F6 Extension Stage 1 New M5
Arncliffe to Kogarah
Preferred Infrastructure Report

Submission to NSW Department of Planning and Environment

from Philip Laird, University of Wollongong, May 2019

This supplementary submission updating one sent in December 2018 is by way of objection and shall draw on research conducted at the University of Wollongong. However, the submission does not necessarily reflect the views the University.

The proposed project includes new twin four kilometre tunnels linking the New M5 Motorway at Arncliffe to President Avenue at Kogarah, and Tunnel stubs for a future connection south to extend the F6 Extension.

1. General Comment

As noted before, there is the question of whether Sydney's car dependence should be further encouraged by construction of Stage 1 on the F6 Extension on top of North Connex and Westconnex along with other major roads. This question should be addressed before Stage 1 approval is given in more detail than has been done in the submissions report.

The question of whether more appropriate road pricing and better public transport is a better option than more tollways and freeways for Sydney should also be addressed.

These issues were raised by the City of Sydney and many other objectors. Although these are acknowledged in the submissions report (with those raised by the City of Sydney forming Appendix A of this submission), the main impression is that apart from two small changes, the proponent wishes to proceed with the project.

This is despite overseas experience demonstrating clearly that building more expressways leads to induced road traffic, more road congestion along with increased air pollution and greenhouse gas emissions.

It is acknowledged in the submissions report that improvements to public transport are being made. However, much more are needed than are under

construction at the moment. The works needed include an upgrade of the South Coast line. Here, in 2018, and again February 2019, Mr Ryan Park MP for Keira and shadow NSW Treasurer committed, if the ALP formed government in the March 2019 election, an upgrade of the South Coast railway line at a cost of some $2.2 billion more important than the F6 extension.

It is understood that the cost of the F6 extension is circa $2.4 billion, with a benefit cost ratio (BCR) of between 1.31 and 1.56, with tolls to apply.

2. Lessons from Melbourne

Melbourne's proposed East West tollway was made an upfront issue in the November 2014 Victorian state election, and effectively rejected by the voters. Unfreezing the federal funding that was allocated for this tollway is an issue in the current 2019 federal election.

December 2015 saw the release of the report of the Auditor General of Victoria on the proposed East West Link (EWL) tollway. The report also noted benefit cost ratio of 0.45 and was critical of both the decision to commence work in 2014 by the former Government of Victoria (and at a time there were legal challenges to the project) and also terminating the project by the new government "without full consideration of the merits of continuing with the project." However, as per the conclusions (page x):

> *If it had proceeded to completion, the entire EWL project would have cost in excess of $22.8 billion in nominal terms. Limitations in the business case meant there was little assurance that the prioritisation of significant state resources to this project was soundly based.*

In place of the East West tollway, with its low benefit cost ratio, the Andrews Government invested in new rail projects. These included the removal of many level crossings, duplication of one line and a new 8 km line to Mernda. This new line opened in August 2018 and in the run up to its opening saw a rise in property values near the stations of some 25 per cent. The new line includes three stations, sharing some 2000 car spaces. Each station has bicycle storage facilities and the stations are linked by new walking and cycling paths.

A new Level Crossing Removal Authority was established in 2015 with the goal to eliminate 50 level crossings across metropolitan Melbourne by 2022. In three years, 27 level crossings were removed and 14 train stations rebuilt. More work is in progress.

Much work was also done in regional Victoria. This includes more

trains and a $518 million Ballarat line upgrade. By way of contrast, very little upgrading of the four mainlines to regional NSW is underway.

In the lead up to the 2018 Victorian election, both the government and the opposition were committing to more investment in rail. In August, the Andrews government promised a new 90km ring railway with 12 new stations between Cheltenham and Werribee via Monash University and Melbourne Airport. The project would require tunnels and cost some $50 billion and take to 2050 to complete.

At the election held on 24 November 2018, the people of Victoria were obviously happy with the changed emphasis from tollway construction to major improvements in urban and regional rail.

3. Lessons from Perth

It is of note that following the March 2017 Western Australian state election, the formerly proposed Perth Freight link road will no longer proceed.

Instead, work is proceeding on an improved rail system, not only to the Perth Airport but also other lines.

4. Alternative projects

It is suggested that other transport projects within New South Wales should have a much higher priority than stage one of the F6 extension.

These other projects should include completion of the Maldon Dombarton rail line, a Parramatta - Epping rail link and a rail link to a Second Sydney airport along with speeding up Sydney Newcastle, Sydney Wollongong and Sydney Canberra trains.

A statement in October 2018 by deputy NSW premier John Barilaro that the Sydney to Orange train time could be cut by 25 per cent (and so by over an hour) by a number of track realignments. Such work could also take preference over yet another Sydney motorway.

Other projects include long overdue grade separation at the foot of the Mt Ousley road.

Attention is again drawn to a 2012 report *Can we afford to get our cities back on the rails?* of the Grattan Institute. The paper looks back to the 19th Century, and towards the end, after reviewing a number of potentially valuable projects, and possible measures of part funding them, concludes: *"None of these measures are politically easy but there is evidence that voters have a big appetite for change in urban transport. ...*

Perhaps the most obvious lesson of history is that urban passenger rail is a long-lived asset that can benefit a city more than a century after it is built. As J.J.C Bradfield wrote about the Sydney Harbour Bridge: —Future generations will judge our generation by our works.

4.1 Completion of the Maldon Dombarton rail line

It is noted that the submissions report picks up on this yet to be completed rail link, and that it was not favoured by Infrastructure Australia. This was on the basis of a 2014 business case from TfNSW. It is surely time that this business case was updated.

In August 2017, the Illawarra Business Chamber released a detailed report noting that in recent years, the efficiency of the existing South Coast Line has been impacted by increased congestion with passenger and freight trains competing for scarce slots. The main recommendation of the report is for the completion of the Maldon - Dombarton Line with duplication of track outside of the Avon Tunnel and Nepean Viaduct, together with electrification of the new line and the 7 km Dombarton - Unanderra section a to form a South West Illawarra Rail Link (SWIRL). The report calculated a Benefit Cost Ratio of 1.13 (central case with discount rate 7%, 50 years) or 1.56 (central case with discount rate 4%, 50 years).

In summary, completion of Maldon Dombarton is now overdue, and is necessary to allow Port Kembla to expand. Completion of the rail link will bring benefits, not only to Wollongong but also Sydney and other parts of New South Wales.

The 2018 report "Regional development and a global Sydney" of the Legislative Council Standing Committee on State Development, has recommendations including (no17) *That the NSW Government explore options to bring forward construction of the Maldon to Dombarton railway line, and Blayney to Demondrille railway line, including seeking funding through the National Rail Program to develop a detailed business case for the construction of the links.*

As noted before, expressions of interest for the private sector to complete this line closed earlier in 2015, were reviewed, and then not taken up. It is likely that some government funding will be required to facilitate this rail link. The question remains is that would NSWgovernment money be better spent on this project and other regional rail projects rather than more than $2 billion on Stage 1 of an F6 extension.

4.2 A better South Coast rail service

The 2012 State Infrastructure Strategy noted in part:

Newcastle and Wollongong *"As Newcastle and Wollongong grow in size and importance to the NSW economy, they need faster and more efficient links to Sydney"*

This report "assesses how faster rail journeys from the Illawarra and Central Coast to Sydney would help enable this integration and support these regions." … also, this 2012 report on page 107, notes "An incremental program to accelerate the intercity routes is proposed, with a target of one hour journey times to Sydney from both Gosford and Wollongong, and a two hour journey time from Newcastle. The focus of the program will be operational improvements supported by targeted capital works to reduce journey times."

The current average speed of about 55 km per hour for the fastest Wollongong - Central trains is too slow. Perth Mandurah and Geelong Melbourne trains average 85 km per hour.

As noted in a May 2017 federal government document “The National Rail Program: Investing in rail networks for our cities and regions” … "Demand for rail is rising - and more investment is needed to match."

This new investment is not just ordering new intercity trains, but also selected track upgrades.

5. Conclusions

In the longer term, the F6 extension will do little to ease road

congestion in Sydney and it will bring more cars closer to the CBD of Sydney, which is NOT wanted by the City of Sydney, for good reasons (see Appendix A of this submission) . Wollongong would be much better served by an upgrading of the rail line linking Sydney and Wollongong than the F6.

Failure to address transport pricing and to improve rail do so will leave New South Wales with increasing road congestion, and dependence on oil. Oil vulnerability needs reducing, and not increasing.

Lessons may be learnt from the former Victorian governments proposal to construct a large and expensive East West Link motorway, the Western Australian change of direction, and overseas experience.

A more balanced approach is needed between new road construction and developing a fit for purpose rail system for New South Wales. Regional NSW deserves a much more attention than it is presently getting from the NSW Government.

In short, Stage 1 of the F6 extension is a case of:

It is **recommended** that the Stage One F6 extension proposal be put on hold by the NSW Department of Planning, until further and detailed consideration is given to alternatives including improved road pricing and better public transport for Sydney.

Associate Professor Philip Laird, Ph D, FCILT, Comp IE Aust
Faculty of Engineering and Information Sciences
University of Wollongong NSW 2522
6 May 2019

APPENDIX A **F6 Extension Submission Report notes on comments made by the City of Sydney.**

Public transport alternatives and Future Transport 2056

The Government's own Regional and District plans acknowledge that the future of Sydney's competiveness comes from creating connected places where people live in close proximity to jobs. This can only be delivered through affordable, reliable public transport.

The Government's own transport plans acknowledge that public transport has superior carrying capacity - a train line (one track in each direction) can move around 50,000 people an hour, compared with two motorway lanes that can only move around 5,000 people per hour. In terms of return on investment for infrastructure, public transport therefore offers a solution that provides ten times the capacity (or ten times less space on surface or in tunnels to move the same demand).

The F6 Extension Stage 1 as outlined in the Environmental Impact Statement (EIS) does little to contribute to the Government's vision and objectives set out in Future Transport 2056, which has a focus on the role of transport in delivering movement and place outcomes that support the character of our future communities.

Transport 2056 refers to:

- a productive economy which relies on an efficient transport system, noting that congestion and network inefficiency increase costs, constrain growth, and stifle economic development and the mobility of services and labour
- liveable communities which promote social inclusion and the health and wellbeing of the people who live in them
- mobility as a 'placemaker' which can transform the public domain, activate centres and unlock new commercial and housing developments, renewing existing neighbourhoods and spaces
- Places for people (such as the Sydney City Centre and Village Centres) are the heart of communities and are more people orientated street environments. To support Places for People, the Movement and Place Framework identifies the need to better prioritise public transport, pedestrians, cycle and freight access whilst limiting through traffic with no destination in the centre.

The answers to the issues and opportunities outlined in Transport 2056 do not lie with building more tollways like the F6 Extension. The Government needs to commit to its own strategies and plans to achieve sustainable transport solutions with a focus on public and active transport.

Assessment process

There is a fatal flaw in the environmental assessment process for the F6 Extension insofar as the project goes against key NSW Government transport and land use policies and strategies.

While the EIS makes reference to these policies and strategies, the City questions the validity of the EIS interpretation that the project supports them.

Operational traffic network impacts

The Traffic and Transport Technical Report (Appendix D of the EIS) discusses the operational performance of the St Peters Interchange and surrounding area for the 'with project' scenario in Section 10.4.2. The assessment of the 2036 AM peak hour concludes that "significant queuing is forecast on the exit ramp from the F6/New M5 Motorway to the Campbell Road/Euston Road intersection, which may queue back to the mainline motorway". Queuing at the exit ramps creates significant safety concerns as a result of drivers quickly reducing their speed. The City is concerned that in response to the poor level of service on the ramps, the Roads and Maritime Services (RMS) may decide to modify the signal operations at the intersection to allow more signal time to vehicles exiting the ramp. Modifying the signals in this way would cause significant delays to pedestrians, people who bike and vehicles along Campbell Road which would be unacceptable to the City.

The stated objectives of the proposed F6 include improvements to urban amenity and place making by reducing traffic along key corridors such as Princes Highway and The Grand Parade/General Holmes Drive. The screenline traffic assessment (refer to section 9.3.1 of the EIS) indicates a reduction of just under 15 per cent in 2026 and 2036 on General Holmes Drive/The Grand Parade. The reduction on Princes Highway has been assessed at around five per cent in 2026 and 2036 and more than 10 per cent in 2026 and 2036.

Even with the reduction of traffic volumes on the existing arterial network around the proposed F6 Extension Stage 1 area, the overall result is an increase in traffic volumes by 14-17 per cent, which suggests induced traffic demands and mode shift from public to private modes of transport. This is a very poor outcome for the City.

The screenline peak hour assessment (Section 9.3.2) shows an increase of around 66 per cent increase in traffic volume on the F6 Extension Stage 1 during the PM peak hour in the 2036 cumulative scenario. Further information is required however to understand this scenario as no explanation has been provided for this increase.

WestConnex program of works

WestConnex has been proposed as a solution to regional traffic impacting local communities. WestConnex Stages 1 to 3 have necessitated significant road augmentations around portals to deal with the traffic generated by the project. Should the F6 Extension proceed:

•

There must be no further allocation of road capacity (physical or operational) to serve traffic generated by WestConnex on road corridors leading to or within the City (such as roads connecting to the St Peters Interchange)

•

It must include reallocation of road space (to public transport, active transport or better place outcomes) on roads leading to or within the City to limit induction of travel by motor vehicles. Reallocating road space to dedicated bus lanes or cycleways is one way of promoting more sustainable travel behaviour while reducing traffic induction. Traffic induction happens when people who didn't previously drive take advantage of road capacity freed up as other drivers divert to the WestConnex.

B11.2.3 Congestion impacts on travel choices

Despite the Government's own policies, there is a major focus in the F6 Extension Stage 1 EIS on the bypassing of 23 sets of traffic lights on the Princes Highway. The Government is failing to make the link between what is considered to be the benefits

of reduced congestion - reduced travel time and improved safety - with the effect this has on people's travel choices. If people can, or perceive they can, achieve a faster travel time by car than by public or active transport, people will switch mode to what is most attractive. The reverse is true for when capacity is reduced, people will move to active or public transport (particularly when there is priority or a dedicated corridor) to achieve the travel time savings. Reduced capacity is a primary trigger to implement demand management strategies, as is occurring in the CBD as a result of light rail implementation.
Since the light rail construction commenced in 2015, there has been an 11 per cent reduction in the number of inbound vehicles and a 9.4 per cent increase in public transport use into the CBD during the morning peak period. This shows that productivity in the global city centre is boosted by more public transport capacity and additional road capacity is not required.`
The EIS must address the intrinsic conflict with the NSW Government's policy to shift travel onto more efficient modes, such as public transport, with the proposal to make it more attractive for people to drive.
The EIS shows that only around 10% of the projected traffic on the F6 Extension would be heavy vehicles. It is clear, therefore that the financial viability of WestConnex requires the project to attract a significant amount of trips in private vehicles.

Impacts to the economy
As a key driver for the national economy, the area covered by the City is vital to Australia's future and the future of NSW. The City economy now totals approximately $125 billion, or almost a quarter of the entire NSW economy. Independent analysts suggest the City economy alone is contributing more than 10 per cent of Australia's current economic growth. It has overtaken the mining sector as the principal driver of Australia's economy along with the inner centres of other major Australian cities like Melbourne and Brisbane.
This economic growth is driving an increase in jobs. Since 2006, job numbers have grown by 100,000 to 498,000, an increase of almost 30 per cent, making the City the epicentre of jobs and job growth in Australia. This is notable, because during this period of unprecedented economic development:

- the number of people driving to the City Centre was steady between 2003 and 2031
- Inbound vehicles to the CBD during the morning peak period have reduced by some 12 percent since light rail construction started in 2015.

One of the most significant risks to this is the Government's relentless focus on expanding the urban motorway network. Why would this Government risk economic growth by attracting more cars into the Harbour CBD when every plan about the central city's competitiveness has been working to get cars out? And why would the Government risk compromising the future of our city's economy, entrenching the east-west social divide and condemning thousands of people to privatised, unsustainable, expensive and inefficient tolled car travel.
The EIS must address the intrinsic conflict with the NSW Government's transport, landuse and economic policies relating to the City and the Sydney City Centre by making it more attractive for people to drive.