Submission by (Mr) Kym Norley on aspects of the North West Rail Link Major Civil Construction Works (Application Number SSI-5100)

Introduction

This submission relates to two specific aspects of the proposed North West Rail Link, as follows:

1) An objection to building a new road through the Bushland Reserve for access to the Cheltenham emergency access and services facility; and
2) A solution to the issue of capacity for additional trains into the CBD

I support the North West Rail Link as essential infrastructure for north western Sydney, regrettably well overdue. My submission is made as a resident of Beecroft and as a professional transport systems engineer and urban planner with 40 years' experience. My observations regarding the Cheltenham facility relate to objection to the option of building a new access road through the Blackbutt Gully forest. This road is entirely unnecessary given that the M2 is immediately adjacent to the proposed facility. The observations relating to CBD access deal with the significant matter of the means by which the additional trains may service the CBD, and are intended as a contribution to the success of the Rail Link.

The Cheltenham emergency access facility

The tunnel between Epping and Cherrybrook is of a length that requires access at approximately the centre of this section for evacuation and services. The proponent intends to construct such a facility next to Cheltenham Oval, sacrificing the netball courts for this purpose. The site will also be used for removal of spoil during construction, requiring about 16 truck movements per day. It is assumed that the site will be remediated once construction is complete.

Two options for heavy vehicle access to the site are offered by the Environmental Assessment. One is to use the M2, which is immediately adjacent to the site. The other option is to build a 400m paved road through the Bushland Reserve to Kirkham St.

I submit that the option to build a new road through the Bushland Reserve to access the Cheltenham service facility and to use local streets for heavy vehicles is unacceptable.

The site proposed for the facility is a gazetted reserve and has been for over 100 years. The Blackbutt Gully forest of the Reserve remains in outstanding condition and contains trees of great significance and size. The area contains substantial biodiversity despite a large tract being annexed for the M2, and many mature trees were removed for its construction and current widening. The chosen site of the

service facility proper using the Cheltenham oval and courts appears to minimise the take of mature trees, and is supported.

However building a new paved road through the forest for just 16 trucks per day is both unnecessary and less effective than direct access to the M2. The use of the M2 will avoid the destruction and it appears perfectly feasible. Furthermore the M2 option will not require heavy vehicles to use Kirkham Street and other local roads. In the case of an emergency evacuation, the M2 option would provide much better rapid response conditions than local streets.

Capacity into the central city

The matter of accommodating the additional trains from the North West is regularly raised publicly, in the media and most recently by Infrastructure Australia. It is usually referenced by statements to the effect that 'the Bridge can only accommodate 20 trains per hour', and that given the existing 18 peak hour paths only two North West peak trains can be accommodated unless a very expensive Harbour Tunnel is built.

My reason for raising this matter at this stage is because the alignment adopted after intense scrutiny in 2008 remains the subject of debate. I fully support the chosen alignment (the direct connection to the Epping Chatswood link at Epping) as being the least costly, simplest to operate and most direct. It appropriately directs trains to the 'Global Economic Arc. It also avoids the inordinate intrusion of the former Beecroft dive proposal. However critics argue that there is limited spare capacity over the Harbour Bridge to accommodate trains from the North West.

I submit that the professed 20 trains per hour capacity limitation without a harbour tunnel is demonstrably incorrect, and that at least 26 trains per hour can be accommodated without major new infrastructure.

Attachment 2 to this submission is a peer-reviewed paper that I presented at last year's Australasian Transport Research Forum explaining how it is possible to provide the cross-harbour capacity needed in the medium term, deferring an expensive harbour tunnel. In short, the Bridge is not the constraint on capacity; rather it is the loading and unloading times (dwell times) of Sydney's trains at the major stations in the city, specifically Wynyard, Town Hall and Central. This is the problem that must be addressed, not the Bridge itself nor the trains. Sydney's trains are well-suited to its geography and commuter market. A Paris or Hong Kong 'Metro' option with high standing loads, as proposed by some, is highly unattractive for such an application.

The paper proposes that existing platform faces that are either unused or underutilised at Wynyard, North Sydney and St Leonards be used to load trains from both sides of what would become island platforms. This configuration was anticipated by John Bradfield in planning the City Railway and is used to good effect internationally. The extensive Paris suburban railway *Réseau Express Régional* (RER) network (which is not the Metro), has such a configuration and it uses double deck trains similar to CityRail's. RER's Line A operates at 30 trains per hour in the

peak on what is essentially a two track railway other than at selected stations. It carries more people on that line alone than the whole of CityRail.

Utilising these techniques in the context of the North West Rail Link would require:

1) Quadruplicating the section from Chatswood to St Leonards, inclusive. All formation and structures for this already exist, however Artarmon Station would need to be duplicated.
2) Fully utilising the existing four platforms at North Sydney as through platforms. The centre platforms are presently used only for terminating a limited number of trains for stabling or turning back and are speed restricted.
3) Opening the existing unused platforms (numbers 1 and 2) at Wynyard (the so-called 'tram tunnels' presently used as a car park) as a turn-back, and linking them to the existing Bridge approach.

This would allow at least 26 trains per hour to reach Wynyard. To extend this to Town Hall would require new tunnels and platforms at Town Hall. However as the additional capacity is only needed during the peak, and light rail and other connections will be available at Wynyard, this situation is tolerable. The prime candidates for trains turned back would be the Central Coast trains that use the Bridge, as these are primarily intended to serve Macquarie Park and the North Shore.

While the scheme described above will work without additional infrastructure it could be further improved extending the quad track to Milsons Point in order to provide some redundancy, so limiting the two track configuration to the Bridge span itself and the lightly used stations at Waverton and Wollstonecraft. This is best undertaken by moving one track (the present up track) to the eastern side of the Bridge such that the redundant toll lanes can be used to duplicate Milsons Point station. A slight adjustment to the former station footprint is needed to maintain the width of the road a carriageway, and the rail bridge that once spanned the road approach would need to be restored. The advantages of this arrangement include:

1) Redundancy to allow for out-of-time running in this key section
2) Simplifying the tunnelling needed to link Wynyard station to the Bridge
3) Opening the possibility of a turn-back for trains from the western lines under the Bridge approach lanes, were additional platforms at Town Hall to be feasible.

It should be noted that, whether or not new platforms are built at Milsons Point, the number of road lanes over the Bridge would be maintained as now. The Milsons Point station configuration suggested is entirely consistent with the Bridge's heritage and entails no intrusion on to adjoining open space. Some minor parking space would be lost.

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