ADDRESS TO WEPA PUBLIC MEETING ON BEACHES LINK AND WESTERN HARBOUR TUNNEL PROPOSAL, 20 NOVEMBER 2018

John Moratelli, 'Beaches Link/Western Harbour Tunnel Project – Congestion Impacts and Public Transport Alternatives', November 2018

Proposed construction at Flat Rock

The information that follows has been provided by Roads and Maritime Services (RMS) except where otherwise indicated.

As everyone here probably knows, the RMS intends to establish a **6.2 acre construction site** either on the western side of Flat Rock Drive (FRD), on the site of the baseball diamond, or on the eastern side, where the bushland has taken over 25 years to re-establish.

On one of these sites, ramps will be built to get to a cavern where tunnelling equipment will head off in three directions – towards the Warringah Freeway near Ernest Street, towards the Gore Hill Freeway near Artarmon and towards Balgowlah via the Northbridge peninsula.

The **tunnel borers will operate 24/7** subject to shift changeovers and regular maintenance downtime.

Truck Movements on Flat Rock Drive

The trucks removing the spoil will operate from 7am to 6pm weekdays and 8am* to 1pm on Saturdays as these are the typical hours approved by the Department of Planning and Environment.

Loading capacity is 35 trucks per hour loaded and 35 returning empty = **70 movements per hour**. But, at this site, the RMS says that trucks will be loaded within the shed every 3-4 minutes, increasing to every 2-3 minutes at peak production times – a maximum of 30 trucks leaving the site per hour.

The truck movements will continue for an estimated **5 years** but I have been unable to obtain an answer from RMS as to whether this estimate is a 'best case' scenario. This is concerning given the recent experience with NorthConnex where harder than expected rock has caused excavation time to blow out considerably.

Trucks leaving the site will head south along FRD, take the Brook St exit onto the Warringah Freeway, cross the Sydney Harbour Bridge and head west to dump the spoil. They will then return empty across the Sydney Harbour Bridge, take the Brook St exit off the freeway and enter the site from FRD.

Once the excavation phase is finished the flow of laden and unladen trucks will reverse.

* The 7am Saturday commencement time mentioned in the Fact Sheet is a typo.

The RMS hasn't answered my questions as to how long the excavation phase will be.

Traffic lights will be installed to facilitate the movement of the B-double trucks and it's understood that these will be towards the bottom of FRD.

If the construction site is established on the western (baseball diamond) side of FRD it might be possible to build a slip road to the site to facilitate the movement of returning trucks. If established on the eastern (bushland) side returning trucks will need a right turn signal to enable them to return to the site. I haven't been able to get an answer from the RMS as to whether an extra northbound lane will be built on FRD to facilitate the right turn across traffic, without blocking traffic behind.

New Traffic Lights

So how long will the new traffic lights be red for? Once again I have asked RMS and haven't received an answer. But, according to National Heavy Vehicle Regulations a B-double truck is 25m long. If a fully-laden truck moves off from a stationary start at walking pace, it would take 18 seconds to get onto FRD. If this was the case the light phase would have to be, at least, 20 seconds. RMS is talking about moving trucks out of the site in groups of 2, so the phase would be, at least, 40 seconds.

My guess is that peak operating time will be in the morning peak, particularly on a Monday morning, when there would be a need to remove the accumulated spoil. Assuming 30 truck movements per hour off the site in groups of 2, that means 15 light changes per hour which is consistent with advice provided by RMS. At 40 seconds per phase = at least 10 minutes per hour the lights will be red.

But what about the trucks accessing the site? I'm not prepared to assume that truck movements will be able to be coordinated so that two trucks will enter the site at the same time as two trucks leave the site. So, if the construction site is on the eastern (bushland) side the lights would also need to turn red for the south flowing morning peak to allow trucks to turn right.

After leaving the site trucks will head off south up a steep hill at the top of which is another set of lights. After passing that set of lights the truck then picks up speed heading downhill before passing through another set of lights as it turns left onto the WF from Brook St.

The truck then has to merge and meet with an equal number of B-double trucks crossing the SHB from the Cammeray Golf Course site, **making a possible 140 B-double trucks across the Sydney Harbour Bridge every hour**. The trucks from the golf course will, presumably, need to get across the bus lane to get onto the relevant bridge lanes to eventually travel west.

Bus Lane Congestion

Then there is the removal of the Ernest Street ramps at some stage, causing people who currently access the Warringah Freeway from Ernest Street, rather than from Miller St so as to avoid crossing the bus lane, to either go to Falcon St or revert to Miller St and rejoin the throngs crossing the bus lane to travel across the SHB and then west. Any regular bus passenger would be familiar with the delay this causes to buses which often have to leave the bus lane and rejoin it closer to the bridge to get out of the traffic. This bus lane congestion would be further exacerbated should drivers switch from using the Brook St entrance to the Warringah Freeway and start using the Miller St entrance to the Freeway because they wish to avoid the new lights on FRD.

One would also have to think that there is at least some additional risk of accident on the Warringah Freeway/Sydney Harbour Bridge due to the addition of all these large trucks with their increased breaking distances limiting their capacity to deal with car drivers cutting in front of them.

Yet, the RMS would have us believe that none of this is going to add significantly to current congestion during construction of the tunnel.

Possible extension of truck operating hours

During some of the information sessions the RMS project manager, Doug Paris, has said in response to questions about congestion that truck movements during peak hour may be limited. More pertinently Road Rule 300-2 requires the permission of the Chief of Police to carry dangerous goods (which includes asbestos) across the Sydney Harbour Bridge during peak hours, and this may not be granted. This raises questions as to whether, given that spoil can only be stockpiled to a certain extent without the tunnelling machines needing to stop, the proposed truck operating hours will be extended.

Any long-term congestion benefits for all this not-so-short-term pain?

The August 2018 Beaches Link project update predicts less traffic on:

- Spit Bridge – 40% less
- Roseville Bridge – 25% less
- Eastern Valley Way – 35% less; and
- Military Road – 15% less

It also predicts 'Reduced rat-run traffic on local roads – Eastern Valley Way, Frenchs Forest Road and Ourimbah Road'.

The report presented to North Sydney Council on 29/10 authored by Nigel Turner, Strategic Transport Planner, in considering some of these claims, said:

- *'A preliminary analysis undertaken prior to the release of the project updates suggested that most traffic currently using Warringah Road and Military Road have local trip origins and destinations and opportunities for traffic re-assignment from these roads is limited. This analysis seems to be supported by the BL project update which identifies relatively small reductions in Military Road Traffic (-15%).'*
- *'Adding WHT/BL capacity to the Sydney motorway network may result in traffic growth.. This may add to the overall amount of vehicle kilometres travelled on the road network and return congestion to pre-WHT/BL levels.'*
- *'Modelling outputs included in the State Infrastructure Strategy, 2012 suggested that 13% of traffic using the Harbour Bridge and Tunnel crossings would transfer to an Inner West Bypass (different alignment). This would mean that traffic re-assignment from these existing crossings would only constitute enough demand to fill ¾ of a lane of traffic in each direction. This suggests that either the revised WHT alignment captures more Harbour crossing trips than the proffered INSW route, or that significant levels of additional traffic demand are expected as a result of WHT.'*
- *'The WHT/BL project updates present no toll framework, traffic modelling or assumptions to substantiate proposed traffic reductions on parallel arterial routes. It is generally accepted that immediate traffic reduction on parallel arterial routes will be undermined by toll disincentives and will be undermined by induced traffic demand in the short-medium term.'*

Nigel Turner's comments in relation to expected traffic re-assignment to the WHT are especially pertinent given the importance of this to the success of the BL. In information sessions the RMS has agreed that unless such re-assignment occurs, WF morning peak congestion will simply be transferred to the BL. One tactic for avoiding this is the more than doubling of the Sydney Harbour Bridge toll to avoid any financial incentive for using the Sydney Harbour Bridge/Anzac Bridge route instead of the WHT.

Promoting Traffic Growth

In concluding this part of my talk I should point out that the predictions in relation to traffic reduction on 35% on Eastern Valley Way, 40% on Spit Bridge etc due to Beaches Link, relate to what the traffic would be in 2027 without Beaches Link and what the traffic is projected to be with Beaches Link. But, **and this is important**, what it would be without BL has nothing to do with natural traffic growth, but has everything to do with **promoted** traffic growth. A few facts:

- Over the past 10 or so years the RMS data 'Average daily traffic – all days' for Spit Road, Burnt Bridge Creek Deviation, Wakehurst Parkway, Mona Vale Rd (Terry Hills), Forest Way and Eastern Valley Way **show no increase in traffic**. The data for

Boundary Road shows a very slight increase which I would guess is attributable to the growth of Macquarie Park as an employment hub (see attached tables)

- Population growth for the Northern Beaches is low compared to Greater Sydney about 1% compared to 1.9% pa for the years 2011 to 2016
- Relative to other LGAs a high proportion of workers in the Northern Beaches LGA work in their own LGA – 52.1% (2016 Census)
- The biggest proportion by far of Northern Beaches resident workers who work outside their own LGA work in the Sydney LGA – 18.6% (24,154), followed by North Sydney – 5.2%, Willoughby – 4.6%, no fixed address – 4.4% (tradies?), and Ryde 2.8% (2016 Census)
- For 2011, the most recent census year for which we have detailed Journey To Work data giving a breakdown of mode of transport used – 20,775 travelled to work in Sydney LGA but only 5,450 of those travelled as the driver of a car. These figures would not, for example, generate a significant proportion of the 17,500 average daily traffic figure on Eastern Valley Way, given that a proportion would travel via the Spit Bridge.

The RMS has said that these traffic forecasts are based on what the Department of Planning has told them about where population growth on the Northern Beaches will be. When one looks at current population densities on the NB there are low densities in the suburbs traversed by Warringah Road (see image 1). I think these are the suburbs where the Department of Planning is predicting, and probably planning, considerable population growth. It's difficult to explain the figures for Eastern Valley Way and the other roads any other way.

Similarly with the time savings from Beaches Link: they are based on 2027 traffic forecasts. It doesn't eg currently take 57 minutes to get from Brookvale to the CBD in the morning peak by car and, according to the B-line timetable, it takes slightly less than 30 by bus.

Public Transport Alternatives

Given the planned population growth, which is likely to be around Warringah Road the obvious public transport alternative to the Beaches Link/Western Harbour Tunnel is a high capacity, high speed public transport link along Warringah Rd between Brookvale and the new metro station at Chatswood.

The Chatswood – Sydenham metro currently under construction and expected to be commissioned in late 2024 should provide an estimated journey time between Chatswood and Martin Place of no more than 15 minutes with stops at Crows Nest, Victoria Cross, and Barangaroo. This is based on an indicative travel time of 32 minutes from Cherrybrook

station. Going the other direction the line will provide quick access to Macquarie Park via North Ryde station.

According to Google Maps an off-peak car journey between the intersection of Warringah Road and Pittwater Road and the Chatswood interchange takes 19 minutes. This should be slightly reduced once the overpass at the intersection of Wakehurst Parkway and Warringah Road is completed.

An express bus on a dedicated peak-hour bus lane should be able to equal that time. If given priority at traffic lights it should be able to better it.

This should compare favourably with the estimated 30 minute 2027 travel time between Brookvale and the Sydney CBD as, although slower on that route, it would better serve new population centres as well as radial journeys to locations such as Chatswood and Macquarie Park.

There are also other options such as the electric Chinese trackless tram.

Alternatively, an extension of the metro to Brookvale, a distance of about 14km, would be another option and likely to involve a fraction of the tunnelling involved in BL given that the volume of a metro tunnel is just over 1/3 of the volume of the three lane roadway tunnel proposed for the BL.

According to a Sydney Morning Herald report dated 18 July 2017:

> *'The 36-kilometre Rouse Hill to Chatswood rail upgrade is much cheaper than the Beaches Link at $8 billion, around $230 million per kilometre.*
>
> *An internal Transport for NSW memo released under the Government Information (Public Access) Act refers to a cabinet directive not to consider public transport alternatives when assessing tollway projects. The memo says the Western Harbour Tunnel and Beaches Link was not benchmarked against a public transport alternative.'*

John Moratelli

20 November 2018