unfair.

Alternative options appear not to have been given due consideration.

- If the Wakehurst Parkway entrance is moved a few hundred meters north then houses would be impacted less.

- If the extra lanes for the parkway were moved from east of current parkway to the western-side it would save many hectares of bush land.
- Bantry Bay road runs parallel to the parkway from Warringah road. It used to join onto the parkway just north of Kirkwood street and was open to traffic. Although the end is currently closed the road itself has been maintained, the electricity power lines run down this road and it still has trucks using it. This road was a two-lane road with the last couple of hundred meters going through the national park. As the road only needs to be upgraded no extra national park land would be needed.
- This would save some twenty hectares of Manly dam reserve which is particularly vulnerable from being impacted. It would be significantly cheaper as you be using an existing road and power supply. Why has this alternative option not been considered?

Our Home

We were both born in this area and have lived, the majority of our lives here. Although we are amongst the most affected properties, we will see no benefit after the project is completed. We get all the pain with no gain. It saddens us that we have to face this massive disruption at this time in our lives. We don't live in a house we live in a home. A home is not four walls our home is built of family, it is a peaceful place, a place of love, a place where memories are made, a place where good times are shared and bad times too. It has been a place of hope and pride, of laughter and tears. A home is so much more. If you have never watched the film The Castle you should – 'the home is his castle', it means so much more, as stated above. We deserve to be treated with fairness and honesty through this process.

Our home is our major asset that we have worked very hard to attain. It will be impossible to sell it for the duration of the project. As there is no entry or exit to the tunnel from our home this will have a negative impact on the value of our property. Our home is our greatest asset, and the potential loss of value (possibly already) is of significant concern to us. Our ability to plan for our future is now hugely impacted by the uncertainty and potential constraints this project poses. We have spoken with others who have engaged legal advice/representation, which has proved to be very costly in order to obtain fair and just compensation, this is far from the best situation but from good advice is the only course to action. This is not something anyone should have to undertake if our system was fair and just.

Our sincere belief is that not enough consultation and listening has taken place. We do not support this project in its current form and hope that further consultation and consideration to design and implementation will now take place.

The sections below are examples directly from the EIS - our commentary is highlighted in green.

Construction Works & Traffic

Local area traffic & parking

At present the local streets of North Balgowlah and Seaforth (Judith & Kirkwood and surrounds street) are congested with our own cars, boats and caravans. Judith street is a main throughfare to Balgowlah and Manly and has become increasingly busy over the past few years. It is a main pick-up point for school children alighting buses on the Wakehurst Parkway. It is exceptionally busy both in traffic and parking during sport seasons (Rugby & Soccer) and on most weekends with bikes riders.

The impact of a large workforce travelling in and out of this small area and with the already limited parking available there must be a plan for local resident's impacted by these sites. It should not be up to residents to negotiate with Northern Beaches Council for a solution, as was proposed during the recent virtual session.

During the online community consultation in February there were numerous discussions regarding the parking of contractors on residential streets, and we were informed by TNSW that if contractors of employees are parking on residential streets they will be removed from the project. Can we confirm this is correct? We will require community consultation regarding this issue.

The EIS statement below Page 63 (8-62), does not provide clarification.

"Car parking areas for construction workers would be provided at the Wakehurst Parkway south (BL12), Wakehurst Parkway east (BL13) and Wakehurst Parkway north (BL14) 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."

Project impacts	Method of assessment	Assessment output
Road traffic	Analysis of road network performance during construction based on strategic traffic forecasting and modelling of the worst case construction traffic scenario.	Quantitative assessment of road network performance with and without the project.
Local roads and parking	Analysis of changes to local road access arrangements, loss of parking spaces and availability of comparable alternative parking in nearby locations. The analysis considers both temporary impacts (ie during construction) and permanent impacts.	Qualitative assessment of local road changes. Estimate of number of lost parking spaces. Qualitative assessment of the impact of parking overflow to parking in nearby locations.
Public transport	Analysis of changes to public transport routes and stops, and service timeliness and efficiency during construction.	Qualitative assessment of impacts on public transport performance (increase or decrease in travel times).

Ref	Phase	Impact	Environmental management measure	Location
CTT11	Construction	Construction traffic	Where provision of construction on-site parking cannot accommodate the full construction workforce, construction worker parking will be actively managed to minimise impacts on parking on local roads. Depending on the location, this will include encouraging the use of public transport and may include provision of shuttle buses for workforce transport where appropriate.	BL/GHF
CTT12	Construction	Construction traffic	Any adjustments to existing bus stops will be determined in consultation with relevant stakeholders including other	BL/GHF

Construction Noise & Vibration:

Chapter 10 – pages 24, 70 – 77 & Table 10 – 8 Page 25 – 27 & Table 10 -9 page 29.

The above pages/tables outline the impact of Rock Hammers and Road-headers likely to occur for those living in our direct vicinity, to be significant and sustained. Examples below.

Page 24 (10-23)

"(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) • Eight other sensitive receiver buildings could be ground-borne noise affected (ice above groundborne noise management level) • 16 commercial buildings could be ground-borne noise affected during rock hammer tunnelling activities.)"

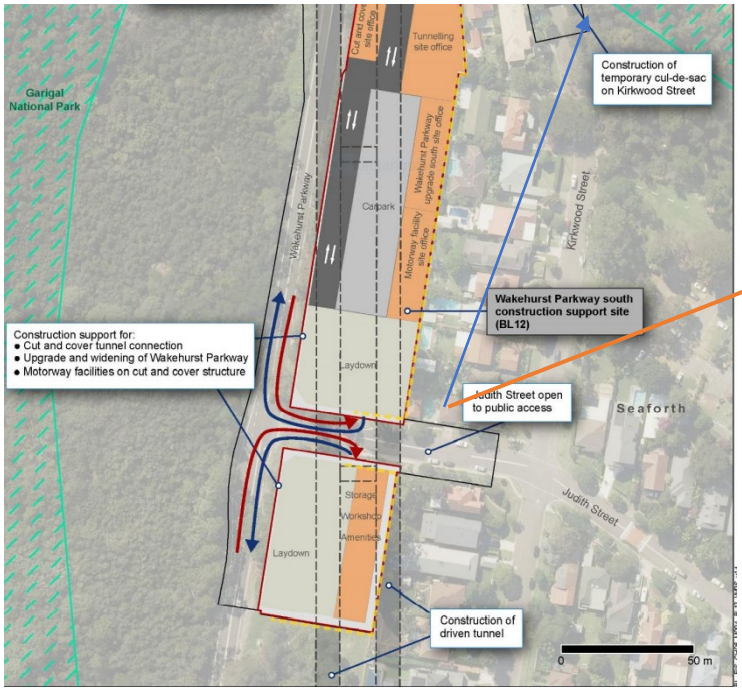
Noise and vibration

Noise and vibration impacts during construction

Proposed temporary construction support sites and activities have been designed to minimise noise and vibration impacts on sensitive receivers. Design considerations to reduce noise and vibration impacts include the proximity of temporary construction support sites to sensitive receivers, construction of acoustic sheds and temporary noise barriers, and positioning of vehicle entrances and exits to allow access directly to and from the arterial road network where possible.

We will have;
-a construction support site/laydown shed directly behind our house with vehicle movements on both sides of our property.
-a construction site, tunnelling, directly under my house
-a construction site, cut and cover, to the north west of us
- a construction site, BL13, to the north & northeast

The door knocks from RMS did not come to our property despite seeing them in the street at that time, I was informed by a neighbour when asked if they had spoken to us. As a significantly impacted stakeholder I would have expected to have been a priority property to approach.
The impact to our visual amenity, to our pristine environment and to our longstanding way of life will be immeasurable changed.



Our home impacted on 2 sides/ BL12 – with the BL13 site only 275mtrs to the north/north west of here

Site description	Located on the eastern side of Wakehurst Parkway just south of Judith Street and Kirkwood Street at Seaforth.
Key activities	Key activities that would occur on, or be supported by, this site would include: • Support site works including clearing and grubbing, topsoil stripping, bulk earthworks, minor retaining structures to reshape and regrade existing site • Construction and operation of temporary site facilities, including a workshops, staff offices and amenities, pavements and car parking • Support the upgrade of Wakehurst Parkway and also the construction of the cut and cover tunnel and trough and motorway facilities at Wakehurst Parkway • Supplementary office support for tunnelling works at Wakehurst Parkway east construction support site (BL13).
Hours of construction	General site activities and spoil haulage would be carried out during standard construction hours (7am to 6pm Monday to Friday, 8am to 1pm Saturday). No spoil haulage or surface civil works would occur on Sundays or public holidays. Occasional works outside of standard hours to support traffic staging and switches on the Wakehurst Parkway and intersection modifications during site establishment may be required.

Key feature	Summary
	• Treatment of wastewater from tunnelling activities • Support for tunnel fitout and finishing works • Utility works associated with surface works, the temporary construction site, and permanent operational infrastructure • Excavation, handling and stockpiling of tunnel spoil • Backfill of access decline • Testing, commissioning and site rehabilitation.
Hours of construction	General site activities and spoil haulage would be carried out during standard construction hours (7am to 6pm Monday to Friday, 8am to 1pm Saturday). No spoil haulage or surface civil works would occur on Sundays or public holidays. Tunnel construction and fitout would be carried out up to 24 hours per day, seven days per week either within an acoustic shed or underground. Night time deliveries would be required to support the tunnelling activities.
Access arrangements	Access in and out of the site would be via a new temporary connection to the Wakehurst Parkway.

The potential that this whole area will become a 24 hour operation is very likely, as has been experienced by many who have been through this exact process – what is promised is often not the reality.

10.3.1 Noise sensitive receivers and noise catchment areas

The location and type of noise sensitive receivers near temporary construction support sites, construction sites and haulage routes were identified using a combination of aerial photography and visual inspections. These noise sensitive receivers were then grouped into noise catchment areas (NCAs) along the project alignment, being areas of similar acoustic environments. The noise catchment areas are shown in Figure 10-2 to Figure 10-5.

10.3.2 Background noise monitoring

Noise monitoring was carried out at 47 locations between June 2017 and April 2019 to establish existing background and existing traffic noise levels within the noise catchment areas. The noise monitoring locations are shown in Figure 10-2 to Figure 10-5. Noise monitoring carried out from 2017 is considered representative of the 2020 noise environment and is applicable for the purposes of the construction and operational noise assessment.

Further details of the noise monitoring are provided in Section 2 and Annexure C of Appendix G (Technical working paper: Noise and vibration).

P10-9 Kirkwood is mostly area NCA 54..1.Near by is NCA 53.1&4. What is L42?

P10-13 Is this over the normal day time noise level? Can we get the ambient noise level measured in Kirkwood St?

Table 10-3 Noise management levels at residential receivers

Time of day	Applicable noise management level ($L_{Aeq\ (15\ minute)}$)[1]
Recommended standard construction hours: Monday to Friday 7am to 6pm	Noise affected RBL + 10 dB(A)[2]
Saturday 8am to 1pm No work on Sundays or public holidays	Highly noise affected 75 dB(A)
Outside recommended standard construction hours	Noise affected RBL + 5 dB (A)

Note 1: $L_{Aeq(15\ minute)}$ is the A-weighted "equivalent noise level". It is the summation of noise events and integrated over a period of 15 minutes
Note 2: dB(A) stands for A-weighted decibel, a unit used to measure noise. Refer to Section 10.5 for a comparison of dB(A) for various activities.

Sleep disturbance criterion

A night time sleep disturbance 'screening criterion' noise goal of RBL + 15 dB(A) is used to identify the receivers where there is potential for sleep disturbance.

Where the sleep disturbance screening criterion is exceeded, further assessment is conducted to determine whether the 'awakening reaction' level of L_{Amax} 65 dB(A) would be exceeded and the likely number of these events. The awakening reaction level is the level above which sleep disturbance is considered likely.

Suburb	NCA	Noise monitoring location	Rating background level (dB(A))[1](L_{A90})[2] Day (7am to 6pm)	Rating background level (dB(A))[1](L_{A90})[2] Evening (6pm to 10pm)	Rating background level (dB(A))[1](L_{A90})[2] Night (10pm to 7am)	Existing road noise level (dB(A)) Day (7am to 10pm) ($L_{Aeq(15\ hour)}$)[3]	Existing road noise level (dB(A)) Night (10pm to 7am) ($L_{Aeq(9\ hour)}$)[4]
Seaforth	42.1	Location L31	42	38	36	–	–
	44.1	Location L32	50	49	40	–	–
	47.1	Location L33	43	39	30	–	–
	49.1	Location L37	45	42	31	56	51
	49.1	Location L38	43	40	33	54	49
	53.1	Location L41	48	39	28	68	61
	54.1	Location L42	45	39	29	55	50

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The results show the following:

- Up to 107 residential receivers could experience ground-borne noise levels between 35 and 40 dB(A) from roadheader tunnelling, which would exceed the night time ground-borne noise management levels, but not the evening ground-borne noise management levels. The majority

Where rock hammers are required to be used for subsurface excavations outside standard construction hours, a large number of residential receivers could experience ground-borne noise levels that exceed either the night time ground-borne noise management level of 35 dB(A) or the evening ground-borne noise management level of 40 dB(A) as provided in Table 10-8.

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)

P10-26 The rock tunnel hammering noise level I will be in excess of 45 dBa, is this over and

above the background noise?

Suburb	NCA	Roadheader tunnelling					Rock hammer tunnelling				
		Residential receivers			Other sensitive receivers	Commercial /industrial receivers	Residential receivers			Other sensitive receivers	Commercial /industrial receivers
		> 35 to ≤ 40 dB(A)[1]	> 40 to ≤ 45 dB(A)	>45 dB(A)			> 35 to ≤ 40 dB(A)	> 40 to ≤ 45 dB(A)	>45 dB(A)		
	53.3	42	–	–	–	–	36	44	151	1	–
	54.1	12	–	–	–	–	6	6	33	–	–

Table 10-9 Number of receiver buildings exceeding construction vibration screening criteria from mainline tunnel construction

Suburb	Noise catchment area	Number of receiver buildings affected by mainline tunnelling	
		Roadheaders	Rock hammers
Risk of structural or cosmetic damage			
	All	–	–

P10-28 What does screening level mean? What is the plan for temporarily relocating us when noise levels are excessive, or we can't cope?

Buildings with screening level above risk of human comfort		
53.1	–	36
53.2	–	3
53.3	–	124
54.1	–	32

P10-32 We have 6 construction activities in our vicinity

1) *BL 12 between Kirkwood, Judith and the Wakehurst to the west*
2) *BL 12 south of Judith*
3) *BL 13 spoil removal to the northeast*
4) *cut and cover construction to the north west*
5) *rock hammer, blasting and tunnelling below*
6) *Construction employee movement on Kirkwood St to the east*

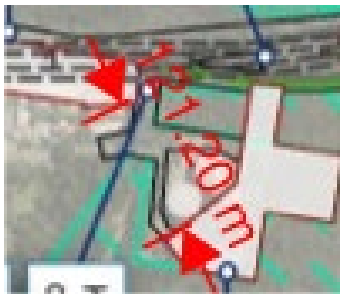
The cumulative effects of the noise from numerous work sites around us will significantly interrupt our sleep patterns which poses a great risk to our general health and wellbeing.

Construction traffic noise

close proximity. Elevated noise levels from both projects might affect the same sensitive receivers. If this occurs, those receivers might experience amenity impacts over extended durations (construction fatigue). Also, works outside standard construction hours might be scheduled for both projects so that affected receivers do not get appropriate respite. In order to avoid these cumulative impacts, the project would consider and manage construction activities with consideration of amenity of the affected receivers, and would coordinate works outside standard

Construction ground-borne noise

As we are effectively amongst numerous works sites and activities and with BL12 &BL13 only being 120m apart how do you propose to coordinate the noise so its simultaneous and what will the simultaneous level be and for what period?



10.6.12 Wakehurst Parkway south (BL12)

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.

Table 10-27 Number of residential receiver buildings over the noise management levels during construction at Wakehurst Parkway south construction support site (BL12) (realistic worst case scenario)

Stage activity	Highly noise affected (L_{Aeq}[1]) >75 dB(A)[3]		Day (standard construction hours) (L_{Aeq})			Day (out of hours) (L_{Aeq})				Evening (L_{Aeq})				Night (L_{Aeq})				Sleep disturbance (L_{Amax}[2])	
	Standard hours	Outside standard hours	1 10 dB(A)	11 20 dB(A)	>20dB(A)	1 5 dB(A)	6 15 dB(A)	16 25 dB(A)	>25dB(A)	1 5 dB(A)	6 15 dB(A)	16 25 dB(A)	>25dB(A)	1 5 dB(A)	6 15 dB(A)	16 25 dB(A)	>25dB(A)	Screening	Awakening
Early works	9	–	15	19	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Establish site	18	–	30	6	18	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Support surface works	0	–	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Support cut and cover and motorway facilities	0	–	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Site rehabilitation	0	–	6	17	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Table 10-27 Number of residential receiver buildings over the noise management levels during construction at Wakehurst Parkway south construction support site (BL12) (realistic worst case scenario)

Stage activity	Highly noise affected (L_{Aeq}[1]) >75 dB(A)[3]		Day (standard construction hours) (L_{Aeq})			Day (out of hours) (L_{Aeq})				Evening (L_{Aeq})				Night (L_{Aeq})				Sleep disturbance (L_{Amax}[2])	
	Standard hours	Outside standard hours	1 10 dB(A)	11 20 dB(A)	>20dB(A)	1 5 dB(A)	6 15 dB(A)	16 25 dB(A)	>25dB(A)	1 5 dB(A)	6 15 dB(A)	16 25 dB(A)	>25dB(A)	1 5 dB(A)	6 15 dB(A)	16 25 dB(A)	>25dB(A)	Screening	Awakening
Early works	9	–	15	19	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Establish site	18	–	30	6	18	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Support surface works	0	–	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Support cut and cover and motorway facilities	0	–	0	0	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Site rehabilitation	0	–	6	17	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Note 1: L_{Aeq} is the A-weighted "equivalent noise level". It is the summation of noise events and integrated over a selected period of time.

Cumulative airborne construction noise

The Wakehurst Parkway south construction support site (BL12) would be sufficiently far removed from locations where activities associated with other major projects would be occurring that cumulative impacts are unlikely.

While the temporary construction support site would be in use for an extended duration, the majority of the activities that would onsite would not be noise intensive. Site specific mitigation measures would be developed for this temporary construction support site with the aim of ensuring that relevant noise management levels are met during site use, minimising the potential for construction fatigue.

The use of Wakehurst Parkway south construction support site (BL12) outside standard construction hours would typically be to support the Wakehurst Parkway surface road works. The use of the temporary construction support site and the Wakehurst Parkway surface road works would be coordinated to ensure that affected receivers in the vicinity are provided with appropriate respite.

No cumulative airborne construction noise impacts are anticipated associated with this temporary construction support site.

BL 12 Is right next to BL13 - Cut & cover & tunnelling which all contribute to airborne noise.

Construction ground-borne noise

Ground-borne noise may be generated by vibration intensive works within the Wakehurst Parkway south construction support site (BL12). However, throughout these construction works it is likely that the airborne noise levels would be greater than ground-borne noise levels at the nearby noise sensitive receivers.

Construction vibration

Table 10-28 shows two heritage structures in NCA 54.1 (Bantry Bay Water Pumping Station and the Bantry Bay Reservoir) are predicted to be within the minimum working distances for major vibration generating activities. Up to 27 receiver buildings within NCA 54.1 (Seaforth) may be exposed to vibration above the human response screening level during early works. The locations of these properties are presented in Annexure L of Appendix G (Technical working paper: Noise and vibration). The most vibration intensive activity at this site is likely to be rock hammers for utility

P10-74

During standard construction hours, up to two residential receiver buildings in NCAs 54.1 (located on Kirkwood Street, Seaforth) are predicted to experience noise levels above the noise management level during early works and site establishment.

During night time works, noise levels are predicted to exceed noise management levels during site establishment works at up to 63 residential receiver buildings in NCAs 53.1 and 54.1 (within Seaforth). A high proportion of receivers (about 67 per cent) would experience exceedances of less than 5 dB(A).

Maximum noise levels at night could exceed the sleep disturbance screening level at up to 35 receiver buildings due to site establishment and tunnelling support works. None of these receivers are predicted to be exposed to maximum noise levels above the awakening reaction level.

No non-residential receivers are predicted to experience noise levels above the noise management levels.

Where noise management levels are exceeded there is a requirement to implement reasonable and feasible noise mitigation. Measures to avoid, minimise and mitigate the potential noise impacts from construction works during construction are provided in Section 10.7.

Table 10-29 Number of residential receiver buildings over the noise management levels during construction at Wakehurst Parkway east construction support site (BL13) (realistic worst case scenario)

Stage activity	Highly noise affected (L_{Aeq}[1]) >75 dB(A)[3]		Day (standard construction hours) (L_{Aeq})			Day (out of hours) (L_{Aeq})				Evening (L_{Aeq})				Night (L_{Aeq})				Sleep disturbance (L_{Amax}[2])	
	Standard hours	Outside standard hours	1–10 dB(A)	11–20 dB(A)	>20dB(A)	1–5 dB(A)	6–15 dB(A)	16–25 dB(A)	>25dB(A)	1–5 dB(A)	6–15 dB(A)	16–25 dB(A)	>25dB(A)	1–5 dB(A)	6–15 dB(A)	16–25 dB(A)	>25dB(A)	Screening	Awakening
Early works	0	–	1	1	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Establish site	0	0	2	0	0	1	1	0	0	8	2	0	0	42	19	2	0	35	0

Can you explain the noise levels, is that increases in decibels are exponential? At 0 db a sound of 10 db is ten times more powerful,20db is 100 times more powerful and 30db is 1000 times more powerful. So, when you state noise levels are 5db above the ambient it could make living in this environment untenable. Further clarification is required.

Page 72 (10-71)

"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 in NCAs 53.1 and 54.1 (within Seaforth) are predicted to experience noise levels above the noise management level during site establishment, early works, and site restoration works.

Page 74 (10-73) + Table 10-28

"While the temporary construction support site would be in use for an extended duration, the majority of the activities that would onsite would not be noise intensive. Site specific mitigation measures would be developed for this temporary construction support site with the aim of ensuring that relevant noise management levels are met during site use, minimising the potential for construction fatigue. The use of Wakehurst Parkway south construction support site (BL12) outside standard construction hours would typically be to support the Wakehurst Parkway surface road works. The use of the temporary construction support site and the Wakehurst Parkway surface road works would be coordinated to ensure that affected receivers in the vicinity are provided with appropriate respite."

"Table 10-28 Number of receiver buildings within minimum working distances for vibration intensive work – Wakehurst Parkway south construction support site (BL12) that may sustain 'cosmetic' damage.

Construction Noise and the added traffic issues combined will cause significant impact on local resident's over a considerable period, a clearer explanation is required as to how this will be managed.

Examples below from the EIS highlights the expected problems:

"NCAs 54.1 and 55.1 located in Seaforth, Allambie Heights, Killarney Heights and Frenchs Forest – sensitive receivers to the east and west of Wakehurst Parkway are predicted to experience an increase in maximum noise levels and the number of events compared to the existing situation. This is due to the realignment and upgrade of Wakehurst Parkway resulting in both the northbound and southbound carriageways moving closer to receivers and the introduction of new traffic light intersections or new bus stops in these NCAs, which in turn are likely to increases maximum noise levels and the number of events at the affected receivers. Maximum noise levels are not expected to significantly change as a result of the project within other noise catchment areas where no major road realignments or widening would be carried out. Changes in maximum noise levels are a consideration when prioritising and ranking mitigation strategies and will be considered during further design development. Mitigation measures to be considered are described in Section 11.8."

ONV3 Page 22 (11-20) Environmental Management measures – describe potential for 'at-property treatments' what does this actually mean? Table 11-9 (11-16)

"For local roads in Balgowlah, North Balgowlah and Seaforth where predicted increases in traffic are likely to result in exceedances of the relevant road traffic noise criteria, traffic calming measures with the aim of limiting potential road traffic noise increases to no more than 2 dB(A) will be investigated in consultation with Northern Beaches Council and implemented. As a minimum, traffic calming measures will be investigated for Wanganella Street at Balgowlah, Woodbine Street at Balgowlah and Judith Street at Seaforth. The need for at-property treatments will be confirmed during further design development and will consider the potential impact of the proposed traffic calming measures on traffic volumes and speeds."

Air Quality

As referred to in Chapter 12 of the EIS, there are real and significant impacts of dust emissions containing contaminants during construction. Page 23, table 12-9 states there will be a large impact from dust etc, and the human health impact is high. This is a genuinely concerning factor for the health of residents adjacent to the work sites.

Example from EIS below

"• 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. These issues would be considered on a site-bysite basis and would be effectively managed through standard air quality mitigation and management measures as outlined in

Table 12-11. Areas identified as potentially containing contaminated soils and other hazardous substances, which may be disturbed during construction, include: • Warringah Freeway, North Sydney to Cammeray • Punch Street, Artarmon • Freeway Hotel, Artarmon • Flat Rock Reserve, Northbridge • Spit West Reserve, Mosman • Balgowlah Golf Course, Balgowlah • Dudley Street, Balgowlah • Judith Street and Kirkwood Street, Seaforth • Sydney Water Bantry Bay Reservoir site, Killarney Heights • Burnt Bridge Creek Deviation, Balgowlah • Wakehurst Parkway, Seaforth to Frenchs Forest."

*In addition, air quality possible soil contamination and its disbursement is also a compounding issue. In **Chapter 16 Geology, Soils & Groundwater**; several hazardous buildings and potential contaminants are identified, Table 16 -10 page 40 onwards outlines the risk.*

Example summary below.

Page 37 "Residential properties, Judith Street & Kirkwood Street, Seaforth [B15] Potential soil contamination may be present within surface soils adjacent to the existing residential premises

located at the corners of Judith Street and Kirkwood Street with Wakehurst Parkway at Seaforth. The potential contamination could be associated with the degradation of hazardous building materials which may have been used in these structures. These areas pose a moderate contamination risk to construction given the potential for contamination and that soils are expected to be excavated and exposed during construction of the Wakehurst Parkway south construction support site (BL12)."

How will we be protected from this??

Location	Location relative to construction footprint	Construction works	Potential contaminants and associated impacts	Risk of land contamination	Risk of existing groundwater contamination
Sydney Water Bantry Bay Reservoir site (and surrounding areas), Killarney Heights [B16]	Area within and adjacent to Wakehurst Parkway east construction support site (BL13) footprint and tunnel (laterally, not vertically)	• Temporary construction support site establishment works • Tunnelling and associated excavation and stockpiling • Roadworks.	Potential soil contamination may be present within the surface soils at the location of the Wakehurst Parkway east construction support site (BL13) and the areas adjacent to it. The potential contamination could be associated with the degradation of painted surfaces on the reservoirs and windblown deposition of paints on adjoining areas. Contamination could also be potentially associated with the demolition of waste material observed across the surface of the site.	**Moderate** Possible contamination/ excavation activities for construction compound and roadwork within site footprint and within potential contamination distribution range (laterally, not vertically) Potential contamination distribution unlikely to affect tunnelling (based on depth of tunnel).	**Low** No known groundwater contamination.

P16-50 We have this risk all around us for 6 years, which is unacceptable to our health and safety.

Location	Location relative to construction footprint	Construction works	Potential contaminants and associated impacts	Risk of land contamination	Risk of existing groundwater contamination
Wakehurst Parkway, Seaforth to Frenchs Forest [B17]	Within construction footprint and Wakehurst Parkway south construction support site (BL12). Above proposed tunnel alignment.	• Temporary construction support site establishment works • Tunnelling and associated excavation and stockpiling • Surface roadworks.	Localised contamination as a result of degrading asphalt road surfaces may be present along the length of Wakehurst Parkway from Seaforth to Frenchs Forest. Hydrocarbon contamination may be present in the surface soils along the road way. The non-urbanised areas immediately surrounding the Wakehurst Parkway may have been historically subject to the illegal dumping of waste. Illegally dumped waste may include heavy metals, hydrocarbons, pesticides and/or asbestos. If contamination is present and not appropriately controlled, there is the potential for: • Excavation activities may mobilise and spread buried contaminants • Cross contamination associated with the incorrect handling or disposal of spoil/unexpected finds • Accidental leaks and spills during use of the temporary construction support site • Erosion and off site transport of sediment and contamination via overland flow and stormwater runoff, affecting the water quality of local waterways.	**High** Known contamination/ excavation activities for construction compound and roadwork within site footprint and within potential contamination distribution range (laterally and vertically) Potential contamination distribution unlikely to affect tunnelling below surface levels (based on depth of tunnel).	**Low** No known groundwater contamination.

The more we read into the EIS the more I believe it is untenable to live in this environment.

Hazards & Risks

One of the significant risks is bushfire being the project would take place over 5 summer periods. The support construction site designated BL 12 Judith/Kirkwood/Wakehurst parkway has what is labelled a Laydown area which appears to be a large structure/shed.

- *how big is the structure – height, area? We have seen other structures eg: Metro support site Artarmon, which if similar would completely block our light from the west.*
- *are there multiple entry/exit?*
- *what activity takes place in the shed?*

The EIS Chapter 23 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 significant risk.

P23-5 It is very concerning that these materials are near residents houses in a fire zone?

Table 23-2 Indicative dangerous goods and hazardous substances stored at temporary construction support sites

Material	Australian Dangerous Goods Code class	Storage method	Assessment against Applying SEPP 33 inventory thresholds	Temporary construction support site
Explosives	1.1	No on site storage – delivery would be timed to avoid the need for on-site storage	Explosives would not be stored on site and would therefore not be subject to the Applying SEPP 33 thresholds.	N/A
Diesel	C1[1], 3 PG III[2]	Self-bunded fuel tank (up to 2.5 kilolitres) and 20 litre drums	Diesel would be less than five tonnes and would not be stored with Class 3 (flammable liquids) materials. It would therefore not be subject to the Applying SEPP 33 thresholds.	All land based temporary construction support sites.
Petrol	C1[1], 3 PG III[2]	Self-bunded fuel tank (up to 2.5 kilolitres) and 20 litre drums	Petrol would be less than five tonnes and would not be stored with Class 3 materials. It would therefore not be subject to the Applying SEPP 33 thresholds.	All land based temporary construction support sites.
Lubricating and hydraulic oils and grease	C2	20 litre drums	Lubricating and hydraulic oils and grease would not be stored with Class 3 materials and would therefore not be subject to the Applying SEPP 33 thresholds.	All temporary construction support sites.
Industrial grade acetylene	2.1	3.2 m^3 cylinders (13 kilograms)	Individual cylinders containing acetylene would not trigger the Applying SEPP 33 thresholds (100 kilograms). Maximum stored inventories (250 kilograms) would be located more than 25 metres away from the temporary construction support site boundary and would therefore also not trigger the Applying SEPP 33 thresholds if considered in aggregate.	All temporary construction support sites.
Industrial grade oxygen	2.2	8.9 m^3 cylinders	Industrial grade oxygen is a class 2.2 dangerous good and is therefore not subject to the Applying SEPP 33 thresholds.	All temporary construction support sites.
Accelerator for shotcrete	3.2	1000 litre intermediate bulk containers (IBC)	Individual IBCs containing accelerator fluid would not trigger the Applying SEPP 33 thresholds (five tonnes). Maximum stored inventories (20,000 litres) would be located more than eight metres away from the temporary construction support site boundary and would therefore also not trigger the Applying SEPP 33 thresholds if considered in aggregate.	• Cammeray Golf Course (BL1) • Flat Rock Drive (BL2) • Punch Street (BL3) • Balgowlah Golf Course (BL10) • Wakehurst Parkway east (BL13) • Wakehurst Parkway north (BL14).
Retardants for concrete	3 PGIII	205 litre drums	Retardants would not trigger the Applying SEPP 33 thresholds if considered as individual containers or in aggregate.	All land based temporary construction support sites.
Epoxies	3 PGIII	20 litre drums	Epoxies would not trigger the Applying SEPP 33 thresholds if considered as individual containers or in aggregate.	All temporary construction support sites.

Tunnel support facilities at the Wakehurst Parkway / High Risk / The tunnel support facilities would be in an area classified as bushfire prone land.

"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. Bushfire risks associated with operational infrastructure along the Wakehurst Parkway would be minimised through continued application of bushfire management practises on the adjoining National Parks land, in accordance with the Garigal National Park Fire Management Strategy (DEC, 2006b) administered by the National Parks and Wildlife Service, Crown Land in accordance with the Manly Warringah War Memorial Park Fire Regime Management Plan (Eco Logical Australia, 2006) administered by Northern Beaches Council, and routine maintenance within the road reserve. "

Wakehurst Parkway south (BL12) Wakehurst Parkway east (BL13)	Medium	These two temporary construction support sites would be located in an area classified as bushfire prone land.
Wakehurst Parkway north (BL14)	High	This temporary construction support site would be located in an area classified as bushfire prone land.

23.3.1 Storage and handling of dangerous goods and hazardous substances

Dangerous goods and hazardous materials would be stored at the operational facilities to be provided as part of the project and used during operation of the project. The types and quantities of dangerous goods and hazardous materials to be stored on-site during operation are summarised in

Ref	Phase	Impact	Environmental management measure	Location
HR5	Construction	Bushfire	An emergency response plan will be prepared for the construction of the project at the Wakehurst Parkway south (BL12), Wakehurst Parkway east (BL13) and Wakehurst Parkway north (BL14) construction support sites, including a bushfire risk matrix.	Wakehurst Parkway south (BL12), Wakehurst Parkway east (BL13) and Wakehurst Parkway north (BL14) construction support sites.
HR6	Construction	Bushfire	First response capabilities, including fire extinguishers, water carts and hoses will be assessed and provided at the Wakehurst Parkway south (BL12), Wakehurst Parkway east (BL13) and Wakehurst Parkway north (BL14) construction support sites, where needed.	Wakehurst Parkway south (BL12), Wakehurst Parkway east (BL13) and Wakehurst Parkway north (BL14) construction support sites.

Environmental Management Issues as outlined in the EIS 23-4 /table 23-8 page 28/29 states clearly that the amount of ***land clearing required to maintain this fire break will mean a complete loss of mature trees and surrounding vegetation. The resulting wasteland in turn will create an even more dust and possible cross contamination that will severely impact human health****.*

The loss of ***visual amenity*** *will be immense and the impact of this will be profound! By example; the loss of 31 football fields of vegetation in this corridor*

the loss of mature trees will devastate not just our visual and acoustic amenity, but a significant habitat for many birds and small native wildlife.

This is our current streetscape – all if which will be gone!

Wakehurst Parkway precinct

Construction activities within the Wakehurst Parkway precinct would include surface roadworks and associated activities (such as earthworks, bridgeworks, installation of retaining walls, new shared user path and underpasses, fauna rope crossings and fauna underpasses) and the construction of a cut and cover tunnel, two entry and exit ramps to the tunnel, motorway facilities ventilation outlet, maintenance facility and tunnel support facilities.

High to moderate impacts are anticipated for the Seaforth residential (LCZ 2), Wakehurst Parkway road corridor (LCZ 3) and Remnant bushland (LCZ 4) landscape character zones during construction, due to the removal of vegetation, an increased visibility of construction activities, vehicle movements, earthworks, surface roadworks and exposure to built form in these landscapes.

Table 22-8 Landscape character impacts during construction – Wakehurst Parkway precinct

Landscape character zone	Sensitivity	Magnitude of change	Overall impact rating
LCZ 2 – Seaforth residential	Moderate	High	**High – moderate**

Wakehurst Parkway precinct

Construction activities within the Wakehurst Parkway precinct would include surface roadworks and associated activities (such as earthworks, bridgeworks, installation of retaining walls, new

High to moderate visual impacts are also expected for residential receivers at Kirkwood Street (Viewpoint 4) and users of the Engravings track (Viewpoint 5). Residential receivers at Kirkwood Street (Viewpoint 4) would have direct views of site hoardings, increased vehicle movements, road realignment and construction equipment associated with the Wakehurst Parkway south (BL12) and Wakehurst Parkway east (BL13) construction support sites. There would also be the discernible removal of vegetation across the two sites, increasing exposure to the Wakehurst Parkway road corridor. Users of the Engravings track (Viewpoint 5) are likely to have filtered views of temporary

The loss of vegetation is not only a loss of amenity but also a natural sound barrier.

Table 22-14 Visual impacts during construction – Wakehurst Parkway precinct

Viewpoint	Sensitivity	Magnitude	Overall impact rating
Viewpoint 4 – Kirkwood Street residential	Moderate	High	**High – moderate**

Wakehurst Parkway precinct

The landscape character impact assessment for the Wakehurst Parkway precinct identified the potential for a high to moderate landscape character impact for the Remnant bushland (LCZ 4) landscape character zone surrounding the Wakehurst Parkway road corridor, due to the widening of the road and removal of vegetation. There would likely be moderate impacts on the landscape

What does this mean for us – what are our options?

20.4 Assessment of potential impacts

The project has the potential to impact on properties and land use in the following ways:

- Occupation of surface properties, including temporary use during construction and perma acquisition for operational infrastructure
- Acquisition of substratum (below ground) land for the project tunnels
- Return of residual land (full or partial lots) required for construction but not for operation c project
- Disruption of existing activities and limitations on the development potential of directly aff properties
- Changes in public open space availability
- Ground movement impacts to properties during construction and operation of the project.

Further assessment of impacts to boat moorings and jetties are discussed in Chapter 8 (Construction traffic and transport) and Chapter 21 (Socio-economics).

20.4.1 Property

Acquisition and temporary use of surface properties

Two properties have been acquired, (shown in red) in Kirkwood St since the announcement of the tunnel, thus this represents a precedent for the acquisition of property owing to the significant impact of this project.

Table 20-2 Anticipated property acquisition required for the project

Location	Ownership	No. of property acquisitions[1]		Properties acquired for Beaches Link (as of 15 September 2020)
		Full property acquisition	Partial property acquisition	
Beaches Link component				

Seaforth and Killarney Heights	Private - residential	-	-	1

Conclusion

As stated at the beginning of the submission, the EIS clearly demonstrates significant impacts on human communities and the environment. The project is supported by our local, state and federal representatives – have they actually read this 12,000 page document…if *you have* how can you support this project! The irreversible consequences to lives, local communities and the environment deserve far more consideration than is currently taking place.

We personally have been left in a limbo like state as we are unable to plan for our future, as our quality of life and economic security are now very uncertain.

We have outlined our concerns in the submission some of which are listed below:

- Traffic and road congestion
- Loss of bushland and animal/bird habitat
- Parking
- Noise
- Dust and other contaminants
- Water run off contaminants affecting fauna and flora – both marine and land-based
- Lay down areas filled with dangerous chemicals, posing further fire risk
- Loss of firebreak with safety problematic
- Visual Amenity / Loss of view
- General Construction Fatigue
- Loss of property value

We *do* support progress and looking for solutions that best support our growing communities – this project utilises outdated data, does not seriously propose any mass transit option, but simply relies on building another toll road with a questionable business case behind it. We do not support this project in the current form and voice our clear objection.

We look forward to your response and acknowledgment of the dire situation facing our community.

Regards,

Mark & Carolyn Morrison

72 Kirkwood Street, Seaforth.