



<http://rozelleagainstwestconnex.org>

RAW Stage 3 EIS Submission



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Lodged on behalf of RAW by

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1 Introduction

1.1 Purpose of this document

RAW has developed this Submission for the WestConnex M4-M5 Link EIS & also to assist RAW members to develop their own submissions. Key aspects of the EIS have been selected. Not all chapters in the EIS are covered by this guide. In this Submission, 'the Project' refers to the WestConnex M4-M5 Link.

Members please note that submissions are due by 5pm Monday 16 October 2017 at <http://bit.ly/2fS5cb3>

1.2 Background

- The Project and the context in which it sits is summarised below.



Source: WestConnex M4-M5 Link EIS

The EIS is for the third of five stages of WestConnex that the Government has so far committed to (Stage 1, completed widening of M4 and largely completed tunnel to Haberfield from end of current M4; Stage 2: M5 upgrade and New M5 including St Peters Interchange; Stage 3 the M4:M5 Link subject of this EIS.

- The EIS is based on the fallacy that the M4 and-M5 need linking when they are already linked by the M7, A6 and A3.
- The A3 is the primary eastern link between the two motorways and is shown in the State Road network hierarchy as the M4-M5 Connector.
- The M4-M5 Link enables the expansion of the WestConnex network to include the Western Harbour Tunnel, Beaches Link and M6. These motorway projects, were not part of the WestConnex business case and are not priority projects in any State or Federal roads plan.
- The EIS is a strategy only document, it does not commit to any design and it therefore does not address any local impacts created by the proposed M4-M5 Link. Rather it prepares the pathway for sale of the Sydney Motorways Corporation to the private sector, removing from the responsibility, oversight and control of the Government the final design, cost and implementation of the M4-M5 Link.
- Crucially, to make the sale more attractive, the tunnels between Haberfield and St Peters will be built independently of the Rozelle Interchange.
- This is being done to de-risk the project for the private sector sale, as the tunnels can be built using known standards and technology and generate income from January 2023.

- While the Rozelle interchange remains committed to be opened in December 2023, the design is so preliminary and so complex that it needs to be treated as another stage of the project to ensure that potential private sector funders are willing to invest, knowing they can heavily modify and/or defer the Rozelle Interchange.
- This EIS, therefore, treats the public with contempt. It offers no final design, no commitment to an outcome and only the most vague and unreliable traffic modelling.
- Instead, like a property development, it seeks to get NSW Government approval so that the opportunity to design, build, operate, maintain and toll the road can be sold to private investors, completely outside of the view of the public who will bear the effects on their community for the next 100 years.
- This is a continuation of the appalling disregard for transparency and disregard of the population that bears the brunt of the WestConnex traffic impacts. It displays a lack of understanding of contemporary good practice in transport problem resolution.
- Not only does the project fail to address its most fundamental objective of connecting to Port Botany, the genesis of the entire enterprise, but it repeats the crippling failure of the CityRail network.
- The same Government that is spending many billions of taxpayer dollars via Metro Rail in an attempt to free itself somewhat of the restrictions now faced by a congested City Circle (which imposes a chokepoint on the whole rail network) is now replicating the City Circle's congested effect with a 60km road network! Even worse, whilst it would make sense to focus our rail network on the centre of our densest employment and residential areas in Australia, which have the greatest economic output per square kilometre – WestConnex does the reverse. It will prove the antithesis of common sense when it comes to practicality, economic productivity, creating good value property, environmental planning, social planning and basic transport planning, if Sydney now replicates what have been good public transport links, with more motorways. What we need is additional, efficient public transport, especially rail - be it underground metro, suburban doubledecks or light rail, and costs should reflect need.

1.3 The Inner West Council and the City of Sydney also object to the WestConnex M4-M5 Link

- It is understood both the IWC and the City of Sydney strongly object to the WestConnex M4-M5 Link ('The Project') for the following reasons:
 - It is a toll road project made for big business and searching for a rationale.
 - It fails to meet the primary objectives of providing a direct motorway connection between Western Sydney and Sydney Airport and Port.
 - The Environmental Impact Statement does not safeguard communities. Government is seeking planning approval to sell the project to the private sector and discharging its responsibility and control for the delivery of the project.
 - There is a lack of strategic justification for the project, No feasible alternatives have been developed or assessed.
 - There will be major impacts on the Anzac Bridge (projected 60% increase in daily traffic) and Sydney City Centre. The EIS forecasts major impacts on bus travel time and reliability.
 - The EIS does not adequately account for impacts on health and air quality. The EIS identifies an additional 5 unfiltered ventilation stacks to be constructed in inner

Sydney. In addition local surface roads will be widened and traffic volumes will increase.

- Lack of alignment with the NSW Government's priorities and policies
- Major impacts on the community
- Legacy Impacts and worsening intergenerational equity
- The NSW Government has missed a great opportunity to be truly visionary, recognising and embracing technological change that offers the potential to revolutionise urban travel, support economic agglomeration and deliver on health and wellbeing outcomes.
- Instead the people of NSW will be left with an intrusive inner city motorway that escalating tolls will make unpopular and technological change will render redundant.
- Other global cities are investing in fast and efficient public transport that truly connects homes and jobs, supports the decentralisation of commercial investment and develops a resilient and equitable city for future generations.

2 Business Case

- The Business Case for the WestConnex project (made up of the New M4, Iron Cove Link and Rozelle Interchange, M4-M5 Link, New M5, King Georges Road Interchange upgrade and Sydney Gateway) was not adequate to justify moving to environmental impact assessment.
- The WestConnex route has changed significantly over time, even after the initial August 2013 Business Case was approved by the NSW Government but not made public. Therefore an Updated Business Case on an updated concept was published in 2015. SGS Economics and Planning undertook a detailed assessment of this and reached the following conclusions:
 - Misrepresentation of the Benefit Cost Ratio (BCR) as 1.71 when it was 1.64.
 - The Business Case did not identify Stage 3 WestConnex, connecting the M4 to the M5, as a priority for “filling in the missing links in Sydney’s motorway network”.
 - Modelling for post-2031 conditions was not undertaken, however benefits were assumed to continue until 2052.
 - The transport modelling is likely to have underestimated the impact of extra traffic induced by the additional capacity, which would significantly reduce the BCR.
 - The Business Case did not reflect global approaches to congestion management, such as transit investment and demand management.
 - The Business Case suggested WestConnex would help renew Parramatta Road by reducing traffic on it, despite the modelling showing that many parts of it would carry more traffic, not less.
 - Travel time savings are a key component of the positive BCR. A significant proportion of these supposed benefits arise from travel time savings were within the margin of error of modelling, or would be so small that motorists may not notice them (and therefore would not value them). Research¹ has found that business travellers are more concerned with predictability and reliability of travel times than they are with actual travel time.
 - Insufficient justification was provided for the significant travel time savings, and economic benefits, factored into the BCR for business and light commercial vehicles – for instance there was insufficient analysis of origins and destinations of these trips.
 - The construction costs appear too conservative – if these increase, the BCR would reduce accordingly.
 - Other costs were not accounted for, such as reduced amenity on urban development, loss of land for higher value activities, and the health costs of potentially reduced public transport use.
- In summary, SGS suggested that the actual BCR of the project could be less than 1:1, with NSW taxpayers exposed to the risk that the project may not succeed.

¹ Roads Australia, 2013, Building the Case for Customers.

- Other criticisms of the Business Case focus on the limitations of the process. Searle and Legacy² raise fundamental issues about the way infrastructure business cases in general are developed, and WestConnex in particular.
- The first of these is the manner in which strategic transport and land use planning considerations are evaluated in business cases:
 - The Business Case did not factor in the impact of longer total journey lengths on urban sprawl, which will have a flow-cost for infrastructure and servicing.
 - The Business Case included benefits from WestConnex supporting more compact commercial land use (“agglomeration benefits”), when this is generally not the result of motorway investment, and is unlikely to be in the area served by Stage 3.
 - The Business Case did not attempt to cost the reductions in public transport, especially the loss of fare revenue.
 - Ancillary road projects necessitated by WestConnex, such as the potentially \$1BN Alexandria-Moore Park Connectivity Upgrade, should have been included in the Business Case.
 - Impact on property values, costs of noise during construction, and loss of business should all have been costed and included in the Business Case
 - Loss of heritage to the whole community (not just property owners) should have been included in the Business Case.
- The second is the manner in which other planning issues are excluded from cost-benefit analysis, which is a key component of developing a business case:
 - No analysis of equity impacts of the infrastructure investment and the tolling regime, given the lower socio-economic status of many areas of Western Sydney, and the requirement for potential users of WestConnex to own or pay for access to a private vehicle to be able to use it
 - The localised impact of air quality around the ventilation outlets should have been accounted for.
 - Impacts associated with loss of amenity from reduced access to open space should have been accounted for.
- Searle attributes some of these issues with the Business Case to the decision of the NSW Government to accept the project as part of a State Infrastructure Strategy and other plans before a business case was developed. There was no incentive to explore alternatives or to fully explore the costs and benefits.
 - This process has been described as “lock in”. Commitment escalates because a project appears in numerous policy documents.
 - WestConnex is a clear example of government “locking in” commitment before detailed analysis had been undertaken.
- With the Government fully locked-in to WestConnex, these issues and inadequacies with the Updated Business Case are repeated in the EIS.

² Searle, G and Legacy, C, 2017, *Do the business cases for major Australian transport infrastructure adequately incorporate planning concerns?* Draft Paper for the State of Australian Cities Conference, Adelaide, November 2017

3 Strategic context and project need

The Strategic Context and project need are considered in Chapter 3 of the EIS.

3.1 The Project is not integrated with the NSW Government's Strategic Planning process

- The EIS suggests that the Project forms part of an integrated planning solution. This is simply not true.
- While WestConnex might integrate with the wider motorway network, no evidence is provided demonstrating that it integrates with the wider road network – let alone the broader transport and land use system. For example the EIS provides no information about changes in traffic volumes entering the Sydney CBD caused by WestConnex. RMS has only just commenced work to identify which roads fanning out from WestConnex portals will need to be upgraded to deliver large numbers of vehicles to and from the project. It is therefore impossible to form a properly informed understanding of the environmental impacts – the very purpose of the EIS.
- The newly formed Greater Sydney Commission is currently preparing strategic plans (six District Plans and the Greater Sydney Region Plan) for Sydney's long-term future and TfNSW is currently developing Sydney's Transport Future. All motorway projects should be placed on hold until finalisation of these plans.
- The Project focuses on 'catering for traffic growth' (P4.15). This contradicts and undermines the NSW Government's *Long Term Transport Master Plan* and *Future Transport* web site which commit to an integrated approach to congestion management focussed on land use planning, demand management, public transport investment and "a coherent whole of network planning strategy", essentially aiming for growth in public transport and containing road demand to that required to serve the freight and servicing tasks.
- The WestConnex program of works has been described as an integrated transport network solution. However, the role and interdependency with public transport and freight rail is not considered. The recent Government commitment to a Metro West requires a rethink on the need for WestConnex. Particularly as the WestConnex business case outlines a mode shift from public transport to the toll road as a benefit required to justify it economically.
- The Western Sydney Airport is due to commence construction next year with completion in 2026. Demand for air travel in Sydney is set to double over the next 20 years. Initial patronage is said to be 10 million passengers per year. Information should be provided demonstrating how (or whether) the project caters for travel to the new airport and the likely lessening of demand to the current monopoly airport.

3.2 No project justification – transport outcomes unclear and contrary to NSW Government aims

- The EIS (Section 3.2) does not set out the specific transport needs addressed by the project but states additional road capacity is required to meet a projected increase in trips. It does not set out any trips, desire lines, demand corridors or growth that the WestConnex project is addressing. As a result it is not possible to assess the project's ability to meet those needs. Nor is it demonstrated that projections in growth in population and employment correlate to traffic demand increase along the proposed M4-M5 Link. TfNSW data confirms that the number of vehicles entering the Sydney Centre

during the morning peak hour was stable between 2002 and 2012³ and in fact decreased by some 9 percent in the two years since construction of light rail began⁴. The number of trips by public transport, by contrast, increased by some 38% between 2002 and 2012⁵ and another 10 percent in the two years since construction of light rail commenced⁶.

- The EIS does not set out a credible strategic rationale for WestConnex. There is no informed discussion on the economic geography of Sydney, and the role an integrated transport system has to play in meeting the needs of businesses and residents.
- The cited 'key customers' that would benefit from the project (long distance, freight, businesses) represent a very small minority of those who are forecast to actually use the project (single occupancy commuter vehicles). The key customers could be served by a far more modest project, given they represent an extremely small proportion of projected traffic on the Project.

³ *Sydney City Centre Access Strategy*, (TfNSW, 2013)

⁴ Coordinator General of the Sydney City Centre

⁵ *Sydney City Centre Access Strategy*, (TfNSW, 2013)

⁶ Coordinator General of the Sydney City Centre

4 The Scope of the Project

4.1 Unplanned, unfunded Sydney Gateway benefits claimed for Project

- The EIS states that the project will improve connection to the Sydney Airport and Port Botany. It will not. The Premier herself has said that the Sydney Gateway does not form part of the WestConnex project. Without the Sydney Gateway, connections between WestConnex (St Peters Interchange) and Sydney Airport and Port Botany will be via congested surface roads in Botany and Mascot. As the connection is unresolved, it is impossible to determine the effect on demand of the unknown pricing regime that will apply to the Sydney Gateway, nor how much travel time will be incurred – which might actually negate the already marginal proposed travel time savings.

4.2 Rozelle and Iron Cove Interchanges do not achieve project objective, do not link M4 East and New M5.

- The Rozelle and Iron Cove interchanges are not to meet the project objective of linking M4 East and New M5 (Part 3.3 of EIS) and should not be included in the overall Project. Existing motorways (Cross City Tunnel and Eastern Distributor) would provide suitable road capacity to avoid the city centre.
- To the west there are the M7, A6 and A3 connections. There has been no modelling provided of whether (with appropriate upgrades) these existing roads might provide far more cost effective and time efficient connections between the two motorways, particularly given their alignments would service multiple demand corridors at the same time.
- The project objectives (Part 3.3 of EIS) include enabling the construction of motorways over the harbour and to the northern beaches. However, the traffic impacts of these motorways in Rozelle have not been assessed. These projects were not part of the business case that justified the WestConnex proposal in the first place. This constant shifting of reason as to why the project is 'justified' points more to a seeming desperation to find some reason to build it, rather than there being a clear need which requires servicing.

5 Project Objectives

The project objectives are discussed at Section 3.3, page 3-22 of the EIS

5.1 The Project does not enable urban renewal

- The EIS misrepresents the structure of the Global Economic Corridor and overstates the relationship of the project to centres within it by claiming the Project serves centres in the north of the GEC that it does not.
- The EIS asserts that WestConnex will be a catalyst for urban renewal along major corridors. No evidence is provided to back this assertion. The Sydney experience suggests that roads don't - this is not a likely catalyst e.g. Canterbury Road after M5 East; Cumberland Highway corridor after the M7.
- Significant improvements in rapid public transport are required for significant urban renewal. The experience in Sydney is that public transport is a strong and effective catalyst for urban renewal e.g. Green Square; Ultimo-Pyrmont with light rail; the Anzac Parade corridor, again with light rail; and Sydney Metro City and South West at Waterloo and along the Bankstown Line. The key ingredient is the political will to reallocate road space to rapid transit, or invest in dedicated rail solutions.
- The Parramatta Road Urban Transformation project has been put on hold by the NSW Government for a number of reasons, including the uncertainties relating to traffic capacity on Parramatta Road following the construction of WestConnex. To claim this as a benefit is misleading. The project predicts increased traffic congestion on Parramatta Road without the transformation, which clearly is not a benefit, and potentially funnels traffic unable to penetrate the corridor into the privately operated toll road.
- There is relatively limited urban redevelopment potential along the small section of Victoria Road that the Project would decongest, and this section is not been classified by the NSW Government as redevelopment area. To claim this as a benefit is misleading.
- The Rozelle Interchange will prevent major redevelopment in the Rozelle area. This area has been identified by the NSW Government as a major opportunity for urban renewal for over 20 years – it has to be assumed that the recent abandoning of grand renewal plans for the White Bay Power Station by Google indicate that a lack of quality transit integration and the favouring of big traffic through WestConnex are already affecting the choices being made by desirable investors.

5.2 Claims congestion will be eased are incorrect and misleading

- The EIS narrowly defines congestion as 'traffic congestion' rather than delays to reliable and efficient access to human capital, goods and services which reduces economic activity and productivity. This results in an incorrect and misleading assessment.
- The method and logic used to develop and assess the Project is similar to methods that have delivered numerous motorways around Australia that have not only failed to ease congestion, but have made it significantly worse.
- There is no reliable evidence presented (or available) that building motorways reduces traffic congestion over the long term. No major urban arterial road project, without carefully considered and implemented pricing signals, has succeeded in easing congestion for more than a few years. This is universally acknowledged in planning

disciplines, and is replicated by the Future Transport website, has been stated by the current Minister for Transport and the current Premier (during her time as Shadow Minister for Transport).

- The EIS projects increases in freight volumes without offering evidence as to how the project enables this. Assertions relating to improvements for freight services rely on the Sydney Gateway Project, which is not part of WestConnex, and which poses significant threats to the crucial freight rail connection to Port Botany. Port Botany itself has questioned whether the current project provides any benefit to it.
- The EIS refers to benefits from road projects that are not part of the project's scope. The full costs, benefits and impacts of these projects need to be considered in a transparent process.
- The EIS asserts that the M4-M5 link would complete the orbital road network between western Sydney and the eastern gateways of Port Botany and Sydney Airport (p4.4). That orbital already exists in the form of the 110km Sydney Orbital - the M2, M7, M5, Eastern Distributor, Harbour Tunnel, Gore Hill Freeway and Lane Cove Tunnel.
- Rather than ease congestion the project is likely to reduce the availability of funds for projects that enable that genuinely reduce congestion (road pricing), give priority for high productivity road users such as delivery and service vehicles or genuinely avoid congestion (public transport in separate corridors/lanes).

5.3 The Project will slow down public transport

- According to the EIS, buses travelling to the CBD will be slower, despite the construction of a tunnel between Iron Cove and the Anzac Bridge. Bus travel times along Parramatta Road will improve, but only because bus lanes would be extended. This could be achieved without WestConnex - and for several billions of dollars less! The construction of a park in the Rozelle Goods Yards which would cover the motorway junction below is also being achieved by severing rail corridors which could service the Bays Precinct and Balmain, linking both with the broader Sydney Trains network.

6 Project development and alternatives

6.1 No strategic alternatives were assessed

- The basic question that the people of NSW need answered by the EIS is:

For the same or lower cost of the project, could we do something that is different to the project that will deliver outcomes that are as good or better?
- The Secretary's Environmental Assessment Requirements (SEARS) require analysis of feasible alternatives to the project. No feasible alternatives have been developed and no objective analysis of alternatives has been undertaken. While Section 4.4 of the EIS purports to cover *Strategic Alternatives*, it does little more than offer a discussion of why an alternative was not pursued.
- Meanwhile, 'maintenance works' approved by RMS in the Rozelle Goods Yards are undermining the possibility of a new surface light rail extension to White Bay and the Balmain Peninsula. As part of the 'works' RMS is removing all existing rail infrastructure which has sat in place for nearly a century of freight work (until 15 years ago) and the EIS, does not in anyway indicate these potentially valuable rail corridors would be replaced once landscaping is complete. We therefore have a situation where a park is proposed to hide the world's biggest motorway junction but its design deliberately obscures the potential to expand surface light rail connections across the region, which would help reduce traffic.

6.2 Alternative road projects must be assessed

- Better use of existing road infrastructure has not been analysed as a feasible alternative. The EIS only refers to existing RMS programs. An analysis of urban road projects recommended in the *State Infrastructure Strategy Update 2014* should be conducted as strategic alternatives including:
 - Smart Motorways investments on the M4, the Warringah Freeway and Southern Cross Drive-General Holmes Drive
 - Upgrading the Sydney Coordinated Adaptive Traffic System (SCATS)
- At very minimum, the assessment of Strategic Alternative 1 (*improvements to the existing arterial road network*) should:
 - Identify key network capacity issues.
 - Develop a scenario of investments in (potentially major) arterial road improvements required to address the road network capacity constraints. The City of Sydney's alternative scheme provides one example of what improvements to the existing arterial road network might look like.
 - Carry out transport modelling and economic analysis to inform the assessment of the alternative.

6.3 Real integrated transport measures must be assessed

- There is no evidence of scenario modelling being used to allow testing the ability of different packages of integrated transport measures to achieve outcomes. The Long Term Transport Masterplan states that integrated approaches are required to manage

congestion. The NSW Minister for Transport claims that we “have to get more people on public transport.”

- The assessment of Strategic Alternative 2 (*Investment in “alternative transport” modes*) should:
 - identify key network capacity issues
 - identify the shift away from private vehicles required to deliver the necessary relief on the road network to meet the future transport needs of Sydney
 - identify the mix of investments in public transport, cycling and walking required to deliver these mode splits.
 - use multi-modal transport modelling and economic assessment to inform the analysis and assessment of the alternative.

6.4 Travel demand management options must be assessed

- The assessment of Strategic Alternative 3 (*Travel Demand Management*) should:
 - Identify key network capacity issues
 - Consider the opportunity for travel demand management measures to address the road network capacity constraints. The measure should aim to retime, re-mode or reduce trips that make less productive use of congested road space.
 - Draw on a process of multi-modal transport modelling and economic assessment to inform the analysis and assessment of the alternative.

7 Construction Work

7.1 Local Councils have no say over construction

- The EIS states that a Construction Traffic and Access Management Plan (CTAMP) “*would be developed in consultation with local Councils and stakeholders associated with public facilities adjacent to project site*”. A similar commitment was made for construction of the New M5. It has been poorly managed. There is limited response to Council input and the Sydney Motorway Corporation and Roads and Maritime Services each deny responsibility and blame each other for a lack of action.
- This is despite the RMS being the client for the Sydney Motorways Corporation. It would appear this is a deliberate strategy of the NSW Government to ensure local communities affected by construction traffic have no reasonable means of managing any complaint. It is undemocratic, against the principles of open government espoused in the election platform of the current government and ultimately escalates community unrest.(P 8-44)

7.2 Only partial construction impacts have been assessed

- The EIS states that spoil handling at the Pyrmont Bridge Road Tunnel Site (C9) will “occur 24 hours a day, seven days a week” for about four years. Given the land use surrounding the site is dense residential, what mitigation measures will be used to control noise, light spill, etc. outside normal business hours? Have alternative living arrangements and/or compensation been considered? (P 8-55)
- The EIS focusses on the impact of construction traffic during commuter peak-hours. Given the EIS notes that construction-related vehicles will be limited during peak-hours, information should be provided on the impact of construction-related vehicles when both traffic volumes are higher – in particular during weekday lunch peak and Saturday lunch peak for sites like the Pyrmont Bridge Road Tunnel Site where operations are proposed 24/7. (Tables 8-46, 8-47, 8-48, 8-51, 8-52, 8-53).
- The great number of heritage houses in the Rozelle interchange construction zone has not been specifically addressed. Noise and vibration impacts can have far more significant impacts on these types of properties. There is no functional management plan for these risks, no articulated complaints investigation process nor any articulated compensation and remediation strategy.

7.3 Construction impacts people walking and cycling more than people driving

- The EIS notes that “in preparing the traffic staging plans during construction the key considerations (...) include *maintaining* traffic and lane capacity (...) on the arterial road network, particularly during peak periods; *minimising* impacts on public transport services (...); and *minimising* impacts on key active transport links”. Existing capacity for both public and active modes of transport should be maintained. (P 8-70)
- The EIS uses criteria to assess the impact of existing walking and cycling routes that will need to be diverted as a result of the M4-M5 Link. The criteria are based on distance only and exclude the additional travel time taken to complete the diversion. This approach is flawed and should also consider travel time – if it did, this would completely change the assessment of the proposed removal of the existing pedestrian and cycle bridge over City West Link. (P 8-71, Table 8-50). Further, the EIS is silent as to whether

the existing pedestrian and cycle bridge over City West Link will be replaced post-construction (P 8-73)

8 Traffic and transport

8.1 The traffic modelling approach is fundamentally flawed and inaccurate

The wrong modelling approach has been used

- All traffic modelling is wrong, the question is: *by how much? And what are the implications of the error?*
- Incorrect traffic modelling has led to overoptimistic traffic predictions which resulted in low toll revenue from of the Cross City Tunnel, Lane Cove Tunnel and Brisconnex in Brisbane, resulting in eventual bankruptcy.
- The traffic modelling process used to develop the Project is fundamentally flawed because:
 - Traffic projections are likely to be significantly different to the actual traffic on the street network
 - Traffic volumes projected in the model are in numerous instances well above the physical capacity of the road network.
- There is no statement on the level of accuracy and reliability of the traffic modelling process. This is a major shortcoming and is contrary to the Secretary's Environmental Assessments Requirements.
- WestConnex traffic modelling relies on implausible traffic volumes that exceed the capacity of the road links and intersections at several key locations.

Modelled future traffic likely will be significantly different to real future traffic

- The traffic model used is an 'unconstrained' model. It assumes that all vehicles will travel on the route with the lowest "generalised cost" (i.e. combination of time and money). But it does not consider whether those routes have the capacity to handle all those vehicles. In the real world people change their time of travel, mode of travel and consider whether to make a trip at all to avoid congested routes. As a result travel patterns in the real world are very different to the patterns identified in models.
- Because the strategic model does not limit the volume on road links and at intersection to their ceiling capacity; it cannot (and was not designed to) be used precisely as it is.
 - A mesoscopic model, which can provide more a far greater level of detail than the strategic model used would have ensured a more thorough analysis of the networks' ability to cope with the traffic predicted.
- The traffic modelling process is not fit for purpose and places significant risks on the people of NSW in terms of:
 - Traffic impacts that are significantly different to those presented in the EIS.
 - Toll earnings that are significantly lower than projections – resulting in government subsidising the owner for lost earnings.
- The modelling process incorporates a highly unusual definition of induced traffic (p.45 of Appendix H). Induced traffic should not include the increase in trips due population growth and land use changes as these are modelled elsewhere.

Key Inputs to the modelling process are unpublished or incorrect

- The accuracy of the model outputs can only be as good as the accuracy of the inputs. Projections of key inputs relating to population and employment become very unreliable beyond 10 or 15 years. In addition to this, the transport sector is facing a potentially significant disruption from connected, automated vehicles that may have a significant impact on traffic growth. This has not been considered or modelled.
- SMC is using an unpublished Value of Travel Time in the WestConnex traffic modelling. If the Value of Travel Time adopted is incorrect, then all outputs will be incorrect.
- The induced demand of 0.3% is too low based on historical experience in Sydney.
 - The benefits counted from reduced traffic volumes on roads such as the existing M5 and the Eastern Distributor are unlikely to be realized due to real levels of induced demand.
- The 2023 'cumulative' modelling scenario includes the Sydney Gateway and the western harbour tunnel but neither of these projects are currently committed and it is highly unlikely they will be completed by this date. This raises the question of *why did the proponent adopt such a misleading position and how does it affect the impacts stated?*
- SMC refuses to release the traffic model and detailed analysis for independent unpaid peer review and scenario analysis.

Modelling scenarios are poorly defined and provide incomplete outputs

- The narrow boundaries of the areas of operational modelling mean the proponents have not fully assessed the Project's impacts on key strategic centres such as the Sydney Central Business District, Parramatta Road, the Anzac Bridge, the City West Link, the Crescent and the flow of traffic north to Drummoyne at the approaches to the Iron Cove Bridge where gridlock already occurs.
 - It is not understood why a mesoscopic modelling approach was not undertaken to gain a better understanding of impacts to the surrounding road network.
 - The modelling conclusions are internally inconsistent. There is an assumption that traffic would dissipate at the edge of the motorway with no negative impacts on the CBD, Mascot and Alexandria. However there is also an assumption that additional roads would be needed to cope with said traffic.
- The EIS (including Appendix H) fails to provide traffic modelling outputs to assess impacts of the Project on CBD streets and intersections. Given the highly constrained and congested nature of the CBD, NSW Government policy focusses on reducing the number of cars in the CBD in favour of public transport, walking and cycling. The proponent should provide intersection performance results for the following intersections:
 - The ANZAC Bridge off-ramp to Allen Street/Botany Road
 - The Western Distributor off-ramp to DrUITT Street (buses)
 - The Western Distributor off-ramp to Bathurst Street
 - The Western Distributor off-ramp to King Street/Sussex Street
 - Gardeners Road and Botany Road
 - All intersections within the modelled area in the Sydney CBD

- Whilst chapters 10 and 12 of Appendix H show mid-block level of service at interfaces with interchanges and points within the tunnels, there is no information about other mid-block points such as the ANZAC Bridge. Part 8.3.3 of the EIS refers to increases in daily traffic forecasts on the Anzac Bridge/Western Distributor, particularly in the AM peak, as traffic accesses the M4-M5 Link and future forms of traffic or network management are intended. Information about the traffic forecasts for the Anzac Bridge/Western Distributor should be provided.
- The construction impact of the future Western Harbour Tunnel and Beaches Link entry and exit ramps connecting to City West Link/The Crescent has been assessed. The operational traffic impact of these ramps has not. This should be completed and publicly released before determination. There is no verifiable or understandable data to determine the veracity of claims of traffic generated by these other links.

Traffic modelling was insufficient to assess the full impacts of the project.

- The underlying traffic modelling and outputs was insufficient to:
 - Demonstrate the need for the project.
 - Understand impacts of dispersed traffic on connecting roads, such as the Anzac Bridge, and whether they have available capacity to meet the predicted traffic discharge. Any congestion on exits has the capacity to negate all travel time savings to the exit point, given the small predicted benefits.
- The strategic model (whole system) inputs traffic volumes that simply cannot be accommodated in the road interchanges and feeder routes. It is physically impossible to fit that amount of traffic on a road.
- The modelling area shown in Figure 8-5 should be extended to include Johnston Street and The Crescent/Minogue Crescent/Ross Street corridor to Parramatta Road to provide clarity on how these feeder routes are envisaged to operate in 2023 and 2033. It should include the modelling assumptions applied.
- Volumes on the main links (the trunks) cannot be as high as what is claimed in the EIS. It is physically untenable. This would suggest surface roads across the Inner West should also be modelled in detail to see how they will cope with the overflow.
- The modelling shows the motorway exceeds reasonable operating limits in the peak in less than ten years.

Unreliable traffic projections snowball into compounding errors in the Project business case, design development and environmental assessment

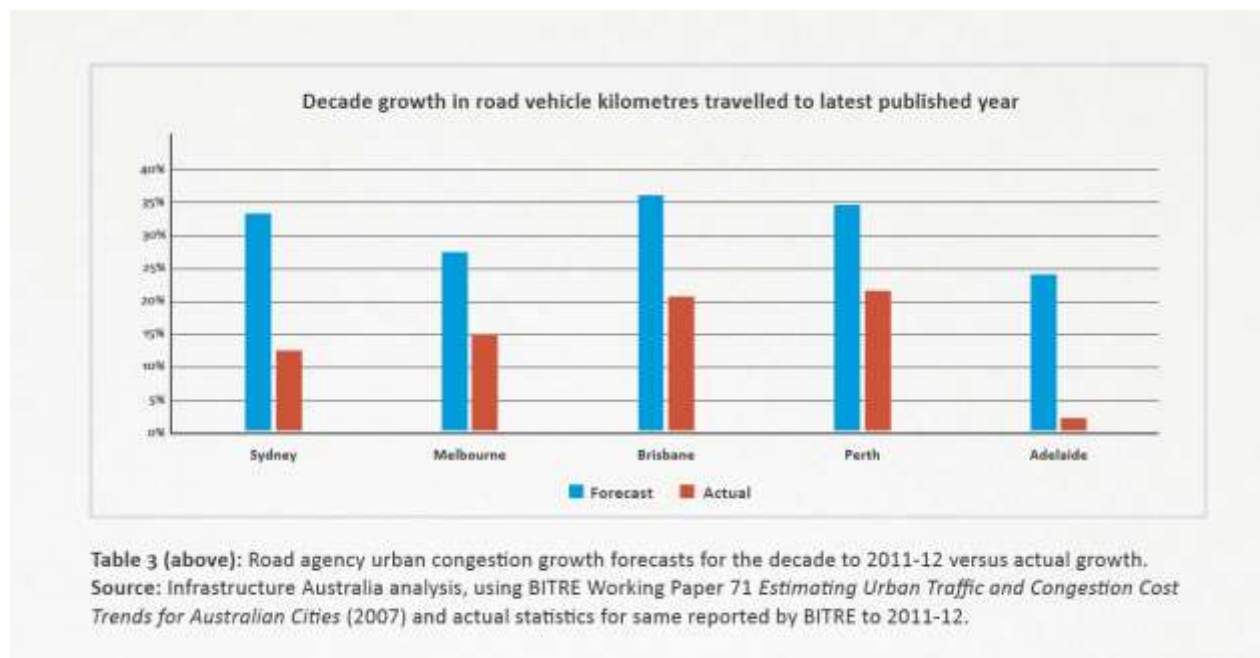
- Unreliable traffic projections lead to significant and compounding errors in the design, EIS and business case processes, including:
 - Dimensioning of motorway tunnels and interchanges (on- and off-ramps) and expansion of roads feeding traffic to and discharging traffic from the toll road
 - Assessment of the project's traffic impacts on other parts of the street network
 - Assessment of overall traffic generation and induced traffic associated with the project
 - Emissions based on traffic volume and driving style (e.g. stop-start driving in congested traffic leads to higher emissions impacts)

- Toll earnings and financial viability, which could trigger compensation claims or negotiated underwriting that would materially undermine the State budget position given the cost of the project.
- Other key inputs to the business case that are derived from strategic traffic modelling, including: purported reductions in crashes, purported improvements in productivity etc.

Evidence shows that the approach to traffic modelling in NSW is flawed

- The traffic modelling approach applied in the EIS is commonly used in NSW. This approach has proven to be flawed.
- Infrastructure Australia compared predicted and actual traffic levels and found that the assumed steady growth in traffic did not occur. . In Sydney, urban congestion levels are growing at around one third of the forecast rate. (See Figure 1, below)

Figure 1 –Growth in Road Vehicle Kilometres Travelled 2001 - 2011



- A review of RMS traffic counts on numerous arterial routes within the 'sphere of influence' of the Project have shown no growth in traffic since 2006. During this period Sydney's population (as measured by the Greater Capital City Statistical Area) has grown at a rate of 1.5% per annum on average. Roads measured:
 - Parramatta Rd at Ashfield (station 25002), Leichhardt (station 20012), Five Dock (station 30005) and Annandale
 - ANZAC Bridge (station 20001)
 - Anzac Parade Moore Park (station 03022 b/w 2008 and 2017)
 - Cleveland Street (station 03022)
 - Sydney Harbour Tunnel (station 01003)
 - O'Riordan Street (station 02309)

- Sunnyholt Road Blacktown (station 69198)
- General Holmes Drive Brighton-Le-Sands (station 23055)
- King Georges Rd Roselands (station 24026)

8.2 Specific examples of shortcomings of the traffic modelling process

The projected traffic volumes would exceed the capacity of the motorways and surrounding surface roads preventing them from delivering their objectives.

- For example The St Peters / Sydney Park Interchange will overload the Mascot road network. As a result traffic levels were reduced to fit the modelling.
- In order to make the model work, traffic that exceeds the free flow capacity of the network was reassigned to hours outside of the peak – i.e. the model assumes people shift the time they travel. However, the potential of shifting journey times to reduce overall traffic demand is not considered.
- The modelling has thousands of unreleased cars at key locations; i.e. in reality those unreleased vehicles would result in vehicle queues and or network failure.
- The modelling shows severe degradation to the City West Link if the Western Harbour Tunnel is connected.
- The modelling shows severe traffic levels and increased congestion on Johnston St, and The Crescent (+80% ADT).
- The modelling shows significant increases in traffic on Victoria Rd (+20% ADT) which is already at capacity.
- The modelling makes no mention of bus lanes on Victoria Rd. If these lanes were not modelled as car lanes the assumed capacity of the road is incorrect.

The modelling uses land use forecasts from the 2014 Plan for Growing Sydney.

- The modelling does not consider the latest plans from the NSW Government's Greater Sydney Commission despite them being released nine months ago.
- The proponent excludes the impact of the Western Sydney Airport from analysis of the project. This could have a significant impact on traffic volumes.
- The EIS notes that the project design and land use forecasts have changed significantly since the Stage 2 and Stage 3 EIS. However the cumulative analysis does not quantify the expected change on those roads. The EIS only notes significant increases in traffic volumes.

The modelling assumes a fixed mode share and does not properly consider the possibility of mode shift.

- The modelling assuming journey time shifting when mode shifting is more likely.
- The proponent does not consider the impact of the Sydney Metro West. This project will have a significant impact on travel behaviour (and specifically mode share).

- The statements made that public transport cannot serve diverse areas are empirically incorrect. The area the WestConnex is being built in has higher public transport mode use than the Greater Metropolitan Area as noted in the IES.

8.3 Specific traffic impacts associated with the Project

Misleading information on benefits and impacts of the Project

- The EIS provides traffic projections for the 'With Project' scenario and 'cumulative' scenario (which in addition to links in the 'With Project' scenario includes the Beaches Link and F6 motorway connections), but when referencing the traffic benefits/impacts in the early sections, the EIS appears to cite the 'with project' scenario rather than Cumulative Scenario. It is unclear which scenarios the Business Case best reflects.

Numerous intersections and roads will be significantly worse with the project

- The Project will have significant impacts on the streets near on- and off-ramps. Modelling shows that the Anzac Bridge will have 60% more traffic in 2033 because of the Project.
- The key intersection performance tables in App H (p.258 St Peters and 248 Rozelle) demonstrate that many intersections will either worsen (at the worst case scenario of LOS F) or remain unchanged particularly in 2033, including the following intersections:
 - Princes Highway/Canal Road
 - Princes Highway/Railway Road
 - Unwins Bridge Road/Campbell Street
 - Campbell Road/Bourke Road
 - Princes Highway/Campbell Street
 - Ricketty Street/Kent Road
 - Gardeners Road/Kent Road
 - Gardeners Road/Bourke Road
 - Gardeners Rd/O'Riordan Street
 - Victoria Road/Lyons Road
 - Victoria Road/Darling Street
 - Victoria Road/Robert Street

The Project will worsen bus performance and reliability

- Road congestion is reducing bus performance and reliability. The project will make it worse.
 - The EIS says traffic on ANZAC Bridge will increase by 2023 (p.8-103).
 - Traffic modelling shows bus times will be slower into the city in the morning (p.3-19).
 - The EIS identifies capacity constraints on ANZAC Bridge (p3-19). This project will dump more traffic onto the ANZAC Bridge.

The Project will have major impacts on the Sydney CBD

- The analysis shows Anzac Bridge/Western Distributor is currently at or close to capacity, particularly in the AM peak where existing operational and geometric features of the road network limit the capacity. The EIS notes that under all scenarios the Project will generate significant additional traffic on these links, requiring major and costly additional motorway infrastructure to the CBD. This is despite the fact that the NSW Government recognises that there is no capacity to accommodate additional car trips to the CBD and all its policies aim to allocate more street space to public transport, walking and cycling. The EIS must assess and identify any upgrades that the Project will cause or require. (App H p. xxxiii)

The Project will have major impacts on the roads to the west and south

- The EIS notes that the Project would cause additional traffic congestion on a number of key roads including: Gardeners Road and Bourke Road in the south, Frederick Street (Ashfield), Johnston Street (Annandale) and numerous streets in Mascot (p.8-103). The EIS must assess and identify any upgrades that the Project will require.

8.4 No details provided of road upgrades required by the Project

Impacts on surrounding road network and required upgrades not detailed

- The EIS notes that an ‘Operational Traffic Performance Review’ will be undertaken at 12 months and five years after the M4-M5 Link is open to consider the need for “post-opening mitigation measures” (Page 223, Chapter 9.8, Appendix H). We object to this approach as it is contrary to the requirements of the EIS process and reflects a clear admission on the part of the NSW Government that:
 - It has no confidence in the traffic modelling process to predict to any reliable extent the likely impacts of the Project;
 - It is unable or unprepared to describe the true impacts of the Project on the people of NSW;
 - It has not considered or budgeted for the potentially significant additional roadwork required to address the impacts of the Project (or the need for road upgrades to feed toll-paying drivers to WestConnex.
- The nature of these “post-opening mitigation measures” are unknown and their impacts could be significant including intersection and road widening (and associated property loss), banning parking in local centres, removal of trees, footpaths and cycling facilities. The people of NSW have a reasonable expectation to understand whether such impacts form part of the Project and they should be detailed in the EIS. They should not be left to a “wait and see” approach. Not only a proper analysis of demand, but also of traffic dispersion should be provided for connecting roads up to three kilometres from every exit and entry portal and the capacity of those roads analysed.
- The EIS (App H, p.269) refers to the RMS plans to carry out “network integration” works surrounding the Rozelle interchange once the project is complete but offers little detail of the nature of the works. It mentions the intersection of the Western Distributor and Pyrmont Bridge Road at Pyrmont, Western Distributor near Darling Harbour and a review of kerbside uses near the Western Distributor, The Crescent, Johnston Street and Ross Street.
- Given that these works could be undertaken to deliver toll paying drivers to the privately owned WestConnex, there is strong potential for a conflict between private profit and community impacts. The cost of any such integration works should very clearly be attributed to the Project cost, and should not impact on the available RMS budget for the State road network’s normal maintenance and improvements budget.

- the Secretary's Environmental Assessment Requirements (SEARs) for the EIS (Page 8-2 – Table 8-1) require the Applicant to consider the operational transport impact of toll avoidance however information provided on toll avoidance in Chapter 9.8 (Page 222) of Appendix H is limited to four short paragraphs.

8.5 Impacts on people walking and cycling

- Part 3 of the Secretary's Environmental Assessment Requirements requires assessment of the likely risks of the project to public safety, paying particular attention to pedestrian safety. This is not addressed in Chapter 8.
- We note that pedestrian amenity around the bottom of Victoria Road, where it meets The Crescent will be severely hampered with the removal of two footbridges which currently provide safe and easily scaled regional links to major bus nodes. These also provide safe and easy walking links between Rozelle Bay and Balmain. In the absence of these bridges, pedestrians running late for buses may feel compelled to cross Victoria Road itself, which could pose severe risks for them given the current levels of traffic upon it. There have been suggested 'upgrades' to Victoria Road's traffic lanes, but why is this necessary if the Iron Cove Link was meant to 'traffic calm' the area? Traffic should not be allowed to amplify in this area.
- A direct pedestrian link could also be encouraged between Gordon Street and the Rozelle Bay light rail stop on the other side of the CityWest Link, as the Gordon Street area of Rozelle is the most remote from light rail services and the line of Gordon Street itself is quite direct for possible pedestrian links into Balmain.
- The existing pedestrian links to the Rozelle Bay light rail stop (in Annandale) should not be hampered by escalation in traffic forecast which occur as a result of upgrades to The Crescent or CityWest Link. Indeed the design of safer, better separated and more efficient active transit links will be required wherever possible at this intersection (and others) and should be encouraged for the local communities of Rozelle and Annandale as part of any road upgrades as a condition of approval.

9 Air Quality

- Scientists have found that there is no safe level of air pollution. As pollution levels rise deaths and hospitalisations rise too⁷. A thorough cost-benefit analysis that takes into account the health effects due to increased exposure is required.
- Concentrations of some pollutants PM_{2.5} and PM₁₀ are already near the current standard and in excess of proposed standards (p9-81, p9-93). It is critical to note that these particulates are a classified carcinogen and are known to have critical, and at times fatal, consequences if elevated. People living within 500 metres of heavily affected areas have demonstrably shorter lives, much higher incidences of chronic lung conditions and higher levels of cardiovascular diseases.
- Significant declines in pollutants are due to improvements to in-vehicle technology and fuel. However, plans to improve standards for heavy vehicles, which disproportionately contribute to NOx emissions and thus ozone, appear to have stalled. The proponent needs to provide a scenario that sets out impacts due to delays in adopting improved emission standards.
- The EIS states that the impact on regional air quality is minimal and thus concludes that the project's impact on ozone is negligible. Ozone is a major pollutant and Western Sydney, Campbelltown in particular, suffers the worst ozone pollution. Major components of ozone are generated in eastern Sydney and drift west. Previous environment departments have spoken about the need for an eight-hour standard concentration and goal for ozone (DECCEW, 2010, State of Knowledge: Ozone). OEH needs to provide information about the value of this standard and on the impact of new motorways on that level.
- Given that the modelling for air quality is based on the traffic modelling, which, as shown above, is fundamentally flawed, and given poor air quality has a significant health impact the EIS should not be approved until an independent scientifically qualified reviewer has analysed the stated air quality outcomes and identified any deficits

The St Peters and Rozelle interchanges are of particular concern. St Peters will have large volumes of vehicles accelerating and decelerating as they enter and exit tunnels and access roads, next to proposed playing fields. This is complicated by emissions stacks located in the Interchange – whereby pollution from the interchange is supercharged by the emissions from the stacks.

The Rozelle interchange has an unprecedented concentration of stacks, in a valley, adjacent to densely populated suburbs. The interchange has steep and long climbs, increasing emissions concentrations, which will then be pumped into the surrounding area. The modelling does not account for stop-start conditions. However, the EIS shows significant traffic volumes heading onto the Anzac Bridge, which already operates at the lowest Level of Service (F) in peak times. There will be significant queues heading into the tunnels, greatly increasing the level of emissions. The existing M5 in peak conditions may provide a more realistic base line.

⁷ Barnett, Adrian G, *It's safe to say there is no safe level of air pollution*, Australian and New Zealand Journal of Public Health Vol 38. Issue 5

10 Land Use and Property

- The project would take land intended for housing and employment specified in *The Bays Precinct Transformation Plan*.
- Increased traffic on Gardeners Road will require land use planning changes that may decrease the value of land.
- Increased traffic on local roads will decrease residential amenity and decrease the potential for new higher density housing. This will affect numerous streets, with particularly major impacts on The Crescent, Minogue Crescent, Ross, Mount Vernon, Catherine, Ross and Arundel streets in Glebe; and Euston Road, McEvoy, Botany, Wyndham, Bourke and Lachlan Streets in the Green Square area. In the redevelopment areas, land adjoining these streets may suffer a loss of development potential, a loss of value and will bear the additional costs of designing for noisy environments.

11 Urban design and visual amenity

- Both the St Peters Active Recreation Area and the Rozelle Interchange Open Space are a false promise. Unless there is an agreement for construction and management these will be grassed wastelands with compromised amenity, adjoined by ventilation facilities in Rozelle, divided by above ground portals and difficult to access across busy roads.
- Despite the promise of the WestConnex business case, Parramatta Road remains a barrier to urban revitalisation. There is no discussion of this commitment in the EIS.
- Improving connectivity with public transport, including trains, light rail and bus services in the inner west would make the Parramatta Road corridor a more attractive place to live, work and socialise.
- Increased traffic cannot be accommodated in Central Sydney. It will further impede pedestrian movement and comfort and undermine easy access to public transport and reduce access to jobs over large areas of the city. It will undermine the attractiveness of Central Sydney to internationally competitive high productivity firms and their potential employees. Overall productivity is adversely affected.
- Increased traffic on Bridge Road, Wattle Street and the Western Distributor will reduce the amenity and value of the investment in the renewal of the Fish Markets and renewal of the Bays Market District

12 Flooding and Drainage

- At the western end of Bignell Lane near Pyrmont Bridge Road existing flood depth was identified up to one metre in the 100 year ARI. The NSW Government Floodplain Development Manual (2005) identifies this location as a high flood hazard area.

13 Non-Aboriginal heritage

- Of the six areas of disturbance and 11 Historical Archaeological Management Units (HAMUs) identified in Chapter 20 of the EIS, all sit within the Inner West Council's LGA, not that of the City of Sydney.

14 Greenhouse gas

- The operational Green House Gas (GHG) assessment is based on the WestConnex Road Traffic Model version 2.3 (WRTM v2.3). This model has major flaws and the unreliable outputs of the model put into question the GHG assessment.
- The assessment states that there will be a net increase in GHG emissions in 2023 under the 'with project' scenario, however under the 2023 'cumulative' scenario, there will be a net decrease in emissions (page 22-15). However, as the 'cumulative' scenario includes the Sydney Gateway and Western Harbor Tunnel projects, which are not yet confirmed to proceed, the 'with project' scenario should be considered as a likely outcome – which would see an increase in emissions. Both scenarios for 2033 show a reduction in emissions vs the 'do minimum' scenario. This is likely to rely on 'free-flow' conditions for the Project for most of the day. Should this not occur, the modelled outcomes could be significantly different.
- Emissions were not modelled beyond 2033. This is an omission, as the contractual life of the project is significantly longer, until 2060. The EIS states, on page 22-15 that 'it is expected that savings in emissions from improved road performance would reduce over time as traffic volumes increase'. Therefore, the longer-term outcome of the project is likely to be an increase in GHG emissions
- Targets for renewable energy and carbon offsets are not aligned with NSW government policy. (Table 22-8)
- Targets for renewable energy and offsets are unclear.

15 Cumulative Impact

- The TfNSW website says "The Sydney Metro West project is Sydney's next big railway infrastructure investment" but the Cumulative Impact assessment by AECOM (App C) does not include Sydney Metro West. A business case for Sydney Metro West should be completed before the determination of the Project.
- The Inner City Regional Bike Network has not been included among projects assessed under Cumulative Impacts. It is identified by Infrastructure Australia as a Priority Initiative and should be included.
- The Inner West Greenway was considered but not assessed as a cumulative impact. One of the claimed project benefits of the proposal is improved east/west crossings of Parramatta Rd for pedestrians/bikes and the Greenway would achieve this and should be assessed and provided as part of the project. The Greenway was part of inner west LR project before it was deferred in 2011 and Inner West Council has done extensive work on how to complete it.
- King Street Gateway is not included in modelling or Cumulative impact assessment however will alter the road geometry and capacity adjacent to the project.
- No cumulative impact has been considered for the removal of the freight rail corridor in the Rozelle Rail Yards. It is possible light rail extension to the Balmain Peninsula could be achieved, were this rail corridor preserved for future adaptive re-use. This link (running under Victoria Road) could serve both the Cruise Terminal and White Bay Power Station – as well as any future development. It is also possible that such a

connection could be linked to the city easily, using the Glebe Island Bridge. This would streamline Inner West LRT services by a substantial amount, bypassing Glebe, the Pyrmont loop and Ultimo. Unfortunately, the Minister responsible for the Rozelle Goods Yards site can order this corridor's removal immediately - regardless of whether the EIS for Rozelle Junction (as part of Stage 3) is approved or not. It would be a short-sighted and obvious mistake to do this, without first considering the existing rail corridor's potential to link the region more broadly, with something other than cars – as doing so would greatly reduce congestion.

- It should also be considered that if the existing tracks were removed in the near future, a clear land corridor should still be reserved for any possible surface rail replacements. This must be respected as something for future land developments to work around. The ideal time for such a land corridor to be preserved is now, whilst the Goods Yards are still in Government hands, and it is our strong recommendation that it be done as a condition of any approval – but also in the event of WestConnex Stage 3 failing to be approved. Light rail is something which can service this region much faster than the Sydney Metro West proposal, which is a long way from approval – but if the Metro is approved, it would be complimented by an interchange with the more regional light rail network at White Bay.

12 October 2017
