

## **Western Harbour Link project and Warringah Freeway upgrade**

This submission is made in response to the EIS for the Western Harbour Link project and the related Warringah Freeway upgrade.

I live in Balls Head Rd in Waverton, and we will be very heavily affected by the truck movements and contractor parking issues right through the set-up, construction, and remediation phases which are set to last for many years, and at least five. Just the remediation itself will be a major de-construction project of dismantling sheds and wharves and turning the tunnelling access point into a public park. Plus, of course, we will end up with a freeway literally under our back fence forever. So, I am concerned and interested in how this project is going to be managed on and under the ground in my very own street – as well as having more general concerns.

My specific, local concerns relate to the effects on the suburb of Waverton during the construction phase and the rehabilitation of Berrys Bay after the project is completed. The streets are not suited the proposed amount of heavy traffic and I am concerned for personal health and safety, as well as for elderly and children in the area, of the hugely increased traffic. These issues are around excessive dust, noise, vibration, parking problems, and truck access.

Personally I think this project is put forward on a rogue pretext. The whole scheme seems to 'solve' a non-existent problem. Any current difficulties in getting from Cammeray to Haberfield or vice versa on the existing roads is only a slight inconvenience at the moment at one point - the southernmost end of the Western Distributor in peak hours where there is a one lane slip exit onto the Anzac Bridge. If this was widened to 2 lanes for the last 300m or so (which looks to be fairly simple) that would give 2 lanes either way with virtually no traffic lights or any other source of delay for the entire route. The link to the Rozelle Bay interchange seems unnecessary and is clearly not being promoted for the purpose of assisting the residents of the North Sydney LGA or other road commuters trying to drive between to these respective areas, or on beyond this particular trip, or to resolve any current or foreseeable future problem.

There would seem to be many other really important infrastructure projects on the Government's list which should get priority ahead of this one and which are supported by the residents in this area – like a new heavy rail link from the Sydney CBD to the Parramatta CBD, or one from Chatswood to Dee Why. It is completely unclear from the Executive Summary of the EIS as to what possible weighting system would have thrown up this project as a high priority, let alone suggesting it be as a 'road only' solution, or running it as a separate project to the Beaches Link project. I am disappointed and angry at having this project promoted ahead of other, much more needed and urgent priorities to improve connectivity across Sydney.

However, I understand that these types of observations are not classed as anything other than background comments in terms of addressing this specific EIS. So instead I will talk about general concerns and then the really localised concerns that I have, arising from the EIS.

There are 2 macro areas of concern with what is being proposed; and one other area of concern which is more a worry about what is NOT being proposed in the EIS. That is, the sense of a 'lost opportunity' from this scheme. Plus, I have some comment about the local specific points and local issues to raise from the EIS, which come after these major general items.

The two macro areas of concern are 1. 'Air Filtration and Pollution'; and 2. 'Traffic and

Pedestrian impacts'. The perceived 'lost opportunity' relates to 'Loss of open, green space'.

### **Background :**

In the tunnel it is proposed to install longitudinal ventilation with exhaust stacks more than 5km from the tunnel entrance - with no filtration either in the tunnel, or of fine particles or gases in the ventilation stacks before the air is dispersed. International "Best Practice" in tunnel and stack ventilation proposals sees diesel heavy vehicles banned from tunnels over 4.5km long unless filtration is used (Paris Duplex Tunnel, Istanbul's Eurasia tunnel), or filters installed and extra air exchange designed 'in tunnel' (for example Madrid Calle 30, Tokyo's Yamate tunnels, Italy's Casena), or to have more exhaust stacks at shorter distances along the route and therefore greater air exchange (e.g. E4 Stockholm has 10 air exchanges on 18km route, an emergency smoke vent and no exhaust stack more than 5km apart).

By contrast the design for the WHLink has the exhausts for the North Sydney and Cammeray mainline exit – 1 at Artarmon and 2 at Cammeray - unfiltered on a 7.2km long tunnel and seeks approval for the Beaches Link stack to be located in the same area, which would add a further 8.5km of unfiltered road tunnel pollution from Seaforth to Cammeray being pumped out at the same location. The WHLink EIS ventilation design (Arup Report) shows 1 air exchange inlet only at Cammeray to add fresh air for the drivers continuing to Rozelle or Seaforth respectively, but this will do nothing to reduce the concentration of pollution collected in the WHLink tunnel which is then channelled to be dispersed at Cammeray, or collected in the Beaches Link tunnel (if that project approved) and also set for dispersal at Cammeray.

### **Possible alternatives:**

It is recognised that NSW has a consistent approach to the ventilation inside road tunnels and whether there is filtration on the ventilation stacks. Unfortunately, this stance is also consistently and wilfully at odds with overseas best practices. The proposed system simply would be unable to be suggested or built in Europe, the USA, or Japan. This is unacceptable. North Sydney has the highest concentration of schools in Sydney and has a major metropolitan hospital and all are within a small radius of the location of these stacks; the nearest primary school being only 200 metres away.

At a minimum there needs to be particulate filtration installed on all the ventilation stacks during their construction. As a related matter, note that in NSW the *2018 Joint Parliamentary Inquiry into WestConnex* recommended NSW move to use international level exhaust stack filtration in all new projects.

We should now implement that recommendation.

We already know we will need filtration, as we are not at the Euro 6 vehicle emission and fuel standards, which is assumed in all the EIS air pollution modelling.

In fact the Federal Government has indefinitely suspended the adoption of this standard into Australia. The effect of this is that the modelling consistently and significantly understates the levels of pollution which must inevitably result.

All suburbs of the North Sydney LGA included in the EIS modelling are forecast to have increased air pollution levels once the tunnels are operational, yet the background air pollution levels already exceed the NEPM national goal of 8mgm/m3.

Lastly, the proposed Ventilation Stacks, however high, do not allow the particulate material to simply 'blow away': due to the nearby clusters of tall buildings instead it will tend to fall over the surrounding suburbs, particularly within 200m to 2km of the ventilation stack. This type of pollution has known and severe health implications - The World Health Organisation has recently declared that outdoor air pollution is already a leading environmental cause of cancer deaths. The current approach in the EIS seems

plain stupid when the surrounding suburbs are also the location of a university, many high schools, primary schools, and preschools (in Sydney's largest education precinct); a significant CBD; plus one of NSW's major hospitals (Royal North Shore) and the adjoining large private hospital.

**Conditions I request are:**

**1.Full air filtration on all ventilation stacks be installed and operational at commencement.**

**2.There is ongoing air quality monitoring installed and operational 24/7 right through all tunnels, from commencement.**

**3.Diesel vehicles be banned from the tunnels completely, or at least banned when the particulate level reaches pre-set dangerous levels (as heavy diesel engines are the major contributor to the in-tunnel pollution levels).**

**4.Use the proven, stable, well tested international technology to install best practice filtration techniques in ALL the ventilation stacks (especially ESP and NOX filters) associated with this project and the Beaches Link project.**

#### **1. Traffic and pedestrian impacts**

***I OBJECT to the local traffic impacts forecast in the EIS, most specifically the effect on connectivity across the North Sydney LGA (especially within the North Sydney CBD in peak hours) and in particular the projected 'F' status in peak hours of the main road out of Waverton towards the Harbour Bridge (Bay Rd).; and to the forecast worsened ability for all the local residents throughout the North Sydney LGA to connect with the Warringah Freeway, the Cahill Expressway, and the Eastern Distributor after the construction phase of this project.***

#### **Background:**

The EIS contains many positive statements about what makes for a good CBD, for example:

*"The infrastructure planning and design must contribute to the accessibility and connectivity of communities and a general permeability of movement through areas by all modes of movement, including walking and cycling" and*

*"Road networks and road corridor planning should help and avoid future conflict between busy roads and busy town centres"*

It is therefore extremely disappointing that the impact of this project, as proposed, has absolutely horrendous outcomes for the North Sydney CBD based on its own analyses and projections. Most major intersections across the LGA are forecast to move to 'F' status (that is, "fail to function") in the peak hour periods, which will block exits out of entire suburbs such as Waverton, McMahons Point, and Wollstonecraft for people headed south to the city or beyond.

Within the CBD the city centre will simultaneously become almost impassable on key roads such as Miller St, Walker St, and the Pacific Highway but especially Berry St which will move to 'F' at EVERY cross street except – somewhat incredulously – Berry and Miller Streets, which are forecast to decline to 'E' rating for both peak hours. Given the new Victoria Cross station is exactly on this same intersection and will be pumping an estimated 15,000 pedestrians per hour in peak hour into this same spot the localised pedestrian situation will be diabolical.

It is proposed in the EIS that that anyone who wants to join the Western Harbour link- including those coming from the Cremorne and Neutral Bay side - has to come into the CBD and onto Berry Street. Anyone from the western side of the CBD who wants to go north on the Freeway will have to come right down the Pacific Highway to turn onto a new entry point on the Kirribilli interchange. The EIS mentions in passing that a new exit ramp for buses will be built near Kirribilli and later that 300 B-Line buses each day will be swung up into Blue St outside North Sydney station and then around into Miller St to offload at Victoria Cross station then go up Miller St and turn into Falcon St to return to the Northern Beaches. These intersections are already forecast to be at 'F' status in peak hours from the car traffic. There are no improvements suggested in the EIS – not even a 'Bus-Only' lane around this loop, or utilisation of the old tramway link right next to the North Sydney rail station as a traffic control point for the bus traffic – which seems odd.

It cannot be stressed strongly enough how this trashing of already fairly poor ambience of the North Sydney CBD (I have worked there), plus the loss of connectivity from around the adjoining suburbs will ruin the CBD area. Clearly in writing the EIS someone recognises how modern, good cities are trying to lower vehicular movements and become more pedestrian friendly – but then the actual proposed changes do the opposite.

Berry St is the key : as well as carrying all city bound traffic it is slated to take all traffic headed for the Western Harbour Link as well. This load will effectively slice the existing CBD into halves - and it is already sliced off from its eastern suburbs by the Freeway.

#### **Possible alternatives:**

As Berry Street is the key to this conundrum of the simultaneous clogging of the North Sydney CBD with cars and pedestrians in each peak hour period, it may be more sensible to build a tunnel under North Sydney coming off the Highway, at somewhere like opposite Cammeraygal High, to carry all the through traffic destined for the Bridge and the Western Harbour tunnel. If it is only locally-generated traffic on the surface in the CBD, the existing streets can cope much better with the anticipated volume.

The other obvious point if one is going to route all the B-Line buses to offload or reload next to the railway stations – not at all a bad idea in itself to have intermodal links – then consideration should be given to how to make that work best on these existing streets. At minimum, a dedicated bus lane and no on street parking in Blue St and Miller St, south of the North Sydney Oval, would seem to be an obvious answer. The EIS has no proposals at all to make on this important initiative.

At the moment, the EIS proposal is also to close the entry point to the Harbour Bridge from Ernest St. This puts all the traffic trying to access the Bridge back onto Military Rd, which is also forecast to go to 'F' status in peak hours as a result. In addition, for anyone coming from the eastern side and trying to access the Western Harbour Link, they would need to get across the Freeway and go down Miller Street and on to Berry St – so adding to the load on what will already be a set of non-functioning intersections. It is understood the intent is to construct the first few hundred metres of the Beaches Link project as a part of this project ... so the obvious thing would be to build a new entry point into the Western Harbour Link tunnel over near Ernest St as well at the same time.

#### **Conditions I request:**

**5. the addition of a dedicated underground bypass of the North Sydney CBD to**

**deliver either all at least 'non-local' vehicles southbound onto the Bridge and into the Western Harbour Link tunnels.**

**6. retain the access southbound on to the Bridge from Ernest St. and add an access point into the Western Harbour Link tunnel southbound from the Ernest St area (i.e. east of the Warringah Freeway).**

**7. If the B-Line buses are routed up to the 2 railway stations in North Sydney CBD, utilise the former tramway spur for a bus only parkup area and add a dedicated bus lane which would go from there up Blue St, into Miller St and continue up to at least North Sydney Oval.**

**8. Ensure there is no provision in any sale/ lease clause of the Western Harbour Link that limits in any way the development by the State Government or any other party of a mass transit or public transport option that would service any geographic part of the project.**

## **2. Loss of green, open space**

**I OBJECT to the destruction of public land inherent in the EIS. I want to take the opportunity to INCREASE the amount of green, open space across the North Sydney LGA from this project by constructing 'land bridges'.**

**As it stands, the EIS will otherwise be a missed great and obvious opportunity to improve cycle and pedestrian connectivity across and through the North Sydney LGA .**

### **Background:**

North Sydney LGA already has one of the lowest ratios of green space to built up area on the north side of the Harbour. It currently fails to be able to support the Greater Sydney Commission aims to create 'Green Grids' to facilitate walking and cycling options of getting around Sydney's suburbs.

NSC currently struggles to free up enough time at its various ovals to accommodate the demand from various sporting codes, while being able to properly maintain these ovals.

The EIS proposes to carve off sections of the Cammeray Golf Course and the adjoining Cammeray Park as a part of widening the freeway to accommodate the new lanes needed for access to and egress from BOTH the Western Harbour Link tunnels and the foreshadowed Northern Beaches Link tunnels. It also intends to carve off a section of the edge of St. Leonards Park to create an exit from the Western Harbour Link tunnel. The EIS also proposes building massive sheds next to the Freeway, on current public land, to house the pumping equipment for the ventilation stacks which are to be built next to Ernest St.

It is understood that the equivalent machinery is going to be located below ground level at the Rozelle end of these same tunnels.

I cannot see why the same is not suggested here, in the EIS.

As a result, it is understood the Cammeray Golf Course will be permanently reduced from 18 to 9 holes because of this construction work and then these permanent sheds.

It is understood that a large section of both land and water at Berrys Bay will be 'off limits' to the public for the duration of the project, after a decade of lost opportunity due to ridiculous oversized marina projects suggested by property developers plus the non

implementation of long agreed improvements to the now derelict western arm of the Bay.

It is understood that at the end of the project, RMS will tidy up the numerous construction sites across the North Sydney LGA used for this project and 'make them secure' – but that all remediation of all these sites will have to be planned and funded by the Council. NSC simply will not have the money to remediate such a large area as the western arm of Berrys Bay, let alone up to 20 other construction sites across the LGA which will be used in this project..

I am very unhappy about losing any more green, open area. In fact, the strong sense is that I want to increase the amount of green, open space through this project and to create new parklands, walkways, sports fields and cycling routes.

### **Possible alternatives:**

Overseas, major inner city road building projects are increasingly using a concept known as 'land bridging' as a way of improving the surface connectivity and open, public use spaces while simultaneously building the expanded and improved traffic infrastructure. This is where the builder constructs wide land corridors over the freeway, usually linking to pre-existing parkland on either side. Obviously no building foundations can be put there, but certainly you can have sufficient soil depth to create parklands, ovals, walking tracks, play areas, cycling routes etc.

The Greater Sydney Commission is coincidentally pushing the idea of creating a 'Green Grid' across Sydney to ensure better connectivity and to promote outdoor, fitness activities rather than driving a car everywhere. This builds on the great popularity of the cycleways and walking paths built out from the Olympics site at Homebush Bay. Given the already huge attraction of North Sydney's harbourside parks and tracks, the idea of linking this up to a wider network of non-car based activities and to provide non car based commuter options is an exciting idea.

The EIS misses some excellent and really obvious opportunities to improve cycling opportunities and to improve pedestrian improvements. For example, for cyclists the 'HarbourLine' concept has long been promoted – this being an elevated cycleway mounted on the western side of the Warringah Freeway from Falcon St down to Milson's Point, where it would connect to the cycleway across the Bridge. Similarly, the opportunity has not been taken in the EIS to improve cycle or pedestrian connectivity from the North Sydney CBD across into Kirribilli or into Neutral Bay. Indeed, the suggested High Street pedestrian connection looks a lot like a dangerous afterthought.

There appear to be several points down the Freeway that meet the prerequisites for location of useful 'land bridges'. One of these has been talked about for at least a decade – between the North Sydney CBD and either into Kirribilli or down into Anderson Park – but the other obvious candidates are on the north side of Ernest St; to the south of Falcon St; and east of Miller St across to Cammeray.

### **Conditions I request:**

**9. Implement the 'HighLine' cycleway concept .**

**10. Create a set of land bridges across the Freeway as a part of this project. Use these to create new sports fields, play equipment sites, parklands, walking tracks, and cycle routes. Try to link these to existing such trails or cycleways to encourage commuters to utilise these opportunities.**

**11. Place the machinery for the in tunnel air extraction and the Ventilation stacks underground at Cammeray, so preserving the existing Park and Golf Course on**

the surface as much as possible.

12. Agree plans for the remediation of all construction sites before the project commences and guarantee the budget be allocated by the State Government for these agreed works at the end of the project.

### 3. Local specific points

I OBJECT because there is no available plan to manage the significant 'UNINTENDED CONSEQUENCES' (noise, dust, vibration etc.) during the construction phase.

By way of background, the recent, lived experience of other residents in suburbs like Rozelle, Leichhardt, Annandale etc. has been that these nuisance issues cause massive inconvenience and resentment, and confrontation between local residents and project employees. I want to avoid that. In Waverton, there are several highly localised issues which are causing concern. These are:

- a. **Concern about worker parking on what are a very few, already full, local streets.** Waverton will host the main tunnel access and egress point for heavy equipment associated with the construction work - plus be the main site for a significant barge operation to remove the heavy spoil of the tunnelling excavation waste. The EIS notes the ongoing workforce working on the tunnelling will come in by boat each day from White Bay, but the EIS also notes there will be around 200 contractors each day looking for parking. Waverton at that point is a narrow peninsular with one local road being the sole access route for the 5 years of this activity and the sole walking distance for any reasonable local parking for these contractors. The solution I support is to build a car park at the end of Balls Head Rd inside the bund wall which can also serve as a long term parking area for events held on the nearby Coal Loader platform, or visitors to the nearby Reserve.
- b. **Concern about the truck movements through the suburb.** The EIS estimates there will be around 50 large truck movements each day: every day for 5 years. These will be mainly large concrete mixers coming to do the lining of the tunnel after the boring machine goes through – a process called 'shotcreting'. The balance of the trucks will be large multiwheel low loaders carrying significant items of mechanical equipment. It will be important to arrange a turning area suitable for such vehicles on the site, plus a means of cleaning the trucks and equipment (and processing/ storing/ removing the waste). It seems almost inconceivable that the last several hundred metres of Balls Head Rd will not need to be closed to any parking, for these trucks to safely go in and out of the site.
- c. **Concern about ongoing tunnel vibration.** As well as the houses which will end up over the tunnels once these are constructed (of which I am located in one), in Woolcott Street we have the closest height to the surface of the underground tunnels in the whole project (except egress portals of course) at just under 20m – and I know those residents are very concerned about permanent vibration and noise effects. This is partly because the ground at that point is not solid rock – it is loose fill and soil into what was a natural creek and waterfall down to the lower level of Waverton Oval. We need RMS to be sure they are right with the tunnel alignment and be able to explain that confidently to the people who live there. More generally, I and residents like me whose houses are directly above the construction need to be sure we will notice nil vibration and nil noise once the tunnels are operational.

- d. **Concern about the lack of contamination sampling where the new temporary wharves are to be built.** This area has long housed a shipyard and ship repair facility, a major oil storage facility and, for a time, a Navy torpedo base. All in the days when all pollution simply fell into the water. Unsurprisingly, the contamination levels were above the accepted guidelines in the places tested according to the EIS - but the tests were not done where the wharves are actually proposed to be constructed, located, then demolished. I consider the tests should be done at the correct places, then proper ways to mitigate that risk be devised, and then that solution used. Similarly the method being proposed for the excavation for building of the cofferdam off Balls Head needs revisiting – a surface skirt does absolutely nothing of any practical effect compared to a tide or swell, and a clamshell bucket rising straight up out of open water similarly lacks credibility as a pollution control mechanism. These measures need to be re-thought.
- e. **Concern the cofferdam is too close to the edge of the Coal Loader structure.** The layout diagrams appear to have not picked up the existing berthing dolphins which are along, but offset from, the heritage face of the Coal Loader. It seems the cofferdam may need to be moved by around 2m to avoid any damage. In general, of course I am concerned at possible vibration damage to the Coal Loader which is constructed of WW1 era unreinforced mass concrete as well. Plus I am highly sceptical about how RMS proposes to locate the tunnels in place and build the cofferdam entirely from barges and not need to have any land base on Balls Head (which we would oppose).
- f. **Concern about the noise resulting from pre tunnelling construction in the Bay; and impact and noise from construction of the 'decline' on the land.** The EIS contains modelling related to 'Early Works' at Berrys Bay. I note the noise contours are from a single point, but this is not where any work is scheduled to take place. As such it is systemically understating the real situation. It also fails to take account of the pile driving in the Bay needed to build 3 separate temporary wharf structures and also fails to address noise and vibration from the impact breakers digging the 'decline' before it goes underground. These are likely to be extreme. Similarly, the modelling fails to address likely point source noise from the tunnel ventilation intakes and exhausts and related motors, or the noise from the water plant. These facilities are expected to operate 24/7 during the construction phase.
- g. **Concern about the timing for remediation works in Berrys Bay.** This area has been derelict for more than a decade. Wharves which were to be removed, and the money already given to the Government, remain in place. Other wharves and the marina are at an advanced state of collapse. Much of the Bay is closed off to boats due to these numerous hazards. The remaining fenced off parkland has never been incorporated - as was promised - into the next door Park. The Quarantine Doctors' houses have never been handed over the Council, even though this was promised more than a decade ago. The EIS does nothing to assist this situation – it intends to takes the land and water 'off limits' for the duration of the project, then demolish/remove what they have built, then walk away. Yet, I and most others who live here think some of what will be the inevitable remediation work could easily be put in place now, before the project starts, and could be used by the public all the way through the construction period.

**As a result, there are several other conditions I request:**

### **13. Dust and noise monitoring equipment and active and comprehensive dust**



suppression measures need to be in place from the beginning to end of the set up phase, during the construction period, and through the remediation phases of the project.

14. The 'noise reduction pavement' mentioned in the EIS should be installed at all portals.

15. The 'local arrangements' around aspects such as truck convoys or worker parking or times for truck movements or stopping trucks idling outside schools or nursing homes be treated as if these were conditions of the approval.

16. The noise modelling in the EIS relating to the operations in Berrys Bay and in particular on the related barge based spoil removal and around the tunnel access site be re-done to address all reasonably anticipated noise sources concerns AND that the acoustic shed is to be constructed before the 'decline' is excavated.

17. The high level of ground borne noise which residents who live above the tunnelling will be exposed to from the use of impact hammers rather than roadheaders is significant - and accordingly the use of large rock hammers for benching should be prohibited. Additionally, if impact hammers must be used then it must only be during 'normal' community work hours.

18. The remediation plan for the Berrys Bay construction site (both on water and on land) be agreed before the set up phase begins and, where possible and sensible, those measures which can be done before the project commences are done as a priority. For example, the construction of the car park at the base of Balls Head Rd; and the construction of an elevated walking bridge from the south end steps of Carradah park to the eastern side of the last roundel under the end of Larkin St. would seem certainties to fit this general 'rule of thumb'.

A handwritten signature in black ink, reading "Marian Baird". The script is cursive and fluid, with the first name "Marian" and last name "Baird" clearly distinguishable.

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