19/10/15

To the Secretary, Dept and Environment

I object to WestConnex because there will be more cars and more pollution.

4867

By Adrian Roper-Tyler

9 years old

To: The Secretary. Dept of Planning & Environment

29.10.15

8984

I Object to WestConnex because I will miss our nice house.

Cameron
9 yrs

by: Cameron Roper-Tyler

96 underwood rd

4869

Mora Main 3 Judges Lane Waverley NSW 2024 7th November 2015
SUBMISSION: WestConnex M4 EIS (SSI 6307)

Director, Major Projects
Assessments,
NSW Department of Planning
GPO Box 39,
Sydney NSW 2001

Dear Sir,

The key objection to this proposal is that it is not inner urban-appropriate infrastructure. It is an outdated, unsustainable and unreasonable approach to mass circulation in a great city. The private motor vehicle has had its day as the dominant transport bubble in big cities worldwide.

Professor Peter Newman eloquently describes the problem. "We really need to build the cities of the 21st Century, not the roads .... of the 1960s. (Westconnex) is not 21st Century at all". Every intelligent city in the world is now moving to mass public transport infrastructure, with a combination of above and underground trains, trams, some buses and cycleways – spatial efficiency which can never be achieved by constructing wider and wider roads. Walking is also being seen as an urban circulation solution. For this, the environment must be friendly and leafy, not polluted, noisy, hostile or shimmering with heat off the bitumen.

Let's get serious about providing a better future for beleaguered Sydney with its already dreadful traffic snarls and pollution, throw out WestConnex which will only amplify the problems, and spend the huge amounts of money it would cost on a properly considered public transport system, owned and operated by the public transport agency, for and on behalf of the well being of the people of NSW.

Yours faithfully,

Mora Main

(Ms) Mora Main

4870

PCU062644

1st of November 2015

Westconnex M4 East Tunnel (SSI 6307)
NSW Department of Planning and Environment
GPO BOX 39
Sydney NSW 2001

To Sir/Madam,

RE: Westconnex and Access to Martin Street, HABERFIELD (the park side of Martin Street)

I am writing in relation to the road designs planned for the Westconnex project for this street. Plans that have been submitted indicate that residents on this street will only be given the options to turn left onto Wattle street, meaning that access to Haberfield will be completely cut off. It is my understanding that the first opportunity to turn right will be at Leichardt.

This is grossly unreasonable and therefore I would like request there be changes made to the plan for the residents of this street. The change should be that the Ramsey street side of Martin Street be opened allowing one lane exit out of the street, allowing access to Haberfield via Ramsey Road.

I would like to request that the current plan for Martin Street, Haberfield not go ahead until a better option for residents exiting this street be sought.

Kind Regards,

Maria Quintal
48 Martin Street,
Haberfield NSW 2045
0422 575 370

4871

[redacted]

[redacted]

Confidentiality Requested: yes

Submitted by a Planner: no

Disclosable Political Donation: no

[redacted]

[redacted]

[redacted]

Content:
Please refer to attached document

[redacted]

Residents of Wolseley Street
Haberfield NSW 2045

Director, Major Project Assessments
Department of Planning
GPO Box 39
Sydney NSW 2001

Submission: WestConnex M4 East EIS (SSI 6307)

We are a group of very concerned residents of Wolseley Street Haberfied and we wish to express our very strong objection to the WestConnex M4 East Motorway proposal.

If built the M4 East Motorway will generate additional traffic, funneling it into heavily congested middle-ring and inner city roads, requiring the demolition of hundreds of homes and businesses to make way for road widening on the surface road network to distribute the traffic from the motorway.

We acknowledge that the WestConnex M4 East EIS has been communicated generally and made available to interested residents of NSW. However, we are outraged that no direct formal communication to the residents in Wolseley Street Haberfield has been made. Instead, the only insufficient communication was made on Tuesday 26 October when Melissa Read (Community Place Manager) door knocked and verbally informed those residents that were home, that a 24 hour a day tunneling site would be located at the end of our street. For those residents that were not home at this time a generic "How to make a submission Fact Sheet" was left with no specific reference to the Northcote Street tunnel site. This deceitful lack of formal communication has meant that we have been forced to make a quick review of the EIS documentation and respond accordingly.

We have several major specific concerns relating to Wolseley Street and the Northcote Street tunnel site. We are outraged that the tunnel work and removal of spoil by heavy vehicles is proposed to be a 24 hour a day operation in our street. We believe that the noise, dust and vibration issues will impact on the numerous residents of Wolseley Street and significantly compromise their health and well being.

We state our strong objections below :

Objection	Request
24 hour a day operation of the Northcote Street tunnel site	Operation of the Northcote Street tunnel site to be consistent with the surface works standard hours of : Monday to Friday, 7am to 6pm Saturday, 8am to 1pm Generally no work on Sundays or public holidays

We state our serious concerns below :

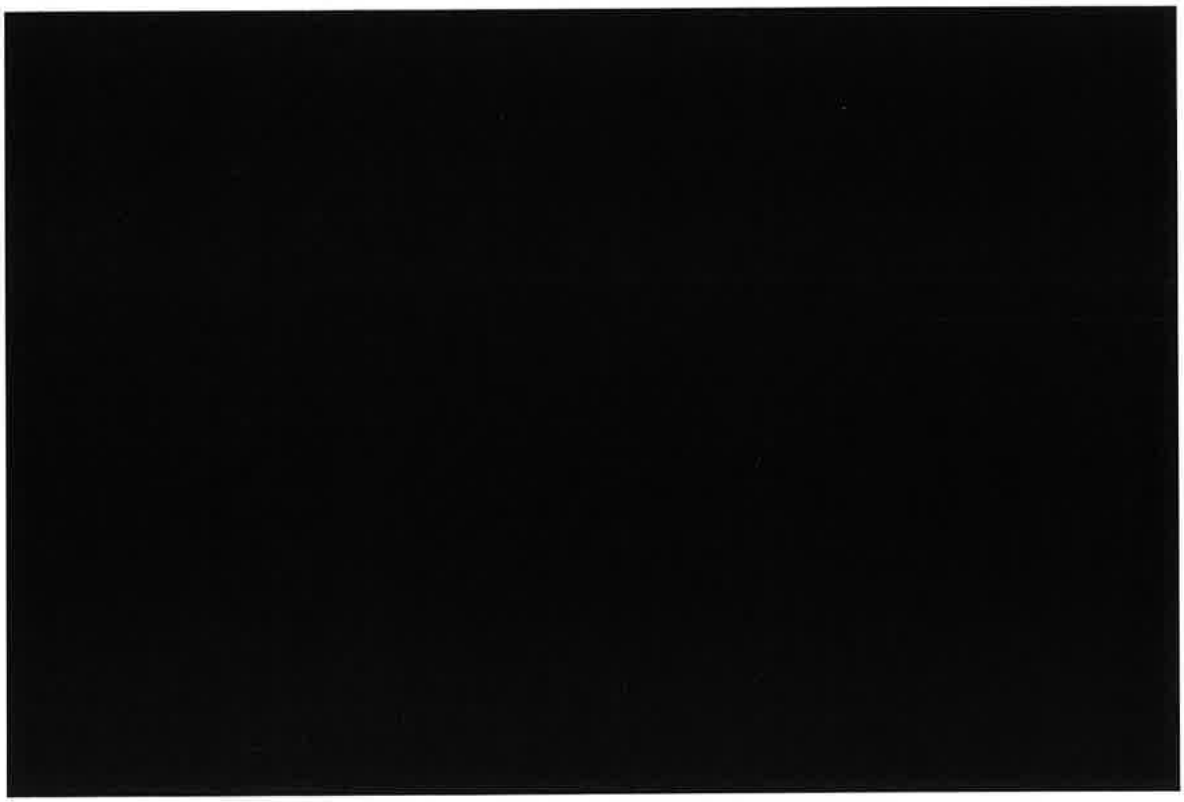
Concerns	Request
That heavy and light vehicles associated with the Northcote Street tunnel site will access our street	No vehicles associated with the Northcote Street tunnel site to access our street
Workers at the Northcote Street tunnel site will use Wolseley Street to park their vehicles	Parking in Wolseley Street is signposted and enforced for residents only
There will be significant dust and dirt distributed to the residents in our street	Full and effective dust control
There will be significant noise generated at the 24 hour Northcote Street tunnel site	Full and effective noise control
The closure of Northcote Street at Parramatta Road will result in people using Wolseley Street as a "rat run" and cause dangerous traffic conditions for cars trying to turn right onto Ramsay Road	Wolseley Street be blocked at Parramatta Road. In addition create a no right turn from Wolseley Street into Ramsay Road
Currently there is a litter issue at the Ramsay Road end of Wolseley Street. This is caused by the close proximity of the taxi depot and several fast food outlets. This issue will increase with the additional workers through the area	Effective litter management

We also wish to register our objection to the government awarding tenders for the project before a full business case has been publicly released and before the EIS had been published and the public has exercised its right of participation.

The EIS process is supposed to allow for genuine public input and to result, potentially, in approval, non-approval, or approval with modifications, of the project. The present procedure makes a mockery of that right.

Please do not hesitate to contact the following residents below should you require any further information.

We look forward to discussing and resolving our issues outlined.



4872

[redacted]

[redacted]

Confidentiality Requested: no

Submitted by a Planner: no

Disclosable Political Donation: no

Name: WestCONnex Action Group Incorporated Company
Organisation: WestCONnex Action Group Incorporated (Member)
Govt. Agency: No

[redacted]

St Peters, NSW
2044

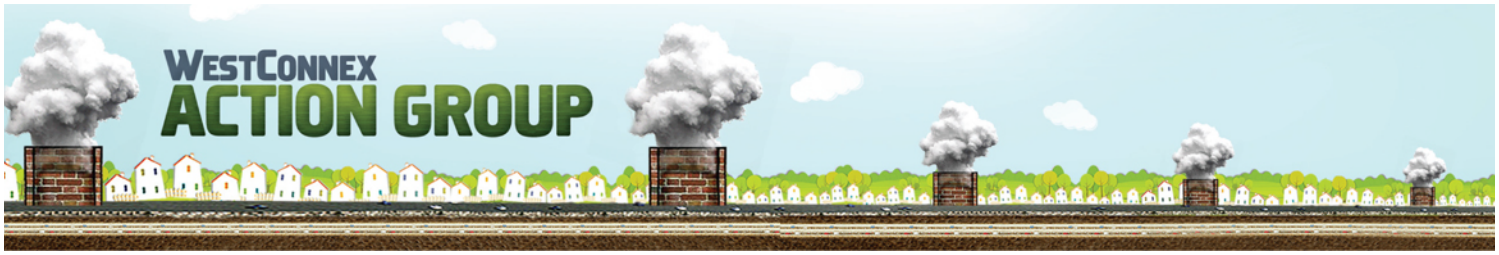
Content:
Submission to EIS for project SSI 6307 WestConnex M4 East

The 122-page PDF document attached contains the formal submission made by WestCONnex Action Group Incorporated (WAG) to the WestConnex M4 East environmental impact statement (EIS).

WAG is a community group made up of residents from across western, inner and south-west Sydney. We are not affiliated with any political party.

WAG strongly objects to the M4 East project based on the information contained in this EIS, and to the WestConnex proposal as a whole. We ask the Minister for Planning to reject this proposal.

[redacted]



Attn: Secretary
NSW Department of Planning & Environment

Monday 2 November 2015

Submission to EIS for project SSI 6307 WestConnex M4 East

This document contains the formal submission made by WestCONnex Action Group Incorporated (WAG) to the WestConnex M4 East environmental impact statement (EIS).

WAG is a community group made up of residents from across western, inner and south-west Sydney. We are not affiliated with any political party.

WAG strongly objects to the M4 East project based on the information contained in this EIS, and to the WestConnex proposal as a whole. We ask the Minister for Planning to reject this proposal.

WestConnex as proposed is the wrong solution at the wrong time for Sydney. It is out of step with international best practice when it comes to transport policy and the creating liveable, economically viable cities in the 21st century. It is not going to solve Sydney's congestion problems.

We recognise there is pressure on several NSW Departments, including Planning and the Environment, to approve this project, particularly as contracts have already been signed for the M4 East ahead of such approval being granted. We remind public servants of their obligation to the public and to the potential social, health and economic costs of spending $15.4 billion on WestConnex when it provides no solution to Sydney's transport needs.

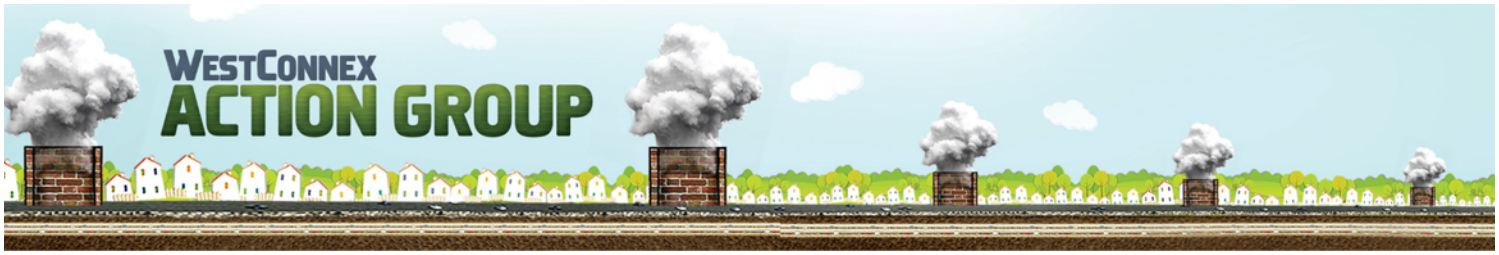
In order to make this submission, WAG consulted with and/or reviewed evidence provided by a wide range of experts, including transport planners, environmental organisations, scientists, transport economists, local councils, medical professionals, social workers, investigative journalists, and more. Combined with our own primary research and review of the EIS, this leads us to not only object to the proposal as a whole, but to raise specific objections with regard to the following areas:

1.0 Objection to the failure of WestConnex, including the M4 East, to achieve its core objectives

2.0 Objection to the lack of transparency and proper process

3.0 Objection to AECOM doing the EIS for the WestConnex M4 East

4.0 Objection to the traffic modelling and analysis of alternatives to WestConnex



5.0 Objection to the corruption of planning process

6.0 Objection to the health impacts

7.0 Objection to the impact on air quality and EIS assessment of impact

8.0 Objection to the impact of WestConnex, including the M4 East, on climate change

9.0 Objection to the impact of noise and vibration caused by WestConnex, and failure of the EIS to properly analyse these impacts

10.0 Objection to the socio-economic impact of the project and failure of the EIS to properly analyse these impacts

11.0 Objection to the flooding impacts

12.0 Objection to the impact on key waterways

13.0 Objection to biodiversity impacts and failure of the EIS to properly assess these impacts

14.0 Objection to the destruction of Sydney's heritage

WAG formally requests a detailed response to each of the concerns we have raised in this submission.

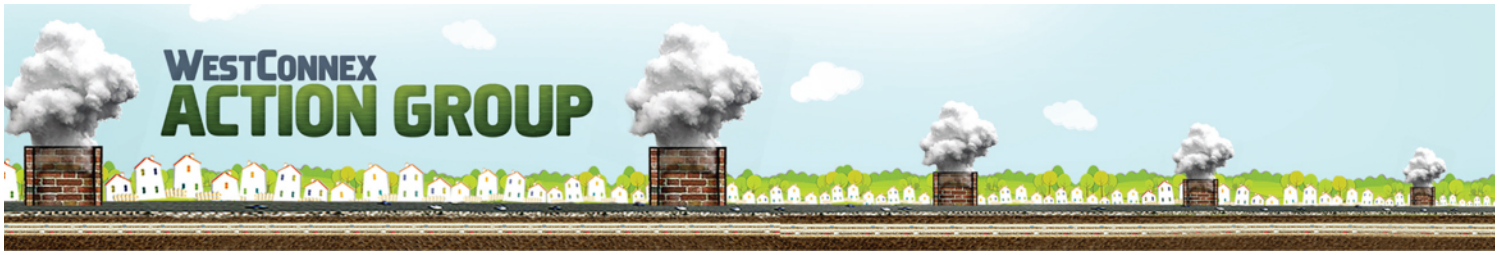
Please send this through to us at:

WestCONnex Action Group

c/o 16 Brown St

St Peters NSW 2044

info@westconnexactiongroup.org.au



1.0 Objection to the failure of WestConnex, including the M4 East, to achieve its stated core objectives

WAG therefore objects to both the failure of WestConnex to meet its stated core objectives and the manner in which these objectives were formulated.

The stated objectives for WestConnex were contrived to fit the project after it had already been announced. In a democratic strategic planning process, objectives are set first based on the needs and desires of the community, and then alternative projects/policies are appraised against their ability to meet those objectives.

The objectives have no associated targets by which their achievement can be ever be determined. Objectives/targets need to be specific, measurable, achievable, relevant and time-bound, and each of the project's objectives fails on one or more of these measures.

Even though the objectives have been contrived to fit the project, the project still fails to meet them, as detailed below.

Core objective	Objective Met?
Support Sydney's long-term economic growth through improved motorway access and connections linking Sydney's international gateways (Sydney Airport and Port Botany), Western Sydney and places of business across the city	**NO** The planned route for the WestConnex does not connect to Sydney Airport or Port Botany. The EIS does not provide evidence that economic growth can be assisted by increased motor traffic to the CBD. There are serious flaws in the proponent's traffic modelling. If WestConnex leads to more traffic congestion in the inner west and routes into the CBD as most independents and even this EIS admits it will, the project will not improve access to businesses. Congestion and traffic will only worsen, not just on the M4 East and other parts of WestConnex, but on the

surrounding road network.

Should Badgery's Creek airport be built, the emphasis on Sydney Airport is likely to be misplaced, as this hub is likely to act as a more appropriate international gateway for many air freight movements given its proximity to western Sydney freight facilities, as well as western Sydney residents.

According to the 2013 WestConnex Business Case Summary, there will be only a $3.4 billion productivity benefit, while the scheme will cost more than $15.4 billion.

There are better ways of spending $15.4 billion that would deliver greater long-term economic growth, including:

- improved road and rail access to Port Botany
- improved public transport between Western Sydney and Sydney's various CBDs
- improving ring roads in Western Sydney
- supporting and developing businesses in Western Sydney

There is already an extensive road and motorway network linking Sydney's international gateways (Sydney Airport and Port Botany), Western Sydney and places of business across the city. The operation of this network could be improved significantly with demand management such as road pricing reform. There is no need for costly and destructive new motorways.

The most efficient and economic way to link large trip generators is with mass transit. A single motorway lane can transport only 2000 passengers per hour, under ideal conditions. A single railway line can

	transport 20,000 passengers per hour.
Relieve road congestion so as to improve the speed, reliability and safety of travel in the M4 corridor, including parallel arterial roads	**NO** The improvements in congestion claimed for the project arise from measures that can be separated from the rest of the project – namely the reintroduction of charges for using the road. Absent congestion charging, or similar, the laws of induced traffic means that increasing road capacity only increases traffic volumes; it does not reduce congestion Charging for the M4 without congestion charging on alternate routes will increase, not reduce, congestion on those routes. WestConnex will not solve congestion on arterial roads such as Parramatta Rd, Victoria Rd or Liverpool Rd. Many intersections will remain at the lowest Level of Service (F) even if the project, including the M4 East, is built. The second sentence seems to assume rather than demonstrate that this objective is met by stating that diverse travel needs are 'best met by road infrastructure.' Claims by WestConnex that the project will improve speed and reliability depend on the reliability of its approach to traffic modelling, which experts argue are flawed. There is no evidence that increasing road capacity and building urban motorways can relieve road congestion in the long term, because the added capacity simply induces more demand. As travel speeds increase, so do travel distances, i.e.,

	increasing the speed of the road network encourages urban sprawl. Perversely, this sprawl has the effect of reducing the population's accessibility to employment, education and services, and increasing transport costs, because people have to travel longer distances. Road congestion is inevitable in any large city in the absence of adequate demand management. There can never be enough road capacity to satisfy the latent demand for driving, where everyone can live as far from work as they like, and drive whenever they like, to wherever they like in free flowing traffic. It is geometrically impossible. Congestion on Sydney's roads is the main thing keeping private vehicle travel demand in check. If this congestion is relieved temporarily by increasing the road supply, then demand will increase until limited by the resulting congestion. A better objective would be to give as many people as possible a more pleasant and faster alternative to sitting in traffic – particularly drivers of single-occupant vehicles who make up the vast majority of peak-hour traffic.
Cater for the diverse travel demands along these corridors that are best met by road infrastructure	**NO** The majority of traffic movements are fungible, and highly responsive to environmental changes including: provision of alternate modes of transport, (for e.g. public transport); provision of alternate traffic generators (for e.g. increased local employment opportunities); and cost and other signals (for e.g. congestion charging). Catering more adequately for travel demands that are not 'best met by road infrastructure' also has the advantage of releasing road capacity for road users

	with no alternatives (within the limitations imposed by induced traffic) and potentially at a lower overall cost that proper process would have seen explored as an alternative to this project. There is already more than sufficient capacity along these corridors to cater for all the essential vehicle travel, particularly if alternative strategies such as demand management and public transport investment are implemented.
Create opportunities for urban revitalisation, improved liveability, and public and active transport (walking and cycling) improvements along and around Parramatta Road	**NO** The transport requirements of large-scale urban revitalisation and densification are better met by public transport than roads. Increasing traffic volumes reduces liveability. Improvements to 'public and active transport' can be achieved without WestConnex, and provide no justification for any part of it, including the M4 East. No serious analysis of such alternatives is undertaken in this EIS, which is a serious flaw. The overall impact of the project will be to increase car dependency. The project could improve liveability for some, though this is not proven by this EIS. What is clear from this EIS, but is not addressed in any serious measure, is that the WestConnex including the M4 East will seriously downgrade liveability for many thousands of others. Traffic volumes on Parramatta Road will be higher with the proposed project than without it. The only reason the Traffic and Transport Assessment in the EIS is able to forecast lower traffic volumes is because it assumes new kerbside bus lanes will be implemented on Parramatta Road, in which case the number of general traffic lanes would be reduced.

	However, these bus lanes are neither part of the proposed project, nor the broader WestConnex scheme. A six-lane motorway with high traffic volumes (and associated noise, air pollution and traffic danger) is not a basis for urban revitalisation, improved liveability, and public and active transport improvements.
Enhance the productivity of commercial and freight generating land uses strategically located near transport infrastructure	**NO** The planned route for the WestConnex does not connect to Sydney Airport or Port Botany. This is a reference to faster travel times that should enhance the productivity and attractiveness for businesses along the WestConnex route. It also relies on traffic modelling predictions being accurate. Modelling has failed for some past projects leading to business failure. It's also not clear exactly what this is referring to and in the absence of a transparent business case, it's not possible to evaluate the 'enhanced productivity' of land uses. This objective could be more easily and more economically achieved by improving the operation of the existing road network with demand management, e.g., road pricing reform. It has to be questioned whether a highly populated inner city area is the optimal location for some commercial and freight generating land uses. Could some of it be moved to less populated areas, where the transport costs and externalities are lower? There is evidence this is already happening in places like Moorebank; this would render this objective, and much of the justification for WestConnex, moot.

Enhance movements across the Parramatta Road corridor which are currently restricted	**NO** Improvements to 'movements across the Parramatta Road corridor' can be achieved without WestConnex and provide no justification for either the entire project or the M4 East. Even without this, it's hard to see how this objective will be achieved when there will be more traffic on some sections of Parramatta Rd after the project is built than there is now. Some intersections across Parramatta Rd west of Homebush will also be slower according to the M4 Widening EIS. Traffic flow might flow more easily in the M4 East at first, tunnel but some argue that it will hit congested spots not long after it emerges from the tunnel – and this EIS predicts that by 2031, the M4 East will reach full capacity, which will place slow movements across the Parramatta Rd corridor even more. The project will result in increased traffic volumes on Parramatta Road and nearby roads, which will further hinder movement across the corridor.
Fit within the financial capacity of the State and Federal Governments, in partnership with the private sector	**NO** The EIS does not include the business case. Until the full business case is released and has been independently verified, it cannot be assumed that the project fits within the financial capacity of the State and Federal Governments. It has already been made clear that the private sector will not be funding this project unless and until the toll road becomes profitable precisely because of concerns about its viability. The only business case that was ever produced was found by the NSW Auditor General to be inadequate. Billions of dollars of public money are being paid to private companies, and the public not the private

	sector carry the risk on this project. Such a one-sided relationship can hardly be described as a "partnership". Currently we do know that the WestConnex will absorb billions of Federal and State funds – not to mention toll revenues from motorists – that could be spent on alternative projects with better and more sustainable returns. There is a high risk of toll revenue from the project not meeting forecasts, resulting in financial losses for the government at state and federal level – which of course, are losses that be borne by NSW and Australian taxpayers.
Optimise user-pays contributions to support funding in a way that is affordable and equitable	**NO** The proposed cost model will not be affordable for many residents, particularly when high parking and vehicle running costs are added to the equation. The tolls are likely to be even less affordable for residents from western and south-west Sydney, where the mean income is below that of residents in the inner city. Numerous studies have shown that irrespective of income, drivers are extremely sensitive to tolls. This has been ably demonstrated by the financial failure of the last four toll roads built in Australia, including Sydney's Lane Cove Tunnel and Cross City Tunnel. More than 99% of the NSW population will not use the project each day, but they will still have to pay for it through general taxation. Many of the potential users will be from low-income households who cannot afford to live near employment centres or railway stations. They will have to pay high tolls while higher-income households have access to cheaper roads and public

	transport. This is hardly equitable.
Integrate with the preceding and proposed future stages of WestConnex, without creating significant impacts on the surrounding environment or duplicating any potential issues across the construction periods	**NO** The project proposes non-trivial environmental damage both during the 3-year construction period for the M4 East and the future operation of this tunnel if it is built. The EIS acknowledges there are significant impacts in relation to noise, loss of housing and destruction of heritage. Already on the M4 widening, there are issues with asbestos waste, while at Beverly Hills noise walls have been stripped away from the M5 and will stay down for months longer than originally predicted. It is difficult to believe such construction issues will not eventuate with the M4 East is it proceeds. There is a high risk that future stages of the WestConnex scheme will never go ahead, due to the likely financial failure of the preceding stages.
Protect natural and cultural resources and enhance the environment.	**NO** The project proposes significant loss of Sydney's heritage, which has been deemed unacceptable by The National Trust of Australia (NSW). The project proposes non-trivial environmental and cultural damage, rather than enhancement or protection. The proponents' claim that WestConnex will reduce emissions (which could be held as enhancing the environment) does not hold up. No credible authority in the world today would suggest that building freeways is the solution to cutting national greenhouse emissions.

The project will result in poorer local air quality. The air quality modelling in the EIS is unreliable because it is based on flawed traffic modelling. Local air quality near the project is already compromised, with air toxin levels regularly exceeding standards. Even when they do not exceed standards, they still cause health problems. There is no safe level of air pollution.

The overall increase in VKT and increased traffic volumes on surface streets will result in poorer air quality and more noise pollution.

The in-tunnel air quality will be poorer than that for surface roads. People using the tunnels on a regular basis will have a higher risk of lung cancer, asthma, heart disease and other diseases. The health of children being driven through the tunnels is a particular concern.

Roads are one of most energy-intensive ways of moving people and freight. The project will encourage longer travel distances (sprawl), which will result in increased transport energy use and environmental damage. It will also encourage travellers to switch from energy-efficient public transport to energy-inefficient private vehicles.

Traffic volumes on surface roads will increase, resulting in increased noise pollution.

The project will reduce social and visual amenity.

a) Concrete interchanges and pollution stacks are visually obtrusive.
b) The increased traffic volumes on surface roads will result in more noise pollution, more fear and intimation and greater crash risk.

The increase in petrochemical exhaust emissions from the tunnel portals, pollution stacks and surface

roads will reduce visibility and air quality.

The project will directly cause irreversible biodiversity loss, and indirectly through increased greenhouse gas emissions that will contribute to climate change and damage natural systems.

The project will result in increased VKT, and therefore more contaminants (brake and clutch dust, hydrocarbon particulates etc.) being deposited on roadways and washed into waterways.

The project is not a sustainable development either economically or environmentally.

1.1 Further comments on the proponents' claims with regard to meeting the project objectives

The proponents claim in the Executive Summary of the EIS that the project will achieve its objectives by providing immediate operational benefits along the M4 and Parramatta Road, including a reduction in travel times and improvements in the level of road safety.

Whether the predicted improved travel times of 6-8 minutes by 2021 is worth the additional traffic congestion on Parramatta Rd from Parramatta Rd to Homebush and the inner west is highly debatable. Traffic is predicted to flow more smoothly on Parramatta Road between Homebush and Haberfield but even that depends on traffic modelling, which WAG and many independent experts believe is flawed.

The project is being developed as part of the first stage of WestConnex that also includes the M4 Widening project. The proponents claim that completion of both projects would provide a full motorway connection between the Blue Mountains in the west and

Haberfield in the east. Future stages of WestConnex would link the project with Sydney's south-west, as well as integral freight centres at Sydney Airport and the Port Botany precinct. As such, the proponents claim, the project would support NSW's key economic generators and provide a strategic response to currently inadequate and highly congested transport routes, and provide "the missing link in the motorway network", which supports what the proponents describe as "Sydney's global economic corridor".

Like so many claims in this EIS, this statement fails to stand up to scrutiny. What is known as Sydney's 'global economic corridor' runs from Ryde, Macquarie Park towards the CBD and Sydney airport – much of which will not be serviced by WestConnex. In any case, even if the chosen route was the "global economic corridor", this suggests that entrenching development towards Sydney's CBD, which is on its eastern edge, is a desirable goal. Some planners, including the Committee of Sydney's CEO Tim Williams, argue that a key driving principle of planning for Greater Sydney should be decentralisation, with an emphasis on enhancing the centres of Liverpool and Parramatta nearer the geographic centre of the city.

The proponents also claim that WestConnex will achieve its objectives because "the integrated package of transport improvements delivered by WestConnex would include complementary enhancements to the existing road network, a redesign of bus services and facilities, improved access to rail stations, and upgrades to cyclist and pedestrian facilities". However, such "complementary enhancements" are not in scope of either the M4 East or the WestConnex as a whole, and it is not clear who will be responsible for these, or if they will happen at all.

There is a reference to improved bus services in the EIS – indeed, dedicated bus lanes on Parramatta Rd form an integral part of its traffic modelling – but these bus lanes promised on Parramatta Rd are only options being considered by Transport NSW, and are explicitly described as not being within the current project scope. Some bus routes across Parramatta Rd running N and S are predicted in the M4 widening to take longer after the completion of works.

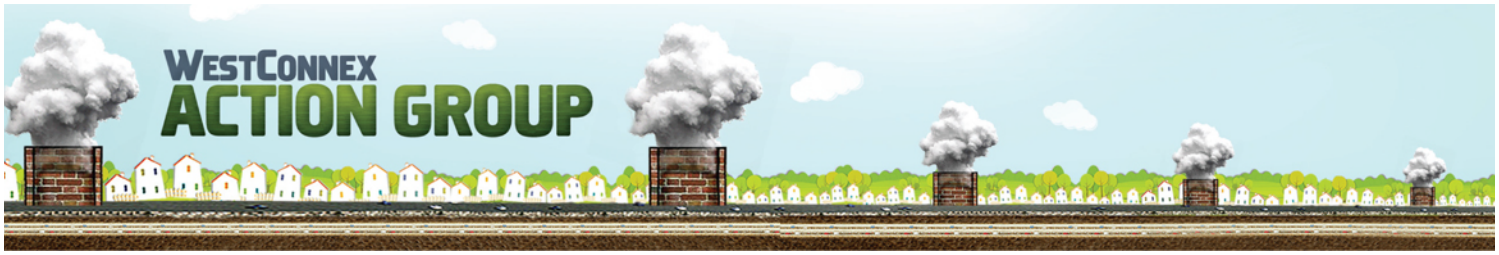
The proponents also claim that the “project complements a number of other transport and freight-based infrastructure initiatives identified in the Transport Master Plan. Ultimately, it is the combination of these initiatives that will best address Sydney’s needs.” But evidence for this assertion is never provided, and there is no firm indication as to either what these other initiatives are, or indeed whether they are being done in the right order.

The proponents also claim that “To protect natural and cultural resources and enhance the environment, design, construction and operation of the project would be undertaken in accordance with environmental management commitments identified in this environmental impact statement (EIS), as well as any additional measures identified in conditions of approval for the project”.

This promise covers many things. The EIS defers consideration of mitigation of many impacts off to the post approval ‘conditions of approval’ phase. It is not clear what access the public has to monitoring these. The experiences of residents affected by other parts of the WestConnex project – including those reporting repeated breaches of health, safety and/or licence conditions incurred by WestConnex contractors removing or storing asbestos at Granville, Erskine Park and St Peters, and residents enduring high levels of noise impacts at Beverly Hills where WestConnex has begun the King Georges Road Interchange upgrade – does not engender public trust in the proponent’s ability to meet this objective when it comes to the M4 East.

1.2 Conclusion

WAG formally and strongly objects to the WestConnex project, including the M4 East, on the basis that it will not even meet its contrived core objectives, and we ask that the Minister for Planning reject the WestConnex M4 East project.


WestConnex
ACTION GROUP

2.0 Objection to the lack of transparency and proper process

WAG objects to the lack of transparency and proper process that has characterised the WestConnex project since its inception, and continues to do so with the M4 East.

These flaws are all the more serious given the Federal and NSW governments have called WestConnex the largest road infrastructure project in Australia's history. For such a major piece of infrastructure it has had a relatively short period of review. It appears to have been 'fast-tracked' to bypass important evaluation steps aimed at providing assurance to government and the taxpayers that the project is the best solution.

2.1 No business case

To date, no business case to justify the $15.4 billion project has been released. Only an "Executive Summary" has been made available for public view. This summary is both out of date and lacking in any serious detail that would allow any independent experts to undertake a serious review of the projected costs and benefits of the WestConnex project.

Both the Federal and NSW governments have opposed calls for the release of the business case. WAG finds it difficult to believe that a compelling business case that supports the benefits being touted by its proponents would not have been shared with the Australian taxpayers by this time if it existed, particularly given the increasingly controversial nature of the WestConnex project.

2.2 Lack of independent oversight

There has also been an almost complete lack of independent oversight of the WestConnex project as a whole. Recent moves to dissolve the WestConnex Delivery Authority (WDA) and move its functions into the private corporation Sydney Motorway Corporation seem designed to make the planning processes even less transparent.

It is also disturbing that this merger follows reports of internal problems with the governance of WestConnex, including issues behind the move is conflict over the control of the planning processes. It is also unacceptable that public money has been used to establish a private company, with two ministerial shareholders, so that the corporation does not have to be publically accountable.

2.3 Grossly inadequate timeframe for community submissions to this EIS

Other projects that were less complex and impactful than the M4 East EIS were allocated considerably more time to the EIS process than the 45 days given to the M4 East project, which was only extended to 55 days when Ashfield Council discovered that the proponent

had left crucial data out of the EIS. For example, communities affected by NorthConnex were given 60 days to respond to its EIS.

The fact that the timeframe granted to this project is longer than the statutory 30-day requirement is irrelevant given the size, scope, and socio-economic cost of this project.

This is inadequate time for submissions and findings of EIS to be considered, summarised and incorporated. Even with our network of experts and actively involved individuals, WAG found it difficult to compile this response in the allotted time. We cannot believe that ordinary residents, especially those compiling submissions on their own, would have been able to manage this process effectively in the time allowed.

We also know that the Department of Planning & Environment was well aware of the depth community anger at the short period of time given for public review and submissions. WAG's campaigns alone saw hundreds of people jam the phone lines at the Minister's office on two separate occasions, and triggered hundreds of emails sent to the Minister, all to ask for an extension.

The failure to grant such an extension in the basis of such an obvious need can only be interpreted as an attempt to maintain the lack of transparency surrounding WestConnex, as well as an effort to avoid proper process by circumventing community input.

2.4 Lack of transparency around WestConnex contracts

More broadly, very little information about NSW government contracts is available to the public.

Notices for contracts worth more than $150,000 are published on the NSW Government eTendering website, but are removed soon after a contracts expires. This is in stark contrast to the Federal register, where historic contracts remain available. The NSW system makes it more difficult for the public to track the development process in NSW.

2.5 Failure to consider cumulative negative impacts

While cumulative benefits in travel-time savings and productivity are claimed for the whole 33km WestConnex project – and even, at times, for additional projects that are not in scope, such as dedicated bus lanes on Parramatta Rd – cumulative negative effects are almost completely overlooked in the entire EIS.

Negative impacts are restricted to the EIS M4 project footprint. They are not extended to include impacts on nearby local government areas such as the City of Sydney; the combined impacts of the full WestConnex on factors such as traffic congestion, pollution, health, and environmental and community destruction; and so on.

If cumulative negative aspects were considered, the opportunity cost of not spending $15.4 billion on a more efficient transportation system (or any public asset) could be evaluated. If the benefits are considered for the whole project at a NSW scale, so too should the negative aspects. The failure to include such analysis in this EIS has the effect of hiding the true impact of both the M4 East and the full motorway, and contributing further to the lack of transparency surrounding this project.

2.6 External criticism

WestConnex's lack of transparency and proper process have also come in for sharp criticism from a number of credible independent sources.

2.6.1 NSW Auditor General's Performance Audit

NSW Auditor General's Performance Audit of WestConnex conducted in 2014 highlighted the importance of proper evaluation and identified some serious deficiencies in the development of the WestConnex project.

The Executive Summary of this audit concluded:

"In the period covered by this audit, the processes applied to WestConnex to provide independent assurance to Government did not meet best practice standards…
"The preliminary business case submitted for Gateway review had many deficiencies and fell well short of the standard required for such a document. Further, on our analysis, the business case put to the Government still included some deficiencies that independent Gateway reviews and external assurance arrangements, if they had occurred, should have identified…

"The post-business case governance arrangements did not clearly separate board-level responsibilities for commissioning from responsibilities for delivering the WestConnex project. After not separating the roles, they also failed to provide mechanisms to effectively manage the conflict between these roles.

"The WestConnex project offers several lessons. While good internal controls are critical, they are not a substitute for externally managed Gateway reviews. Steering committees and boards cannot be responsible for both project delivery and independent assurance

and reporting to the Government. Responsibility for commissioning should be clearly differentiated from the responsibility for project delivery. Challenging deadlines heighten the need for good assurance but, paradoxically, also the risk of departure from best practice." (p.3-4)

"The Government approved a new Major Projects Assurance Framework in December 2011…

"The objective of the Framework is to increase the Government's confidence and assurance in planning and implementation of major projects through their entire lifecycle, specifically:

- prevent projects failing or not realising their stated objectives/benefits
- improve clarity in the feasibility phase of projects
- drive better governance
- inform Cabinet Infrastructure Committee intervention

"A key component of the Major Projects Assurance Framework is the Gateway review system. The Gateway system is a series of structured reviews at key decision points (gates) in a project's lifecycle. Gateway gives the Government a level of independent assurance on:

- whether an investment in a project is warranted
- the strategic options considered
- the agency's capacity to manage and deliver the project on time, on budget and achieve desired project outcomes
- whether a project is on track and ready to move to the next phase."(p.10-11)

WAG agrees with this assessment and it forms part of our objection to the M4 East and WestConnex as a whole. Failure to abide by the Major Projects Assurance Framework and employ best practice governance from project inception has greatly reduced community confidence in the WestConnex project. In the case of the M4 East EIS, the community is being asked to comment on an EIS that is deficient in analysis of project justification.

A project of this size and impact should adhere to the NSW Government's Major Projects Assurance Framework. Vital gateway reviews should have been undertaken before the preparation of the EIS (and certainly before awarding construction contracts) should be commissioned, completed and made publicly available before any further approvals are issued.

The NSW Auditor-General also called the assessment of the WestConnex project concept into serious question. The following quotes are taken directly from its Audit:

> "Based on the Major Projects Assurance Framework, we expected a Gateway review (or similar arm's length, independent review) either during the concept phase or early in the development of the business case.
>
> "The Major Projects Assurance Framework introduced a Gate Zero to provide assurance that projects are well justified after considering a wide range of options. A Gateway review or similar should therefore be conducted early in a project's life cycle to provide assurance around whether:
>
> • the need for a project is properly defined
> • there is justification for addressing that need
> • the best value means of servicing that need are being proposed after considering a broad range of alternatives and their associated costs and benefits.
>
> "We also expected that Infrastructure NSW or some other body would have recognised the need for a Gateway review during the concept phase, or early in the development of the business case and taken steps to ensure this occurred, including reporting to the Cabinet Infrastructure Committee.
>
> "There was no independent Gateway review or equivalent undertaken at the concept stage. Infrastructure NSW has indicated that the concept paper it prepared to advise Government before WestConnex was publicly announced was not subjected to any independent assurance reviews. The first gateway review was of the preliminary business case late in the business case development phase..
>
> "We saw no evidence that:
>
> • the Government specifically exempted WestConnex from the Major Projects Assurance Framework Gate Zero
> • provided an explanation or justification for the variation from the Major Projects Assurance Framework
> • the alternative approach adopted was assessed as being equivalent to, or better than, the Major Projects Assurance Framework.
>
> "…we believe that a Gate Zero Gateway review should have been conducted. It would have provided independent assurance that the project was justified…

> "Infrastructure NSW's roles at this stage of the WestConnex project were in conflict. It was responsible for developing the WestConnex concept and at the same time it was the key agency responsible for providing assurance to Government over major capital projects including WestConnex. A fundamental principle is separation between those providing independent assurance and those developing and delivering a project." (p. 16-17)

WAG agrees with this assessment and it forms part of our objection to the M4 East and WestConnex as a whole.

The development of the WestConnex business case - which to date has not been made publicly available, as mentioned above - was also criticised in the NSW Auditor-General's audit. The following quotes are taken directly from its report:

> "Given no Gate Zero Gateway review was conducted during the concept phase, we expected one (or an equivalent arm's length, independent expert review) at the beginning of this phase.
>
> "In line with the Transport for NSW Investment and Gating System we also expected to see the following Gateway reviews (or equivalent arm's length, independent expert reviews)
>
> - a strategic business case review (Gate One)
> - a preliminary business case review (Gate Two)
> - a final business case review (Gate Three).
>
> "We expected there would be acquittals of each of these reviews, and that the review reports and acquittals would be provided formally to Infrastructure NSW and followed up in each subsequent Gateway review or equivalent. We also expected regular progress reports to, and monitoring by, Infrastructure NSW." (p.21)
>
> "We expected to see outputs from the other peer reviewers but detailed reports were limited to infrastructure solutions, capital costs and traffic analysis. Even here, timing was a concern. The peer reviewer engaged to review the traffic analysis produced a report, but not until November 2013 after the business case went to the Government. The reviewer's report indicated that the review was supposed to be continuous throughout the process of modelling, but the traffic modellers were too pressed for time to consult on a continuous basis with the peer reviewer. The reviewer described the exercise as more an audit than a peer review. The reviewer

concluded that the traffic data he received in early August 2013 ‘raises questions about the underlying quality of the modelling’.

“The agencies concerned advised us that significant analysis and review of traffic numbers was undertaken by the specialist work streams established within the Project Office. However, we have seen no evidence of an independent, arm’s length review of the traffic analysis used for the final business case, by someone technically qualified to do so, before the business case was presented to the Government.

“We did not find peer review outputs for land use, urban planning or transport planning.”(p.26)

WAG agrees with this assessment and it forms part of our objection to the M4 East and WestConnex as a whole.

As well as criticising the process by which the WestConnex business case was developed, the NSW Auditor General also criticised the lack of information provided about the project in the single independent review undertaken of the WestConnex business case. From its audit report:

“One formal, independent Gateway review was conducted during the development of the business case. This was of a preliminary business case.

“In its report to the Sydney Motorways Project Office (dated 14 June 2013), the Gateway Review Panel concluded that: ‘due to lack of key information presented for the review, the Gateway Review Panel was not able to form a view on whether the project is a worthwhile and prudent investment (both economically and financially viable) for the NSW Government’.

“Further, the Gateway Review Panel stated that:

“A number of key documents were delivered later than anticipated and the Review Panel had very limited time to review the Silver business case.

“Relevant documentation relating to a number of critical areas of the business case was not available for review – these included the Governance Section, Financial Plan and Communications Plan. The absence of these documents did impact on the ability to review related sections.

> "The Review Panel did not have access to a number of Stakeholders or documents that were considered essential in order to satisfactorily complete the review.
>
> "The Review Panel noted that not all key benefits nor all key risks were adequately documented, and that the business case would benefit from these and other inclusions". (p.28)
>
> "The Gateway Review Panel also found the preliminary business case should have been more advanced than it was and would have benefited from previous iterations and review processes which had not occurred.
>
> "The Gateway Review Panel's 'traffic light' risk ratings against the Gateway criteria were all red and yellow, with no greens."

WAG agrees with this assessment and it forms part of our objection to the M4 East and WestConnex as a whole.

According to the NSW Auditor General, a full Gateway review may have identified a number of key matters with the business case:

> "We reviewed the final business case and identified some issues with the underlying analysis which we believe a full Gateway review should have identified. "These deficiencies related to the way the business case dealt with risks around traffic projections, project cost, economic benefits, financial analysis, governance arrangements and the procurement strategy." (p.31)

WAG agrees with this assessment and it forms part of our objection to the M4 East and WestConnex as a whole.

The NSW Auditor General's audit also raised serious criticisms about the lack of independent reviews of the WestConnex business case:

> "Roads and Maritime Services say that the assurance provided to the Government on the WestConnex business case was appropriate for its purpose.
>
> "It says the overall objective outlined in the Business Case Implementation Plan was to "produce a business case that demonstrates the overall technical and financial viability of the WestConnex scheme, consistent with the State's Fiscal Strategy".

> "Roads and Maritime Services advised that at the conclusion of the business case in July 2013, Stage 1 was regarded as being sufficiently developed to proceed to procurement and environmental planning phases. For the other stages, the business case outlined a pathway for their further development and planning. It says that it was always envisaged that there would be additional Gateway reviews conducted on the component parts of the scheme.
>
> "Roads and Maritime Services' arguments do not justify the lower level of independent assurance provided on WestConnex than that offered by the Major Projects Assurance Framework. The objective was to "produce a business case that demonstrates the overall technical and financial viability of the WestConnex scheme, consistent with the State's Fiscal Strategy." Approval of the business case was the key decision point so far for this project, and arguably the stage at which independent assurance was most critical."(p.31)

WAG agrees with this assessment and it forms part of our objection to the M4 East and WestConnex as a whole.

2.6.2 Productivity Commission

It is also clear that the WestConnex project has failed to meet industry best practice in project selection and transparency. The Productivity Commission in its recent inquiry into public infrastructure found: "an urgent need to comprehensively overhaul processes for assessing and developing public infrastructure projects."

It pointed to "numerous examples of poor value for money arising from inadequate project selection, potentially costing Australia billions of dollars". It argued that further spending under the status quo will simply increase the cost to users, taxpayers and the community, and lead to more wasteful infrastructure.(1)

2.6.3 Grattan Institute

At the request of the Senate Select Committee into the Abbott Government's Budget Cuts, the Grattan Institute recently prepared a paper on infrastructure financing and expenditure with a focus on transport infrastructure.(2) Their recommendations stand in stark contrast to the WestConnex planning process, which has failed to meet any of the standards outlined below (all excerpts taken directly from the Grattan Institute report):

> "To get a better return from infrastructure spending, governments should focus on selecting the right projects, and on making the business cases and their underlying assumptions more transparent. Governments can also get a better return through

use of new technologies to get more value out of existing infrastructure; through minor augmentation and relief of pinch points; and through more systematic maintenance.

“The capacity to waste money is a serious risk for infrastructure, given the very large amounts of money involved.” (p.1)

“Infrastructure investment over the past five years has been about one per cent of GDP higher than a decade earlier. Such a significant increase would have been expected to have some visible effect on GDP growth. There is no evidence it has done so, with GDP growth still well below three per cent per annum and below historic growth rates.

“The wrong projects can destroy value and divert funds from projects that would be more valuable to the economy and community.” (p.4-5)

“Australia could get better value from public infrastructure by making better project selections. Unreliable or non-existent cost-benefit analyses have been an obstacle to optimal project selection. Recent large infrastructure projects in Australia have typically suffered from cost overruns of about 15 per cent, while patronage has been 15 per cent lower than projected, on average. As a result, real cost-benefit multiples are expected to be about 25 per cent lower than projected on average. All other things being equal, this consistent overestimation of benefit-cost ratios is making uneconomic projects look viable at the approval stage.” (p.5)

2.6.4 Prof Peter Newman, Professor of Sustainability at Curtin University

Prof Newman, a former member of the Infrastructure Australia board, has spoken out strongly against the processes surrounding WestConnex on a number of occasions.

Newman was a board member of Infrastructure Australia at the time the motorway was first proposed. He is also a member of a Scientific Advisory Committee with the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Professor Newman considers that WestConnex only became a serious proposition when Prime Minister Tony Abbott took up the issue while still in opposition, and that the project is highly politicised.

He described the planning processes around WestConnex as, “very tight knit… (this scenario) doesn't surprise me because I was involved in the planning side. The planning was really very, very light – just a few ideas being thrown together without any serious detailed work being done, and all the detail that was done showed very poor cost-benefit ratio.

“They have completely subverted the normal planning processes and now they’re subverting the consulting processes.

“It’s corrupting the process, that is what you can say. It doesn't mean that it is corrupt in a legal sense, but it is close to the edge."

2.7 Conclusion

WAG formally and strongly objects to the lack of transparency and proper process in the WestConnex project, including the M4 East, and we ask that the Minister for Planning reject the WestConnex M4 East project.

3.0 Objection to AECOM doing the EIS for the WestConnex M4 East

WAG strongly objects to the fact that AECOM, the company contracted to compile this EIS, has deep interests in the planning and construction of the $15.4 billion motorway project, raising questions about the independence and integrity of the planning assessment process.

The same firm is the subject of an ongoing legal action in Queensland – more than 650 investors are suing for $150 million, claiming the company's traffic predictions for a privately-owned toll-road in Brisbane were substantially inflated.

While AECOM has been contracted for "Traffic Director" services on WestConnex in Sydney, it faces a class action over its traffic forecasts for the failed Clem 7 tunnel in Brisbane.

Brisbane's Clem7 RiverCity tunnel carried less than one quarter of the traffic forecasted after it opened in 2010. Legal firm Maurice Blackburn is representing 650 investors who are seeking to recover losses of more than $150 million from AECOM.

According to Maurice Blackburn's website, the case alleges that AECOM made forecasts without reasonable grounds, and left critical information out of its report published in RiverCity's Disclosure Statements.

It also allegedly failed to reveal that earlier traffic forecasts it had developed for Brisbane City Council showed traffic volumes substantially lower than those in the RiverCity Disclosure Statements.

AECOM is defending the action and has made cross claims against directors of RiverCity. The case is listed for hearing in 2016. Planning Minister Stokes did not respond to a question about whether he was aware of this court action.

In addition, AECOM recently has settled a major lawsuit over forecasts it made for a toll road in Australia, paying $280 million ($US201m) to creditors - one of the largest settlements related to misleading and deceptive conduct in Australian corporate history.

Yet despite all this, AECOM has been paid $1.6 million to provide the NSW Baird government an assessment of the environmental risks for the M4 East tunnel, from Homebush to Sydney's Inner West (Stage 1 of WestConnex).

AECOM has previously partnered with Leighton Contractors, which is part of the successful joint venture winning bid with John Holland and Samsung C&T to construct the WestConnex M4 East, announced by the Baird government today. AECOM and Leightons had been joint construction partners in other road building contracts, and jointly bid for the East West Link in Melbourne but withdrew the bid on the grounds that it was too risky.

This is one of six contracts the company has been awarded by the proponent over the last 18 months. The contracts have a combined value of over $9 million, and cover a range of services.

AECOM was involved with preparing the proponent's proposal for Stage 2 of WestConnex (the M5 tunnel) and is involved in business and traffic estimates for other parts of the project. The M4 East environmental assessment contract itself includes broader services, described as "Design Development & Communications Services" on the Contract Award Notice.

Even before its assessment was published or any feedback received, AECOM already endorsed the motorway on its website. It claimed - though these references seem to have been removed now - that "WestConnex will assist in making Sydney a more liveable city by reconnecting communities, enhancing centres and significantly improving the urban domain along Parramatta Road" and will "provide welcome relief from congestion on the M4 and Parramatta Road…"

These claims are hotly contested. An independent study commissioned by City of Sydney found that WestConnex will actually *increase* traffic congestion on Parramatta Road. In May the *Sydney Morning Herald* reported that the PROPONENT's own traffic assessments show that the $15 billion project will not stop Sydney traffic from worsening.

AECOM's other work on WestConnex includes a contract to prepare THE PROPONENT's proposal for a new Stage 2 M5 East tunnel; a $4.9 million contract to conduct geotechnical investigations for the M5 Tunnel from South West Sydney to St Peters; a $700,000 contract for "Traffic Director" services; and two contracts worth more than $777,000 to work on the Stage 3 of the motorway, which is a tunnel linking the M5 and M4. These Stage 3 contracts include design engineering, business development, and environmental and technical services for the tunnel, about which almost no information is available. These are huge conflicts of interest when it comes to its contract to deliver this EIS.

WAG formally and strongly objects to the M4 East due to these conflicts of interests and serious doubts over AECOM's ability to produce a truly independent EIS, and we ask that the Minister for Planning reject the WestConnex M4 East project.

4.0 Objection to the traffic modelling and analysis of alternatives to WestConnex

WAG strongly objects to the traffic modelling and analysis of alternatives to building the WestConnex M4 East included in the EIS.

Nearly all other claims in the EIS depend for their validity of the traffic analysis. However, the EIS has failed to model the impacts of implementing the proposed project (M4 East) relative to not implementing the proposed project (the 'future do minimum' scenario). The 'future do something' scenarios, on which the traffic, air quality, health and greenhouse modelling is based, include the M4 East project *plus another uncommitted project* to convert kerbside general traffic lanes on Parramatta Road to bus priority. With these additional bus lanes, the capacity of Parramatta Road would be significantly reduced and traffic volumes would fall accordingly, with drivers opting to use the M4 East tunnel instead. As such, the traffic volumes for the M4 East tunnel have been dramatically overestimated, and the traffic volumes for Parramatta Road have been dramatically underestimated in the 'future do something' scenarios.

The impacts of the project as proposed by the proponent (and as defined in Section 5 of the EIS), that is, the M4 East Tunnel with *no* new priority bus lanes on Parramatta Road, has not been presented in the EIS, as required by the SEARs.

As outlined in Section 1.0 of this submission, the stated objectives for the project were contrived to fit the project after it had already been announced. In a democratic strategic planning process, objectives are set first based on the needs and desires of the community, and then alternative projects/policies are appraised against their ability to meet those objectives.

The EIS has not modelled alternative policy scenarios that could meet the transport and accessibility needs of NSW's growing population, such as greater investment in public transport, road pricing reform, and land use planning that places more homes closer to employment and services.

It is no secret that the real purpose of the WestConnex scheme is to increase the road freight accessibility of Port Botany and Sydney Airport, and that private passenger vehicles have been included as a means of paying for it through tolls. However, there are various policy alternatives for dealing with the growing freight task that do not appear to have been considered, such as:

- Increasing the capacity and reliability of rail freight.

- Increasing rail freight subsidies to match/surpass those of road freight.
- Diverting container operations to other ports outside the city centre. Very few cities concentrate container operations in the city centre where road access is costly and has significant impacts on highly populated areas.

The M4 East will be used by less than 1% of the NSW population each day. The costs will be borne by the whole population. It can hardly be argued that it is providing for the "greater good".

The Traffic and Transport Assessment does not stand up to scrutiny for a number of reasons:

- The EIS does not provide enough information about the methodology, input data or assumptions used in the assessment for the forecasts to be independently verified.
- It does not include a sensitivity analysis. The effects of varying key assumptions (e.g. drivers' willingness to pay the M4 East toll) have not been disclosed. How will traffic volumes be affected if (when) the willingness to pay for the toll is different to the point estimate used?
- It has failed to model the travel time and accessibility impacts for non-motorised modes (walking and cycling).
- The issue of induced demand has not been fully addressed.
- Impacts of disruptive technology (e.g. automated vehicles) on future driving demand have not been not considered
- Intergenerational changes in vehicle ownership, driver licensing and transport preferences have not been considered.
- Changes in aggregate transport measures have not been provided for the various scenarios, such as:
    - Overall increase in VKT
    - Change in average trip distance

Given the seriously flawed Traffic and Transport Assessment, there can be no confidence in the accuracy of the other impact analyses in the EIS that are dependent on the traffic forecasts, in particular:

- Air quality
- Noise and vibration
- Human health
- Greenhouse gas emissions.

The role of motorways in a multimodal urban transport network is to allow traffic to circulate around the edge of a city connecting low density suburbs, where the traffic does not directly impact highly populated areas. For radial transport into and out of employment and activity centres, mass transit is faster and more efficient, requires less space, and has fewer impacts on highly populated inner-urban areas.

The EIS does not consider the cumulative costs of adding more urban motorways to those previously built through the heart of Sydney since the 1950s. Although the economic, social and environmental costs of each *individual* motorway (as reported in an EIS) may be considered by some stakeholders to be acceptable, the cumulative costs are considerable:

- Following decades of road expansion and consequential sprawl, Sydney now spends about 13% of its GDP on transport, while the average European or Asian city spends only between 5% and 8%.[1]
- Serious human health impacts due to petrochemical vehicle emissions/smog, including:
    - Lung cancer,
    - Asthma,
    - Heart disease,
    - Impaired lung development in children living near motorways/exhaust stacks.
- Waterways contaminated with road runoff (heavy metals and carcinogens in brake and clutch dust, exhaust particulates etc.).
- High traffic crash costs (of deaths/traumatic injuries and material damage).
- Urban sprawl and increasing commuting distances.
- Social isolation for non-drivers living in car-dependent suburbs.
- Noise pollution from traffic and its impacts on sleep.
- Impacts on visual amenity (pollution stacks, concrete interchanges, concrete flyovers).
- Extreme summer temperatures (urban heat island effect).
- Community destruction and severance.
- Destruction of heritage.
- Less incidental physical activity from walking and cycling (including to/from public transport), resulting in higher rates of obesity, diabetes, cancer and heart disease.
- Increased chauffeuring burdens for parents and carers.
- Less independence for children.
- High per-capita greenhouse gas emissions.

The EIS also fails to consider the cumulative negative impact of the WestConnex project as a whole, even though it repeatedly cites the supposed benefits of building the entire motorway as justification for building the M4 East. At a minimum, it would be expected these would worsen the kinds of factors cited in the previous point, but this is not addressed in any meaningful way in the EIS.

4.1 SEARS not met

The EIS also fails to meet a number of the project's SEARs as detailed in the following table.

SEAR	Met?	Reasons SEAR not met
An analysis of feasible alternatives to the carrying out of the project and project justification, including: an analysis of alternatives/options considered having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and the provision of a clear discussion of the route development and selection process, the suitability of the chosen alignment taking into account environmental impacts, consideration of tunnel construction methods and whether or not the project is in the public interest, and justification for the preferred project taking into consideration the objects of the Environmental	No	The EIS does not include a cost-benefit analysis, or any other objective appraisal, of feasible alternatives.

Planning and Assessment Act 1979.		
Consideration of potential cumulative impacts due to other development in the vicinity; and	No	The assessment of cumulative impacts does not include past/existing developments, in particular existing arterial roads and motorways. Although the economic, social and environmental costs of the proposed M4 East motorway (as reported in an EIS) on its own may be considered by some stakeholders to be acceptable, the cumulative costs of this and previous/existing motorway developments are considerable: 1. Following decades of road expansion and consequential sprawl, Sydney now spends about 13% of its GDP on transport, while the average European or Asian city spends only between 5% and 8%.[1] 2. Serious human health impacts due to petrochemical vehicle emissions/smog, including: a. Lung cancer, b. Asthma, c. Heart disease, d. Impaired lung development in children living near motorways/exhaust stacks. 3. Waterways contaminated with road runoff (heavy metals and carcinogens in brake and clutch dust, exhaust particulates

		etc.). 4. High traffic crash costs (deaths/traumatic injuries and material damage). 5. Urban sprawl and increasing commuting distances. 6. Social isolation for non-drivers living in car-dependent suburbs. 7. Noise pollution from traffic and its impacts on sleep. 8. Impacts on visual amenity (pollution stacks, concrete interchanges, concrete flyovers). 9. Extreme summer temperatures (urban heat island effect). 10. Community destruction and severance. 11. Destruction of heritage. 12. Biodiversity loss. 13. Less incidental physical activity from walking and cycling (including to/from public transport), resulting in higher rates of obesity, diabetes, cancer and heart disease. 14. Increased chauffeuring burdens for parents and carers. 15. Less independence for children. 16. High per-capita greenhouse gas emissions.
An assessment and modelling of operational traffic and transport impacts on the local and regional road network (including	No	The EIS has failed to model the traffic and transport impacts of implementing the proposed project (M4 East) relative to not

Parramatta Road, Queens Road, Gipps Street, and other arterials), and the Sydney motorway network	No	implementing the proposed project (the 'future do minimum' scenario). The 'future do something' scenarios, on which the traffic, air quality, health and greenhouse modelling is based, include the M4 East project *plus another uncommitted project* to convert kerbside general traffic lanes on Parramatta Road to bus priority lanes. With these additional bus lanes, the capacity of Parramatta Road would be significantly reduced and traffic volumes would fall accordingly, with drivers opting to use the M4 East tunnel instead. As such, the traffic volumes for the M4 East tunnel have been dramatically overestimated, and the traffic volumes for Parramatta Road have been dramatically underestimated in the 'future do something' scenarios. The impacts of the project as proposed by the proponent (and as defined in Section 5 of the EIS), that is, the M4 East Tunnel with *no* new priority bus lanes on Parramatta Road, has not been presented in the EIS.
		The EIS does not include any objective assessment or modelling of impacts on pedestrians and bicycles using the local and regional road network.

		Pedestrian and bicycle movements have not been included in the strategic model (WRTM) and intersection models (LinSig). There is no forecast of the impacts on walking and bicycling travel times and accessibility. As such the EIS does not include a complete "assessment and modelling of operational traffic and transport impacts", it only includes an assessment and modelling of motor vehicle and public transport impacts.
Induced traffic and operational implications for public transport (particularly with respect to strategic bus corridors and bus routes) and consideration of opportunities to improve public transport patronage;	No	Induced demand has not been adequately accounted for because: 1) The model ignores the induced demand caused by long-term transport decisions of individuals and firms, including: a) Residential location choice – the project will encourage more people to move further from work (sprawl), thereby increasing average travel distances/demand. b) Work location choice – the project will encourage more people to work further from home, thereby increasing average travel distances/demand. c) Car ownership choice – the project will encourage more car ownership.

		d) Firm location choice – the project will encourage firms to locate in locations further away from their labour supply/customers/suppliers than they otherwise would, thereby increasing travel distances/demand. 2) To WAG's knowledge, there has been no long-term evaluation/verification of the methodology used to forecast induced demand (New Zealand Transport Agency Economic Evaluation Manual (EEM)). Induced demand by its nature materialises over several years, as people gradually move home/work location etc. Without a long-term evaluation/verification of the methodology, there can be no confidence in the induced demand forecast produced.
Impacts on cyclists and pedestrian access and safety and consideration of opportunities to integrate cycleway and pedestrian elements with surrounding networks.	No	The EIS does not include any objective assessment or modelling of impacts on pedestrians and bicycles using the local and regional road network. Pedestrian and bicycle movements have not been included in the strategic model (WRTM) and intersection models (LinSig). There is no forecast of the impacts on walking and bicycling travel times and accessibility.

An assessment of construction and operational activities that have the potential to impact on in-tunnel, local and regional air quality. The air quality impact assessment must provide an assessment of the risk associated with potential discharges of fugitive and point source emissions on sensitive receivers	No	An accurate assessment of air quality impacts is dependent on an accurate assessment of traffic and transport impacts. Because the traffic and transport impacts have not been correctly modelled, the air quality impact assessment is worthless.
An assessment of human health impacts	No	An accurate assessment of human health is dependent on an accurate assessment of traffic and transport impacts. Because the traffic and transport impacts have not been correctly modelled, the human health impact assessment is worthless.
An assessment of the noise impacts of the project during operation	No	An accurate assessment of noise impacts is dependent on an accurate assessment of traffic and transport impacts. Because the traffic and transport impacts have not been correctly modelled, the noise impact assessment is worthless.

An analysis of feasible alternatives to the carrying out of the project and project justification, including: an analysis of alternatives/options considered having regard to the project objectives (including an assessment of the environmental	No	The EIS does not include a cost-benefit analysis, or any other objective appraisal, of feasible alternatives.

costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and the provision of a clear discussion of the route development and selection process, the suitability of the chosen alignment taking into account environmental impacts, consideration of tunnel construction methods and whether or not the project is in the public interest, and justification for the preferred project taking into consideration the objects of the Environmental Planning and Assessment Act 1979.		
Consideration of potential cumulative impacts due to other development in the vicinity; and	No	The assessment of cumulative impacts does not include past/existing developments, in particular existing arterial roads and motorways. Although the economic, social and environmental costs of the proposed M4 East motorway (as reported in an EIS) on its own may be considered by some stakeholders to be acceptable, the cumulative costs of this and previous/existing motorway developments are considerable: 1. Following decades of road expansion and consequential sprawl, Sydney now spends about

		13% of its GDP on transport, while the average European or Asian city spends only between 5% and 8%. 2. Serious human health impacts due to petrochemical vehicle emissions/smog, including: a. Lung cancer, b. Asthma, c. Heart disease, d. Impaired lung development in children living near motorways/exhaust stacks. 3. Waterways contaminated with road runoff (heavy metals and carcinogens in brake and clutch dust, exhaust particulates etc.). 4. High traffic crash costs (deaths/traumatic injuries and material damage). 5. Urban sprawl and increasing commuting distances. 6. Social isolation for non-drivers living in car-dependent suburbs. 7. Noise pollution from traffic and its impacts on sleep. 8. Impacts on visual amenity (pollution stacks, concrete interchanges, concrete flyovers). 9. Extreme summer

		temperatures (urban heat island effect). 10. Community destruction and severance. 11. Destruction of heritage. 12. Biodiversity loss. 13. Less incidental physical activity from walking and cycling (including to/from public transport), resulting in higher rates of obesity, diabetes, cancer and heart disease. 14. Increased chauffeuring burdens for parents and carers. 15. Less independence for children. 16. High per-capita greenhouse gas emissions.
An assessment and modelling of operational traffic and transport impacts on the local and regional road network (including Parramatta Road, Queens Road, Gipps Street, and other arterials), and the Sydney motorway network	No	The EIS has failed to model the traffic and transport impacts of implementing the proposed project (M4 East) relative to not implementing the proposed project (the 'future do minimum' scenario). The 'future do something' scenarios, on which the traffic, air quality, health and greenhouse modelling is based, include the M4 East project *plus another uncommitted project* to convert kerbside general traffic lanes on Parramatta Road to bus priority lanes. With these additional bus lanes, the

		capacity of Parramatta Road would be significantly reduced and traffic volumes would fall accordingly, with drivers opting to use the M4 East tunnel instead. As such, the traffic volumes for the M4 East tunnel have been dramatically overestimated, and the traffic volumes for Parramatta Road have been dramatically underestimated in the 'future do something' scenarios. The impacts of the project as proposed by the proponent (and as defined in Section 5 of the EIS), that is, the M4 East Tunnel with *no* new priority bus lanes on Parramatta Road, has not been presented in the EIS.
		The EIS does not include any objective assessment or modelling of impacts on pedestrians and bicycles using the local and regional road network. Pedestrian and bicycle movements have not been included in the strategic model (WRTM) and intersection models (LinSig). There is no forecast of the impacts on walking and bicycling travel times and accessibility.

		As such the EIS does not include a complete "assessment and modelling of operational traffic and transport impacts", it only includes an assessment and modelling of motor vehicle and public transport impacts.
Induced traffic and operational implications for public transport (particularly with respect to strategic bus corridors and bus routes) and consideration of opportunities to improve public transport patronage;	No	Induced demand has not been adequately accounted for because: 1) The model ignores the induced demand caused by long-term transport decisions of individuals and firms, including: a) Residential location choice – the project will encourage more people to move further from work (sprawl), thereby increasing average travel distances/demand. b) Work location choice – the project will encourage more people to work further from home, thereby increasing average travel distances/demand. c) Car ownership choice – the project will encourage more car ownership. d) Firm location choice – the project will encourage firms to locate in locations further away from their

		labour supply/customers/suppliers than they otherwise would, thereby increasing travel distances/demand. To my knowledge, there has been no long-term evaluation/verification of the methodology used to forecast induced demand (New Zealand Transport Agency Economic Evaluation Manual (EEM)). Induced demand by its nature materialises over several years, as people gradually move home/work location etc. Without a long-term evaluation/verification of the methodology, there can be no confidence in the induced demand forecast produced.
Impacts on cyclists and pedestrian access and safety and consideration of opportunities to integrate cycleway and pedestrian elements with surrounding networks.	No	The EIS does not include any objective assessment or modelling of impacts on pedestrians and bicycles using the local and regional road network. Pedestrian and bicycle movements have not been included in the strategic model (WRTM) and intersection models (LinSig). There is no forecast of the impacts on walking and bicycling travel

		times and accessibility.
An assessment of construction and operational activities that have the potential to impact on in-tunnel, local and regional air quality. The air quality impact assessment must provide an assessment of the risk associated with potential discharges of fugitive and point source emissions on sensitive receivers	No	An accurate assessment of air quality impacts is dependent on an accurate assessment of traffic and transport impacts. Because the traffic and transport impacts have not been correctly modelled, the air quality impact assessment is worthless.
An assessment of human health impacts	No	An accurate assessment of human health is dependent on an accurate assessment of traffic and transport impacts. Because the traffic and transport impacts have not been correctly modelled, the human health impact assessment is worthless.
An assessment of the noise impacts of the project during operation	No	An accurate assessment of noise impacts is dependent on an accurate assessment of traffic and transport impacts. Because the traffic and transport impacts have not been correctly modelled, the noise impact assessment is worthless.

4.2 Comments on specific sections

4.2.1 Section 1.4 Purpose of this report

One of the stated purposes of the report is to "Complete a holistic traffic and transport assessment including crash analysis, travel speeds and travel time analysis and

opportunities to enhance public and active transport networks within the project area". However, the report does not provide any travel time forecasts for active transport.

Another purpose is to "Recommend a suite of measures to mitigate and manage traffic and transport impacts of the project for construction and operational scenarios". The general consensus among transport experts is that the most effective way to manage traffic demand is through demand management, e.g., road pricing reform. However, the report does not recommend any demand measurement measures.

4.2.2 Section 3 Strategic context

The stated justification for the project is based on the discredited 'predict and provide' approach to transport planning, whereby it is assumed that transport demand will continue to grow, and that capacity must be increased to accommodate it. In practice, transport demand in cities is limited by capacity: as capacity increases, so does demand (induced demand). It is geometrically impossible to provide enough roadway capacity to accommodate all the latent demand for driving (i.e., where everyone can live and work where they want, and make all the driving trips they want, when they want, to wherever they want in free-flow traffic) in a city of Sydney's population.

Furthermore, the most efficient way to accommodate the transport and accessibility needs of a growing population is through *mass transit* and better land use-transport integration. Urban motorways are a very inefficient way of moving people around. A single traffic lane can transport a maximum of only 2000 people per hour (in ideal conditions); a single railway line can transport 20,000 people per hour.

The statement "It is acknowledged that any investment in motorway infrastructure has to be aligned with supporting public and active transport initiatives to achieve an increase in capacity, while aiming to reduce the reliance and demand of private vehicles on the future road network" is contradictory: increasing motorway capacity will only serve to *increase* private vehicle demand.

4.2.3 Section 4 Assessment methodology

There is not enough information about the modelling methodology for it to be replicated and the outputs independently verified.

The transport model (WRTM) has not been made available for independent verification.

The model input data and assumptions have not been made available for independent verification. E.g. what toll prices have been assumed?

The model coverage area is too small to capture all the transport impacts of the project. The project will affect transport demand and behaviour across the whole metropolitan area.

More detail on the Value of Travel Time Saving (VTTS)/Willingness to Pay (WTP) model is needed.

- The form and parameters of the model have not been given.
- If it was based on stated preference surveys, then how has the issue of hypothetical bias been addressed?
- Has the model been validated? Previous toll choice models in Australia have overestimated WTP for toll roads.
- Does it include the negative utility of the tunnel environment (monotony, no natural light, poor air quality)?

The weekend period has not been modelled, despite current weekend traffic volumes being higher than weekday traffic volumes on many corridors.

The EIS provides insufficient information about the travel zone structure in the WRTM, including:

- What are the travel zones based on? How big are they?
- How are intra-zonal trips modelled?
- How are trips to/from external zones modelled?

Induced demand has not been fully addressed in this EIS. The model ignores the impact of the project on the long-term transport decisions of individuals and firms, including:

- Residential location choice: the project will encourage more people to move further from work (sprawl), thereby increasing average travel distances and demand for driving.
- Work location choice: the project will encourage more people to work further from home, thereby increasing average travel distances/demand.
- Car ownership choice: the project will encourage more car ownership.
- Firm location choice: the project will encourage firms to locate in locations further away from their labour supply/customers/suppliers than they otherwise would, thereby increasing travel distances/demand.

There appears to have been no long-term evaluation/verification of the methodology used to forecast induced demand (New Zealand Transport Agency Economic Evaluation Manual (EEM)). Induced demand by its nature materialises over several years, as people gradually move home/work location etc. Without a long-term evaluation/verification of the methodology, there can be no confidence in the induced demand forecast produced.

The EIS fails to provide sufficient detail on origin-destination demand matrix generation, including:

a) What are the form and parameters of the generalised cost function?
b) How were shortest paths calculated?

34) Insufficient detail on trip generation:

- What are the form and parameters of the trip production function, and how was it estimated?
- What are the form and parameters of the trip attraction function, and how was it estimated?
- Were trips were balanced towards attractions, or towards productions?

Insufficient detail is provided on trip distribution/modal split.

- What are the form and parameters of the gravity model used?
- What are the form and parameters of the deterrence function used?
- How has modal split been estimated?

The EIS fails to provide sufficient detail on road traffic assignment. E.g.:

- Is assignment stochastic or deterministic?
- What link loading/flow function was used?
- Were intersection delays included?

Insufficient detail on public transport assignment:

- How were access and egress points determined?
- How were route strategies determined?

Non-motorised trips have not been included in the WRTM or LinSig modelling.

Impacts on accessibility have not been modelled.

Most transport is not an end in itself; it is a means to access work, education, services etc. How does the project affect population accessibility? This EIS does not consider this.

Equity and equality impacts not described.

- How many people are better off with the project?
- How many people are worse off with the project?
- Do benefits/impacts accrue to any population groups more than others, e.g., people with a disability or on low incomes?

The Downs-Thomson Paradox has not considered.

The project will attract passengers away from public transport to road. As such, public transport patronage will be lower than it would be without the project. This could result in public transport service levels being cut, which will encourage further mode shift from public transport to road.

4.2.4 Section 7 Assessment of construction impacts

Impacts on walking/bicycle demand and travel times have not been modelled.

Does the LinSig intersection modelling take into account the impact that changes in intersection LOS will have on travel demand?

4.2.5 Section 8 Future year traffic volumes and patterns

Impacts on walking/bicycle demand and travel times have not been modelled.

Does the LinSig intersection modelling take into account the impact that changes in intersection LOS will have on travel demand?

4.2.6 Section 8 Future conditions without the project

Impacts on walking and bicycle demand and travel times have not been modelled.

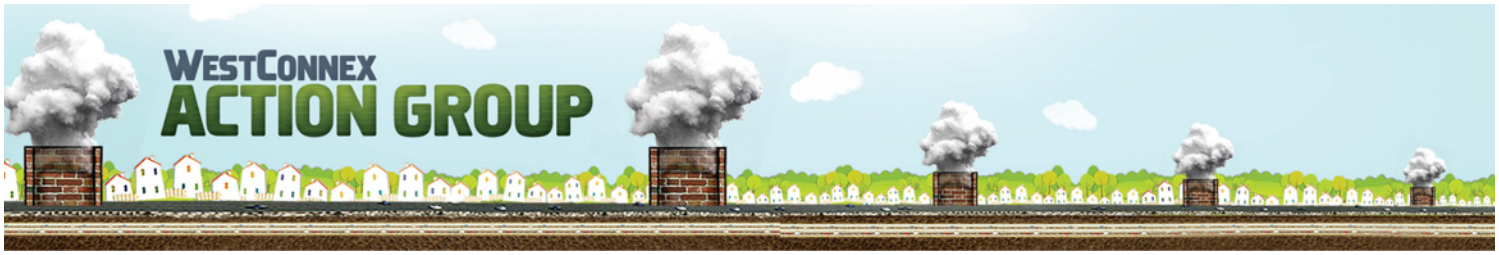
Does the LinSig intersection modelling take into account the impact that changes in intersection LOS will have on travel demand?

4.2.7 Section 9 Assessment of operational impacts

Impacts on walking and bicycle demand and travel times have not been provided.

4.3 Conclusion

WAG formally and strongly objects to the traffic modelling and analysis of alternatives to building the WestConnex M4 East included in this EIS, and we ask that the Minister for Planning reject the WestConnex M4 East project.



5.0 Objection to the corruption of planning process

WAG objects the corruption of proper planning processes that characterises WestConnex, including the M4 East.

This includes:

5.1 Strategic development

There is a requirement for the EIS that the proponent's proposal is consistent with all Sydney's strategic planning instruments. Requiring this project to be consistent with all strategic planning instruments sounds reasonable until you realise that all the plans were rewritten in 2012/2013 to place WestConnex at the centre of their transport strategies.

Up until 2012, metro strategy development in NSW was based on developing the broad strategy planning objectives and then discussing options to meet these strategic objectives before proposing individual projects/actions. Linking the M4 with the M5, as proposed by WestConnex, was never included as a project to realise previous Metropolitan Strategies.

Once WestConnex became the number one infrastructure project proposed by Infrastructure NSW, all strategic planning documents were rewritten to include WestConnex. In fact, it became the centrepiece of the transport strategy. This was after extensive community consultation was undertaken in February 2012 for the Long Term Transport Master Plan, which did not include Westconnex.

At the time, Les Walinga, the then Director General of Transport, was on the Board of Infrastructure NSW and at the same time was developing the Long Term Transport Master Plan. When Infrastructure NSW proposed WestConnex as the major infrastructure project of its plan, Les Walinga resigned from the Board citing conflict of interest as he was proposing public transport solutions in the Long Term Master Plan and was not supporting WestConnex. Even within Infrastructure NSW there was doubt about the appropriateness of WestConnex.

Even allowing for the bastardisation of the planning process, there are a number of areas where the M4 East is clearly not consistent with the Metro Strategy. These include:

- Does nothing to alleviate Western Sydney congestion
- Is an unsustainable solution as it will reach capacity by 2031
- Does not relieve traffic congestion on most downstream intersections.

In 1998 the NSW government released *Action for Transport 2010 an integrated transport plan for Sydney*. According to page 2 of this plan, it proposed to:

"redress the [then] current imbalance in the road and public transport system."

The plan included a 10 Point Action Plan for Sydney:

1. Getting the best out of the Sydney system
2. Improving Sydney's air quality
3. Reducing car dependency
4. Meeting the needs of our growing suburbs
5. Getting more people on public transport
6. Safeguarding our environment
7. Making space for cyclists and walkers
8. Preventing accidents and saving lives
9. Making freight more competitive
10. Giving the community value for money

The plan listed 21 projects to be completed or started by 2010. These were:

Rapid Bus Only Transitways

1. Liverpool to Parramatta (2003)

2. Parramatta to Strathfield (2002)

3. St Marys to Penrith (Stage 1 2003) (Stage 2 2008)

4. Parramatta to Blacktown (2004)

5. Blacktown to Castle Hill (2009)

6. Blacktown to Wetherill Park (2006)

7. Parramatta to Mungerie Park (2010)

Heavy Rail

1. **Airport Line (2000)**
2. Bondi Beach Railway (2002)
3. Parramatta Rail Link to Epping and Chatswood (2006)
4. Hornsby to Newcastle High Speed Rail (Stage 1 to Warnervale 2007) (Stage 2 to Newcastle work to start by 2010)

North West Rail Link Epping to Castle Hill (2010)

1. North West Rail Link Epping to Castle Hill (2010)
2. Sutherland to Wollongong High Speed Rail (2010)
3. Hurstville to Strathfield Railway (To start by 2010 and be completed by 2014)
4. Liverpool Y Link (Work to start by 2010

Light Rail

16. To Lilyfield (2001)

Road Improvements

17. Eastern Distributor (2000)

18. M5 East (2002)

19. Cross City Tunnel (2004)

20. M2 to Gore Hill (2004)

21. Western Sydney Orbital (2007)

All the projects in bold were built. It can be seen from the list that every road project was delivered. Of the 16 public transport projects only four were completed.

The inability for successive governments to deliver public transport projects has made Sydney (particularly western Sydney) more car dependent. Building more roads has not had any lasting impact on road congestion. The traffic projections in the current M4 East EIS show the tunnel at capacity by 2031.

“2031 AM peak and PM peak operational performances (in comparison to the ‘do minimum’ results) are detailed in Table 10.7 and Table 10.8 respectively. High traffic densities are now recorded in the project’s mainline tunnel east of Concord Road, particularly westbound during the AM peak and eastbound in the PM peak where capacity is reached.”

(M4 EIS M4 East EIS Volume 2A Appendix A-G, page 10-6)

What is the plan post 2031? Building more roads will not solve traffic congestion in Sydney. WestConnex clearly fails to:

- Reduce car dependency
- Meet the needs of our growing suburbs
- Get more people on public transport

The Benefit-Cost analysis of WestConnex is evaluated over a 40-year period. Relieving traffic congestion on the corridor appears to be a major objective of the project. The project reaches capacity in the M4 East tunnel within eight years after project completion. This does not seem to be an effective means of relieving congestion. Any cost-benefit analysis should include costs of additional measures required over the remaining 32 years of the project life to maintain the claimed congestion and travel-time savings. If included, it is likely that the project costs will significantly outweigh any benefits. It is hard not to conclude that this is why the NSW Government has failed to release the full WestConnex business case, including the cost-benefit analysis.

5.2 Contracts being signed before planning approval is granted

Another unusual feature of the M4 East is that while the EIS must look at “feasible alternatives” and “project justifications”, the contracts for construction will and are being awarded before this EIS was completed or planning approval granted.

Asked whether he would prefer to grant approval before the contract was awarded or whether he had any concerns about the process, Minister Stokes told *New Matilda*, "Timing of contracts is entirely the proponent’s responsibility and is not a consideration in the assessment process. However it is clear that no work on any project is able to commence without planning approval…. I do not intend to treat this project differently to any other project that comes to me or the Department.”

WAG believes that awarding the contracts before approvals as though such approvals are merely “green tape” is neither acceptable nor democratic.

5.3 Politicisation of the process by government officials and Ministers

One of the most disturbing elements of the WestConnex project has been the highly politicised nature of any discussion around the WestConnex. Expert analysis presented by the likes of SGS Economics and Planning, who prepared two independent reports on WestConnex for the City of Sydney, and even the NSW Auditor General have been dismissed by the NSW Government.

Perhaps the most shocking public example of this was the treatment meted out to Dr Tim Williams, CEO of the Committee for Sydney, after he strongly criticised WestConnex and the highly politicised road-building ideology that lies behind these kinds of infrastructure projects in an heavily researched presentation at the University of Sydney in April 2015.

Within days of his speech being reported in the *Sydney Morning Herald*, Dr Williams backed away from the criticism, saying in a letter to the *Herald* co-signed by Committee for Sydney chair Lucy Turnbull that the speech reflected only his personal views, despite the fact that his presentation was made on Committee for Sydney-branded PowerPoint slides.

Days after this letter appeared, Roads Minister Duncan Gay admitted in Parliament that he and his staff had made angry phone calls to pressure the Committee for Sydney to retract Dr Williams's comments, saying:

"I did most of the phoning but my office did some as well...This was an appalling situation in which there was a rogue operator using the Committee for Sydney's material without their permission. In the strongest possible terms I prosecuted that case to the members of that committee, as did some of my staff."

It is hard not to conclude that the pressure placed on the Committee for Sydney by Minister Gay and his employees did not play a pivotal role in Mrs Turnbull and Dr William's decision to make such a public and humiliating backdown from his well-informed speech, which was in line with credible international analysis on best practice urban and transport policy.

It is a chilling development when elected officials use their power to shut down open and democratic debate on an issue in which so much public money, the future prosperity and liveability of Sydney, and the quality of life of thousands of people rests.

5.4 Compulsory acquisition of properties before planning approvals are granted

Residents and businesses in Haberfield and Ashfield received compulsory acquisition notices (PANS) before this EIS was released, let alone planning approval for the project granted. This has had the effect of residents being forced to either agree a settlement for their property with the RMS (which has been charged with acquiring properties for WestConnex), or refer their cases to the Valuer General where an agreed settlement could not be reached, for properties being taken for the M4 East before this project has received planning approval.

Residents, some of who have lived their whole lives in the district, are being forced from their homes, often with what is considered inadequate funds to secure housing within the neighbourhood. Residents report that RMS staff are behaving in a forceful and bullying manner towards them. WAG has been contacted by numerous home and business owners affected by WestConnex compulsory acquisitions across the route, including the

M4 East, who have reported being offered hundreds of thousands of dollars less than what they are legally entitled to. All of these affected property reported suffering physical and mental anguish as a result of the process, with anxiety, depression, insomnia, relationship strain, significant weight loss and worsening of existing conditions such as schizophrenia, chronic fatigue, and high blood pressure all being reported to WAG as a direct result.

The only true and fair way of mitigating this social and health impact on affected residents is to cease all property acquisition processes until there is full release of the WestConnex business case to parliament and the public to allow appropriate analysis of the entire project, including this M4 East proposal, to be considered and independently verified. This must include a full socio-economic impact analysis that accounts for the true costs of the project and does not hide the costs borne by individuals if the M4 East project were to proceed.

Should the project stand up to this level of transparency and independent scrutiny, affected property owners must be offered just compensation for their losses, and be left in a position that is no worse off than they would have been had they not been forced from their homes or businesses for the toll road. This protection should also extend to rental tenants who live and/or run a business from an affected property.

5.5 Conclusion

WAG formally and strongly objects to the corruption of the planning processes surrounding WestConnex, including the M4 East, and we ask that the Minister for Planning reject the WestConnex M4 East project.

6.0 Objection to the health impacts

WAG objects to the negative impact the WestConnex project, including the M4 East, would have on the health of residents who live, work or study along the motorway's path, as well as drivers who use the tunnels and feeder roads.

WAG also objects to the human health risk assessment (HHRA) in this EIS on the grounds that so much of the air dispersion, traffic, noise, and vibration modelling assumptions or results upon which it is based are insufficient, poorly done, and/or unable to be verified. Unless the proponent can provide enough data and sufficient analysis to allow its assumptions in these areas to stand up to independent scrutiny, any areas of the EIS that relies on it – including the HHRA – should also be rejected, because the output of this modelling is pivotal data used by the HHRA. This is especially so for the traffic modelling and air dispersion modelling undertaken for the air quality impact assessment. Any deficiencies in the modelling, or change in predictions of pollutant air concentrations are likely to impact the HHRA, and may change the conclusions of the HHRA.

6.1 Failure to meet SEARS

There are several areas in which the HHRA either does not meet the Secretary's Environmental Assessment Requirements (SEARs) related to human health, or it is unclear whether relevant SEARS have been adequately addressed.

- In relation to the requirement 'how the design of the proposal minimises adverse health impacts':
    - Although features of the proposed project and an overview of the construction activities are provided in Section 2 of Appendix J, how the design, e.g. relative to other design options, minimises adverse health impacts is unclear. o Sections 11.3 and 11.4 in Volume 1A provide a summary of the conclusions of the HHRA assessment, and identify where mitigation measures will be required. However, there is no specific reference to how the design, or as yet unconfirmed mitigation measures, minimises adverse health impacts.
    - The HHRA reports the chosen in-tunnel air quality criteria for NO2 may be exceeded. As a result, the report concludes asthmatics who use the tunnel may be at an increased risk of experiencing adverse health effects (Section 7.5, Appendix J). However the HHRA also notes (Section 7.1) the ventilation system of the tunnel has been designed so in-tunnel air quality will not

exceed these criteria. It is therefore difficult to objectively assess how the design of the tunnel minimises adverse health impacts.

Given the proposed scale and longevity of the WestConnex project, including the M4 East, additional detail for how the chosen project design, relative to other options, minimises adverse health impacts should have been included in this EIS.

6.2 Issues with the HHRA

There are a number of areas in which the HHRA fails to consider significant health impacts and risks associated with the M4 East project, and therefore cannot be considered fit for purpose.

6.2.1 Failure to assess impact of filtering ventilation stacks

Air quality (and resulting health impacts) once the tunnels are in operation was not assessed with the inclusion of filtration, or other pollutant reduction measures, in the tunnel exhaust stacks. As a result, the potential benefit to human health of including filtration has not been objectively assessed.

In addition to providing potential physical and clinical benefits from reducing pollution exposure, there are psychological health benefits that should also be taken into consideration when evaluating the worth of installing pollution abatement measures in the stacks.

Furthermore, the Protection of the Environment Operations Act 1997 of NSW (1997) states that, amongst its objectives, are: “to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development”, and “to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the...making of progressive environmental improvements, including the reduction of pollution at source.”

Omission of in-stack pollution reduction measures in the air quality and HHRA considerations of the HHRA is not consistent with the policy objectives of the Protection of the Environment Operations Act 1997 of NSW. It is not appropriate to use logic that relies on existing bad (and non-compliant) air quality, and the attending health risks not getting any worse to justify the project or not evaluating the inclusion of pollution abatement equipment.

6.2.2 Over-reliance on vehicle emission exhaust data

Given the recent revelation of vehicle manufacturers to significantly (perhaps by as much as 50%) understate pollutant emissions, WAG questions whether vehicle exhaust data used in the dispersion modelling to predict levels of community exposure are sufficiently robust to provide an accurate estimation of exposure.

6.2.3 Compliance vs risk assessment

Apart from the assessment of NO2 and PM, the health effects of all other compounds chosen for assessment have been evaluated by compliance with air quality guidelines. Such a screening compliance assessment does not necessarily evaluate the actual risks or impacts to health. It is not sufficient or appropriate for a project of this scale.

Other serious concerns regarding the method of assessment used to evaluate risks and impacts to human health in the HHRA include:

- The justification for choosing the guidelines is not in the HHRA. For a project of this scale, it would be expected that a detailed explanation of the data underpinning the guideline value and why it is appropriate for judging the health effects (and not only compliance with a guideline) to people be provided. Included should be a scholarly exposure-response assessment (i.e. the effects that a substance may cause at exposure concentrations other than the effect used to set the guideline). The EIS should have included appropriate justification for choosing a guideline over a different one. A scholarly justification should also have been provided for the selection of the guidelines used in the HHRA with regards to what health effects are associated with a substance and how the guidelines are protective of acute and chronic health effects.
- For a number of the pollutants that may be in stack emissions, the averaging times of the guideline may not be pertinent for assessing short term health impacts – particularly for the assessment of eye and respiratory tract irritation from exposure to individual substances, and as a mixture. For example, acetaldehyde and formaldehyde were assessed against 1-hour guideline values derived by different states in the USA, but elicitation of sensory irritation can occur with very brief exposure, i.e. within 5-10 minutes (NHMRC 2006). Even though the irritation may be relatively mild, manifested as itchy eyes or a tingling nose, it can affect general amenity and wellbeing if it happens often and in conjunction with odour (see below). In this situation the effect should be considered adverse (NHMRC 2006). The risk of sensory irritation be assessed for all relevant compounds, and as a mixture.
- Missing from the HHRA is an evaluation for odour impacts. Repeated, unwanted odour can have significant bearing on the amenity of communities. It is well

recognised that the health effects associated with malodour or unwanted odour are not of a clear toxicological nature but are an effect on wellbeing and include such non-specific symptoms such as headache, mental fatigue, stress and perceived irritation (NZ MfE 2002, TCEQ 2015). Providing the air concentration of odour is sufficient, only very short exposure times are required to experience an odour event, in the order of a few seconds. Although a brief compliance assessment for odour was included in the air quality chapter of the EIS (Appendix H, Part 5, pg. 170-171), the assessment was conducted using 1-hour average concentrations for only three individual pollutants. The assessment is deficient in that biologically relevant exposure concentrations (brief exposures to peak concentrations) of mixtures of air pollutants have not been considered. Odour impacts be assessed for the mixture of relevant compounds.

- Also missing from the HHRA is consideration of elicitation of an asthma response that does not necessarily requiring a visit to a hospital emergency department. In Section 6.9.2 of the HHRA, it is acknowledged that a wide range of other health effects and health measures including mortality for different age groups, chronic bronchitis, medication use by adults and children with asthma, respiratory symptoms including cough, restricted work days, work days lost, school absence, and restricted activity days have also been associated with PM exposure. The report indicates while these associations have been identified the exposure-response relationships established are not as strong as those used in the assessment for quantitative evaluation. The available baseline data do not include information for many of these health effects, making it impossible to undertake a quantitative assessment. Other indicators of acute health effects to PM (i.e. <24 hours in duration) than hospitalisation or respiratory mortality should have been considered as part of this EIS, because substantially more persons are likely to be affected (NHMRC 2006). Notwithstanding that the health impacts from PM have apparently been agreed in consultation with the NSW Department of Health, we believe such consultation established the minimum health effects that should be examined, and should not limit health risk assessment to only those ‘agreed’ effects. This could be done by acknowledging that exposure to PM (and NO2) should be somewhat less than the 24-hour guideline. The assessment for PM should include effects other than hospitalisation prevalence and mortality for shorter-term exposures.

6.2.4 Choice of chemicals included in HHRA

Not all pollutants relevant for assessing the impact of tunnel emissions have been included in the HHRA, or have been reasonably/objectively dismissed as having possible negligible impact.

For example the Australian Motor Vehicle Emission Inventory for the National Pollutant Inventory (NPI) (Smit 2014) lists 116 pollutants, included are metals and 14 carbonyl compounds. However the HHRA does not consider metals at all, and only two carbonyls (acetaldehyde and formaldehyde) are included. Of note is the inventory does not include the wear release of compounds entrained within tyres and brake pads that become resuspended in air and emitted from the tunnel stacks. Various authors (e.g. Sternbeck et al. 2002, Lough et al. 2005, Grigoratos and Martini 2015) have found brake wear to be a major emission pathway for some metals. A consensus statement from an international workshop held in June 2011 concluded that wear-related PM emissions that contain high concentrations of metals may (despite their limited contribution to mass of non-exhaust emissions) cause significant health risks for the population, especially those living near intensely trafficked locations (Denier van der Gon et al. 2012).

The selection of chemicals considered in the HHRA is probably limited by the data provided by the air quality assessment. However the air quality assessment did not include two important scenarios: inclusion of in-stack pollution abatement equipment, and 'what-if' modelling for traffic density increases on Parramatta Road after the tunnel is operational.

6.2.5 High-rise exposure

There is no discussion in the HHRA regarding the potentially different exposure profile for people who may be living above ground in medium-to high-rise apartments. The air quality modelling has projected ground level concentrations. Current and future development of the area with more people inhabiting apartment buildings could affect the exposure profile for this sector of the population, particularly if windows are open to allow air flow through the apartments. This is particularly significant given the latest plans for Parramatta Rd released by Urban Growth, which incorporates plans to build thousands of new dwellings in medium-to-high-rise apartments near the M4 East route. The HHRA in this EIS cannot be considered fit for purpose unless it considers how exposure and resulting risk profile for people living above-ground level in apartment buildings may be different from that discussed in the HHRA.

6.2.6 Lack of quantitative assessment of construction scenarios

Quantitative assessment of construction scenarios and lay-down areas has not been undertaken in the HHRA. The question arises how the construction management plan will ensure negligible health effects from potential dust impacts on nearby residents. For example drilling and grinding sandstone or other hard rock creates small biologically active

silica particulates which have carcinogenic potential (QLD WH&S 2009, Safe Work 2013). Public exposure to these particulates has not been considered in the HHRA.

As a result, the EIS contains no details as to how public exposure to such substances is to be minimised or preferably avoided entirely throughout the construction process if the project proceeds. Such conditions should include, at a minimum, requirement for measurement of respirable crystalline silica and adherence at the construction boundary to the Victorian ambient air standard (VIC EPA 2007) of 3 µg/m3 as PM2.5 (as NSW does not have an equivalent criteria); installation of vehicle washes, especially wheel washes, before leaving construction areas and entering public roads; and a minimum moisture content of trucked spoil of 10%.

6.2.7 Averaging time used for calculation of incremental risk of NO2 and PM

The calculation of incremental change in individual risk from modelled change in NO2 and PM concentrations has been undertaken in the HHRA using several short-term and long-term health endpoints. Many of the concentration-response functions from the literature which have been used in the HHRA are related to a daily maximum concentration (for NO2) or daily average concentration (for PM). However, the HHRA has used a change in annual average NO2 and PM for assessment against the short-term health endpoints. This is inappropriate, and is likely to be diluting the exposure and therefore the estimation of potential risk.

6.2.8 In-tunnel health risk assessment

The modelled in-tunnel concentration data are provided as maximum 1-hour average concentrations. However, the in-tunnel criteria which are used to judge the potential for health impacts are related to shorter averaging times. Comparing the two is inappropriate. In addition, the HHRA states the ventilation system in the tunnel has been designed so as not to exceed the in-tunnel criteria (Section 7.1). However for NO2, it is clearly evident that the in-tunnel criteria would be exceeded, since there are instances where the modelled maximum 1- hour average already exceeds the 15-minute criteria chosen as the guideline for HHRA.

The HHRA rightly concludes there may be a health risk for asthmatics who travel through the tunnel. The advice for management of this risk to asthmatics is to keep windows up and air conditioning on recirculation. This management approach is inadequate, as it does not protect motorcyclists or other people not travelling in fully enclosed vehicles. Perhaps more importantly, the first point of exposure management should be improving the tunnel design and engineering controls to minimise exposure by reducing pollutant concentrations in the first place.

An ‘in-tunnel’ worst-case exposure scenario that addresses ventilation decrease, or failure, has not been included in the HHRA. It is also noted that NSW Health commented in their requirements that in-tunnel exposures for vehicle occupants and motorcyclists be assessed, and that the assessment should include consideration of all reasonable and feasible mitigation measures. An objective assessment of all feasible mitigation measures does not seem to have been provided.

6.2.9 Combining suburbs

Appendix F in the HHRA presents the assessment of increased or decreased number of cases by suburb related to the population weighted change in modelled air concentration. Strathfield, Burwood and Ashfield have been combined and reported as one area without any explanation as to why this is the case provided in either the Appendix or the rest of the HHRA. Figure 6.4 in the HHRA indicates Haberfield (within the Ashfield LGA) is one of most impacted suburbs, but it has not been separately assessed in this EIS with respect to health impacts, though it contains areas from the dispersion modelling with higher concentrations. Again, no explanation has been provided for this decision.

These unexplained and, in WAG’s opinion, unjustifiable decisions are likely to obscure the potential health impact to the Ashfield LGA as a whole, and on individual suburbs – particularly the ones that are likely to be the most heavily impacted by the M4 East.

6.3 Conclusion

WAG formally and strongly objects to both the health impacts of the WestConnex including the M4 East, and to the way in which this HHRA has been conducted. We ask the Minister for Planning to reject the WestConnex M4 East project.

7.0 Objection to the impact on air quality and EIS assessment of impact

WAG objects to both the impact WestConnex, including the M4 East, will have on Sydney's air quality, and the failure of this EIS to properly assess those impacts.

The Air Quality Impact Assessment (AQIA) in this EIS relies too heavily on the WestConnex Road Traffic Model (WRTM) forecast of reduced traffic on Parramatta Road for its claim that there will be negligible impact on the overall air quality in the vicinity of the WestConnex project.

In what should have been an independent study, the AQIA needed to model a fuller range of traffic scenarios for the corridor, including possible "rat runs" used to avoid tolls and thus changing the air quality at those points.

The fact that the Parramatta Road corridor has numerous traffic "hot spots", where levels of dangerous pollutants are already elevated, is glossed over, and the dangers of adding to these "hot spots" and creating more of them is not taken into account by the overly conservative induced traffic forecasts.

There has been no modelling of estimates for any pollutants in a scenario where the traffic on Parramatta Road is more than the modelled forecast of a "53% reduction" (by 2021) along the Concord to Haberfield section.

There has been no comparison between the project and other cleaner forms of transport.

The AQIA makes no mention of the possibility of phasing out diesel fuel passenger vehicles as one way of assisting with the problem of elevated levels of PM2.5 and NO2 in the corridor.

The AQIA also should have used the new, soon to be endorsed National Environment Protection (Ambient Air Quality) Measure (NEPM) standard of 20ug/m3 for average 24-hours, rather than the current standard of 25ug/m3.

The AQIA also fails to comply with the project SEARS in a number of instances, as well as failing to provide enough data to adequately assess compliance with some SEARS.

Particle pollution levels along the proposed WestConnex route are already at or above current standards, and well above proposed standards. The EIS (p.66) states that annual PM2.5 concentrations measured in 2014 in the study area were "very close to or above" the current advisory reporting guideline (noting that the new national standards is

expected to include a stricter target of 7µg/m3 to be achieved over 10 years). Current 24-hour average concentrations of PM2.5 are “close to or above” the current NSW reporting standard of 25µg/m3 and well above the likely national target of 7µg/m3.

This is also true of coarse particle (PM10) pollution levels. Figure 8-54 (p,149) identifies several locations along the WestConnex route where annual average PM10 concentrations are already above 20µg/m3 (in the range 20-24µg/m3). Similarly. Figure 8-62 (p.155) identifies large residential areas adjacent to the M4 Western Motorway and A6 (Olympic Drive) where PM10 concentrations are already above 20µg/m3.

Figure 8-56 (Appendix H p.151) forecasts the maximum 24-hour mean PM10 concentrations at 31 ‘community receptors’ in 2021 and 2031. At all these receptor locations the maximum concentration was “below – but close to – the NSW impact assessment criterion of 50µg/m3”.

Particle pollution levels near the motorway already exceed the current PM10 and PM2.5 standards. Construction and operation of WestConnex will increase pollution concentrations and adverse health impacts.

Rather than building more mega-toll road projects like WestConnex that will only add to these levels, the NSW Government should be acting to prevent any additional sources of fine particle pollution and to actively manage existing polluters.

7.1 Flaws in the methodology of the EIS report

- The AQIA relies on the traffic modelling for its claim receptors will, generally, be improved. This traffic modelling did not include a scenario where traffic on Parramatta Road is greater than model estimates. Independent experts are predicting that this will be the case.
- The WRTM traffic forecasts rely on the Bureau of Transport Statistics (BTM) population model, which uses the main inputs from the Department of Planning and Environment’s (DP&E) 2014 NSW population, household and dwelling projections and Australian Bureau of Statistics’ (ABS) 2011 Census data on population and dwellings. The model makes adjustments to incorporate known major developments and future plans. Given that the EIS uses BTM data from 2013, before the Parramatta Road Renewal Plan was released, the model may not allow for an estimated additional 40,000 units (80,00 – 100,000 people) along the Parramatta Road corridor, many of whom it should be assumed will use a car.
- The estimates for “induced demand” in traffic (claimed as between 2%-7% – Vol 2A, Traffic and Transport Assessment, p4-6) are very conservative, given they rely

on population forecasts which may underestimate population growth along the corridor collected prior to the Parramatta Road Renewal Plan.

- Data reported against the current standard of 25ug/m3 (24-hour average) does not give an accurate picture of the peak hour traffic emissions, which would be well above the standard; the fact that children are walking to school near several of these sites in the morning peak hour means they are being daily exposed to dangerous emission levels. If their classrooms are also located near the sites with elevated emissions, they are exposed for lengthy periods. Dobroyd Point and Haberfield Public Schools will be particularly affected, and Homebush Public School slightly less so.
- The 31 community receptors used to indicate changes to emission levels at 2021 and 2031 already show levels of PM2.5 are above the new proposed NEPM standard of 20 ug/m3 (24 hour average), with most sitting just below the current standard (25ug/m3) (page K100). If the WestConnex project induces more traffic to the area by 2031 (or the population grows faster than planned or more diesel vehicles use the road or tunnel) then PM2.5 levels will be well over the current standard, let alone the new standard
- The planned height of the ventilation stacks is not modelled to show other scenarios, including effects of greater heights on dispersal of pollutants; there is a lot of international research that indicates a greater height of stack results in better dispersion
- The model claims the data from the OEH monitors and St Lukes Park Concord (M4E:05) is representative of the air quality of the project; the data from the other 4 roadside monitoring sites of the proponent's is downplayed, yet there are currently many residents living within 200-300 metres of these "hot spots"
- The AQIA seems to downplay the key findings from the Human Health Risk Assessment (Volume 2D, Appendices J-L) including:
    - By 2021, without the project, the maximum (residential and commercial) 1-hour concentration of NO2 estimated to be (in micrograms per cubic metre) 375ug/m3 and 360ug/m3 (respectively) – which is well above the guideline (of 246ug/m3); with the project completion, the levels estimated as 307ug/m3 and 286ug/m3 (respectively) – still well above the guideline
    - By 2021, without the project, the maximum (residential and commercial) 24-hr average concentration of PM2.5 estimated to be 29.3 ug/m3 and 30.5ug/m3 (respectively) – which is significantly above the guideline (25ug/m3); with the project completion, the levels estimated as 28.2ug/m3 and 26.6ug/m3 (respectively)-still above the guideline
    - By 2031,with the project, PM2.5 levels estimated as above the guideline

  - By 2021, without the project, the maximum (residential and commercial) 24-hr average PM10 concentration estimated as 54ug/m3 and 55.4ug/m3 (respectively) – above the current guideline (50ug/m3) and well above the recommended (from the 2014/15 review) of 40-50ug/m3
  - By 2021, with the project, the maximum (residential and commercial) 24-hr average PM10 concentration estimated as 52 ug/m3 and 50ug/m3 (respectively) – above both the current guideline and recommended (review) guideline
  - By 2031, both without and with the project, PM10 will be above both guidelines
- The claim there will be no emissions from portal sites is questionable, given that any congestion on the feeder road into a portal entrance or the exit point will produce concentrated sites of emissions
- Bureau of Meteorology data from Canterbury Racecourse is used to model the atmospheric conditions for dispersion of the plume at Wattle Street Haberfield. This may not be appropriate, given the location of the very large Parramatta River to the East of the stack and thus different terrain compared to Canterbury; more suitable local data should have been collected for such a major project
- The GRAL dispersion model has been adopted in the AQIA for surface roads and for the ventilation outlet. The GRAL model was designed principally to model emissions from surface roads and tunnel portals in complex urban environments. Whilst the model has the capability to model emissions from ventilation outlets, other models such as CALPUFF are more often used. The GRAL model has certain limitations relative to CALPUFF, for example in relation to the characterisation of the temperature of the plume.
- Insufficient information has been provided to enable a detailed review of the model inputs.
- The AQIA has not predicted concentrations of air pollutants on elevated receptors. Experience elsewhere shows that higher concentrations of air pollutants will be experienced by receptors that are elevated above the ground when emissions occur from an elevated emission source. For example, the upper floors of a multi-storey building may receive higher concentrations of air pollutants from a stack or vent than are experienced at ground level. No justification is provided for this omission, which is particularly significant given the number of multi-storey buildings that already exist in the area, and the high number of medium-to-high rise developments Urban Growth plans to build in the vicinity of the M4 East as part of its New Parramatta Rd strategy. Consequently, the AQIA may have under-predicted concentrations of air pollutants on the upper floors of multi-storey apartments. The AQIA makes no mention of any plans to re-assess concentrations

of air pollutants on the facades of any existing or possible future multi-storey buildings in the vicinity of the ventilation stacks.

- The AQIA has not quantified emissions or ground-level concentrations of all air pollutants that may be associated with motor vehicles. For example, metals associated with the project. WAG notes that the NSW EPA's 2008 Air Emissions Inventory for the Greater Metropolitan Region in New South Wales includes a range of metals from motor vehicles. In Section 8 of the AQIA, operational emissions and impacts of PM10, PM2.5, NO2, CO, benzene, PAH (as BaP), formaldehyde and 1,3-butadiene have been considered. There are a range of other air pollutants that are emitted from motor vehicles including metals, sulphur dioxide and volatile organic compounds. While these excluded air pollutants will not be critical in an assessment against air quality criteria, they may be an important consideration in the human health risk assessment, which relies on this AQIA.
- One "expected traffic scenario" has been considered for surface roads. It is unclear whether the scenario is representative of worst-case. The AQIA considers only one "expected traffic scenario" for 2021 Do Something, 2031 Do Something and 2031 Do Something Cumulative. The outcome of the AQIA is critically dependent on the traffic scenarios. In particular, the "expected traffic scenario" results in significant reductions in vehicles on surface roads such as Parramatta Road. However, alternative traffic scenarios that might result in higher traffic levels on surface roads have not been explored in the AQIA. The AQIA has relied upon the validity of the traffic modelling assessment. If the traffic modelling assessment has under estimated traffic volumes or has incorrectly characterised traffic volumes, it is possible that the air pollutant levels may also have been incorrectly characterised. As outlined in Section 4.0 of this submission, it is very likely that the traffic forecasts in this EIS are incorrect, which would render this AQIA incorrect as well.
- The AQIA has provided data only for the averaging times that are relevant for the regulatory assessment against air quality criteria. However, model predictions of short-term periods is required for the Human Health Risk Assessment (HHRA) in this EIS. This omission seriously compromises both the AQIA and HHRA in this report, both of which are critical to the overall validity (or lack thereof) of this entire EIS.
- The air pollutant emission rates applied in the dispersion model appear to have been averaged across three time periods through each day. If this is correct, peak 1-hour average ground-level concentrations of air pollutants are likely to have been underestimated. This will have implications for the regulatory assessment of nitrogen dioxide and other air pollutants that have criteria averaged over 1 hour. This will also have implications for the Human Health Risk Assessment.

- The AQIA has not provided predicted ground-level concentrations of air pollutants due to the ventilation outlets in isolation of the surface roads and regional background levels of air pollutants. This information is relevant to understanding the potential impacts of the project, whether filtration of ventilated air is required and its potential benefit.
- There is a lack of a quantitative assessment of air quality impacts from the construction phase of the project. The M4 East EIS has adopted a semi-quantitative approach to assess construction impacts on air quality. This approach assumes that mitigation "...should be straightforward." The underlying assumption is that impacts will be manageable such that the residual effect will be "not significant". The AQIA has not quantitatively assessed emissions and potential impacts of air pollutants from the project during construction. Rather, the AQIA includes a qualitative risk based approach in relation to construction emissions and potential impacts (Chapter 7). The risk based approach is based on Guidance from the United Kingdom Institute of Air Quality Management that has been "…adapted for use in NSW." An inherent assumption of the assessment approach is that potential impacts can be managed to avoid adverse impacts. The approach does not have the ability to determine that a particular activity is not feasible because of its scale, duration or proximity to sensitive receptors. The AQIA states that "...A Construction Air Quality Management Plan will be produced to cover all construction phases of the M4 East project." WAG does not consider it acceptable that such a significant risk to workers' health and safety risks being compromised by the proponent's failure to assess this as part of the EIS.
- There is a lack of information in the AQIA regarding monitoring (both ambient and in-tunnel) during the operation of the M4 East Project.
- The AQIA refers to five ambient air quality monitoring stations in the M4 East area established by WestConnex "to support the development and assessment of the project", but it does not specify whether these monitors will remain operational after completion of construction of the M4 East if the project goes ahead. Nor does the AQIA indicate whether these monitoring locations best represent worst-case impacts from the M4 East.
- While the AQIA makes some attempt to identify the pollutant exposure for the M4 East journey (even though this is not complete when it comes to factors such as the types of pollutants measured), no attempt is made to measure either the levels or impact of cumulative exposure for people who would remain in tunnels for longer journeys if the remaining WestConnex tunnels are built, or for journeys that would include other existing or planned road tunnels.
- Australia's nine environment ministers representing the states, territories and Commonwealth, are currently revising the national standards for particle pollution.

The NSW Government is leading this process and released an Impact Statement for comment in August 2014, presenting the costs and benefits of various options for these new standards. At their 14 July meeting this year, ministers agreed in principle to new standards for PM2.5. At their December meeting, ministers are expected to finalise new standards for both PM10 and PM2.5. The table below compares current Australian standards to the standards currently being considered, and to the standards that are referenced in this EIS (Appendix H, p.48).

	$PM_{2.5}$ 24 hour average	$PM_{2.5}$ Annual average	PM_{10} 24 hour average	PM_{10} Annual average
Current standard	25µg/m³	8µg/m³	50µg/m³	n/a
Proposed NEPM standards	15, 20 or 25µg/m³	6, 8 or 10µg/m³	30, 40 or 50µg/m³	12, 16 or 20µg/m³
Standards referred to in WestConnex EIS	25µg/m³ (and a 'target' of 20µg/m³)	8µg/m³ (and a 'target' of 7µg/m³)	50µg/m³	30µg/m³

The case for stricter standards outlined in that Impact Statement is compelling: *"Decreasing short-term exposure to PM10 would reduce attributable hospital admissions for childhood respiratory disease and pneumonia/bronchitis in people aged 65 and above."* Reducing PM10 concentrations to 40µg/m3 is predicted to reduce health impacts in Sydney by around 50%. Meeting the proposed PM2.5 standard of 6µg/m3 nationally would prevent approximately 530 deaths.

This EIS (Appendix H, pages 36-37) reveals that the NSW EPA has sought the endorsement of the NSW Cabinet for an annual average PM10 standard of 25µg/m3. This would allow significantly higher pollution concentrations than any of the three options for the standard that are advocated in the Impact Statement prepared by the NSW EPA to guide the variation of these standards. It is important to note that the ministers will determine the new standard collectively. This is not a decision that will be made by the NSW minister alone. There is no reason to expect the standard proposed by the NSW EPA will be endorsed by other states or adopted nationally. It should not have been used to assess the impacts and viability of this project.

The EIS (Appendix H p.48, Tables 7-5 and 7-6 on p.76. p.151 and elsewhere) interprets annual average PM10 levels in terms of a standard of 25µg/m3 and a

'target' (10-year objective) of 20µg/m3, ignoring the strong case for stricter standards and the fact that a decision has not yet been made regarding the new PM10 standards.

Similarly, the EIS assumes that the standard for 24-hour average PM10 concentrations will remain unchanged. On page 151, the EIS acknowledges that, "The maximum 24-hour mean PM10 concentrations at the 31 community receptors with the project in 2021 and 2031… At all receptor locations the maximum concentration was below – but close to – the NSW impact assessment criterion of 50µg/m3." If (as expected) a stricter national pollution standard or 30 or 40µg/m3 is adopted in December, it will already be significantly exceeded along the WestConnex route.

7.2 Flaws in model's assumptions

- The benefits from the project, in terms of some reduced pollutant concentrations at particular points (as shown on contour maps (Fig K-98, K-99, K- 100), depend on completion of stage 3 of the project, which may not eventuate if tolling of stage 1 does not meet estimated revenue. If stage 3 is not completed, the levels of PM2.5 throughout many parts of Haberfield, Ashfield and Leichhardt will exceed current advisory and new standards.
- The overall benefits rely on the traffic on Parramatta Road being significantly reduced, as claimed in the EIS. The WRTM traffic model depends on the BTR population forecasts (which use ABS Census of Population & Housing data) and the toll-resistance modelling estimations. Traffic forecasting is a major issue in Australia, given the number of projects with significantly incorrect forecasts of volume, including the Brisbane N-S By-Pass, Sydney Cross City Tunnel, Brisbane Connections, Lane Cove Tunnel and East-Link Melbourne. As the Australian Bureau of Transport and Communication Economics, Canberra states, traffic models are … "radical simplifications of real urban systems" (cited in Black, J (2014) Traffic Risk in the Australian Toll Road Sector, Public Infrastructure Bulletin, Vol 1, Issue 9, Art 3). So all the claims of improvements in overall air quality, or at best negligible impacts on air quality, are reliant on the accuracy of the traffic modelling.

As Black (ib id, p5) shows, the eight most recently built toll-roads in Australia have all had significant underestimation of traffic volumes by an average ratio of .48 (total traffic from the 8 projects forecast as 945,286 vehicles, but actual volume was 455,939 vehicles). The proponent must be very optimistic that this project will be the first one in many years to get the traffic forecasts correct. The problem is that local residents' lives are about to be severely interrupted and possibly have the air quality worsened if this project attracts more traffic than estimated onto the surface roads, particularly Parramatta Road.

Following a review of local and international reports and data, the Australian Department of Infrastructure and Transport, Bureau of Transport and Regional Economics (BITRE) in its Review of Traffic Forecasting Performance Toll Roads (2011) sets out what it sees as the major sources of errors in toll road forecasting. These errors include both technical (inadequate models, data limitations, unrealistic model input assumptions and ramp-up risk) and non-technical (optimism bias and strategic misrepresentation) sources of errors. Given that the Project Manager of the proponent stated at an Ashfield Council Forum (23/09/2015) that a key element of the business case for the project is .."as an enabler for the Parramatta Road Renewal Plan", one would have to wonder whether the traffic forecast that the M4 will reduce surface traffic on Parramatta Road by 53% by 2021 is an error of misrepresentation (to cite the BITRE classification of errors). The robustness of the WRTM model is crucial to the claims that the air quality will not be adversely affected by the project, and this AQIA should have included a worst-case scenario of more than projected traffic on Parramatta Road, particularly given the series flaws in this EIS's traffic modelling as detailed elsewhere in this submission.

- The five air quality monitors have been collecting data for about eight months, yet the proponent has only very recently posted three months of data (June/July/Aug 2015) on the website. The data indicates there were exceedences of PM2.5 as follows:
    - 6 occurrences at Wattle Street (the maximum one on 7 June being 9.4ug/m3 above the average 24-hour standard of 25ug/m3); 2 occurrences at Concord Oval (maximum one 30 June, 11ug/m3 above standard)
    - 2 occurrences at Concord Oval (maximum one on 5 July 1.5ug/m3 above standard)
    - 1 occurrence at Wattle Street (21 Aug 12.9 ug/m3 above standard); 1 occurrence at Edward St (21 Aug 10.8ug/m3 above standard); 1 occurrence at Bill Boyce Res (21 Aug 11.9ug/m3 above standard); 1 occurrence at Concord Oval (21 Aug 14.8ug/m3 above standard); 1 occurrence at St Lukes Pk (21 Aug 8.6ug/m3 above standard) - there was back-burning in national

parks in Sydney on 21 Aug which would account for higher readings, but it shows that the air quality is readily affected in these parts of Sydney which have already elevated readings; once the new NEPM is adopted (20ug/m3), there will be many more average 24-hour readings for the WestConnex corridor that will exceed the standard

- The AQIA appears to ignore key actions recommended in the new National Clean Air Act, including initiatives to reduce localised emissions. The WestConnex project will not only increase levels of NO2 and PM2.5 at several community receptors, it also runs the risk (if estimated traffic flows are greater on Parramatta Road than predicted) of increasing these levels across the Corridor. This project will not be futureproofing Sydney.
- Even if we accept the assertion in the EIS that the exhaust ventilation tunnel will for the most part allow for reasonable distribution of pollutants away from the immediate vicinity (which WAG does not), several issues of concern remain. For example, what would be the impact of intense localised plume strikes onto small areas, which will cause often short, but quite intense concentrations of pollutants in a restricted area, due to changes in wind patterns or atmospheric inversion layers? These acute events can be a major trigger for acute asthma episodes or people with other chronic lung conditions.
- With regard to in-tunnel air quality monitoring, the AQIA states "…the ventilation system would be automatically controlled using real-time traffic data covering both traffic mix and speed, and feedback from air quality sensors in the tunnel, to ensure in-tunnel conditions are managed effectively in accordance with the agreed criteria." The AQIA does not specify the pollutants to be monitored, the method of monitoring, nor the location. This is a disturbing omission given that so much of WestConnex, including this M4 East, is made of tunnels that drivers may end up spending extended periods of time in.
- The proponents allege (Appendix H, Figure 5.2, page 50) that WestConnex will improve air quality. This beggars belief. Building and expanding motorways increases air pollution, as motorways induce traffic.

  The EIS assumes a 31% increase in vehicle kilometres travelled (VKT) in the WestConnex domain (p.94). Increasing road capacity will directly increase VKT. As a result, air pollution worsens.

  The EIS predicts that PM2.5 emissions in the WestConnex domain will decrease by 21% while vkt increases by 31% (Table 8.6 p.94), from 234 tonnes per annum in 2014 to 182 tonnes in 2031. Similarly, the EIS predicts a reduction in PM10 and PM2.5 emissions from the M5 East tunnel stack.

Across Sydney, ambient concentrations of PM2.5 and PM10 are increasing. This compels the NSW Government to act to improve air quality and take all available measures to reduce particle emissions.

The prediction that constructing WestConnex can reduce emissions is based in part on the assumption that the motorway will ensure that traffic moves faster and more freely. In reality, many motorways become congested more rapidly than expected, due in part to induced traffic.

7.3 Failure to comply with SEARS

WAG has reviewed the AQIA submission made by Ashfield Council to this EIS and we object to the AQIA's failure to comply with the Secretary's Environmental Assessment Requirements (SEARS) for the project. We also object to the AQIA's omission of key data that would have made it possible for independent experts to review the claims made in this EIS.

The following table was taken from this submission and highlights the areas in which the AQIA fails to comply with SEARS or where compliance could not be verified based in the information provided in the EIS.

Table 1 Evaluation of M4 East AQIA against SEARs

SEAR	AQIA Section	Compliance/comment
An assessment of construction and operational activities that have the potential to impact on in-tunnel, local and regional air quality. The air quality impact assessment must provide an assessment of the risk associated with potential discharges of fugitive[1] and point source[2] emissions on sensitive receivers, and include:	Chapter 7 (construction) Chapter 8 (operational impacts)	See comments below.
• The identification of all sources of air pollution and assess potential emissions of PM_{10}, $PM_{2.5}$, CO, NO_2 and other nitrogen oxides and volatile organic compounds (e.g. BTEX) and consider the impacts from the dispersal of these air pollutants on the ambient air quality along the proposal route, proposed ventilation outlets and portals, surface roads and ramps, the alternative surface road network, and in-tunnel air quality.	Chapter 3 (sources of pollution) Chapter 5 (identifies air pollutants) Chapter 7 (construction impacts) Chapter 8 (operational impacts)	**Construction:** Does not comply with SEAR. Construction emissions and impacts dealt with generically through a qualitative risk assessment. The underlying assumption is that impacts are manageable such that the residual effect will be "not significant". See issue AQ8. **Operation:** Partially complies with the SEAR. The AQIA has not considered all air pollutants that are likely to be emitted from the project. A range of air pollutants has been excluded for various reasons in Chapter 5. Whilst none of these excluded air pollutants will be critical in an assessment against air quality criteria, they may be an important consideration in the human health risk assessment. See issue AQ3.
• Assessment of worst case scenarios for in-tunnel and ambient air quality, including assessment of a range of traffic scenarios, including worst case design maximum traffic flow	Chapter 8 (operational impacts)	**In-tunnel** Complies with SEAR. **Ambient air quality** Unclear whether complies with SEAR.

SEAR	AQIA Section	Compliance/comment
scenario (variable speed) and worst case breakdown scenario, and discussion of the likely occurrence of each.		One "expected traffic scenario" has been considered for surface roads. Unclear whether the scenario is representative of worst-case. See issue AQ4.
• Details of the proposed tunnel design and mitigation measures to address in-tunnel air quality and the air quality in the vicinity of portals and any mechanical ventilation systems (i.e. ventilation stacks and air inlets) including details of proposed air quality monitoring (including criteria).	Chapter 10 (management of impacts)	Complies with the SEAR. The AQIA includes the details requested in the SEAR. The M4 East Tunnel is proposed to have two ventilation outlets for each three lane tunnel. The tunnel design philosophy is to ensure no portal emissions would occur except during emergency situations such as a fire near a portal. Each ventilation outlet is proposed to have an air inlet in close proximity. The project does not include filtration or denitrification emission controls. The following design features are proposed to minimise air pollutant emissions from the ventilation outlets: • Maximum gradient within tunnel is 4% • Large tunnel cross-sectional area (90m^2) • Tunnel height is 5.3m (c.f. M5 East: 4.6 m) • Jet fans automatically controlled using real-time traffic data (fleet mix and speed) and in-tunnel air quality sensors • Specific ventilations modes will be developed to manage breakdown, congestion and emergency situations • NorthConnex in-tunnel air quality concentration limits have been applied as standard conditions • Smokey vehicle cameras will be used. The AQIA has not specified in detail the air quality monitoring that is proposed. See issue AQ9.
• Demonstrate how the project and ventilation design ensures that concentrations of air emissions meet NSW, national and international best practice for in- tunnel and ambient air quality, and taking into consideration the approved criteria for the NorthConnex project.	Chapter 4 Chapter 5 Chapter 8 (operational impacts)	**In-tunnel air quality** Complies with the SEAR. Chapter 4 summarises in-tunnel limits set for other NSW tunnels and Appendix C summarises international standards for in-tunnel air pollutant concentrations. The AQIA states "..these criteria (in-tunnel air quality criteria) are equivalent to those applied to the NorthConnex project." In tunnel air quality was determined based on a number of potential traffic scenarios. Tunnel ventilation system is designed based

SEAR	AQIA Section	Compliance/comment
		on the maximum capacity traffic of the tunnel and the NorthConnex in-tunnel air quality criteria. IDA Tunnel Software was used to model the in-tunnel and ventilation outlet emission rates. Main finding is that the tunnels would be primarily self ventilating due to the piston effect of the predicted traffic flow scenarios. Jet fans would only be required at certain off-ramps to ensure net portal inflows. **Ambient air quality** Unclear whether complies with SEAR. The following issues are relevant: • Insufficient information provided to review adequacy of dispersion modelling methodology. Relevant data has been requested. See issue AQ1. • Unclear whether worst-case has been assessed for surface roads. See issue AQ4 and AQ6. • Dispersion modelling has not assessed potential impacts on elevated receptors. See issue AQ2. • I am advised by ToxConsult that the averaging periods that have been produced by the dispersion modelling are incompatible with those required for the Human Health Risk Assessment. See issue AQ5. • The AQIA has not provided predictions due to the ventilation outlets in isolation. See issue AQ7.
• Consideration of any advice from the Advisory Committee on Tunnel Air Quality on the project.	Advice provide by the Advisory Committee for the NorthConnex project was taken into account when developing the assessment methodology.	Cannot verify if complies with SEAR. Section 5.3 states that consultation took place with the relevant bodies listed in the SEAR.
• Details of any emergency ventilation systems, such as air intake/exhaust stacks, including protocols for the operation of these systems in emergency situations, potential emission of air pollutants and their dispersal, and safety procedures.	Section 2.4.3 Chapter 10 (management of impacts)	Partially complies with SEAR. Specific ventilations modes will be developed for to manage breakdown, congestion and emergency situations. General information on tunnel management is provided. No detailed information on ventilation operation during emergency is provided.
• Details of in-tunnel air quality control measures considered, including air filtration. Justification must be	Section 10.2 "…provides a review of the Australian and international	Complies with SEAR.

SEAR	AQIA Section	Compliance/comment
provided to support the proposed measures.	experience with filtration systems in tunnel environments."	
Details of the proposed mitigation measures to prevent the generation and emission of dust (particulate matter and total suspended particulate (TSP)) and air pollutants (including odours) during the construction of the proposal, particularly in relation to ancillary facilities (such as concrete batching plants), the use of mobile plant, stockpiles and the processing and movement of spoil.	Chapter 10 (management of impacts)	Partially complies with SEAR. Chapter 10 provides general information on dust management measures that may be included in Dust Management Plans. However, the AQIA also states in section 11.3.1 that "…A Construction Air Quality Management Plan will be produced to cover all construction phases of the M4 East project." See issue AQ8.
Cumulative assessment of the local and regional air quality due to the operation of the M4-M5 Link and surface road operations.	Chapter 8, Chapter 9 and Appendix K	Unclear if complies with SEAR. The 2031 Do Something Cumulative scenario included an assessment of surface roads, existing air quality and the M4-M5 Link. However, the adequacy of this assessment is unclear as detailed in the following issues: • Insufficient information provided to review adequacy of dispersion modelling methodology. Relevant data has been requested. See issue AQ1. • Unclear whether worst-case has been assessed for surface roads. See issue AQ4 and AQ6. • Dispersion modelling has not assessed potential impacts on elevated receptors. See issue AQ2. • I am advised by ToxConsult that the averaging periods that have been produced by the dispersion modelling are incompatible with those required for the Human Health Risk Assessment. See issue AQ5. • The AQIA has not provided predictions due to the ventilation outlets in isolation. See issue AQ7.
The air quality assessment, including the setting of air quality criteria, must be done in consultation with NSW Health and the Environment Protection Authority and with the consideration of any applicable advice provided by the Advisory Committee on Tunnel Air Quality.	Section 5.3	Cannot verify if complies with SEAR. Section 5.3 states that consultation took place with the relevant bodies listed in the SEAR.
Modelling (including dispersion modelling) must be conducted in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (NSW DEC, 2005) or a suitably justified and verified alternative method based on	Chapter 8 (operational impacts) Appendix E (emission models) Appendix J (dispersion	Unclear if complies with SEAR. In general, modelling appears to have been conducted in accordance with the Approved Methods. However, the adequacy is this assessment is unclear as detailed in the

SEAR	AQIA Section	Compliance/comment
current scientific understanding of atmospheric dispersion. Particular attention must be given to the verification of the method of predicting local air quality or meteorological conditions based on non-local or modelled data.	model)	following issues: • Insufficient information provided to review adequacy of dispersion modelling methodology. Relevant data has been requested. See issue AQ1. • Unclear whether worst-case has been assessed for surface roads. See issue AQ4 and AQ6. • Dispersion modelling has not assessed potential impacts on elevated receptors. See issue AQ2. • I am advised by ToxConsult that the averaging periods that have been produced by the dispersion modelling are incompatible with those required for the Human Health Risk Assessment. See issue AQ5. • The AQIA has not provided predictions due to the ventilation outlets in isolation. See issue AQ7.

7.4 Conclusion

WAG formally and strongly objects to both the air quality impacts of the WestConnex including the M4 East, and to the way in which this AQIA has been conducted. We ask the Minister for Planning to reject the WestConnex M4 East project.

8.0 Objection to the impact of WestConnex, including the M4 East, on climate change

WAG objects to the increase in emissions WestConnex, including the M4 East, will cause, and the worsening of climate change that will result. WAG fundamentally rejects the proponents' allegation (Appendix H, Figure 5.2, page 50) that WestConnex will improve air quality and reduce emissions.

This beggars belief. Building and expanding motorways increases air pollution, as motorways induce traffic. No credible authority in the world today would suggest that building motorways is the solution to cutting national greenhouse emissions.

The EIS assumes a 31% increase in vehicle kilometres travelled (VKT) in the WestConnex domain (p94). Increasing road capacity will directly increase VKT. As a result, air pollution worsens.

The EIS calculates the vehicle kilometres travelled (VKT) for light vehicle traffic (cars, vans and motorbikes) will increase from 266 million to 375 million VKT (i.e. by 41%) if WestConnex is built compared with if it was not built.

For heavy vehicles (trucks and buses) forecasts annual VKT to almost double from 27 million to close to 57 million by 2031 with WestConnex compared with if it wasn't built.

The EIS also provides calculations are then made about vehicle types, their fuel consumption and their speed and concludes that, despite these massive increases in VKT, there will be a *decrease* in overall fuel use. So light-vehicle VKT goes up 41%, but their total fuel consumption falls 115; trucks VKT doubles, but their fuel use falls 13%.

These predications of lower fuel use thanks to WestConnex underscores the proponent's claims that vehicle greenhouse emissions will be lower with WestConnex than without it. The EIS predicts that PM2.5 emissions in the WestConnex domain will decrease by 21% while VKT increases 31% (Table 8.6 p.94), from 234 tonnes per annum in 2014 to 182 tonnes in 2031. Similarly, the EIS predicts a reduction in PM10 and PM2.5 emissions from the M5 East tunnel stack.

According to the EIS: *"As improvements to traffic flow and congestion are achieved through increased speeds, reduced travel distances and reduced frequency of stopping, fuel efficiency is improved and subsequently GHG [greenhouse gas] emissions associated with road use are reduced."*

The proponents allege that because traffic will be flowing freely rather than stuck in a jam, less fuel will be used. This argument has been thoroughly discredited for years. What matters is VKT. Higher VKT means higher greenhouse emissions.

Even if this argument did hold true, this EIS also shows that by 2031, WestConnex traffic will not be flowing freely. Its own figures say that by 2031, there will be *"high traffic densities"* in the M4 East tunnel, *"particularly westbound during the AM peak where capacity is reached"*. In other words, the tunnel will be full and gridlocked.

WAG formally and strongly objects to the increase in greenhouse gas emissions and the worsening of climate change that will result if the WestConnex, including the M4 East, is built. We ask the Minister for Planning to reject the WestConnex M4 East project.

9.0 Objection to the impact of noise and vibration caused by WestConnex, and failure of the EIS to properly analyse these impacts

WAG objects to the both the long and short-term impact that increases in noise and vibration will have on the lives of the hundreds of thousands of people who currently live, work or study in or near the route of the planned WestConnex, including the M4 East. We also object to the poor analysis of these impacts in the M4 East EIS.

Noise could have a long-term impact on those who would live beside the proposed M4 East, as well as in local streets and roads carrying extra traffic nearer tunnel exits and on 'rat runs'. Construction noise from demolition, thousands of truck movements a day and rock crushers would impact heavily on local communities and businesses. In some situations this could occur for several years. In others, the impact would be over shorter periods. Research has shown that noise does have negative effects on health. Vibration from construction including tunnelling could cause cracked walls. The proponent has already begun warning residents of this risk.

The SLR report does recommend noise mitigation for some buildings, although only up to the first story. It recommends noise walls and other strategies that would reduce the noise. Some buildings on Parramatta Rd that would under normal circumstances be offered noise protection would be left exposed so that the land between these buildings and the motorway can later be developed.

The EIS provides no justification for not treating residential buildings exposed to road traffic noise greater than two (2) storey in height. It provides no information regarding cumulative noise impacts from surface and underground tunnelling construction activities, or justification for not addressing construction noise at properties greater than single storey. Assessing such impacts were outlined in the SEARS for this project. On this basis alone, these findings in the EIS should be rejected.

There are many gaps in the EIS when it comes to assessing these impacts, and much is also left to future decision making during the final design phase.

Even the way the EIS reports are presented make it difficult for residents to see whether their neighbourhoods would be affected by excessive noise levels or not. While it's expected that technical data can be hard to understand, the summary chapter should be presented in a more accessible way. It is not. Even so, it is clear that the EIS shows hundreds of homes and thousands of residents would be affected by noise either during both the three-year construction period and after the M4 East is opened if it is built.

There are many issues in this EIS that need to be redone before any Planning approval should be granted. It is not acceptable that, given the uncertainty raised in a range of areas of the noise and vibration assessment, and the number of potentially impacted properties and people within the project area, the local community and other affected stakeholders have not been provided with the information they need to make a fully informed assessment. This must occur as part of the EIS consultation process where further comment can be sought from the community, and not simply resolved through the Submissions Report that does not allow any further community input.

9.1 Gaps in the EIS analysis

There are a number of significant gaps in the EIS analysis, including:

9.1.1 Deficiencies in reporting of noise monitoring results

Table 10.2 does not provide information on what times of day, evening or night the noise levels presented for the attended noise monitoring was undertaken. If the purpose of the attended monitoring was to support the data gathered through unattended monitoring, then attended noise monitoring results for each of these time periods should be provided.

9.1.2 Construction noise management levels

Table 10.3 states out that the noise management levels (NMLs) for construction works during standard hours should be the rating background level (RBL) +10dBA and the rating background level +5dBA for out of hours works (based on the Interim Construction Noise Guideline (INCG), however not all of the NMLS for the project have been accurately calculated in Table 10.4 when compared to the measured INCG RBLs in Table 10.2. For example:

- INCG RBLs for monitoring location L23 are 53dBA (day-time), 52dBA (evening) and 46dBA (night-time) which should make the out of hours NMLs for this location 58dBA (day-time), 57dBA (evening) and 51dBA (night-time), however the night-time NML in this table is shown as being 54dBA
- INCG RBLs for monitoring location L22 are 53dBA (day-time), 53dBA (evening) and 49dBA (night-time) which should make the out of hours NMLs for this location 58dBA (day-time), 58dBA (evening) and 54dBA (night-time), however the NMLs shown in this table are 66dBA (day-time), 62dBA (evening) and 47dBA (night-time)

There are other inaccuracies in the calculations given and this whole section needs to be reviewed and amended as necessary. This would then need to be compared against the

data predicting exceedences of the NMLs to ensure that these are based on accurate NMLs. Given the significant predicted noise impacts discussed in later sections of the EIS, this is absolutely critical to get right so that the local community can make an informed decision about what the potential noise impacts are likely to be.

9.2.3 Sleep disturbance during construction

Page 10-11 states that a sleep disturbance NML of 55dBA LAFmax (internal) and 65DBA LAFmax (external) has been adopted, however Table 10.4 provides varying sleep disturbance NMLs for each noise catchment area and does not specify whether the sleep disturbance NML is internal or external. Page 10-29 summarises that Tables 10.14 to 10.19 show that sleep disturbance criteria are predicted to be exceeded during all construction scenarios that are proposed at night and notes that the INCG only requires consideration of maximum noise levels when more than two consecutive nights are proposed. More detail on how potential sleep disturbance would be managed should have been included in the EIS given the proposal to conduct such extensive out of hours works as identified in the EIS.

9.2.4 Construction vibration

In s10.3.2 on page 10-15 there is discussion about the application of blast vibration criteria with a statement: *"For projects such as this, with a shorter duration of blasting of 12 months or less, a higher vibration criterion may be reasonable. For this project, the location of the blast moves along the alignment such that any one receiver is affected for only a short period of time."*

With no detail given about how long 'a short period of time' is, there is no way to determine whether it is appropriate that a higher vibration criterion be permitted, irrespective of whether or not the referenced standard was developed for mining operations rather than road tunnel construction. Given the range of sensitivities to vibration within any one community, it would be more appropriate to apply a conservation measure in the first instance.

In s10.3.2 the control of damage from air blast is discussed and there is a statement that: *"Nominating appropriate criteria for heritage buildings generally require site inspections; this would be confirmed during detailed design."*

The SEARs state that the EIS must *"include an environmental risk analysis to identify the potential environmental impacts associated with the infrastructure"* and *"where relevant…must include…measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment."*

If nominating appropriate criteria for the control of damage from air blast requires further site inspection then this should be conducted as part of the EIS process in order to meet the requirements of the SEARs as referenced above. Delaying this until detailed design, the completion of which would realistically occur some time after the commencement of construction should the project be approved, is not adequate given the potential impacts to the heritage and the concerns about this in the community.

Table 10-23 shows a total of 203 residential and light commercial buildings, 238 typical buildings, 11 heritage listed and 13 structurally unsound buildings are within safe working distances of highest vibration plant for cosmetic damage. 493 buildings are within the human response criteria for vibration. Additionally, three more properties are within the safe working distance for human response due to proposed tunnelling activities.

This is a large number of buildings that are going to be placed at risk of cosmetic damage and an even more significant number of buildings within which people would be at risk of experiencing adverse effects from vibration. The number of buildings predicted to be impacted by vibration is worrying, particularly for the human response criteria, as this impacts on the health and wellbeing of residents.

Page 10-35 refers to a detailed analysis of the potential vibration impacts needing to be undertaken for locations where the predicted and/or measured vibration levels are greater than the nominated screening levels, but no timeframe is supplied for this. Similarly, s10.4.5 discusses the need for further investigation into predicted noise and vibration levels after confirmation of the scope of blasting to determine whether or not the cosmetic damage and human comfort criteria would be met.

Given the significant numbers that are predicted to experience vibration impacts, both of these analyses should be undertaken as part of the EIS process, so that the local community and potentially impacted residents are fully informed opinion about the proposed project.

The proposed management measures in this EIS are also not adequate to mitigate the potential vibration impacts on such large numbers of receivers as they do not discuss ways to reduce or eliminate vibration impacts or provision of respite. More rigor should be applied to determining the exact extent of potential impact and what would be done in a practical sense to ensure that people and buildings are not exposed to potentially damaging levels of vibration.

9.2.5 Demolition of buildings

Table 10-13 shows that in 13 NCAs exceedences of the NMLss are predicted to be up to or more than 25dBA during day-time works. Given the RBLs are 10dBA less than the

NMLs, then this means that over half of the NCAs would experience noise levels of up to or more than 35dBA above the existing background level during demolition. The Transport for NSW Construction Noise Strategy referenced on page 10-5 of the EIS categorises this level of noise impact to be “highly intrusive” as it uses the rating background level as the starting point for determining exceedences.

What is proposed to mitigate noise impacts associated with demolition? As a minimum, highly affected receivers should be offered respite, such as accommodation elsewhere paid for during construction period. However, no mention of this is made in the EIS.

9.2.6 Work area establishment

Table 10-14 shows exceedences of up to or more than 25dBA above the NMLs are predicted for work areas establishment in 14 NCAs during standard daytime hours, with exceedences of more than 25dBA predicted for all but two sets of receivers during out-of-hours works. These exceedences are excessive and would have a significant impact on nearby receivers.

9.2.7 Construction facilities

Table 10-16 shows that operation of construction facilities is predicted to significantly exceed NMLs during night-time operations, including exceedences of 50dBA or more in 4 NCAs and 11 NCAs that are predicted to exceed night-time NMLs by 30-50dBA. This represents a significantly intrusive impact to residents and night-time operations should not be considered reasonable given the number of residents who would have to ensure these conditions in these locations.

9.2.8 Road construction

The opening paragraph on road construction states that new road works would be undertaken within the construction footprint, however out of hours works would be likely to minimise impacts to traffic and reduce safety risks for workers. If the works are being conducted entirely within the construction footprint, then why would there be potential impacts to traffic and workers safety? Does this actually mean that new road works would be undertaken within areas that are currently in use for road operations?

Table 10-17 shows that exceedences of over 25dBA above the NMLs are predicted for the majority of NCAs for all time periods during road construction works. Given the significance of this level of exceedance, more detail should have been provided about exactly how much over 25dBA predicted exceedences are for each of these time periods. The information presented in the table indicates that the majority of the NCAs would experience high noise impacts (at the higher end of “moderately intrusive” as defined by

the TfNSW CNS) for the duration of road works. This represents a significant burden on the local community, particularly during out of hours works when sleep disturbance is likely.

9.2.9 Tunnelling

Tunnelling is proposed to be carried out 24 hours a day, seven days a week and some above ground tunnel construction ancillary facilities would also be in use 24 hours a day, seven days a week to support tunnelling works. Page 10-28 states that:

"NMLs for residential properties located close to the tunnel construction ancillary facilities are predicted to be exceeded by more than 25dBA during the night-time periods. These exceedences would be restricted to residential properties directly adjacent to tunnelling sites. Where exceedances are expected, properties would be considered for construction mitigation."

Even with the proposed installation of acoustic hoarding and the assumption that this would afford a 10dBA reduction in noise levels, there would still be residential receivers who would experience exceedences of more than 25dBA above the NML, as shown in Table 40 of Appendix I.

It is unacceptable to expect residents to be subjected to such potentially high noise levels 24 hours a day, seven days a week as this provides no respite from noise, light, dust and traffic impacts. It is also noted that the statement above gives no certainty about whether or not mitigation would actually be implemented, merely considered.

9.2.10 Highly noise affected residential receivers

Table 10.21 shows more highly noise affected receivers after acoustic hoarding is installed in NCA 13 and NCA 21. Yet installation of acoustic hoarding should reduce the numbers of impacted receivers, not increase them. The reasons for this highly unusual result are not explained in the EIS.

9.2.11 Ground-borne noise

Section 10.4.2 indicates that there are a number of locations within 40 metres of tunnelling works where the criteria for ground-borne noise would be exceeded in both the evening and night. While it is mentioned that the duration of these impacts would be a relatively short period of time at each location, there is no discussion on what mitigation would be implemented to reduce the impacts on the directly impacted residents. Given exceedences are predicted for the time periods that people are more likely to be at home and trying to sleep, this is not acceptable.

9.2.12 Construction traffic noise

Given that spoil removal and concrete delivery are proposed during the night in s10.4.3, with potential impacts at Short Street East, the fact that detailed assessment of potential maximum night-time noise events on local roads has not yet been undertaken is unacceptable and does not allow affected residents in this area to be able to determine what the potential impacts on them are.

The reference to sleep disturbance in s10.4.3 is disingenuous as it only refers to light vehicles, when sleep disturbance will be more likely to be caused by heavier vehicles that would be undertaking night-time spoil removal and concrete delivery.

9.2.13 Operational noise and vibration impacts from ventilation facilities

Table 10-28 and the text below it shows that modelling has not been undertaken to predict potential operational impacts from the three proposed ventilation facilities. This does not allow potentially affected receivers to be able to make an informed opinion on what the impacts may be. It is also impossible to tell from this EIS whether the proposed maximum allowable sound power level for these facilities is achievable, and what the process would be if it is not.

9.2.14 Operational noise impacts and mitigation

Page 10-37 states that:

"…the project is predicted to result in an overall reduction in the number of receivers where exceedences of the noise criteria are experienced….This reduction is a result of reductions in the numbers of vehicles using some surface roads…

Large reductions in noise levels (up to 8dBA) have been identified…due to a reduction in the number of vehicles using the surface M4…"

A reduction of up to 8dBA, while noticeable, would not necessarily be clearly audible. As such, it is better described as a moderate reduction rather than large. The predicted "increases in noise levels (up to 16dBA)", however, are more accurately described as large when they are at the upper end of being clearly audible.

The predicted reductions are based on the traffic modelling for the project undertaken on behalf of a proponent with a vested interest in undertaking road projects. And as has been seen in a number of other large road infrastructure projects in Sydney in recent years, inaccuracies in traffic modelling can have disastrous impacts on the viability of a project on completion and on the community who are left shouldering the burden of such

infrastructure in their local environment. This, combined with the fact that predicted increases in operational noise impacts are significantly higher than the predicted reductions in other areas, does not provide ample evidence that the project is justified.

Seven new or increased height noise barriers are proposed as part of the project. Some of the new noise walls are proposed to be 5m or 6m high which has the potential to significantly impact on the amenity (visual impact and overshadowing) of residential properties that are immediately adjacent to the proposed noise walls. Even with construction of these noise walls and the installation of low noise pavement, a large number of receivers (310) would still need consideration of additional mitigation. At-property treatment for noise mitigation, while being able to help achieve operational noise goals, also means that people are restricted in being able to open their windows without experiencing noise impacts, so can have a significant impact on the amenity of their property. The number of receivers that may need further at-property treatment is very high and further work should be done on the design and/or alignment of the proposal to reduce this number to a more acceptable level.

Table 10.24 shows number of receivers still affected operational traffic noise with mitigation installed in a number of scenarios. As this table uses different terminology to that of the scenarios at the beginning of the noise and vibration assessment on page 10-6 of the EIS, a direct comparison is made more difficult and it can only be assumed that the four scenarios presented in Table 10.26 are meant to mirror those given on page 10-6. There is also confusion caused by the explanatory text above this table that refers to data about numbers of affected receivers in scenarios without mitigation that is not shown in the table. The EIS should clearly communicate what the predicted operational impacts are likely to be and it does not do that.

The assessment of maximum noise levels discussed on page 10-42 indicates that there are a number of locations where the maximum noise level would increase but that not all of these potentially affected receivers would be eligible for property treatments. As some of these receivers would also be in line of sight to elevated vehicle exhausts, this is not an adequate response to a potential increase in maximum noise levels and impacts to health, wellbeing, visual amenity and air quality.

9.2.15 Environmental management measures

A number of environmental management measures for noise and vibration are proposed in the EIS. Of particular concern are the following:

NV6

"Permanent noise barriers will be scheduled for completion as early as possible in order to minimise construction noise"

NV7

"Property treatments identified for the operational phase of the project will be considered for installation before or early in the construction period, where they would improve noise levels"

Given the number of areas where the EIS delays the detailed assessment of noise and vibration impacts, presumably until after project determination, it is most likely that construction would commence well before information is available to base noise barrier design on, let alone construct them. Detailed noise and vibration assessment should be included in the EIS rather than deferred to after the project has been assessed and determined so that a more accurate picture of what is proposed is presented to the community for consideration, and management measures such as these can be realistically implemented.

NV10

"Night works will be programmed to minimise the number of consecutive nights that work affects the same receivers, where feasible. This would not apply to civil and tunnel sites."

The proposal to undertaken tunnelling activities 24 hours a day, seven days a week is inconsistent with this management measure, particularly given the need for supporting tunnelling facilities to be utilised at the same time. The exemption of civil and tunnel sites covers a significant portion of the project works, making this exemption almost universal.

Out of hours/night works should only be undertaken when it can be demonstrated that no other options are safe or the impacts to the surrounding receivers are absent or minimal. This is not the case being presented in this EIS. Therefore more stringent limits on out of hours works should be applied, rather than more lenient limits such as those being proposed in this EIS.

NV11

"When working adjacent to schools, particularly noisy activities will be scheduled outside normal school hours, where practicable."

While this proposed management measure is positive for schools, it also has the potential to increase the need for out of hours works and therefore must be considered in conjunction with other proposed management measures that relate to out of hours works. Given there are areas within the project's influence that may be subjected to prolonged

and/or noise out of hours works, a balance needs to be struck between impacts to schools and impacts to residential receivers.

NV24

"Respite periods (eg one hour respite for every three hours of continuous construction activity) will be scheduled for high noise impact works where appropriate"

The EIS does not state that respite periods will be used for properties impacted by 24 hour, seven day a week tunnelling activities, even though these are likely to be the most highly impacted due to predicted noise levels and duration of works.

NV27

"As far as practicable, construction vehicle movements along local roads at night will be restricted to light vehicles only, subject to further investigation of potential night-time maximum noise levels during detailed design."

NV29

"Spoil removal will be undertaken during the day as far as practicable"

These measures are inconsistent with information discussed above, and NV28 below, which states that spoil removal and concrete delivery will occur at night. Spoil removal and concrete delivery will be undertaken with heavy vehicles so statements about restricting night movements to light vehicles are largely irrelevant, and potentially misleading.

NV 28

"As far as practicable, heavy vehicle movements outside of standard construction hours associated with tunnel support works (spoil removal, concrete delivery and other heavy vehicle movements) will be limited to access and egress directly to and road network"

This needs further discussion on the numbers and location of potentially affected receivers within the EIS itself rather than these imprecise management measures.

NV31

"The safe working distances will be complied with where feasible and reasonable. This will include the consideration of smaller equipment when working close to existing structures."

As outlined above, it is already known that there is a large number of buildings that would fall within the safe working distances, making the commitment to comply "where feasible and reasonable" meaningless in these areas. Smaller equipment should be specified, not just considered.

NV 32

“If vibration intensive works are required within the safe working distances, vibration monitoring or attended vibration trials will be undertaken at the outset of these works to ensure that levels are within the relevant criteria.”

This management measure gives no assurance that vibration intensive works would not be carried out within safe working distances. Vibration monitoring once vibration intensive works have commenced is not appropriate given this in itself could cause damage and/or human discomfort.

NV44

“Once plant items within the ventilation building are confirmed during detailed design, impacts will be assessed with consideration of the INP modifying factors. Where modifying factors are found to be applicable they will be added to the assessment, and compliance with the INP criteria checked at all receivers.”

This management measure is specified as to be undertaken during pre-construction, however given it references detailed design, there is more likelihood that it would occur well after construction has commenced. As discussed above, there should be a specified process for how to manage non-compliances with the criteria prior to commencement of operation.

9.3 Conclusion

WAG formally and strongly objects to the increase in noise and vibration that will be experienced if WestConnex, including the M4 East, is built, and to the inadequate and not fit for purpose analysis of the same undertaken in this EIS. We ask the Minister for Planning to reject the WestConnex M4 East project.

10.0 Objection to the socio-economic impact of the project and failure of the EIS to properly analyse these impacts

WAG objects to the enduring and destructive impact that the WestConnex project, including the M4 East, will have on the lives of the hundreds of thousands of people who currently live, work or study in or near its path.

WAG also objects to the social impact analysis included in this EIS on the basis that it is markedly deficient, and meets neither the project SEARS nor what the community is entitled to expect from proper EIS process. And again, the proponents have failed to address the wider negative impacts of the entire WestConnex project, despite using the supposed benefits of the entire WestConnex as justification for proceeding with the M4 East.

The whole WestConnex, including the M4 East, will impact millions of people, and the Social and Economic Impact Assessment is where you would expect to find those impacts documented and evaluated in an EIS.

In regards to the M4 East in particular, the loss of homes and businesses will be irreplaceable. The social connections and networks of families and friends will be disrupted. However, no meaningful mitigation is proposed.

The central argument of the project proponents is that the perceived benefits of WestConnex will make Sydney a better place to live and work. However, the proponents do not provide any real evidence to support this. In fact, it would appear that the proponents are pushing ahead with the project in spite of clear external critiques and with no logical rebuttal to the critics.

WAG notes that GHD was commissioned to do the assessment. They also did the soil contamination assessment and would seem to be better qualified for that task. GHD has done some social impact assessments in the past but does not specialise in that area. It is not clear in the EIS why GHD was chosen over an independent social research company.

The project has already had an impact on the health and wellbeing of local citizens. Many residents have reported becoming anxious, angry, depressed and resorting to medication. There will be further health, social and economic consequences on a greater scale if construction activities remain unmodified, particularly in regard to 24 hour heavy vehicle movements and tunnelling work.

Even if the M4 East is completed, local pollution and noise hot-spots will remain; east of Bland St and along City West link will be as congested as ever, with increased the capacity coming to a stuttering halt at those 2 choke points. And despite the EIS relying on the improved public transport plans for Parramatta Road (for example, the introduction of dedicated bus lanes) for many of its assumptions, such improvements are not within the scope of this project, nor are they in scope for any approved project that exists at the present time.

As outlined there remain too many adverse impacts and unanswered questions about the social impacts of this project. From a health and welfare perspective, this is a slow-moving disaster for local affected communities. The disaster is easily avoidable and should be avoided by not proceeding headlong with this project. It is the wrong project at the wrong time for Sydney.

10.1 Flawed methodology

10.1.1 Cumulative positive effects highlighted while cumulative negatives ignored

While cumulative benefits in travel time savings and productivity are claimed for the whole 33km WestConnex, cumulative negative effects are almost completely overlooked in the entire EIS, including its socio-economic analysis.

Negative impacts are restricted to the M4 East project footprint. They are not extended to include impacts on nearby local government areas such as the City of Sydney, or the combined impacts of the M4 East and New M5 on traffic congestion in the inner west. This has the effect of underestimating the negative socio-economic impact of the project.

10.1.2 Framework established, then ignored

The EIS outlines the methods used to conduct the social and economic impacts, including the socio-economic assessment methodology (Chapter 14, p. 2), an SIA framework and rating table (Chapter 14, p. 3) where impacts are evaluated in consideration of their duration and spatial scope, and the combination of these two is given as the level of impact.

It is difficult from this point on (and including in the SIA and EIA) to see this methodology utilised in any great detail, and especially not with any consistency.

For example, how does the EIA come to the finding that *“Overall, the assessment has concluded that the positive impacts on businesses and the economic benefits of the*

project are expected to outweigh any negative impacts that cannot be satisfactorily mitigated" (Appendix N, p. 9–1)?

The social impacts of transport infrastructure, prior to analysis (given in the methodology section), are considered to be *"property acquisition, community networks and amenity"* (Chapter 14, p. 2), an insufficient starting point for a project of this scope and impact.

The maximum spatial scope of the Impact assessment rating criteria is *"inner western region of Sydney"*—though with the proponents billing WestConnex as the *"biggest transport project in Australia"* the economic and social ramifications of it will be far broader than this.

For example, there is no consideration of negative direct or indirect effects to the *"wider state economy"* (Appendix N, p. 6–1), despite consideration of several positive indirect or cumulative effects.

The scope of this section is therefore too confined. For instance:

- *"Significant subsurface works associated with the project, such as tunnelling, would occur outside these precincts; however, these are not expected to impact at the surface"*—no objective analysis or findings from other sections given, assumed from the start of this section.
- *"City of Sydney Council LGA is outside the project footprint and would be indirectly affected"*—at this scale transport infrastructure would be expected to affect traffic flows and the central city of the region in which it is implemented.

The EIS states that *"an affected business has been defined as a business that would be impacted by property acquisition, changes in amenity, changes to accessibility or changes in the volume of passing trade due to the construction and operation of the project"*, but fails to provide a figure for the actual total number of businesses these changes affect.

The SIA (Appendix M) is not definitive, and should have been able to collect more reliable data so that the effects and its findings could be validated. Instead, it explicitly states that *"It is important to note, that not all social infrastructure may be captured in this report. Information has been gathered through desktop research, site visits, information from councils and information provided as part of community consultation. There may be some social infrastructure which is not identified at this stage but it is anticipated that Appendix C will be continually updated as part of the ongoing environmental planning and assessment process"* (Appendix M, p. 49). Even Dobroyd Point School, which is

considered in other sections of the EIS and therefore could reasonably be expected to be impacted by this project, is not even listed in the social infrastructure section.

10.1.3 Superficial social impact assessment (SIA)

The SIA is very superficial and simply states there will be impacts without investigating their costs and depth.

Simply listing social infrastructure within the study region cannot be defined as SIA. Nowhere in the EIS is there a systematic review of each piece of social infrastructure against a best-practice framework to determine whether it will be affected and, if so, the extent to which it will be.

The SIA in this EIS uses earlier failed tollway projects for case studies without explaining that they failed. In these cases, the social impact studies conducted prior to construction of these failed projects found that despite likely negative social impacts, the tollways were justified. In the case of the Clem7 were wrong because the premises on which they were based were wrong. It is surprising that AECOM, which is currently being sued by investors in the Clem7 for negligent traffic modelling, would put forward the social impact assessment as a useful case study.

Under ‘Existing environment of social infrastructure’, little is made of the sense of community or the impact the project might have. Social infrastructure can be defined as the ‘hard’ infrastructure (Hancock, 1993) such as halls, schools, churches etc. and is rudimentarily addressed in this SIA and EIS, as well as the ‘soft’ infrastructure such as the relationships that form between people and groups in the community that is largely overlooked in this report.

A relevant example of ‘soft’ social infrastructure might be the fact that in many suburbs groups have mobilised against the project – simultaneously giving an idea of community sentiment regarding the project, community spirit and the types of social aspects that the report fails to even approach. The social effects of such large-scale road projects are evident in works such as Jacobs (1961) and are hinted at by the local government submissions in this report, such as concern by Ashfield Council regarding the mobility, safety, connectivity and isolation of its older residents (see Appendix M, p. 61). Many cities globally have realised this and have either stopped building large road projects, or are ripping existing ones down.

10.1.4 Reliance on flawed traffic modelling

As with the majority of this EIS, much of the socio-economic analysis rests on the accuracy of its Traffic and Transport Assessment, which as stated elsewhere in this submission, is seriously flawed. As such, there can be no confidence in the accuracy of the other impact analyses in the EIS that are dependent on the traffic forecasts, including this SIA and EIA.

10.1.5 Minimal stakeholder and community involvement

When evaluated against the international IAP2 Public Participation Spectrum, the 'community involvement' undertaken for the M4 East EIS centres around 'informing' (the lowest stage on the spectrum with the least impact on decisions) and only rarely could be considered 'consultative' (the second lowest). So many residents have complained about slow and vague response to information requests from the community about WestConnex and the M4 East that WAG believes its community consultation does not even reach the lowest level of consultation and public participation.

The EIA states that neither the proponent nor its consultant GHD consulted directly with local businesses in the path of the M4 East EIS. Such a serious omission demonstrates the overall deficiency of the socio-economic analysis in this EIS.

There is also no suggestion in the EIS that it attempted to consider the impact on children as part of its socio-economic analysis. Given the high numbers of families in the affected area, and huge concern of parents and children who attend local schools (which has been expressed publicly through a number of demonstrations centring around Haberfield Public School), this is another serious omission that demonstrates the overall deficiency of this socio-economic analysis.

10.2 Poor mitigation of impacts

Given the extent of the social and economic impacts that will occur as a result of the project, the list of proposed mitigation actions is insufficient in both impacts that it addresses and the detail of responses given for the matters that are addressed. Some impacts such as trauma during property acquisition have been happening for months, whereas the suggested mitigation is treated as if it is the future.

- **Demolition of Apartments and social housing stock**: One impact of the M4 East, particularly in Haberfield, Ashfield and Concord, is the proposed demolition of many apartments and social housing blocks. Haberfield will lose over 50% of its apartment dwellings, many of which house long term residents who are single

people, elderly and others with special disability needs. There is little if any equivalent stock available for them to purchase or rent nearby. Many of the people being forced out their homes will have to find a new home some distance away from their established communities, in which they have lived for years. Compulsory acquisition processes are already being implemented on local residents. Families, friends and neighbours are being separated. So while the impact is most significant for the 400 or more people who are being forced to move, it also affects the thousands who remain behind in their once shared community. Housing stock needs to be replaced and made locally available for people on low incomes.

- **Support for those affected by proposals**: The EIS suggests WestConnex would offer a counselling service to those impacted. This is a somewhat akin to a person assaulting another and then offering counselling to the assaulted person! No consideration is given to offering independent financial, legal, counselling and social support to affected people.
- **Loss of community**: The EIS itself says in 14.4.2, “Changes to the amenity of a street or suburb can negatively impact the sense of belonging and identity of its residents and consequently their cohesion and connectedness. Areas with heritage values can also be a significant contributor to local character and community sense of place. Impacts on heritage assets affect not only the value of the assets, but the value communities place on the quality of their environment, and their connections to it, both past and present...These impacts are primarily along the M4 corridor in Homebush at the western and eastern ventilation facilities, Concord Road interchange, and Parramatta Road and Wattle Street interchanges.” It describes that the impacts for Haberfield are “major adverse impacts” with the whole project having cumulative adverse impacts. Yet no solution or restitution is proposed to mitigate this impact. This is not acceptable.
- **Impact of ongoing forced acquisitions of homes and business**: Residents and businesses in Haberfield and Ashfield have now received compulsory acquisition notices (PANS), which set a 90-day time frame for a negotiated settlement to be finalised, before legal proceedings would commence. Residents, some of whom have lived their whole lives in the district, are being forced from their homes, often with what is considered inadequate funds to secure housing within the neighbourhood. Residents report that RMS staff are behaving in a forceful and bullying manner towards them, WAG has been contacted by numerous home and business owners affected by WestConnex compulsory acquisitions across the route, including the M4 East, who have reported being offered hundreds of thousands of dollars less than what they are legally entitled to. All of these affected property reported suffering physical and mental anguish as a result of the process, with anxiety, depression, insomnia, relationship strain, significant weight loss and worsening of existing conditions such as schizophrenia, chronic fatigue, and high

blood pressure all being reported to WAG as a direct result. The only true and fair way of mitigating this social and health impact on affected residents is to cease all property acquisition processes must cease until there is full release of the WestConnex business case to parliament and the public to allow appropriate analysis of the entire project, including this M4 East proposal, to be considered and independently verified. This must include a full socio-economic impact analysis that accounts for the true costs of the project and does not hide the costs borne by individuals if the M4 East project were to proceed. Should the project stand up to this level of transparency and independent scrutiny, affected property owners must be offered just compensation for their losses, and be left in a position that is no worse off than they would have been had they not been forced from their homes or businesses for the toll road. This protection should also extend to rental tenants who live and/or run a business from an affected property.

- Grief over the forced loss of homes, businesses and communities will have an enduring influence on many people, including those forcibly moved and those that remain. It will also increase the risk of both anxiety and depressive conditions. The loss of home and community attacks a basic need for all humans, to have stable shelter and accommodation. Many people believed that a home within the confines of the Heritage Conservation area would safe-guard them from such destruction and vandalisation of their community as proposed by the M4 East project. The lack of any proposed mitigation for this major impact is a serious deficiency in the EIS. There should not be any progress on the project until this matter is satisfactorily addressed and appropriate restitution made to affected residents.
- The loss of close family and friends from an immediate neighbourhood diminishes the quality of life for many people. Increased isolation, particularly those who were in their own or rented flats will be associated with increased health morbidity. It is most likely that the initiation of the project will hasten the death of many elderly residents if they are displaced from their long-standing homes and community. The lack of a clear and compassionate plan to deal with these major social problems is a serious deficiency of the EIS.

10.3 Flaws in the analysis

10.3.1 Assessment of construction impacts

The framework of evaluating impacts outlined in the methodology section has not been followed, especially considering the far greater negative impacts that will occur.

- *"Increase in demand for labour may increase wages in the region, particularly for construction workers"*— no reference or mention of where else this has happened is made in the EIS.
- Noise and vibration—only action is to consider more measures.
- Visual environment only considers residents and workers, and not shoppers, visitors, students, etc that would frequent the businesses, schools, churches and other social infrastructure listed in the EIS's 'Existing environment'
- While changes to accessibility appear to have been evaluated against the framework listed in the methodology, it is not clear how they are rated (eg are they evaluated as 'minor' impacts due to them being considered 'short-term' but with considerable effects, or some other combination?).
- Given the impact assessment rating criteria (Table 14.2), the medium-term timeframe and the municipality (and in some cases regional) effects of these considerations, it can be assessed that each of the impacts concerning traffic delays would be at least moderate (though no measure is given in the EIS)?
- Property acquisition: Simply stating that dwellings on partially acquired properties will not be affected is not good enough. What measures are to be taken to ensure this from a social/economic perspective? What reason is there to assume they will not be affected?
- '14.3 Assessment of construction impacts' lists 'Health of the community' as one of six considerations that will be discussed *"in the following section"*. However there is no such section.

10.3.2 Assessment of operational impacts

To list the negative aspects of surface works as a series of bullet points given the extent of the impact they will have socially and economically on the region is insufficient, especially given minimal additional detail given in Appendices M and N.

- Impacts of surface works to be considered include: loss of vegetation screening, new road infrastructure – interchanges, tunnel ramps, bridges/flyovers and new noise walls, closer proximity to new road infrastructure for some properties, ancillary operation facilities such as ventilation facilities, the motorway control centre, electricity sub-stations and the water treatment facility, loss of heritage items and changes to streetscapes.
- In Appendix M, health is listed, and vehicle emission rates are mentioned - but not at the stacks. These should be addressed here considering community and Council concern at the social impacts of the pollution that will be emitted at these stacks.
- For those properties affected by the noise of the project it is assumed that they will *"keep external windows and doors shut and have minimal use of outdoor areas"*

and that *"Impacts on the use and enjoyment of outdoor areas due to increased noise may result in increased levels of stress at individual properties"*. However, no meaningful analysis of this impact is undertaken.

- Minimal consideration is given to existing businesses along Parramatta Road, despite the EIS predicting: *"19% loss of output and full time employment for businesses along Parramatta Road due to reduced passing trade, equivalent to $7.3 million output"*. However, the assessment identifies five (5) businesses as *"potentially benefitting from an increase in passing trade, comprising service stations, a car wash and cafes/restaurants"* — making the possibility of 'rat-running' clear, and again showing preference to include data on what many would consider to be a negative socio-economic impact when it can be twisted to benefit the proponent, and ignore it when it does not.
- Broad and abstract terms are included such as claims that *"Travel time savings (or transport efficiency) provide significant social benefits, freeing more time for recreation, social interaction and economic activities, all of which contribute to physical and mental health. With reduced congestion on major roads in the long term, local mobility would also likely be enhanced. Parramatta Road is currently a barrier to many local and regional social networks. Reduced congestion at intersections to cross the corridor and on the road itself would be an incentive for increased expansion across the corridor for community interaction, enhancing access to regional social infrastructure such as Sydney Olympic Park and Flemington Markets."* These claims open the door to analysis through similar broader lenses including car dependence (and its effects on population health, the economy and societal connections), induced traffic demand and impacts on social infrastructure/community connectedness. However, as noted elsewhere in this submission, such negative impacts are not considered in sufficient detail in this EIS.
- The EIS correctly notes that *"Improvements in public transport availability and efficiency would have broad social benefits. The use of public transport includes incidental exercise (eg walking to and from bus or train stops), increasing the chance of travellers meeting recommended daily physical activity targets. A more active lifestyle can help reduce the risk of preventable diseases, including coronary heart disease, stroke, type 2 diabetes, obesity and some cancers. It can also help improve mental health, community life, social wellbeing and community safety."* However, such improvements in public transport are not within scope of this project, and it is more likely WestConnex will make much-needed public transport improvements in this corridor far more unlikely (for example, by diverting billions of dollars of public funding that could be spent on such improvements instead).

10.2.3 Assessment of cumulative impacts – construction

- The EIS states that cumulative impacts are most likely to occur because of concurrent construction activity (such as new M5 and M4 widening), and paints such impacts in an entirely positive light – for example, employment and economic stimulus opportunities, increased local employment opportunities, potential higher wages for construction workers, opportunity for local businesses to supply the goods and services. To consider these positive aspects as the first 'cumulative impacts' is bizarre, particularly given little evidence is offered to support these claims, and negative cumulative effects of the same are downplayed or ignored.
- There is no further mention in Chapter 14 of how any other negative impacts during construction would interact with each other or on other users of the area (residents, business owners etc.), which is surely one of the points of cumulative impacts. By definition, they involve the impact of things like loss of local amenity AND loss of local service AND loss of accessibility AND impacting on more vulnerable groups such as elderly populations AND so on.
- Some negative cumulative impacts of construction are given in Appendix M (p. 95): "Construction of the project and M4 West (Parramatta to Homebush) would overlap, resulting in extended durations of construction impacts. At a local and regional level, for commuters, public transport users, pedestrians and cyclists, social impacts related to travel delays, diversions and inconvenience, exposure to visual and noise amenity impacts would be prolonged." Undertaking such a rudimentary analysis for a project of this size and scope is insufficient and no doubt seriously downplays what can be expected to be serious and prolonged impacts on people.
- The EIS discusses a construction period of 3 years. It proposes a plan for 24-hour operations of heavy truck removal, with many places experiencing 20-40 heavy truck movements an hour 24 hours a day, as over 1.7 million cubic metres or some 16 million tonnes of spoil are removed. It is also proposed that trucks run up and down Wattle Street adjacent to residential areas where traffic is usually light between 9pm and 6 am. According to the EIS, there will be no respite to residents who will be subjected to 24-hour noise, dust and truck movements due to this approach to spoil removal.
- All the trucks from Haberfield and Ashfield would congregate in Concord through Homebush and beyond for 24 hours a day, subjecting many people along that corridor to extended period of noise and dust exposure. The current proposed mitigation measures for this cumulative impact are inadequate. WAG members and other residents have directly witnessed and photographed the failure of WestConnex contractors at St Peters and western Sydney to properly cover and wash down trucks and construction site entry / exit points as it has removed asbestos-contaminated and other toxic waste from the Alexandria Landfill to landfills in western Sydney, including Erskine Park. We see no reason to have

confidence in the proponent to fully cover and wash down trucks and wheel bays on the proposed spoil removal sites for the M4 East.

- There is significant local resident concern on the impact of tunnelling beneath and around properties and the possibility of structural damage to old homes, particularly as the M4 East tunnel will run as little as 8m below some properties. The assessment of properties for which structural condition reports are provided should have covered a greater area than is proposed in the EIS.

10.2.4 Assessment of cumulative impacts – operation:

- No serious attempt is made to document or analyse negative cumulative social and/or economic impacts of the operation of this project are outlined.
- This section of the EIS refers to other chapters when covering management of changes to amenity, traffic and access. However, this is the section in which the social and economic impacts of these should be addressed in detail.
- Mitigation works, such as those to reduce impacts on social infrastructure, centre predominantly around consultation and lack clear and decisive measures in which tangible effects (such as noise, vibration and visual amenity) will be addressed.
- Given the extent of the social and economic impacts that will occur as a result of the project, the list of proposed mitigation actions is insufficient in both impacts that it addresses and the detail of responses given for the matters that are addressed.

10.2.5 Inconsistent assessment of level of impacts between the SIA and EIA

The seemingly inconsistent assessment of level of impacts between the SIA (Appendix M) and EIA (Appendix N), and Chapter 14 Social and Economic, raising concerns as to the information left out of the ‘main document’ and included only in Appendices.

10.2.6 Minimal mention of health and heritage impacts

- While seemingly significant heritage effects are identified in Appendix M as well as concerns raised by local councils regarding this, the only mention in the main document’s Chapter 14 Social and economic comes briefly under ‘Section 14.4.2 Changes in amenity’ (‘loss of heritage items and changes to streetscapes’) and concerns brought up during community consultation (Section 14.1.4).
- Health impacts are mentioned in Appendix M (p. 87) as ‘worst case assessments without mitigation would likely generate health impacts for some receivers during some works’, though these are not elaborated on in Chapter 14. Mentions of ‘health’ are otherwise limited to issues raised during community consultation (section 14.1.4), under construction impacts and operational impacts as ‘Health of the community’

(though no further information is given), and in broad terms (such as ‘Relocation health risks’ or ‘important for community health’).

- Given community health concerns (and those raised during consultation with the public and councils), this issue needs to be better addressed to ensure the appropriate ‘mitigation’ measures as mentioned are followed.

10.3 Other issues raised during the community consultation process

WAG members attended community consultation sessions held by the proponent following the release of this EIS in which we spoke to the GHD consultant. We were disturbed to be told by this consultant that:

- She relied heavily on "research" supplied to her by the proponent, rather than consulting with affected communities and conducting a full socio-economic analysis herself. She seemed to use little original source material independently collected. She said the major problems with the SIA were due to "limited time factors."
- Dobroyd Primary and St Joan of Arc schools were NEVER considered to be 'social infrastructure providers'. Nor was the long-standing Ella Community Child Care and Ella Centre So they were never consulted or considered for the purposes of the SIA report, despite their proximity to project area, plus the location of the City Link portals and significant proposed Waratah St and Mortley St changes. The consultant seemed quite unaware of local streets and where Dobroyd and St Joan of Arc were actually located before being informed by WAG members.
- The consultant admitted that the only residents 'consulted' for the SIA were those whose homes were being acquired. This 'consultation' appears to have only been undertaken by the proponent or the RMS for the purpose of acquiring the properties, rather than attempting to assess the impact of the same.
- When challenged as to the inappropriateness of the proponent providing “counselling” offered by the proponent as a means of mitigating the social impact compulsory acquisitions, the consultant implied that such problems were caused by a "lack of time to do things properly”.

10.4 Conclusion

WAG formally and strongly objects to the negative and irreversible socio-economic impacts that will result if WestConnex, including the M4 East, is built, and to the inadequate and not fit for purpose analysis of the same undertaken in this EIS. We ask the Minister for Planning to reject the WestConnex M4 East project.

11.0 Objection to the flooding impacts and insufficient analysis of such impacts in this EIS

WAG objects to the impact the WestConnex project, including the M4 East, on flooding impacts and hazard risks, and the failure of this EIS to properly investigate and report on these risks.

The analysis contained in the EIS fails to meet at least one of the SEARS, *"Soil and Water - including but not limited to: Identification of potential impacts of the project on existing flood regimes, consistent with the Floodplain Development Manual (Department of Natural Resources, 2005), including impacts to existing receivers and infrastructure and the future development potential of affected land, demonstrating consideration of the changes to rainfall frequency and/or intensity as a result of climate change on the project. The assessment shall demonstrate due consideration of flood risks in the project design."*

In general, the assessment of flooding and any necessary stormwater upgrades and improvements has not been addressed sufficiently within the EIS. Much of the EIS states that further detailed investigations will need to be undertaken during detailed design and construction planning. It is not acceptable that so much of this investigation has not taken place as part of the EIS itself, which would have given affected Councils and residents an opportunity to review, assess and comment on the risks identified. It is also not acceptable to leave these investigations to simply be summarised in a Submissions Report, as a condition of Planning approval, or once the project starts, when the community will have little to no ability to comment on or modify the proposed approach.

The key stormwater and flooding issues are as follows:

- The assessment of flooding and any necessary stormwater upgrades and improvements has not been addressed sufficiently within the EIS
- There are unacceptable proposed increases in flooding to downstream properties
- There are potential increases in stormwater volumes within the local council (Ashfield Council)'s stormwater pit and pipe network.

In general, the assessment of flooding and any necessary stormwater upgrades and improvements has not been addressed sufficiently within the EIS. Much of the EIS states that further detailed investigations will need to be undertaken during detailed design and construction planning.

Section 17.3.1 Volume 1B of the EIS states, *"The cut-and-cover section of tunnel at the Parramatta Road interchange is located across an existing overland flow path that*

operates during storms more frequent than the five year ARI. To construct the cut-and-cover section, the existing stormwater drainage line that crosses Parramatta Road at Chandos Street would be converted to a siphoned arrangement to direct overland flows along Parramatta Road and Bland Street. This mitigation measure would be further developed during detailed design and construction planning." Such an arrangement could result in increased potential flooding to downstream land, with additional impact and/or volume of water into the local stormwater pit and pipe network.

Section 17.3.2 Volume 1B of the EIS states, *"The investigation found that construction activities have the potential to exacerbate flooding conditions in adjacent development at a number of locations along the project corridor. While the greatest impacts are associated with construction ancillary facilities C3a and C10, adverse flooding conditions arising in adjacent development are also associated with construction ancillary facilities C1, C4, C5, C6 and C9. There is also the potential for all 10 construction ancillary facilities to affect local catchment runoff; local stormwater management controls would be implemented to manage this impact."* This level of detail is insufficient, and further information is needed on what these stormwater management controls are. Again, the approach chosen could result in increased potential flooding to downstream land, with additional impact and/or volume of water into the local stormwater pit and pipe network.

Section 17.3.2 Volume 1B of the EIS states, *"The construction ancillary facility would obstruct overland flow that travels west across Parramatta Road at Chandos Street. Depths of overland flow along Parramatta Road between Chandos Street and Bland Street would increase by up to 120 mm. There would be a slight increase in the extent of inundation within development located at the corner of Parramatta Road and Chandos Street. Flood levels within properties along Bland Street and Parramatta Road north of Bland Street would be increased by up to 120mm."* Flooding properties by more than 10mm, let alone an additional 120mm, is unacceptable.

Section 17.4.a Volume 1B of the EIS states, in reference to Wattle Street: *"Localised increases in peak PMF levels in the vicinity of Loudon Avenue, by a maximum of 0.04 m. An increase in the depth of inundation in Dobroyd Parade of between 0.1 and 0.3 m across the range of potential storm events."* Parramatta Road: *"An increase in peak 100 year ARI flood level in Parramatta Road, north of Chandos Street in Haberfield, to a maximum of 0.32 m, resulting in an increase in the extent of inundation in the adjacent commercial property. An increase in peak 100 year ARI flood level on the corner of Parramatta Road and Bland Street by a maximum of 0.12 m. Similar increases would be experienced at three commercial properties in Parramatta Road, north of Bland Street, Haberfield. Localised increases in peak 100 year ARI flood levels along Bland Street, between Parramatta Road and Curt Street in Ashfield, by a maximum of 0.07 m. These*

increases in peak flood levels have the potential to impact one residential property in Bland Street. A reduction in peak 100 year ARI flows and flood levels along the Sydney Water trunk drainage line downstream (north) of Bland Street in Haberfield, due to the attenuating effect of the stormwater detention tank and the diversion of a portion of the catchment at the tunnel dive structure to the tunnel drainage system. An increase in peak PMF levels along Parramatta Road between Chandos Street and Walker Avenue in Haberfield, to a maximum of 0.48 m north of Chandos Street, but typically 0.05 m or less." Again, flooding properties by these additional amounts is unacceptable.

Table 6.4 (Appendix Q) demonstrates significant increases in flooding on Dobroyd Parade caused by the proposed project. Further, section 6.2.8 (Appendix Q) states in relation to flooding on Dobroyd Parade, that *"the road would be trafficable for floods less than about a 5 year ARI".* This is of significant safety concern, as it implies that any flood greater than a 5 year ARI will make Dobroyd Parade - which is a highly trafficked and residential road - unusable and potentially dangerous.

Specific details of the location and possible upgrade/changes to stormwater structures have not been provided within the EIS. If there are to be direct connections to existing downstream stormwater system, then a detailed hydraulic assessment and understanding of the proposed performance of the system should have been provided as part of this EIS. Where the connection is likely to increase the impacts on the local stormwater system, details of how it would be upgraded to meet the increased demand from the project should also have been included.

With the substantial works being undertaken in the vicinity of the intersection of Chandos Street and Parramatta Road both north and south, this will pose a significant impact on the existing drainage network within this area. That is, the overland flow paths will alter, and the existing pipe network crossing Parramatta Road will no longer be functional. This will also have an adverse affect on the road network and neighbouring properties.

With the substantial works being undertaken in the vicinity of the intersection of Wattle Street and Allum Street this will pose a significant impact on the overland flow within this area. That is, the overland flow paths will alter and be diverted. This will also have an adverse affect on the road network and neighbouring properties.

With the substantial works being undertaken in the vicinity at the intersection of Ramsay Street and City West Link Road and Martin Street and City West Link Road this will pose a significant impact on the existing drainage system (both major and minor) within this area. That is, the overland flow paths will alter and the existing pipe network crossing the City

West Link Road will no longer be functional. This will also have an adverse affect on the road network and neighbouring properties.

WAG formally and strongly objects to the potential flooding impacts that WestConnex, including the M4 East, will cause if built, and to the EIS's inadequate analysis of these risks. We ask the Minister for Planning to reject the WestConnex M4 East project.

12.0 Objection to the impact on key waterways

WAG objects to the impact the M4 East project will impact on four main waterways and their associated sub-catchments with a fifth waterway close to the project footprint. A total catchment area of 1,553 hectares will potentially experience significant surface water quality impacts and other environmental impacts including soil erosion, pollution of groundwater, potential asbestos contamination in soils and stormwater runoff and contamination of water quality in local waterways.

- Construction work will cause potential contamination of downstream waterways and groundwater, impacting on aquatic and riparian habitats, unless strict EPA guidelines are enforced. WAG does not have confidence in this, given the repeated breaches we and local residents have witnessed in St Peters in regard to EPA guidelines and the removal of asbestos, and EPA's seeming failure to take action against the proponent as a result.
- Accidental leaks or spills of chemicals, fuels, oils and/or greases from construction plants and machinery, may result in pollution of local waterways and groundwater sources.
- During operation the main potential impacts on water quality are associated with discharge of treated groundwater, stormwater runoff during rainfall events and direct deposition of airborne particles, causing acute or chronic contamination of water quality in downstream waterways.
- To mitigate the potential surface water quality impacts, WestConnex is proposing to create water treatment plants, gross pollutant traps and spill-containment and water treatment basins.
- According to the M4 East EIS, the project will include the installation and operation of 6 water treatment plants to treat tunnel groundwater and dirty construction water prior to being discharged into local canals.
- During the operation of the project, a bio-retention basin of around 500 square metres is proposed at the Homebush Bay Drive interchange.
- Huge permanent sediment basins will have to be located at the Homebush Bay Drive interchange to accommodate contaminated runoff from the interchange in storm events.
- The project will result in increased VKT, and therefore more contaminants (brake and clutch dust, hydrocarbon particulates etc.) being deposited on roadways and washed into local waterways.

WAG formally and strongly objects to the potential impacts and risks to Sydney's waterways that will result if the WestConnex M4 East is built. We ask the Minister for Planning to reject the WestConnex M4 East project.

13.0 Objection to biodiversity impacts and failure of the EIS to properly assess these impacts

WAG objects to large-scale negative impact that WestConnex, including the M4 East, will have on biodiversity, and the failure of this EIS to properly consider those impacts.

WestConnex will greatly impact our environment and biodiversity. Huge amounts of space and parklands will be lost, including some of the last remnants of natural bushland in the inner west and south-west.

Typically an EIS downplays or dismisses the habitat value within a project footprint in order to remove or limit the biodiversity-promoting value that is there, and/or to understate the impacts of the project. This EIS is no exception, and it does this in a number of ways.

As with the rest of this EIS, there is also a failure to consider the negative impacts of the entire WestConnex route on biodiversity, both cumulative and otherwise, even as unsubstantiated “benefits” for the whole route are referred to repeatedly.

13.1 Insufficient field surveys

The EIS field surveys (observations in the field) are very limited in duration and season. The “short duration of surveys” is acknowledged (20-3) as well as the possibility that “seasonal species were not identified”(20-3).

For this EIS, field surveys occurred on one day (12/2/15: no number of hours specified) and one night (27/2/15: also no duration specified) in one area (not specified where), with additional surveys on 12/3/15 and 26/6/15 “to investigate areas not covered by the previous surveys” (20-3). In regards to the latter, it’s not specified where if a physical location is referred to, or whether it was day or night, or the duration.

Repeated sampling over some time period is really needed to develop anything representing a comprehensive survey. The failure of the proponents of this EIS to conduct this kind of service you are quite time limited as all EIS’s are, you are falling well short of what is a satisfactory, let alone a rigorous survey process.

It is apparent that the EIS flora and fauna surveys would not satisfy the requirements of the NSW Threatened Species Act NSW 1995.

13.2 Threat to Grey-headed Flying-foxes (GHFF)

The EIS acknowledges that Grey-headed Flying-foxes (GHFF) use the area when foraging for food. An evening field study, consisting of two evenings only, confirmed this.

The project footprint is well within the nightly foraging range of the Clyde/Duck River camp, as well as other urban Sydney GHFF camps.

Urban GHFF camps have become important to the survival of the species, which is now classed as Vulnerable under Federal and State legislation.

Neither street trees nor private garden trees have been included in loss of area calculation (see more on this below). Trees in these “unaccounted for” areas can be and are very important food resources for GHFF feeding.

This foraging habitat should have been quantified in their assessment and their conclusion re GHFF foraging habitat impact. As a result the area and significance of foraging habitat has been understated.

On 20-16, the EIS states that “These planted trees do not constitute habitat critical to the survival of the Grey-headed Flying-fox.”

As there is currently no declaration by either the NSW or Federal Government as to what constitutes critical habitat, this statement is disingenuous.

Stating under the heading Cumulative Impacts (20-20) that the combined WestConnex projects would result in “the removal of mainly planted vegetation and associated fauna habitats” (20-20) is not an adequate assessment of the whole WestConnex’s project impact on Grey-headed Flying fox foraging habitat.

This species in its increasingly urban environment relies on much planted vegetation. Indeed the number of urban camps now in the Greater Sydney area is a result of the available food provided by such urban planted landscapes in proximity to camps – themselves also located in some cases amongst planted vegetation, especially as suitable habitat elsewhere in the species range has significantly contracted since European occupation (estimated at 50 % loss: Eby,P).

The whole WestConnex project will impact on urban GHFF foraging habitat to a significant degree.

13.3 Threat to Micro-bats (Large-footed Myotis and Eastern Bentwing Bat)

Given the very limited field surveys undertaken and poor quality recording of calls during these, the EIS cannot substantiate claims about the extent of use of existing infrastructure as roosting sites, nor claims about breeding habitat. The EIS claims there is no breeding habitat in the study area, but a breeding habitat can also include roof and wall cavities in the absence of tree hollows.

Nor is there substance to the claims about re-colonising new roosting sites, such as continuing to use culverts post construction disruption (20-16). There is no evidence quoted to indicate this will happen.

13.4 Failure to properly consider the loss of all kinds of vegetation

"Vegetation" is stated in the EIS as being substantially planted vegetation – "Planted trees and gardens", including parkland, involving 15.7 hectares made up of 12.9 hectares of planted trees and screening vegetation (although inconsistently, the EIS also refers to 13.3 hectares on page 27-11), and 2.8 hectares of grassland with scattered trees (i.e. parkland).

While the loss of parkland to the M4 East would be significant, the loss of green space this part of the tollway would cause is even worse than stated in the EIS.

The EIS has not quantified the loss in area and nature of vegetation from private gardens and street trees. This should have been done, since they claim they are providing in this EIS "a detailed assessment of ecological issues including impacts on flora and fauna".

The EIS included these areas in the 83 species number cited (20-6). So it also should have been straightforward to map the coverage and approximate area covered by this private/street vegetation. This was not done. This downplays the role and the extent of vegetation of any sort. Irrespective of whether it is planted or remnant, it is potentially important and can play an ecological role.

The EIS therefore makes no real assessment of the nature and quality of the planted vegetation, which can stand in to some extent for remnant vegetation if well planned and maintained.

Dismissing it as just "planted" - eg on 20-13 "All the above creek lines only have planted vegetation within their riparian corridors …." - fails to provide any further detailed (qualitative or quantitative) assessment as to ecological value as claimed.

All city vegetation is important in the context of preventing, and countering the urban heat island effect, a recognised phenomenon. For instance, see http://www.cityofsydney.nsw.gov.au/vision/towards-2030/sustainability/carbon-reduction/urban-heat-island.

There are also urban biodiversity benefits of both planted as well as remnant vegetation well acknowledged by others.

For example, see September 2015 (Vol. 16, No. 3) of *Ecological Management and Restoration (EMR)* (pp. 206-213). Trees and shrubs (the latter of which is not mentioned in

the EIS) “have the potential to provide nesting and shelter habitat for common birds and possums” (20-12). The EIS also fails to mention that such vegetation also provides food resources either directly or indirectly. This is a sloppy omission, but again it downplays and limits the vegetation’s role.

The EIS’s failure to quantify or assess the ecological role of private gardens and street plantings means that its comments about vegetation and connectivity do not tell the whole story, and so the potential connectivity (and ‘stepping stones’) that exist via this vegetation is ignored.

Some animal species manage quite well in small and fragmented patches of vegetation, and providing that patch distance is not too great other species are able to move between and utilise such patches.

Suburban gardens are an example of this even where there is no direct house to house connectivity and there are roads and footpaths separating areas; an example animal species would be the once common Superb Blue Wren, a small bird species which moves between home gardens finding necessary resources (nesting sites, shelter, food) quite satisfactorily. Ditto Blue Tongue Lizards, also once common but now in decline in urban areas.

There is some acknowledgement in the EIS that existing patches “may be used as ‘stepping stones’ for fauna movement”. However, there is no “may” about it. Such stepping stones are critical for fauna crossing and leaving cities. It is known this does happen, and that it is important for migratory species, such as the Yellow-faced Honeyeaters that make annual migrations through Sydney. Lack of connectivity disadvantages some, but by no means all native species.

13.5 Failure to consider cumulative and wider impacts of biodiversity loss

20.4.7 of the EIS says: “These losses in biodiversity are likely to be restricted in area, given their location in highly modified environments” (26-10).

Apart from this being an unsubstantiated opinion, this statement also ignores the fact that highly modified environments are synonymous with cities. In fact, it’s one of the strongest arguments for preserving the green spaces and associated vegetation that *do* exist in urban environments. We can’t afford to lose more havens for wildlife and biodiversity within highly modified areas than we already have.

This is where cumulative impacts are more acutely felt, and to dismiss them leads to a ‘death by a thousand cuts’ scenario.

It is fatuous to say (20-15) that “The removal of planted vegetation would result in minimal fragmentation (i.e. loss of connectivity between vegetation), given the already fragmented state”.

There is no mention of any compensatory parkland or other green space creation. Why should WestConnex be permitted to simply demolish the 15.7 hectares described in the EIS without creating any alternative/s?

The conservation of urban biodiversity has profound benefits for human wellbeing in regards to physical and psychological health – e.g. Turner et al 2004: *Global Urbanisation and the separation of humans from nature*, Bioscience 54 585-590. Yet the social value to people is not addressed in this EIS at all.

There is also no attempt made in this EIS to assess the loss to biodiversity across the whole WestConnex project, including the M4 widening, King Georges Interchange, M5 duplicate and the linking M4/M5 project. A Southern Motorway (F8) is also referred to in the EIS which would threaten wetland. This is a serious deficiency in the EIS, particularly given that the “benefits” of the entire WestConnex and additional motorways such as the F8 are repeatedly cited in the EIS as justification for building the M4 East section.

13.6 Conclusion

WAG formally and strongly objects to the negative impact the WestConnex project, including the M4 East, will have on Sydney’s biodiversity if it is built, and the failure to properly assess these risks in the EIS. We ask the Minister for Planning to reject the WestConnex M4 East project.

14.0 Objection to the destruction of Sydney's heritage

WAG objects to large-scale destruction of heritage areas and buildings cited in the M4 East EIS that WestConnex, including the M4 East, will cause.

WestConnex will negatively impact on some of Sydney's most important heritage sites, which are zoned as Heritage Conservation Areas by the NSW Government and are significant not only to local communities but to all Australians. Many homes and heritage items are slated for demolition in Ashfield and Haberfield as part of WestConnex Stage 1 and the heritage suburbs of Newtown, St. Peters and Enmore will all be hugely impacted by Stage 2 of the proposed project.

Haberfield was designated a State Conservation Area in 1985 and was added to the register of the National Estate in 1991. The M4 East EIS notes that 53 properties within the Haberfield Conservation Area will be demolished, "permanently (removing) a substantial portion of the built heritage items fronting Wattle Street." This will have a detrimental effect on the heritage value of the area as a whole even before the impacts of the M4 East's additional traffic, roadways, ventilation outlets and more - all of which will also negatively impact the area's heritage value - are taken into account.

As Ashfield Council's heritage consultant noted in their submission to this EIS:

"Haberfield's gridded layout of development is like a patterned quilt, laid out upon the undulating topography of its broad peninsula landform. Within the pattern, individual squares are worked differently, but coalesce to make the whole.

The Wattle Street interchange, as much as it is possible to be appreciated from its current stage of design development, will create a large hole in the quilt, dismissing the pattern and the squares within it. It is difficult to see how this removal of a structural part of the significant pattern can be acceptably mitigated, to any acceptable degree. A disruptive patch is being sewn in."

WAG agrees with this assessment.

14.1 Heritage items to be destroyed for the M4 East if built

According to the M4 East EIS, the following listed or potential heritage items will be demolished:

Listed heritage items

- 11 and 23 Sydney Street, Concord, Rare examples of Victorian houses in Canada Bay

- 64 Concord Road, Concord, example of transitional Victorian/Federation house
- 9 Wattle Street, Haberfield, an example of John Spencer-Stansfield's Design No 1
- 19 Wattle Street, Haberfield
- 21 Wattle Street, Haberfield
- 23-25 Wattle Street, Haberfield
- 35 Wattle Street Haberfield
- 37-39 Wattle Street Haberfield
- 41-43 Wattle Street, Haberfield
- 51 Wattle Street, Haberfield
- 53 Wattle Street, Haberfield
- 46 Martin Street, Haberfield
- 164 Ramsey Street Haberfield.
- 92-94 Chandos Street, Haberfield
- 96 Chandos Street Haberfield

Potential heritage items to be demolished:

- 2 Short Street East, Homebush – a fine example of interwar bungalow with Arts and Crafts style details
- 15 Young Street, Concord – an example of a Federation Arts and Crafts style house with unusual decorative pressed metal oriel window apron
- 54C Sydney Street, Concord – an unusual example of an interwar bungalow with Arts and Crafts influences
- 56 Sydney Street, Concord – an example of a Federation bungalow
- 71 Concord Road, Concord – an example of a good intact transitional Federation/interwar bungalow

Properties proposed for demolition within the Haberfield Conservation Area

– 53 houses

– 29 of these contributory to the values of the Conservation Area

– 2 intact tree lined streets – Sydney & Edwards Streets

– Opening the back fences of other houses to the public domain

Properties proposed for demolition within the Powells Estate Conservation Area

– 11 dwellings

– 10 of these are contributory to the values of the Conservation Area

– 2 are individually listed Heritage Items

Partial demolition with major consequences

– Wesley Uniting Church, 81 Concord Road

> This destruction will result in a permanent scar on the historic fabric of the world's first garden suburb and also cut off the western corner of the suburb from the rest of this treasured precinct. The EIS states that this proposal will have a major adverse impact on Haberfield and the overall project will have a major cumulative impact on the Haberfield Conservation Area. It does not propose any mitigation or restitution for this loss. (*Definition of Major Adverse Impact p 19-11, Table 19-4 EIS Section 1B: "Actions that would have a severe, long-term and possibly irreversible impact on a heritage item. Actions in this category would include partial or complete demolition of a heritage item or addition of new structures in its vicinity that destroy the visual setting of the item. These actions cannot be fully mitigated*. ")

WAG is also deeply concerned that full details of the extent of this destruction were only made public a few months before this EIS was released. Yet contracts may already have been signed and commitments made to commence construction when the full impacts of the development may only be coming to the public attention.

It is also important to note that the M4 East is only one section of WestConnex. If future stages of the project proceed, further heritage areas will be destroyed - including listed items on the site of the proposed St Peters Interchange and the Stage 3 tunnel between Haberfield and St Peters. No consideration is given in this EIS to the cumulative impacts of the heritage destruction WestConnex would cause across Sydney, even though the benefits of the entire WestConnex are repeatedly cited as justification for building the M4 East.

14.2 Concerns raised by National Trust of Australia (NSW)

The National Trust raised a number of concerns about heritage destruction in its 2014 submission to the M4 East concept design:

- Over the past fifteen years the Trust has continued to express concern at the heritage impacts of inner urban motorway proposals and has supported mass transport options such as light and heavy rail in preference to inner urban motorways.
- While acknowledging that the increased mobility and affluence of our society and an expanding population require much improved transport facilities, the National Trust opposes further motorways being brought into the inner suburbs and central business district if they threaten areas of historical, architectural, scenic and social importance.
- The National Trust believes that the provisions of public/private partnership agreements for urban motorways should be made public and that such agreements must not contain penalty provisions for compensation payments to a motorway operator if a public transport system competes effectively with the motorway.
- The National Trust would oppose public/private agreements that disadvantage the public who do not choose to use the toll roads constructed under those agreements and believes that massive expenditure on motorway development will divert much needed public and private investment away from public transport development which can move large numbers of people more effectively and with much less adverse heritage impact.
- The constant daily movement of large transport trucks severely degrades the urban environment and the National Trust urges that rail transport should be the preferred means for transporting container goods related to Port Botany and Sydney Airport. The Trust would oppose motorway proposals which promote increased large truck movements through urban precincts, particularly those with heritage significance.
- The National Trust acknowledges that inner city motorway development will be inextricably linked to residential/commercial redevelopment of higher densities in the zones adjoining the
- motorway and consequently, would oppose such development, or elements of that redevelopment when it: –
    - *impacts upon, or degrades the values of adjoining, Heritage Conservation Areas*
    - *involves the demolition of Listed Heritage Items*
    - *involves the demolition of places which have been removed from Heritage Lists on non heritage-based grounds*
    - *involves the demolition of places which, in the Trust's view are of indisputable heritage significance, but which have been denied statutory heritage recognition.*

The National Trust has had a long history and involvement in campaigning with the community to protect inner urban heritage.

In 1972 the National Trust opposed the North-Western and Western Expressways which would have cut a swathe through Glebe, demolishing 800 homes and the property “Lyndhurst”, to the steps of the Sydney Town Hall.

On 26 February, 2014 the Board of the National Trust of Australia adopted a Policy on the Heritage Impacts of Urban Motorways. This Policy built on and reiterated earlier positions and policy statements including:

- National Trust: Policy Statement on Urban Freeways (1976)
- National Trust Policy on Urban Freeways (1981)
- National Trust Discussion Paper: Towards a Transport Policy for the National Trust (1989)
- National Trust Policy Paper: Transport – The Heritage Implications (1995)
- Trust Alert: Motorway proposals threaten inner city Urban Conservation Areas (2005)

The National Trust also has an extended policy on the heritage impacts of urban motorways. The following excerpt is taken from the 2014 version of this policy:

1. While acknowledging that the increased mobility and affluence of our society and an increasing population require much improved transport facilities, the National Trust will oppose further motorways being brought into the inner suburbs and central business district if they threaten areas of great historical, architectural, scenic and social importance.
2. The National Trust will oppose the loss of public parklands for inner urban motorway construction, including both permanent loss involved with a motorway route/connection ramps or shorter term alienation during the construction phase.
3. The National Trust believes that the provisions of public/private partnership agreements for urban motorways should be made public and that such agreements must not contain penalty provisions for compensation payments to a motorway operator if a public transport system competes effectively with the motorway.
4. The National Trust would oppose public/private agreements that disadvantage the public who do not choose to use the toll roads constructed under those agreements.
5. The National Trust believes that massive expenditure on motorway development will divert much needed public and private investment away from public transport

development which can move large numbers of people more effectively and with much less adverse heritage impact.

6. The National Trust believes that the constant daily movement of large transport trucks severely degrades the urban environment and will urge that rail transport should be the preferred means for transporting container goods related to Port Botany and Sydney Airport. The Trust would oppose motorway proposals, which promote increased large truck movements through urban precincts, particularly those with heritage significance.
7. The National Trust acknowledges that inner city motorway development will be inextricably linked to residential/commercial redevelopment of higher densities in the zones adjoining the motorway and consequently would oppose such development or elements of that redevelopment when it:
    - impacts upon or degrades the values of adjoining Heritage Conservation Areas,
    - involves the demolition of Listed Heritage Items,
    - involves the demolition of places which have been removed from Heritage Lists on non heritage- based grounds,
    - involves the demolition of places which, in the Trust's view are of indisputable heritage significance but which have been denied statutory heritage recognition.

The National Trust's view is that the heritage impacts of the WestConnex Motorway are severe. WAG agrees with this assessment.

We note that The National Trust also questioned whether the financial commitment for the total project in today's dollars of $15 billion (inevitably set to rise) would be much better allocated to public transport, which in all its forms (heavy rail, light rail and buses) has much greater potential to remove motor vehicles from roadways, reducing traffic congestion. Again, WAG agrees with this.

14.3 Conclusion

WAG formally and strongly objects to large-scale destruction of heritage areas and buildings cited in the M4 East EIS that WestConnex, including the M4 East, will cause.

WAG also formally and strongly objects to the destruction of Sydney's overall heritage that will be caused by WestConnex, including the M4 East, if it is built.

We ask the Minister for Planning to reject the WestConnex M4 East project.

4873

[redacted]

From: Bev JAN [redacted]
Sent: Monday, 2 November 2015 8:45 AM
To: information-Planning
Subject: WestConnex M4 East SSI 6307 submission

To the Secretary, Dept Planning & Environment

I am writing to express my strong objection to the SSI 6307 WestConnex M4 East EIS and to formally request a response to my concerns.

I object to the entire WestConnex for a number of reasons. Global experience and research has shown conclusively that these kinds of toll road mega-projects are hugely expensive and counterproductive. WestConnex will increase air pollution and traffic, and expose NSW taxpayers to unacceptably high levels of financial risk. It is not a long-term solution to Sydney's congestion problem.

The fact that the State Government has already signed multi-billion dollar contracts for WestConnex before this EIS was even placed on public exhibition undermines community confidence that this is a genuine consultation process.

Failure to abide by the Major Projects Assurance Framework and employ best practice governance from project inception has also greatly reduced community confidence in WestConnex, including the M4 East EIS. The Community is being asked to comment on an EIS that is deficient in analysis of project justification.

A condition of consent for the M4 East should include adherence to the NSW Government's Major Projects Assurance Framework. Vital gateway reviews which should have been undertaken before the preparation of the EIS (and certainly before awarding construction contracts) should be commissioned, completed and made publicly available before any further approvals are issued.

In regards to this WestConnex M4 East proposal, I strongly object to the following points, and I ask you to respond to each in your reply:

• I strongly object to the lack of transparency in the entire WestConnex process. Billions of dollars of contracts have been let without a full business case having been released or the project being subjected to independent Gateway reviews.

• I strongly object to the short 55-day timeframe in which members of the community have been given to respond to the EIS for the M4 East. This document runs to nearly 5,000 pages, but the public was only given 55 days to

respond – despite hundreds of people calling and emailing the Minister for Planning to explain why this was not enough time.

• I strongly object to AECOM being paid millions of dollars of public funds to play the key role in the EIS for the M4 East. AECOM has been awarded other WestConnex contracts that give it a huge vested interest in the project going ahead, and this is demonstrated by the lack of independence and superficial analyses that characterise this EIS. In addition, AECOM has been sued for being negligent in relation to its past traffic studies, and has already paid more than $250m in settlement costs.

• I strongly object to having each section of the WestConnex assessed separately. Vague rationales for the whole project are used to justify the serious negative impacts of each stage. Projects such as the Southern motorway F8, which are not even at a planning stage, are included in the argument for the project without explanation.

• I strongly object to the failure to consider total negative impacts against the total claimed positive aspects. While the M4 East EIS repeatedly makes references to the positive impact of the entire WestConnex when arguing for the project, it fails to consider the negative impacts of the whole project – such as loss of housing, heritage and biodiversity.

• I strongly object to the failure to provide enough data to allow independent experts to verify the M4 East EIS's traffic analysis. For example, a detailed study undertaken by SGS Economics & Planning for the City of Sydney concluded that WestConnex would make traffic worse on Parramatta Rd, Victoria St and many local roads. The M4 East EIS claims it will improve traffic, but offers very little data that would allow experts to objectively assess this analysis.

• I strongly object to spending $15.4 billion for small savings that will not benefit most commuters. Instead of spending this amount of money to benefit a very small percentage of drivers in Sydney, and cut just one minute off overall road network traffic speeds, the NSW Government should be investing in public transport, traffic management solutions, and regional city centres to address traffic congestion and boost NSW's economic prosperity in the long term.

• I strongly object to the poor analysis of alternatives undertaken in the M4 East EIS. This section of the EIS is superficial and amounts to nothing more than a roundabout way of saying that the M4East tunnel project is preferred by WestConnex.

• I strongly object to the huge impact that the flow of cars and trucks out of tunnel exits. This will gridlock local roads throughout the Inner West.

• I strongly object to hundreds of residents being forced from their homes and businesses for the M4 East, and the failure of the EIS to assess the social impacts of this. Forcibly acquiring and destroying over 200 homes and businesses will result in massive social disruption in communities. There have been numerous reports of

homeowners and tenants being inadequately compensated for the loss of their properties. These acquisitions were in motion before the EIS was even completed. Yet the EIS Social Impact study failed to do any direct research on the impact of forced acquisitions on residents.

• I strongly object to the health risk and air quality analysis, which fails to assess the true impact of the M4 East. The claim is even made that WestConnex will improve local air quality – which will surely make it the first motorway in history to do so!

• I strongly object to the total inadequacy of the M4 East biodiversity assessment. This 'analysis' is based on insufficient studies. No attempt is made to assess cumulative impacts of the entire WestConnex project on loss of open space, gardens and other vegetation.

• I strongly object to the wholesale destruction of heritage homes and precincts. This is not acceptable, particularly for a project that will not resolve but add to Sydney's traffic congestion.

• I strongly object to the failure of WestConnex consultants to directly consult with business owners. Local business owners were not approached by WestConnex about the impact the M4 East would have on their livelihoods, despite the fact that many stand to see their businesses destroyed as thriving streets precincts are drowned in traffic.

I therefore call on the Minister for Planning to reject this proposal on the grounds that:

• Even the M4 East's inadequate traffic analysis shows that WestConnex will be at capacity by 2031.

• AECOM has not even met the basic Planning Secretary's requirements in its assessment.

• This is an outdated project that is not consistent with current trends in thinking about public transport, urban planning and livability of cities.

I recognise there is pressure on several NSW Departments, including Planning and Environment, to approve this project. I remind public servants of their obligation to the public and to the potential social, health and economic costs of spending $15.4 billion on WestConnex when it provides no solution to Sydney's transport needs.

Yours sincerely,

Bev JAN

Sydney NSW 2049, Australia

[redacted]

Public Health Association
AUSTRALIA

Public Health Association of Australia

Submission to the NSW Government Department of Planning and Environment on the WestConnex M4 East Project

Director – Infrastructure Projects
Department of Planning and Environment
Number: SSI 6307
Major Projects Assessment
GPO Box 39
Sydney NSW 2001

Contact for PHAA:
Jude Page
NSW Branch President
nswphaa@gmail.com

4 November 2015

Introduction

The Public Health Association of Australia

The Public Health Association of Australia Incorporated (PHAA) is recognised as the principal non-government organisation for public health in Australia and works to promote the health and well-being of all Australians. The Association seeks better population health outcomes based on prevention, the social determinants of health and equity principles. PHAA is a national organisation comprising around 1900 individual members and representing over 40 professional groups.

The PHAA has Branches in every State and Territory and a wide range of Special Interest Groups. The Branches work with the National Office in providing policy advice, in organising seminars and public events and in mentoring public health professionals. This work is based on the agreed policies of the PHAA. Our Special Interest Groups provide specific expertise, peer review and professionalism in assisting the National Organisation to respond to issues and challenges as well as a close involvement in the development of policies. In addition to these groups the Australian and New Zealand Journal of Public Health (ANZJPH) draws on individuals from within PHAA who provide editorial advice, and review and edit the Journal.

In recent years PHAA has further developed its role in advocacy to achieve the best possible health outcomes for the community, both through working with all levels of Government and agencies, and promoting key policies and advocacy goals through the media, public events and other means.

Vision for a healthy population

The PHAA has a vision for a healthy region, a healthy nation, healthy people: Living in a healthy society and a sustaining environment, improving and promoting health for all.

PHAA's Mission

Is to be the leading public health advocacy group, to drive better health outcomes through health equity and sound, population-based policy and vigorous advocacy

Executive Summary

By 2050, outdoor air pollution is projected to become the major cause of environmentally related deaths worldwide. Motor vehicles are the major source of urban air pollution. New road infrastructure increases vehicle use, which is estimated to increase significantly in Sydney due to population growth and limited investment in public transport. Over the last 20 years, a vast body of medical and scientific research in the area of air pollution and health has emerged. The known health impacts of air pollution are serious. These include increases in heart disease, stroke, cardiac arrhythmias, lung cancer, poor lung development, asthma, and new research on peri-natal impacts. These effects occur both from short-term exposure to even low levels of pollutants, as well as diseases caused from long-term cumulative effects. There is a substantive risk for respiratory problems, especially implications for lung growth in children, and exacerbating diseases for those with underlying chronic respiratory conditions.

Diesel vehicular emissions have been classified as a Group 1A carcinogen by the World Health Organisation, this is the highest level of evidence linking Diesel emissions as cancer causing. Diesel vehicular emissions are high in ultrafine particles. These particles, which are smaller than 1 micrometre in diameter, penetrate deep into lung tissue and cause inflammatory and thrombotic effects. The full extent of health impacts of ultrafine particles remains unknown at this stage and scientific research and understanding of these pollutants is evolving. There are, however associations between these particles and adverse health impacts, such as cardiopulmonary effects, through biological pathways.

The medical and scientific community has recently reviewed our national environmental protection measures for air pollutants in August 2014. The new guidelines confirm that we need to protect the public from the known and unknown health effects of air pollution. The research to date indicates that particulate matter is a non-threshold pollutant. This means that there is no safe limit below which health can be protected. There is, therefore, a shift in the medical and scientific community towards implementing an exposure reduction framework to safeguard public health.

Value and equity are important considerations when investing public money. If the WestConnex projects are developed as planned Sydney will have some of the most concentrated and expensive toll roads in the world and at least half of households in the Greater Western Sydney would find it difficult or unaffordable to use the toll roads. The costs of additional toll roads could put significant pressure on financially disadvantaged and low income families.

This submission from the PHAA relates to the Environmental Impact Statement for the WestConnex M4 East Project in Sydney. The project includes two 5.5 km three-lane tunnels, emission stacks, tunnel ventilation systems, widening of the existing M4 East motorway and removal of hundreds of homes to create interchanges. The M4 East Project is proposed to decrease travel time between Homebush Bay Drive to Parramatta Road and City West Link and to reduce congestion on Parramatta Road. The tunnels will have unfiltered ventilation stacks in residential areas in Sydney.

The M4 East proposal along with linked projects, the M5 East duplication and the M4-5 link projects are the bulk of the 33 km long road & tunnel project, collectively known as WestConnex.

There are several issues that we highlight in this submission that need to be addressed in terms of the protection of public health. The concerns of the PHAA regarding the WestConnex proposal relate to:

- The ventilation stacks will emit unfiltered emissions from heavy and light vehicles on a daily basis. These emissions are likely to impact on the quality of ambient air in the immediate surrounding radius of the stacks above acceptable levels regularly and potentially concentrate in other places such as south western Sydney.
- The placement of unfiltered emission stacks in densely populated areas, with high numbers of preschool and school children, older people and residences, is contrary to our new national environmental protection framework for population exposure reduction.
- Emissions at tunnel entrances and exits will expose the nearby population to vehicular emissions at ground levels.
- The predicted in-tunnel concentrations of particulate matter as calculated in the NorthConnex Environmental Impact Statement is likely to be very high, and may therefore have health impacts on tunnel users, particularly regular users, pregnant women and people with existing health conditions.

- The introduction of toll charges to roads that are currently free and new tolls will make travel on the M4 East unaffordable or increase financial pressure for at least half the population of Greater Western Sydney and people with low incomes such as casual workers, single mothers and people living with disabilities.

Summary of recommendations and key points

1. The PHAA objects to the WestConnex proposal as adequate consideration of the health impacts of the project on local communities and road users has not been demonstrated.

2. Modelling accuracy depends on the assumptions and parameters used, and cannot be fully relied upon given the degree of uncertainty in traffic numbers, topography and the projected amount of vehicular emissions. We recommend that local microclimate conditions be assessed prior to decisions regarding the height of emission stacks.

3. Purported benefits of the WestConnex proposal are subjective and not based on evidence.

4. Alternatives such as surface orbital routes or railway transport that may assist in mitigation of risks to health, whilst ensuring efficient freight transport have not been considered.

5. The PHAA recommends installation of efficient engineering to ensure exhaust stacks do not release large quantities of harmful particulate matter onto local communities and others areas across Sydney. Operating procedures need to ensure the engineering design/filtration remains switched on or that adequate atmospheric dispersion occurs.

6. The PHAA urges intersectoral collaborative approaches between government planning departments, roads ministries, private developers, and the medical and scientific communities to ensure there is protection for public health.

7. Given the substantive known health risks, and emerging data on risks to health from ultrafine particulates, we urge policymakers to apply the precautionary principle to mitigate risks to public health.

8. Consideration be given to affordable alternative transport to private cars as a fairer, cleaner and healthier way to improve the mobility of most very low income outer suburban residents.

Health Equity

As outlined in the Public Health Association of Australia's objectives:

> *Health is a human right, a vital resource for everyday life, and a key factor in sustainability. Health equity and inequity do not exist in isolation from the conditions of society that underpin people's health. The health status of all people is impacted by the social, political, and environmental and economic determinants of health. Specific focus on these determinants is necessary to reduce the unfair and unjust effects of conditions of living that cause poor health and disease.*

Population Health Impacts of Air Pollution

It is well known from the medical literature that long-term exposure to air pollution results in significant cardiopulmonary risk in adults, lung cancer, increased all-cause mortality, and long term respiratory decline in children[1 2 3 4]. Studies also show exposure to high concentrations of particulate matter pollutants increases cardiac arrhythmias, [5] acute myocardial infarcts,[6] and stroke.[7] In addition, there is emerging evidence suggesting a steep risk for mortality from cardiac disease even at low levels of exposure to vehicular pollutants.[8]

In March 2014, the World Health Organization (WHO) reported latest estimates that in 2012 around 7 million people died as a result of air pollution exposure - or 1 in 8 global deaths, confirming that air pollution is now the world's largest single environmental health risk.[9] Diesel emissions have been classified by the WHO as carcinogenic, and are particularly toxic as they contain higher concentrations of ultrafine particulate matter as well as polycyclic aromatic hydrocarbons.

Recent OECD statistics suggest that the number of deaths from air pollution in Australia jumped from 882 in 2005 to 1483 in 2010, representing an increase in death of 68 percent.[10] Australia was one of the fourteen countries that saw death rates from air pollution increase. It is proposed air pollution related to road transport and a switch to diesel vehicles accounted for a large percentage of this increase.

Urban transport plays a large role in relation to 'new' pollutants, in particular ultrafine particles, with their concentrations elevated by up to one or two orders of magnitude in proximity to busy roads or tunnels, respectively.[11] There is growing evidence of an association between high concentrations of ultrafine particles and mortality.[12] These particles once emitted remain in the atmosphere for a short time, after which photochemical reactions tend to convert them into larger size secondary particulates. [13] It is therefore difficult to predict the behaviour of these emissions using standard modelling methods. In addition, the health effects of secondary particles remain unknown requiring further epidemiological study.

There appears to be no lower limit for exposure to particulates[14] below which populations are safe, especially for ultrafine particulates. This has particular implications for our national environmental protection standards, which guide industrial and vehicular infrastructure monitoring. Health effects can occur with levels of exposure below these standards, hence there is a shift in the scientific community towards ensuring the lowest possible population exposure to vehicle emissions.

Components of vehicular and industrial air pollutants

The types of vehicular emissions include particulate matter (PM) of different sizes (PM10, PM 2.5, PM1), ultra-fine particles, sulphur dioxide, nitrogen oxides, carbon monoxide, benzene (a carcinogen), formaldehyde, ground level ozone, and volatile organic compounds from diesel emissions.

Particulate matter includes airborne solid or liquid particles including dust, pollens, soot and aerosols arising from combustion. The particles known as PM10 (with a diameter less than 10 mm) are most commonly measured, however finer particles such as PM2.5 and below, are of considerable concern as they can penetrate deeper into the lungs and have the potential to be more damaging. It is important to note that diesel vehicles emit higher concentrations of ultrafine particulates. [15]

Evidence from cellular or toxicological experiments, controlled animal and human exposures and human panel studies have demonstrated several mechanisms by which particle exposure may both trigger acute events as well as prompt the chronic development of cardiovascular diseases. Particulate matter inhaled into the pulmonary tree may instigate remote cardiovascular health effects via three general pathways: instigation of systemic inflammation and/or oxidative stress, alterations in autonomic balance, and potentially by direct actions upon the vasculature by particle constituents capable of reaching the systemic circulation. In turn, these responses have been shown to trigger acute arterial vasoconstriction, endothelial dysfunction, arrhythmias and pro-coagulant or thrombotic actions.[16]

Research Summary

An important study in the American Heart Association Journal *Circulation* in 2010 found that even short exposures to PM 2.5 µm in diameter (PM2.5) (i.e. a few hours to weeks) can trigger cardiovascular deaths and illness, while longer-term exposure (i.e. over a few years) greatly increases the risk for cardiovascular mortality and reduces life expectancy among highly exposed groups by several months to a few years.[17] In a study examining the exposure-response functions for mortality from cardiovascular disease, a steep increase in risk was found at low-levels of exposure to PM 2.5. A linear exposure-response was found between exposure to PM 2.5 and mortality from lung cancer.[18]

An additional study assessed long-term exposure to air pollution and lung cancer in 313,000 people from 17 cohorts in 9 European countries. [19] There were 2095 lung cancer cases diagnosed over a follow-up of 12.8 years. The meta-analyses showed a statistically significant association between risk for lung cancer and PM10 with a hazard ratio (HR) of 1·22 per 10 µg/m3. For PM2.5 the HR was 1·18 per 5 µg/m3. An increase in road traffic of 4000 vehicle-km per day within 100 metres of the residence was associated with a hazard ratio for lung cancer of 1·09. This risk therefore exists even when the levels of particulate matter air pollution are below the current European limit values.

Recent findings also suggest long-term exposure to PM2.5, even at low levels, is related to an increased risk of mortality attributable to diabetes. These findings have considerable public health importance given the billions of people exposed to air pollution and the worldwide growing epidemic of diabetes.[20]
The effect of air pollution on lung development in children 10 to 18 years of age was published In the New England Journal of Medicine in 2004.[21] In this Children's Health Study, 1759 children of an average age of 10 years, were monitored over 8 years using annual spirometry.

The results of this study provide robust evidence of an exposure dose relationship on impaired lung development from 10 to 18 years, with FEV1 being reduced in children exposed to higher levels of ambient air pollution. This effect was similar to those that have been reported for exposure to maternal smoking.[22] [23]

A case control study from California assessed the relationship between traffic related air pollution and autism. The study found that children with autism were more likely to live at residences that had the highest exposure to traffic-related air pollution during gestation, and the first year of life. The associations were found with exposure to nitrogen dioxide, PM2.5, and PM10 during these periods.[24]

There is increasing evidence of adverse health effects on babies and children from maternal exposure to air pollutants: exposure is associated with adverse pregnancy outcomes, risk of low birth weight, foetal growth restriction, and pre-term delivery.[25] [26] [27] [28]

Outdoor air pollution is recognised as an asthma trigger, and early childhood exposure to air pollutants may play a role in the development of asthma. A study of 3,482 children from British Columbia showed a statistically significant increase in risk of asthma with increased early life exposure to CO, NO, NO2, and PM10 in addition to other pollutants.[29] Traffic-related pollutants were associated with the highest risks, for a 10 microgram.m-3 increase in NO and NO2.

Congenital anomalies may also be of concern.[30] In a metanalysis of several studies, NO2 and SO2 exposures were related to increased risks of coarctation of the aorta and tetralogy of Fallot, and PM10 exposure was related to an increased risk of atrial septal defects.

Populations with chronic disease such as diabetics, those with coronary artery disease, are particularly susceptible to the harmful effects triggered by particulate matter exposure.[31] A study of 141,000 residents of Montreal found consistent increases across exposure to most types of ambient particles for people who had cancer, acute lower respiratory diseases, any form of cardiovascular disease, chronic coronary artery diseases, and congestive heart failure.[32]

The models for predicting ambient air quality around ventilation stacks depend on multiple variables that are not easy to take into account. Emission levels vary dependent on time of day, traffic congestion and type of vehicles. The background monitoring of air quality data has to be collected at the site of the stack to have any meaningful comparisons in modelling scenarios.

In the case of the WestConnex tunnel assessment, background air quality data may not be representative of the local microclimates in which the emission stacks are being placed. The PHAA recommends that prior to a significant infrastructure project of this magnitude being approved that appropriate microclimate data be collected and assessed by the project proponents, to justify the site of the emission stacks and to ensure adequate dispersion occurs, above atmospheric inversion layers that are commonly present in stable microclimate areas such as valleys.

There are no models for estimating ultrafine particles in ambient air. Existing standards for air quality that rely purely on PM10 or PM 2.5 are insufficient to gauge the full risk to public health from finer particles. There are at present no WHO guidelines or Australian standards for ultrafine particles; however, there exists a reasonable understanding of the potential health consequences of exposure to these particles.

There is no validated understanding of interactions between air pollutants and their compounded harmful effects. Once emitted, air pollutants are modified by meteorological factors such as sunshine, temperature and humidity, as well as the interactions between the mixes of pollutants. These interactions lead to nucleation processes, which form particles of different sizes - which are more complex to investigate.

The plume effect of ventilation stacks results in short bursts of highly polluted air being released from the stack into its immediate vicinity. The plume effect is difficult to measure since most measurement devices estimate hourly ambient air quality or average ambient air quality over a period of time such as 12 months. Monitoring is generally averaged over 12 months hence plume effects are not accounted for in the Environmental Impact Statement for WestConnex.

There exists no particle that can effectively be measured to indicate if ambient air pollution is from surface roads or from a ventilation stack. The source appointment of emissions in the case of WestConnex stacks is very complex.

Finally, given the levels of direct increases in air pollutants in the immediate surrounds of a tunnel emission stack, difficulties in accurately predicting and modelling the dispersion of the particulate and gaseous pollutants from the stack, and the serious nature of potential health impacts on adults and children, this submission reaffirms that any decrease in ambient air quality below background levels in densely populated regions, represents a significant risk to the morbidity and mortality of the exposed population.

Additional concerns raised by modelling assumptions

There are several assumptions in the modelling for the EIS that the PHAA believes are questionable.

- First: there is an underestimation of the concentrations of pollutants that are emitted from heavy freight diesel vehicles.
- Second: increases in tunnel users over time will result in increases in emissions over time.
- Third: While the overall air quality in Sydney may not be affected, there is no consideration of susceptible local populations.

As a result of these assumptions the actual amounts of pollutants discharged into local microclimates via stacks is likely to result in significantly higher pollutant concentrations than the "negligible" amounts that have been predicted in the EIS.

Revised Air Quality Guidelines

As stated, the medical and scientific community have recently revised our current National Environmental Protection Measures (NEPM) to better reflect the growing and substantive health impacts from vehicular air pollutants in the medical literature.

These changes are described in depth at: http://www.environment.gov.au/system/files/pages/dfe7ed5d-1eaf-4ff2-bfe7-dbb7ebaf21a9/files/aaq-nepm-draft-variation-impact-statement-executive-summary.pdf
The new NEPM guidelines state:

"The need to reduce atmospheric concentrations of particulate matter (PM) derives principally from its well-recognised and quantified effects upon human health. The recent historical trend of decreasing ambient concentrations of PM10 and PM2.5 is expected to be reversed in the future due to growth in population, economic activity and emissions, with subsequent increases in population exposure and the incidence of adverse health outcomes, and increases in the monetary costs of air pollution to society.

It is likely to be more difficult to meet the national air quality standards and goals for particulate matter in the future without proactive intervention, risking sufficient protection for Australian public health. Intervention is considered necessary to prompt and accelerate policies and measures to reduce population exposure to particulate air pollution. Updating the AAQ NEPM will reduce these adverse effects by highlighting potential problems and assisting jurisdictions in the formulation of air quality policies to reduce emissions from different sectors.

The WHO numerical guideline for 24-hour PM10 of 50 µg/m3 has been adopted in Australia and elsewhere (but not in the United States), even though the number of permitted exceedances is greater in Australia than in the WHO guideline. However, fewer exceedances of the standard are provided for in Australia than in most other countries/regions (an exception being New Zealand).

The annual advisory mean standard for PM2.5 of 8 µg/m3 in Australia is lower than the current WHO guideline. The current 24-hr PM2.5 advisory reporting standard of 25 µg/m3 is identical to the WHO 2005 guideline."

Although the Australian PM standards are numerically lower than, or equivalent to, those in other countries and regions, it is not straightforward to interpret such comparisons and they do not necessarily mean that the Australian standards are more stringent. For example, the proponents state that the Australian guidelines are more stringent than other countries, and as long as the "average" levels over 24 hours and 12 months meet the standards the project will be safe. However, averages of pollutants over a given timeframe, do not account for exposures to emission plumes (large amounts of emissions) from emission stacks for the population in close proximity to the stacks.

As noted earlier, there would still be health benefits in Australia from setting the PM standards as low as reasonably achievable, given there is no safe threshold for particulate matter exposure. Also, there are differences in implementation of standards in Australia compared with other countries. For example, there are no sanctions associated with non- compliance with the standards and goals in Australia, whereas there are in other countries and regions.

Particulate Matter

Particulate Matter is a non-threshold pollutant. This means that adverse health impacts occur at levels below current standards. As stated below in the latest NEPM review:

"In Australia for non-threshold pollutants such as PM, overall health outcomes in a population are driven by large- scale exposure to the prevailing average concentrations, rather than by relatively small-scale exposure to higher concentrations. Where there are no exceedances of air quality standards there may be no impetuses to implement measures to further reduce exposure to PM. This has compelled a shift in the approach to air quality management, and in some countries and regions (notably the European Union) this has taken the form of an 'exposure-reduction framework'. The scientific support for the exposure-reduction approach to managing PM has been strengthened by the latest health findings".

This articulates the current scientific thinking that infrastructure projects minimise population exposure to particulate matter, to below current standards, as significant health impacts occur even below current standards, especially when large populations are exposed, as is the case with the WestConnex design. The NEPM provides a guideline only to assist policymakers, and these guidelines should not be used as an absolute value against which to measure the safety of WestConnex tunnel emission levels. Rather, the WestConnex tunnels and ventilation stacks should be designed to ensure there is an overall reduction of population exposures to particulate matter.

Particulates that are derived from specific sources, such as diesel emissions, are known to comprise other compounds such as volatile organic compounds and polycyclic aromatic hydrocarbons that are known to also be associated with adverse health effects. The presence of these other compounds has been addressed separately however the presence of these (and likely other compounds) compounds and other co-pollutants (also derived from combustion sources) adds to the complexity of utilising data from urban air epidemiological studies for assessing health effects from particulate matter.

As the epidemiological data is complex, and interactions between particulates and other compounds emitted are unknown, the PHAA questions the conclusion as stated in the EIS that there are negligible health impacts from such a long tunnel, with large amounts of diesel emissions, ventilation stacks and no filtration. Our concern is that the nature of health risks associated with the emissions is too serious to rely solely on the modelling and assumptions that predict negligible health risks in the proponent's EIS.

Government departments would be prudent in applying the precautionary principle, to safeguard public health from known and future health risks. The problems associated with the exposure to emissions from the placement of stacks and portals in residential areas should be considered now, and rectified in the design stages to ensure harm minimisation.

Specific Concerns related to ultrafine particles (< 1 micrometer diameter)

Based on the available studies, there is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur. At present, at the population level, there is not enough evidence to identify differences in the effects of particles with different chemical compositions or emanating from various sources.

However, whilst these factors pose difficulties in the assessment and specific modelling of ultrafine particulates, our current knowledge suggests that there are reasonable scientific grounds to believe ultrafine particles negatively impact health, and reductions in population exposure in the longer term is imperative to protect health. We cannot conclude that there is no risk from ultrafine particles to human health, merely because the medical research is evolving and that specific monitoring of ultrafine particles has not generally been performed in the available research to date. The precautionary principle needs to be applied.

Lack of Filtration

The WestConnex EIS states that:

1. *"***The project's in-tunnel air pollutant levels, which are comparable to best practice and accepted elsewhere in Australia and throughout the world, would be achieved without filtration".***"*

Inadequate information is provided to substantiate these claims of best practice or whom accepts the projected air pollutant levels.

Australia's longest tunnel, the 6.7km Brisbane Airport Link had average daily traffic of 47,802 vehicles in 2013 (BrisConnect company report 2013). This is approximately one quarter of the daily traffic estimated in the EIS that will use the WestConnex M4 East tunnel, with significantly fewer trucks.

2. "Emissions from the ventilation outlets of the project tunnel will have a negligible impact on existing ambient pollutant concentrations"

There is not enough evidence to make conclusions about local ambient pollutant concentrations. A study of the Lane Cove Tunnel eastern tunnel ventilation stack by the Woolcock Institute of Medical Research found increased reported nose, throat and chest symptoms for local residents after the tunnel began operations in 2006[36].

Explanation for these findings among residents living around the stack was inconclusive. Smaller sized PM and volatile compounds were not measured and, as yet unknown factors that affect respiratory health may have been present. The researchers suggested "the need for further investigation, such as some project monitoring of ultrafine particles or black carbon levels at different sites around the tunnel and stack, to determine whether spatial differences in these pollutants".

Ambient pollutant concentrations are also dependant on local weather conditions and may fluctuate.

Filtration is to capture particulate matter from inside the tunnel and prevent concentrated vehicle emissions being transferred to air outside the tunnel.

3. "Of the systems that have been installed, the majority have subsequently been switched off or are currently being operated infrequently".

It is assumed the EIS primarily refers to the costs and performance of the M5 East filtration trial[35] in Sydney as the main justification for not considering filtration of the tunnel emissions before discharge via emission stacks into residential precincts.

The M5 East filtration trial involved a retrofit of an in-tunnel air treatment system. To do this for additional tunnels, an underground cavern for the filtration equipment, additional auxiliary infrastructure (such power supply) and additional jet fans were required to be installed and operated. As this electrostatic precipitator system (ESP) was retrofitted, and it was not included in the original design, the filtration system was not able to be optimised.

The AMOG Consulting report on the M5 filtration trial[37] recognised that ESPs were significantly under capacity for the volume of air delivered to them. The report suggests that this was the reason for the relatively poor efficiency of the ESP in removing particulates and the reliability issues of the ESP. The poor efficiency and reliability of the ESP were also a major factor in relatively high operating costs of the M5 Filtration trial.

Despite this, the electrostatic precipitators removed 65% of particulate matter, and hence were effective in this regard. In addition this estimate was derived from the filtration of only 50% of the westbound tunnel and with the ESP only turned on for 4 hours a day. With these operating parameters of course the trial was only able to show removal of a small proportion of the total in tunnel particulate matter.

The costs and works required to install a filtration system for WestConnex require consideration. The filtration system could be designed and installed in the proposed ventilation buildings during the design and development stages. Realistic cost estimates for installing filtration and an independent study on the costs and benefits of filtration, need to be undertaken.

Long-term Health Costs

In addition to the scientific arguments there are strong economic arguments to mitigate health risk. The recent review of the NEPM guidelines states *"Any reduction in exposure to particle pollution will have public health benefits. The health cost of particle air pollution in the NSW Greater Metropolitan is estimated to be around $4.7 billion per year (NSW DEC 2005; Jalaludin et al. 2011). The greatest proportion (>99%) of the health costs accrue from avoiding premature deaths due to long-term exposure to PM2.5"*[38]

Health costs downstream from poorly designed infrastructure are a key motivation to ensure vehicle transport projects are well designed. Public and private sector infrastructure developers must also improve in their attitude to global citizenship. These companies should be accountable for the health effects on populations. Government should apply risk mitigation strategies. For example, this may include appropriate design of surface transport infrastructure, consideration of rail freight transport options which produce less diesel, appropriate placement of tunnel portal emissions and ventilation stacks in non-residential areas, and installation and continuous operation of filtration in tunnel emission stacks.

Given the substantive and emerging data on health risks posed by vehicular emissions, especially diesel vehicles, we call on policy makers to take action to promote clean air, reduce population exposure. Particularly as Australia is an advanced economy, cost limitations for these projects should not affect the protection of population health.

Equity of Access

While a major benefit of the WestConnex Project is promoted as saving time, the financial costs to use the tollways is likely to be unaffordable for many. When WestConnex opens in 2023 the cost of a daily commute to the City area from the North-west will be over $30 a day for a standard vehicle and from west of Parramatta nearly $20 a day. Trucks will be charged significantly more. According to the WestConnex M4 Contract these tolls will increase at a greater rate than existing toll roads and at a greater rate than inflation[i]. Additionally, many roads which are currently free will be unavailable to people who can't afford the tolls. The EIS has not adequately assessed the financial impact using toll roads or the opportunity costs of alternative transport.

Sydney toll road users paid an estimated $1.19Billion dollars in tolls in the last financial year[ii]. The costs of additional toll roads could put significant pressure on financially disadvantaged and low income families.

The Institute of Transport and Logistics Studies at the University of Sydney, suggest motorists will reach "saturation point". That is, when motorists start to value the time they save driving on a toll road less because they are no longer willing to or are unable to spend that much money driving [39].

According to Australian Bureau of Statistics, Census of Population and Housing 2011 approximately 49% of households in Greater Western Sydney had an income of less than $1499 per week (less than $78,000 per year) and 19% of household were classified as low income[40]. After basic living expenses such as rent/mortgage, food and utilities it is estimated that around half of the population of Greater Western Sydney would find the cost of toll roads and running a car to be unaffordable or put them in financial stress resulting going without visits to the dentist, medications and higher quality foods that would reduce the incidence of chronic illnesses such as diabetes.

For people on low incomes, including the 'working poor', older people, single parents with young children and people with disabilities the cost of transport is proportionally a greater burden than for people with higher incomes as they more often live further from employment and services and have less access to public transport. When people and families are finding it difficult to cover the cost of housing, food and essential bills, the additional costs associated with travelling to and from work or an essential service with a toll may simply be unaffordable.

The Australian Bureau of Statistics 'Household Income and Expenditure Survey' in 2010 [41], found that 72% of those households living in poverty reported at least one indicator of financial stress, while 52% reported three or more. This impacted on:

Ability to access Medical treatment if needed	99.9%
Able to buy medicines prescribed by a doctor	99.5%
A substantial meal at least once a day	99.4%
Dental treatment if needed	99%

People Aged over 65 and living alone are most likely to be in the bottom 20% of incomes with an average weekly expenditure of $446 [42].

The number of new toll roads planned for Sydney over the next decade will create one of the highest concentration of toll roads in the world including:

- NorthConnex (nine-kilometre tunnel)
- WestConnex (33-kilometre)
- Another harbour road tunnel
- A motorway connection to the Sutherland Shire

Additionally two existing motorways which are currently free – the M4, motorists will pay about $4.58 (Trucks $13.70) for driving between Parramatta and Concord from 2017 and about $6.09 (Trucks $18.00) to drive on the M5 East from about 2019 if the M5 East section of WestConnex is expanded. Limitations to pay should be considered in usage projections and the equity of benefits of the project.

The M4 East section from Homebush Bay Drive to the City West Link, is estimated to 'take 20,000 cars and 4,600 truck off the road'. At a maximum cost of $3.60 for cars and $10.80 for trucks the projected cost is $121,680 per day in tolls in 2019.

The PHAA recommends providing affordable alternative transport to private cars as an effective way of improving the mobility of most very low income outer suburban residents. Public Transport is a far cleaner, healthier and more equitable way to transport people, without the need for parking costs.

Transport to employment and essential services presents particular difficulties for people without cars such as many Aboriginal people due to low levels of car ownership, and difficulties obtaining licenses.

Developing infrastructure which disproportionally disadvantages some people over another in a systemic, predictable way is considered unfair and/or unjust and/or avoidable.

Health inequity occurs as a result of unfair, unjust social treatment – by governments, organisations and people[43], resulting in macro politico-economic structures and policies that create living and working conditions that are harmful to health, distribute essential health and other public services unequally and

unfairly, preventing some communities and people from participating fully in the cultural, social or community life of society.

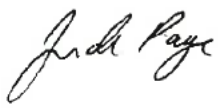
Concluding Comments

PHAA supports improved infrastructure that meets the needs of users and local communities affected. However, we are keen to ensure that population health is protected, as detailed in this submission. We are particularly keen that the following points are noted and considered:

- There are serious risks to health from air pollutants, the full extent of which is under evaluation at present.
- Children, elderly and those with chronic diseases are more vulnerable to health impacts
- The medical and scientific community have promoted an exposure reduction framework as a strategy for safeguarding health.
- The 33km of tunnels proposed in the WestConnex projects have the potential to have a substantial adverse impact on health for regular users and those near pollution outlets. This is due to potential irregular insufficient dispersion from emission stacks and design, the large numbers of children and dense population exposed, the lack of consideration of filtration, and exposure to pollutants within the tunnel length, specifically frequent and regular exposure to in tunnel air.
- Consideration be given to affordable alternative transport to private cars as a fairer, cleaner and healthier way to improve the mobility of most very low income outer suburban residents.
- Consideration be given to alternative, lower emitting options for efficient freight transport in Australia to alleviate the need for road freight transport.

The PHAA appreciates the opportunity to make this submission and would welcome the opportunity for further consultation on the issues raised in this submission.

Please do not hesitate to contact me should you require additional information or have any queries in relation to this submission.



Jude Page B.Sc. Grad Dip Psych. MPH
New South Wales
Public Health Association of Australia

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36https://static1.squarespace.com/static/515ba920e4b0afec12175c59/t/5434afc1e4b0f82b6dbc532b/1412739009751/NorthConnex+EIS+submission-WIMR+web+%282%29.pdf
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38 http://www.environment.gov.au/system/files/pages/dfe7ed5d-1eaf-4ff2-bfe7-dbb7ebaf21a9/files/aaq-nepm-draft-variation-impact-statement-executive-summary.pdf
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[i] http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/6530.0Main%20Features22009-10?opendocument&tabname=Summary&prodno=6530.0&issue=2009-10&num=&view=
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[ii] **Sydney Tollway usage and revenue 2014/15:**

Toll road	daily trips	toll	Toll revenue 2014/15 Million$
Hills M2	116,000	$6.48 Beecroft Rd to Lane Cove Tunnel	$221
Lane Cove Tunnel	81,000	Lane Cove Tunnel Toll: $3.14 Military Rd off-ramp: $1.57.	$75

Harbour Bridge	134,400	(Mon-Fri.): 6.30 — 9.30am $4, 9.30am — 4pm $3, 4 — 7pm $4, 7pm — 6.30am $2.50	$90
Cross city tunnel	36,000		$55
M1 Eastern Distributor	53,000	Toll to Eastern Sydney: $6.55	$113
Westlink M7	156,000		$59
CityLink	816,000		$577
Total			$1.19 Billion

Source: Company Annual and quarterly Reports such as: Transurban http://www.openbriefing.com/AsxDownload.aspx?pdfUrl=Report%2FComNews%2F20150710%2F01640410.pdf

4875.

Date: 31 10 2015

Secretary
DP&E Project No. SSI 6307
NSW Dept. of Planning & Environment
GPO Box 39, SYDNEY NSW 2001
Re – WESTCONNEX PROJECT

I make this submission in relation to the Environmental Impact Statement for the WestConnex M4 East Tunnel project. I strongly object to this project and the entire WestConnex of which this is a part and request a reply to the following concerns:

- I object to the lodging of an EIS before a full business case has been made public and to billions of dollars of public money being signed away on contracts before planning approval is given. This is an abuse of democratic and transparent planning.
- I object because Westconnex is NOT a solution to costly traffic congestion. The government's figures for the first M4 widening stage of WestConnex show that re-imposing a toll on the current M4 will increase traffic on sections of Parramatta Rd, the M2, Victoria Road and other major roads for decades to come. Toll roads may provide temporary relief from traffic congestion but the EIS states that the M4 tunnel would be full by 2031. Many intersections on Parramatta Rd would continue to have an 'F' level of service. Local roads near the M4 and M5 would be choked.
- I object to $15.4 billion being spent on toll roads that will further encourage car dependency, especially in the Western suburbs of Sydney where public transport has been neglected for so long. The EIS analysis of alternatives is superficial, dismissive and blatantly favours the toll road option.
- I recognise the need to move freight efficiently but am disappointed that the NSW government ignores international best practice in failing to consider a combination of alternative solutions for reducing traffic.
- I object to hundreds of owners and tenants are being forced from their homes and businesses as a result of compulsory acquisitions. Residents report that rather than being supported, as the EIS states, they are being bullied out of their homes at below market prices. This is disrupting communities and causing people to suffer extreme stress and depression, all for a 'solution' that will not work.
- I object to the significant destruction of heritage properties including nearly a whole block in Haberfield, a conservation area of national and international significance. I object to the threat to biodiversity and loss of vegetation.
- I object to the lack of serious community consultation and a Social and Economic Impact report for which no consultations with residents or business owners were conducted.
- I object to the impact that years of 24-hour construction work will have on communities. Across the route there will be thousands of diesel truck movements a day. Noise and vibration cause stress and anxiety and affect sleep patterns.
- I object to toxic pollution that will come with the M4 East tunnel including unfiltered stacks. Pollution in local areas near tunnel exits will be worse. Traffic pollution is linked to higher incidence of respiratory and heart disease and lung cancer, as well as impaired lung development in children. This is unacceptable given the high numbers of residents, businesses, schools, childcare and aged care facilities near the project route.

Yours sincerely

Name: Bonnie Hart Address: 17 Dickson st newtown

Phone (Opt): 0402090345 Email: Bonnie.Hart01@hotmail.com

4876

[redacted]

[redacted]

Confidentiality Requested: yes

Submitted by a Planner: no

Disclosable Political Donation: no

[redacted]

[redacted]

[redacted]

Content:
Attn: Secretary
Dept of Planning & Environment

I am writing to register my strong objection to the WestConnex M4 East proposal.

I strongly object to the EIS's failure to consider total negative impacts against the total claimed positive aspects. While the M4 East EIS repeatedly refers to the positive impact of the entire WestConnex when arguing for the project, it fails to consider the negative impacts of the whole project, including loss of housing, heritage and biodiversity.

I strongly object to a process in which each section of WestConnex is assessed separately. Vague rationales for the whole project are used to justify the serious negative impacts of each stage. Projects such as the Southern motorway F8, which are not even at a planning stage, are included in the argument for the project without explanation.

I strongly object to the lack of transparency in the entire WestConnex process. Billions of dollars of contracts have been let without a full business case having been released or the project being subjected to independent Gateway reviews.

I strongly object to $15.4 billion being spent on WestConnex for small savings that will not benefit most commuters. Instead of spending this amount of money to benefit a very small percentage of drivers in Sydney, and cut just one minute off overall road network traffic speeds, the NSW Government should be investing in public transport, traffic management solutions, and regional city centres to address traffic congestion and boost NSW's economic prosperity in the long term.

I strongly object to the poor analysis of alternatives undertaken in the M4 East EIS. This section of the EIS is superficial and amounts to nothing more than a roundabout way of saying that the M4East tunnel project is preferred by WestConnex.

I strongly object to the short 55-day timeframe in which members of the community have been given to respond to the EIS for the M4 East. This document runs to nearly 5,000 pages, but the public was only given 55 days to respond, even though hundreds of people have called and emailed the Minister for Planning to say this is not long enough.

I strongly object to AECOM being paid millions of dollars of public funds to play the key role in the EIS for the M4 East. AECOM has been awarded other WestConnex contracts that give it a huge vested interest in the project going ahead, and this is demonstrated by the lack of independence and superficial analyses that characterise this EIS. In addition, AECOM has been sued for being negligent in relation to its past traffic studies, and has already paid more than $250m in settlement costs.

I strongly object to the EIS's failure to provide enough data to allow independent experts to verify its traffic analysis. For example, a detailed study undertaken by SGS Economics & Planning for the City of Sydney concluded that WestConnex would make traffic worse on Parramatta Rd, Victoria St and many local roads. The M4 East EIS claims it will improve traffic, but offers very little data that would allow experts to objectively assess this analysis.

I strongly object to the total inadequacy of the M4 East biodiversity assessment. This `analysis' is based on insufficient studies. No attempt is made to assess cumulative impacts of the entire WestConnex project on loss of open space, gardens and other vegetation.

I strongly object to the huge impact that the flow of cars and trucks out of tunnel exits will have on local roads through out the Inner West.

I strongly object to hundreds of residents being forced from their homes and businesses for the M4 East, and the failure of the EIS to assess the social impacts of this. Forcibly acquiring and destroying over 200 homes and businesses will result in massive social disruption in communities. There have been numerous reports of homeowners and tenants being inadequately compensated for the loss of their properties. These acquisitions were in motion before the EIS was even completed. Yet the EIS Social Impact study failed to do any direct research on the impact of forced acquisitions on residents.

I strongly object to the health risk and air quality analysis, which fails to assess the true impact of the M4 East. The claim is even made that WestConnex will improve local air quality - which will surely make it the first motorway in history to do so!

I strongly object to the wholesale destruction of heritage homes and precincts. This is not acceptable, particularly for a project that will not resolve but add to Sydney's traffic congestions.

I strongly object to the failure of WestConnex consultants to directly consult with business owners. Local business owners were not approached by WestConnex about the impact the M4 East would have on their livelihoods, despite the fact that many stand to see their businesses destroyed as thriving streets precincts are drowned in traffic.

Global experience and research has shown conclusively that these kinds of toll road mega-projects are hugely expensive and counterproductive. WestConnex will increase air pollution and traffic, and expose NSW taxpayers to unacceptably high levels of financial risk. It is not a long-term solution to Sydney's congestion problem.

The fact that the State Government has already signed multi-billion dollar contracts for WestConnex before this EIS was even placed on public exhibition undermines community confidence that this is a genuine consultation process.

I recognise there is pressure on several NSW Departments, including Planning and the Environment, to approve this project. I remind public servants of their obligation to the public and to the potential social, health and economic costs of spending $15.4 billion on WestConnex when it provides no solution to Sydney's transport needs.

I therefore call on the Minister for Planning to reject this project, and to formally respond to each of the concerns I have raised.

Yours sincerely,

[redacted]

4877

[redacted]

From: Christine Hawkins [redacted]
Sent: Friday, 30 October 2015 4:53 PM
To: information-Planning
Subject: SSI 6307 WestConnex M4 East EIS submission

I wish to make a submission in response to the WestConnex M4 East Environment Impact Statement (EIS). I strongly object to the WestConnex M4 East proposal. I request a response to each of these concerns from the Secretary of the Department of Planning and Environment.

As a resident of the garden suburb of Haberfield, I believe that this porject would have a devastating effect on our local community. I have received a letter in the last fortnight telling me that the land under my property is to be acquired, which I object to. I also object to Wattle street coming within 12 metres of my back fence - however I feel we are lucky compared to some of our neighbours who are having part of the back gardens compulsorily acquired. I object to the loss of a number of what should be heritage-listed homes, being demolished for little gain. I note with interest the submission to the EIS process by the National Trust with regard to heritage matters. I object to the total change in our community as a result of this motorway proposal. I object to the smokestacks rising into the air at the top of my street, what will not only affect the air quality as they are not to be filtered, but will clearly be a visual eyesore, despite the assurances from (the o

ld) WDA officials saying that they will be heritage-looking, which is simply mind-boggling! These smokestacks, 'heritage' or not, should be filtered, regardless of the cost. I am concerned about noise pollution too and am please that the EIS mentions noise abatement to the rear of our property, but hopefully it will be of an appropriate height, standard and not be another visual eyesore. I am also concerned at our street (Walker Avenue) and other surrounding streets becoming 'rat runs' to avoid the motorways and tolls. Our street, despite the proximity to Wattle Street, Parramatta Road and Ramsay Street, is currently relatively quiet, and I would not want this to change.

My son attends Haberfield Public School, and my daughter will attend the same school from 2017, and I fully support their submission to the EIS process. The construction of the motorway will divide and destroy the school community, and the issues around air and noise pollution for both the constructoin and operational phases for the school are a major concern.

I strongly believe that a better system of 'park and ride, meaning parking hubs with links to public transport, are a much more sensible way forward, and a well thought out system of light rail, trains and bus transport is a much better way of spending taxpayers money and more efficiently moving the ever-expanding numbers of Sydney residents around.

I object to billions of taxpayer dollars being spent on a toll road that will only provide short-term relief. By 2031, the modeling in this EIS shows the M4 East will reach capacity. Traffic volumes will also increase significantly on key roads in the target area, including:

• Parramatta Rd at Homebush: Traffic on will increase by 46%, with average weekday traffic climbing from 33,600 to 49,800 by 2031.

• East-west traffic along Lyons Rd, Dobroyd Parade, Parramatta Rd and New Canterbury Rd: This will jump by about 48% if WestConnex is built, averaging around 193 cars a minute, 24 hours a day.

• The proposed tunnel linking the M4 and M5 in Stage 3 of the project will result in very high traffic densities.

I also object to the complete lack of transparency surrounding WestConnex:

• No business case has been revealed for the $15.4 billion WestConnex. The short 'summary' released by WestConnex to date is no substitute for a full and proper business case with detailed cost/benefit analyses, traffic modelling, and other data that can be independently scrutinised.

• In Dec 2014 the NSW Auditor-General noted that there were 'shortcomings in the level of independent assurance provided to the Government'. According to the Government's framework, an additional 4 'Gateway' reviews should have been conducted.

• The NSW Auditor-General noted fundamental conflicts in that WestConnex steering committees and boards also provided assurances to Government.

• The Sydney Motorway Corporation (SMC) is the public/private company charged with delivering WestConnex. Information about SMC cannot be captured through Freedom of Information requests, shielding it from scrutiny.

I object to claims made in this EIS that WestConnex will result in less pollution due to free-flowing traffic.

• Total traffic east-west across this part of Sydney will jump 53% by 2031. Such an increase is hardly going to improve air quality.

• The EIS shows that air quality at the 31 sites modelled across the M4 East area will greatly exceed the proposed national standard of 8 microns per cubic metre of air by 2021.

• The EIS also shows the air quality for a large section of Sydney, including Haberfield, Five Dock, Ashfield, Burwood, Strathfield, Concord, Canada Bay, Homebush and Flemington, will be about 25% worse in the next 6 years than the target air quality standard.

• Unfiltered pollution exhaust stacks will be located less than 500m from public schools, childcare centres and nursing homes.

• Modern diesel exhaust consists mostly of particles sized PM0.5 and smaller. There is no measurement in the M4 EIS of the quantity of these particles that drivers will be exposed to in WestConnex's tunnels.

• Fine particle matter has been placed by the World Health Organisation (WHO) in the same class of carcinogens as asbestos. They can penetrate deep into the throat and lungs, and are known to cause premature mortality, respiratory and heart diseases, cancers, impaired lung development in children, and more.

I object to the impact WestConnex will have on our environment and biodiversity:

• The M4 East EIS field surveys are very limited in duration and season. The EIS acknowledges this, stating "it is possible that seasonal species were not identified".

• Many homes targeted for acquisition and destruction for the M4 East have substantial yards with mature trees and green areas. Streetside green spaces will also disappear, along streets lined with established trees.

I object to the devastating impact WestConnex will have on people and communities:

• Around 400 homes and businesses are subject to compulsory acquisition by WestConnex for the M4 East and New M5 even before the projects are approved and a business case released.

• Haberfield will lose over 50% of its apartment dwellings, which are home to mostly single and elderly long-term residents, who will find it impossible to find similar accommodation nearby. Many will have to move away from the established communities that have been their home for years.

• Many residents report that prices being offered by the government grossly undervalue their properties, causing great stress at an already traumatic time.

• Thousands of residents will be impacted by increased noise and pollution, which will have significant negative health impacts. This is also likely to devalue many homes near the WestConnex.

• Consultations with Local Councils were only done on the concept plan regarding the M4East and were not repeated in 2015 after the final route was announced. Therefore councils were not given the opportunity to address the social and heritage impacts on the final route.

• Local communities will be carved up by multi-lane roads, cutting residents off from each other and vital social infrastructure.

• Communities will be subjected to years of disruption and traffic chaos during the construction phase of the tollway, creating stress and loss of amenity.

• Pedestrians and cyclists will be impacted as they face increased traffic density on key roads, increased travel times, and increased risks.

I object to the potential contamination of local waterways WestConnex will cause:

• Construction work will cause potential contamination of downstream waterways and groundwater, impacting on aquatic and riparian habitats.

• Accidental leaks or spills of chemicals, fuels, oils and/or greases from construction plants and machinery may result in pollution of local waterways and groundwater sources.
• Discharge of treated groundwater, stormwater runoff during rainfall events and direct deposition of airborne particles risk causing acute or chronic contamination of water quality in downstream waterways.

• Huge permanent sediment basins will have to be located at the Homebush Bay Drive interchange to accommodate contaminated runoff in storm events.

I object to the large-scale destruction of key Sydney heritage sites for the M4 East:

• The M4 East EIS notes that 53 properties within the Haberfield Conservation Area will be demolished, "permanently (removing) a substantial portion of the built heritage items fronting Wattle Street." 29 of these are assessed as 'contributory to the values of the Conservation Area'.

• The constant daily movement of large transport trucks severely degrades the urban environment, including those with heritage significance.

I therefore call on the Minister for Planning to reject this proposal.

Yours sincerely,

Christine Hawkins

52 Walker Avenue

Haberfield NSW 2045

4878

MYNRMA.COM.AU

Submission to Department of Planning & Environment
WestConnex M4 East
Environmental Impact Statement
November 2015
Application Number SSI 6307

Introduction

The National Roads & Motorists' Association (NRMA) comprises more than 2.4 million Members across New South Wales (NSW) and the Australian Capital Territory (ACT). For more than 90 years, NRMA has represented the interests of motorists in relation to traffic management and road safety.

NRMA welcomes the opportunity to provide this submission to the NSW Department of Planning and Environment in response to the M4 East Environmental Impact Statement.

NRMA strongly supports completing the missing links in Sydney's motorways to create a connected and functional road network.

The WestConnex M4 East will be a major addition to this network, and when joined with the proposed WestConnex Stages 2 and 3, will provide a continuous motorway link between the M4 and M5 motorways. By improving travel times, travel time reliability, and road safety it will make a very positive difference to the way people move around.

Comments and Queries

NRMA has outlined in this submission a number of key recommendations for consideration by the NSW Department of Planning & Environment and by the Proponent. We would welcome the opportunity to discuss this submission with the Department and with the Proponent to assist the Department in undertaking its assessment.

Comments and queries on this document may be directed to:
Government Relations & Public Policy
National Roads & Motorists Association
PO Box 1026, Strathfield NSW 2135
T: +612 8741 6000
E: Public.Policy@mynrma.com.au

Making WestConnex work for road users

The fundamental issues for WestConnex are how well it will work for traffic and how well it will be perceived by users and the wider community.

In March 2014 NRMA put forward a number of new ways to keep tunnels moving as part of our strategy to positively influence the design and operation of the proposed mega motorway projects – WestConnex and NorthConnex.

In July 2014 we followed this up by publishing a key report "WestConnex: Getting it Right". The report brought together NRMA's suggestions and highlighted the need to focus on keeping traffic moving, reducing the numbers of incidents such as crashes and breakdowns, as well as ways to manage these incidents when they do occur. A copy of this report is included in Appendix A to this submission.

Summary of Recommendations

We have outlined in this submission a number of key recommendations for consideration by the Department of Planning and Environment. NRMA would welcome the opportunity to discuss this submission with the Department and to assist the Department in undertaking its assessment.

We are pleased that many of the recommendations in NRMA's 'WestConnex: Getting it Right' report appear to now have been embraced by the WestConnex project, such as improved tunnel lighting to reduce fatigue, improve safety and add interest to the tunnel journey, and avoiding steep uphill and downhill grades. A copy of this report is included in Appendix A.

It is unclear, from the level of detail provided in the EIS, whether certain other recommendations have been adopted, such as avoiding right to left merges at on and off ramps, and extending the length of the merge ramp that is available for actual merging so as to reduce traffic flow turbulence and the ability to suspend bus lane operations when the M4 East is closed.

A summary of NRMA's further recommendations are provided below. This is followed by more detailed information on each recommendation.

Recommendation 1
The Proponent shall provide a critical analysis of traffic predictions versus actual traffic volumes on previous Australian motorway projects opened over the last 10 years, and an explanation of how this has been taken into account in predicting traffic volumes for the WestConnex M4 East project.

Recommendation 2
The Proponent shall present the results of stress testing the project design and tolling assumptions against high, medium and low traffic projections

Recommendation 3
The Proponent shall provide details of the toll sensitivity testing that was used to inform the toll choice modelling, the survey outcomes of drivers' willingness to pay tolls, and details of how this affected the model results

Recommendation 4
The Proponent shall consider future-proofing the project and extending the benefits to road users by increasing the lane capacity of the proposed tunnel, east of Concord Road, Strathfield

Recommendation 5
The Proponent shall ensure all features of a managed (smart) motorway are able to be operational on opening of the Project

Recommendation 6
No advertising shall be permitted within the WestConnex lease area both during construction and operation

Recommendation 7
The Proponent shall ensure the M4 East is designed and operated to minimise both the number of times and the duration it is closed for maintenance

Recommendation 8
The Proponent shall consult with road user groups such as NRMA in regards to the detailed tunnel design features

Recommendation 9
The Proponent shall publish the operational requirements for the motorway in regards to identifying, responding to and clearing incidents, such as crashes and breakdowns.

Recommendation 10
The Proponent shall publish detailed information each month in regards to the performance of the motorway. This must include details of traffic volumes both on the mainline motorway and by ramp, incident data including numbers of crashes and breakdowns, the duration of these incidents and the response times for dealing with these incidents.

Recommendation 11
The Proponent shall ensure the M4 East detour routes maintain sufficient capacity to cater for the high traffic volumes that will be diverted to the surrounding streets, whenever WestConnex is closed. The Proponent must develop incident response plans and procedures that enable bus lanes to be temporarily suspended in response to major incidents affecting the M4 East.

Recommendation 12
The Proponent shall ensure the lane widths on detour routes are sufficiently wide to safely cater for large trucks, including petrol tankers that are not permitted in the tunnels, so as to minimise the potential for conflict with other vehicles and vulnerable road users, such as cyclists and pedestrians.

Recommendation 13
The Proponent shall install a continuous line of profiled line marking [raised markings] as an edge line outside the tunnels to delineate the traffic lanes from the road shoulder and provide both a visual and audible alert to any motorist deviating from the carriageway. This will improve safety for anyone using the road shoulder, such as broken down vehicles, cyclists (where permitted), or maintenance workers, and will improve delineation, particularly at night and in wet weather.

Recommendation 14
The Proponent shall undertake a risk analysis of bicycles using Sydney motorways, including a comparison with the use of urban motorways by cyclists in other Australian States.

Recommendation 15
Subject to the outcome of the risk analysis, where bicycles are expected to use the M4 East road shoulder, the Proponent shall install a minimum one metre wide buffer strip of chevron line markings within the road shoulder, immediately to the left of the carriageway edge line, to enhance the safety of cyclists, incident responders, maintenance workers and the travelling public.

Recommendation 16
The Proponent shall prohibit spoil truck movements in the AM and PM weekday, and weekend road traffic peaks

Recommendation 17
The Proponent shall apply additional safety features to improve road safety associated with the operation of trucks on the project. Examples of appropriate safety features could include front / side / rear under-run protection and speed control.

Further information relating to NRMA's recommendations

Recommendation 1

The Proponent shall provide a critical analysis of traffic predictions versus actual traffic volumes on previous Australian motorway projects opened over the last 10 years, and an explanation of how this has been taken into account in predicting traffic volumes for the WestConnex M4 East project.

Robust traffic projections are a critical input to WestConnex, not just in terms of predicting the amount that will be collected from motorists in tolls, but in terms of design issues such as the numbers of traffic lanes on the motorway and on the entry and exit ramps, and in terms of the changes that may be feasible on surface roads, such as new bus and bicycle lanes.

One of the challenges for WestConnex is to demonstrate to the public the steps that have been taken to address the accuracy of traffic modelling. This is particularly important given that recent Australian toll road projects appear to have consistently over-predicted the amount of traffic that will use these projects.

The EIS contains a significant amount of information in relation to traffic modelling, however, the analysis does not appear to include an evaluation of modelling undertaken for previous toll road projects, the lessons learnt and an explanation of how the WestConnex modelling has addressed these issues.

Recommendation 2

The Proponent shall present the results of stress testing the project design and tolling assumptions against high, medium and low traffic projections

As demonstrated by recent toll road projects, traffic modelling is far from an exact science. The strategic model used for WestConnex assists in undertaking a metropolitan level analysis and modelling broad network changes, but in spite of the limitations of strategic modelling, the EIS presents the results as if they are absolute traffic figures.

We believe it would also be useful to present the traffic modelling in terms of high, medium and low projections and to report the results of sanity checking, or stress testing the project design and tolling assumptions against each of these scenarios.

Recommendation 3

The Proponent shall provide details of the toll sensitivity testing that was used to inform the toll choice modelling, the survey outcomes of drivers' willingness to pay tolls, and details of how this affected the model results

The EIS contains very limited information in regard to tolling or project financing. This makes it difficult to objectively assess whether the proposed tolls for traffic using WestConnex are appropriate and whether the predicted traffic volumes will be achieved.

We would like to see details of the toll sensitivities used to determine the proposed toll levels and traffic projections. The EIS indicates the toll choice model was adjusted to match observed patronage on existing toll roads, but does not report on this, or provide an analysis of the sensitivity of road users to paying multiple tolls whilst travelling from one toll road to another, for example, from the M7 to the M5 and then onto WestConnex.

Toll levels can have a major effect on the distribution of traffic using the toll road compared to traffic using alternative routes. As shown by recent Australian toll road projects, road users are very sensitive to different toll levels.

As an example, it would be useful for information to be provided on the toll sensitivity testing in relation to the proposed truck toll at three times the car multiplier, including the outcomes of consultation both the large road haulage companies and also with single vehicle owner / operators of vehicles who will be required to pay the truck toll.

There may also be an opportunity to reduce truck tolls at night to encourage trucks to use the project, helping to reduce the impact on residents when trucks divert to the surrounding streets.

Recommendation 4

The Proponent shall consider future-proofing the project and extending the benefits to road users by increasing the lane capacity of the proposed tunnel, east of Concord Road, Strathfield

The fundamental issues for the M4 East project are how well it will work for traffic and how well it will be perceived by users and the wider community. If the road does not work as expected, if it is not seen as representing value for money, and if it is not supported by users, then the anticipated benefits to local communities will not be achieved.

The challenge is to make sure the benefits of the M4 East, such as higher traffic throughput, quicker and more reliable travel times and improved road safety, continue into the future. This is imperative if the expected improvements to local amenity and urban regeneration are to be achieved and maintained.

The M4 East traffic modelling indicates that by 2021, two years after the M4 East opens to traffic in 2019, motorists will continue to experience a high level of service within the main tunnels.

However, within just 8 years of the M4 East being connected to the completed WestConnex project (full WestConnex completion expected to occur in 2023), the predicted midblock operational performance of the motorway indicates the M4 East, east of Concord Road, Strathfield will be congested in both the AM and PM peaks, even with a motorway management system in operation. The M4 East EIS modelling does not indicate how this section will perform at other times, or how other sections of WestConnex will operate.

The modelling reported in the EIS indicates 6,668 vehicles per hour (vph) will use the westbound tunnel in the AM peak, and 6,399 eastbound in the PM peak (See Volume 1A, Section 8.41, Table 8.13, also Volume 2A, Appendix G. Section 10.1.2, Table 10.7).

NRMA is concerned that these high theoretical figures reported in the EIS from the strategic traffic model (6,668 vph equates to 2,222 vph in each lane) are not achieved in any of Sydney's existing road tunnels and are unlikely to be achieved using current vehicle and motorway control system technology. Whilst the 'safe' vehicle following distance is often promoted as being 3 seconds, this would only allow for a maximum of 1200 vph/lane. In reality, in busy traffic, gaps of less than 1 second are common. Accordingly, the reported mid-block motorway performance of Level of Service (LoS) 'E' may actually occur sooner than the 2031 modelling year reported in the EIS, and quickly deteriorate to Level of Service 'F' where traffic volumes exceed the road capacity.

LoS 'E' is defined as "Traffic volumes are at or close to capacity, and there is virtually no freedom to select desired speeds or to manoeuvre within the traffic stream. Flow is unstable and minor disturbances within the traffic stream will cause breakdown". LoS definitions are outlined in Volume 2A, Appendix G, Section 6.1.1, Table 6.1.

The response from road users faced with this level of congestion will inevitably be greater peak spreading, with the road being busier over a wider, longer period. There will be queuing to access the motorway and traffic will seek to divert to surrounding streets.

Given the difficulties of making any significant changes to road tunnels once they are in operation, the modelling results reported in the EIS appear to indicate a need to consider constructing additional lane capacity within the M4 East in order to 'future proof' the project.

We acknowledge that there would be engineering challenges in constructing additional lane capacity, however, this would appear to be preferable to going through the costly exercise of building additional capacity in the future, as is now being proposed for the M5 East, leading to additional tolls for road users. The proposed NorthConnex tunnel has addressed this through the provision of an additional lane, initially marked as a breakdown lane and converted to a traffic lane in the future as required. The initial concepts for WestConnex Stage 2 appear to indicate a similar approach is proposed in the new M5 East tunnels.

Recommendation 5

The Proponent shall ensure all features of a managed (smart) motorway are able to be operational on opening of the Project

Actively managing the M4 East will be critical to keeping traffic moving. The EIS indicates many of the features of a smart or managed motorway will be provided as part of the project, such as widened on-ramps "to support the future implementation of a smart motorway solution" (EIS Volume 1A, Section 5.8.7).

However, it does not provide confirmation that the full system will be implemented as part of the project and will have the ability to be operational when the project opens to traffic.

NRMA was disappointed that neither the recent M2 or M5 widening upgrade projects incorporated smart motorway features to help keep traffic moving into the future and to manage the motorways as a network, rather than as isolated links. We are pleased the M4 East project will provide many of the features required to actively manage traffic on the motorway, but are concerned the EIS still does not appear to provide for full implementation of smart motorway operations.

Additionally, we continue to raise concerns that the motorway management system being developed by RMS may not perform as well as the tried and tested system used on Victoria. The M4 Smart Motorway EIS identified travel time improvements of up to 25 per cent in peak period travel times as a result of implementing the smart motorway management system. It did not, however, provide any detailed analysis to show how this will be achieved by the M4 Smart Motorway management system, the impact on traffic waiting to access the motorway, or any analysis on whether adopting the system used in Victoria and being rolled out in Queensland, would produce better results for motorists. NRMA supports WestConnex having an active managed motorway system and continues to seek the best system for road users and NSW taxpayers.

Recommendation 6

No advertising shall be permitted within the WestConnex lease area both during construction and operation

On previous toll road projects such as the Cross City and Lane Cove Tunnels, advertising signs were specifically prohibited as part of the conditions of approval for these projects.

Whilst the M4 East EIS advises that advertising structures are not proposed as part of the project, it does not preclude these being installed at a later date and states that this "would be subject to separate assessment or approvals process should they be included at a later date".

NRMA considers that permitting advertising signs and structures would introduce an unnecessary road safety issue. NRMA's 'WestConnex: Getting it Right' report highlighted the importance of minimising the number of crashes and distractions on the motorway in order to keep traffic moving, improve safety and minimise the number of times that traffic diverts to surrounding streets.

The dangers of distraction are highlighted on the NSW Centre for Road Safety website, as follows:

"Driving is a complex task. Anything that takes your mind or eyes off the road, or your hands off the wheel, not only compromises your safety, but that of everyone else on the road.

Being distracted increases your chances of having a crash. It slows down your reaction times and puts you in danger of failing to see hazards such as traffic lights, stop signs or other road users, including pedestrians and cyclists."

Given these dangers and the increasing use of electronic billboards to attract the attention of road users, we believe there should be a specific planning condition prohibiting advertising signs and structures within the M4 East corridor.

Recommendation 7

The Proponent shall ensure the M4 East is designed and operated to minimise both the number of times and the duration it is closed for maintenance

NRMA's 'Decongestion Strategy – 10 Ways to Relieve Sydney's Traffic Headache' revealed that the M5 East motorway was closed 72 times for planned maintenance and 45 times for unscheduled maintenance between July 2009 and July 2010. During these closures traffic is redirected to surrounding streets,

The M4East EIS does not contain details on the numbers of times the road will be permitted to close for maintenance. There is an opportunity to include requirements within future planning conditions of consent for the project. This would help to drive innovation in the design, construction, operation and maintenance of the project, helping to minimise the impact of closures on road users and the surrounding communities.

Recommendation 8

The Proponent shall consult with road user groups such as NRMA in regards to the detailed tunnel design features

We are pleased the concept urban design and lighting concepts (Appendix 2D Section 6.3) appears to have adopted NRMA's recommendations for improved lighting and tunnel features outlined in our 'WestConnex: Getting it Right' report as a way to reduce fatigue, improve safety and add interest.

Typically the EIS represents the final stage where the community may make detailed comments in relation to a project. We believe there is an opportunity for Transport for NSW, through its agency, Roads & Maritime Services as the client agency for the WestConnex motorway, to demonstrate its commitment to putting the customer at the centre of everything it does through ongoing consulting with road user groups in regards to the tunnel design features.

As outlined in the recommendations from the Inquiry into the Roads and Traffic Authority's response to an accident on the F3 Freeway near Jolls Bridge on 12 April 2010, "NRMA (and others) have propositions gathered from their community inter-actions and community consultation. Transport

NSW and the RTA could do no worse than to listen to the community through these representative groups.

Doubtless, any community-based debate and consultation will evoke different points of view on different issues and consensus may not always be possible. To not engage in the debate in the first instance is a grave misjudgement. Ultimately, it is the community and groups like the NRMA who seek to aid road and traffic management, and their knowledge and commitment ought not to be discounted."

Recommendation 9

The Proponent shall publish the operational requirements for the motorway in regards to identifying, responding to and clearing incidents, such as crashes and breakdowns.

Publishing this data will provide road users with transparency in regards to these key aspects of the toll road operator's obligations. In conjunction with the proposed recommendation below, it will ensure there is a key focus on the road user as the customer and will help to limit the impact of these incidents on surrounding streets.

Recommendation 10

The Proponent shall publish detailed information each month in regards to the performance of the motorway. This must include details of traffic volumes both on the mainline motorway and by ramp, incident data including numbers of crashes and breakdowns, the duration of these incidents and the response times for dealing with these incidents.

Detailed traffic and incident data is difficult to obtain for existing Sydney toll roads. This makes it difficult to establish how well the road is performing and whether the operator is complying with its contractual requirements.

We believe there is an opportunity for Transport for NSW, through its agency, Roads & Maritime Services as the client agency for the WestConnex motorway, to demonstrate its commitment to putting the customer, in this case the road user, at the centre of everything it does by publishing regular, detailed information in regards to the performance of the motorway.

The existing M4 is Sydney's busiest motorway, carrying over 170,000 cars and trucks. More NRMA Members break down on the M4 than on any other road in metropolitan Sydney. Studies show that even a vehicle stopped in a breakdown lane can reduce the carrying capacity of a road by 250 vehicles per hour, as motorists slow when they drive past.

Over the last ten years, NRMA has helped over 40,000 stranded motorists on the M4, coordinated from NRMA's Sydney Operations control centre strategically positioned next to the M4 /

WestConnex at North Strathfield. Quickly responding and clearing incidents will be even more important for incident responders when the M4 East and the full WestConnex project become operational.

As well as the congestion impacts, the level of safety (including the potential for secondary crashes) is largely dependent on the motorway operators and the people performing rescue services.

NRMA's Decongestion Strategy highlighted how traffic jams on busy motorways can build at the rate of 1.5 kilometres per minute. When something does go wrong in the M4 East it has the potential to quickly create 'gridlock' across Sydney, severely impacting on people's lives and on businesses.

This recommendation by NRMA is intended to encourage both design innovation in order to keep traffic moving and reduce the number of crashes and breakdowns, as well as improved management of these incidents when they do occur.

Recommendation 11

The Proponent shall ensure the M4 East detour routes maintain sufficient capacity to cater for the high traffic volumes that will be diverted to the surrounding streets, whenever WestConnex is closed. The Proponent must develop incident response plans and procedures that enable bus lanes to be temporarily suspended in response to major incidents affecting the M4 East.

The M4 East tunnel will be 5.5 kilometres in length, over 30% longer than Sydney's longest existing tunnel, the M5 East. When completed, the combined WestConnex tunnels will comprise the longest road tunnel in Australia, three times longer than the existing M5 East. Driving through WestConnex will be a new experience for Sydney's motorists. With mistakes by motorists contributing to 95 per cent of crashes, the challenge is to make it a good experience.

Whilst Sydney's existing road tunnels generally have a reasonable safety record, the longer the tunnel, the greater the likelihood of an incident, such as a crash or breakdown somewhere in the tunnel. NRMA's studies also show that the busier Sydney's motorways get, the more crashes occur.

When a big incident occurs on a surface motorway, like the M4, traffic is generally allowed to continue along the motorway and leave at the last exit prior to the incident. However, when these types of incidents occur in tunnels, the whole tunnel is typically closed and traffic, both private and public on the surrounding surface streets and adjacent motorways slows to a crawl. This is why NRMA has put forward recommendations that aim to ensure WestConnex is designed and operated to minimise the number and duration of crashes and breakdowns.

Recommendation 12

The Proponent shall ensure the lane widths on detour routes are sufficiently wide to safely cater for large trucks, including petrol tankers that are not permitted in the tunnels, so as to minimise the potential for conflict with other vehicles and vulnerable road users, such as cyclists and pedestrians

The draft proposals for Parramatta Road indicate the project allows for future provision of a seven metre wide central running mass transit corridor on Parramatta Road. The existing traffic lanes on Parramatta Road are particularly narrow, contributing to congestion and safety issues where buses and trucks are unable to track within their lane. Since petrol tankers and over-dimensional vehicles will not be permitted in the M4 East tunnels, the lane widths on Parramatta Road and feeder roads must be appropriate to cater for these vehicles. 3.2m lane widths are likely to be the minimum lane widths appropriate to cater for these vehicles.

Recommendation 13

The Proponent shall install a continuous line of profiled line marking [raised markings] as an edge line outside the tunnels to delineate the traffic lanes from the road shoulder and provide both a visual and audible alert to any motorist deviating from the carriageway. This will improve safety for anyone using the road shoulder, such as broken down vehicles, cyclists (where permitted), or maintenance workers, and will improve delineation, particularly at night and in wet weather.

Recommendation 14

The Proponent shall undertake a risk analysis of bicycles using Sydney motorways, including a comparison with the use of urban motorways by cyclists in other Australian States.

Recommendation 15

Subject to the outcome of the risk analysis, where bicycles are expected to use the M4 East road shoulder, the Proponent shall install a minimum one metre wide buffer strip of chevron line markings within the road shoulder, immediately to the left of the carriageway edge line, to enhance the safety of cyclists, incident responders, maintenance workers and the travelling public.

The concept of using buffer zones to protect vulnerable users is well established. A yellow line on Sydney's train station platforms helps to maintain separation between passengers and moving trains. Recently the NRMA, Bicycle NSW, and the NSW Government have all partnered with the Amy Gillett Foundation to promote the 'metre matters' road safety campaign to improve safety for cyclists.

NRMA is concerned that crashes involving cyclists on motorways typically result in deaths or serious injuries. In early January 2009, a cyclist was killed and one of his training partners incurred severe head injuries after being hit by a truck on the M7.[i] In April 2010, a cyclist was killed and three riders injured after being hit by a truck when riding in the breakdown lane on the M4.[ii]

NSW is the only State in Australia to permit bicycles to use the road shoulder on toll roads, however, no specific enhancements have been adopted to protect cyclists using the road shoulder

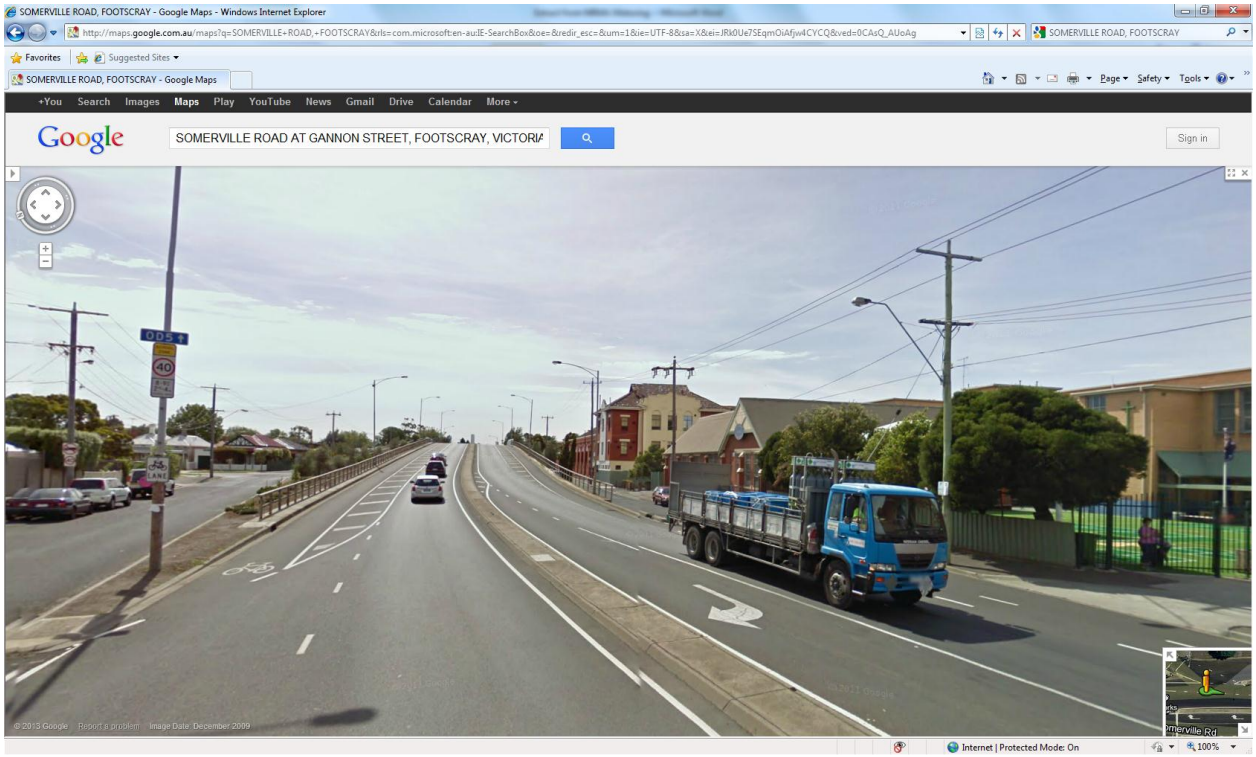
NRMA's proposal for a raised profile edge line and buffer strip is consistent with our recommendations for the previous M2 and M5 widening upgrades, although to date this safety initiative has still not been embraced by RMS. It would provide road users with both audible and visual information when they are drifting out of their lane. This would be an important safety feature given the NSW Centre for Road Safety website identifies fatigue as one of the three main causes of death and injury on NSW roads (along with speed and drink driving). It would also enhance delineation, particularly in wet weather and at night.

Our proposed buffer zone within the road shoulder would provide separation between cyclists and the traffic lane under normal circumstances.

Given the volumes of trucks that are projected to use the M4 East and given that cyclists are permitted to use the road shoulder, opportunities to widen the road shoulder, even if only on some sections of the Project should be considered.

Even if the shoulder width is not able to be widened, it is important to recognise that a properly designed buffer strip need not necessarily reduce the physical shoulder width available for use by broken down vehicles but would encourage drivers of these vehicles to park as far left as possible.

The example below from Melbourne helps to illustrate NRMA's buffer strip concept



Example of chevron lines observed at Somerville Road, near Gannon Street, Footscray, Victoria. Source Google Maps.

Recommendation 16

The Proponent shall prohibit spoil truck movements in the AM and PM weekday, and weekend road traffic peaks

NRMA is concerned the proposal for all spoil to be removed by truck will increase congestion and have an impact on safety on some of Sydney's busiest road corridors, particularly during the AM and PM weekday, and weekend peaks.

Roads such as Parramatta Road have very narrow lane widths and high volumes of traffic. There are many locations where spoil trucks with 'dog' trailers will be unable to fit within their lane, increasing congestion and the potential for conflict with other vehicles and increasing congestion by reducing road capacity.

The EIS (Volume 2A, Appendix G, Section 6.4.1) highlights how "an increase in demand on Parramatta Road would result in lower operating speeds and an increase in slow rolling queues resulting in vehicles travelling closer together, increasing the likelihood of rear end crashes (which currently account for 43 per cent of all crashes in this area, see Table 6.11. Under these conditions drivers can also become more frustrated as their ability to travel their desired speed is impaired; more risks are often taken in relation to overtaking manoeuvres, and crashes can occur as a result." … "Additionally increased delays at intersections could encourage frustrated drivers to take aggressive manoeuvres such as travelling through red lights. These trends are highlighted in Figure

6.2 where an increase in the number of crashes on Parramatta Road occurs during and between the congested AM and PM peak periods".

We acknowledge that these are existing issues, but without active intervention as recommended by NRMA in this and the following recommendation, they are likely to be exacerbated by the increase in truck movements during the construction phase of the project.

The EIS states the project would generate around 2.4 million cubic metres of spoil (Appendix 1A Section 6.9). The WestConnex spoil movements will be in addition to spoil transported across Sydney as part of the NorthConnex and North West Rail projects.

The EIS (Volume 1A, S.8.3.1, Table 8.6) reports that 172 additional heavy construction vehicles are expected to travel on Parramatta Road as a result of the project in one AM peak hour (7.30am-8.30am) and 161 on one PM peak hour 4.15pm-5.15pm. This does not include the large number of concrete trucks associated with the project.

Table 8.8 shows Parramatta Road mid-block capacity between Mosely Street and Burwood Road, Strathfield as failing (Level of Service 'F') in both AM and PM peaks in the city bound direction and in the AM peak outbound direction. Gipps Street, from west of Burwood Road to Concord also fails during the PM peak in both city bound and outbound directions, with road users experiencing long delays shown by a volume to capacity ratio of 1.10 and 1.19 respectively.

The EIS states that "the existing traffic volumes on these road sections are congested" but does not provide any solutions to address the increased congestion resulting from permitting spoil and concrete truck movements in peak periods.

We recommend additional options are considered for removing / relocating spoil. For example, if there is insufficient space to stockpile spoil on the surface at the proposed tunnelling points, other opportunities could potentially be considered, such as utilising the proposed stub tunnels associated with the project for temporary storage of spoil.

Recommendation 17

The Proponent shall apply additional safety features to improve road safety associated with the operation of trucks on the project. Examples of appropriate safety features could include front / side / rear under-run protection and speed control.

We believe that due to the proposed large number of truck movements, there is an opportunity to require trucks associated with the project to incorporate a range of safety features.

This would both improve safety associated with the project and on the wider road network. It would provide a lasting road safety benefit as these vehicles would transition to other jobs, including the subsequent stages of WestConnex.

NRMA's Heavy Vehicle safety report released in 2010 identified a range of safety features to improve heavy vehicle safety, aimed at both reducing crashes and protecting other road users in the event of a crash, such as front, side and rear under-run crash protection.

See: http://www.mynrma.com.au/media/Heavy_Vehicle_Safety_Report_March_2010.pdf

Additional safety features have been developed since NRMA released this report and we would be pleased to assist the Department and RMS in identifying the features that may be incorporated in to a planning condition.

For example, the Centre for Road Safety has released its Speed Adviser smartphone app designed to reduce speeding and save lives, and there are commercial products that can track speed, excessive braking and record incidents.

Additional general comment

We note the EIS includes traffic modelling results for the intersection of Underwood Road and Pomeroy Street, but does not contain any analysis of the impact of the project on the congested Underwood Road / Australia Avenue roundabout at Homebush.

Appendix A - WestConnex: Getting it Right

WestConnex: Getting it right

NRMA's recommendations for:

New ways to keep WestConnex moving
New ways to minimise crashes and breakdowns
New ways to manage crashes and breakdowns
Celebrating tunnel infrastructure

July 2014

About The National Roads & Motorists' Association

The National Roads and Motorists' Association (NRMA) comprises 2.5 million Members in NSW and the ACT. For more than 90 years, NRMA has represented the interests of motorists, delivering better results for our Members by lobbying for better roads, increased road infrastructure funding, new ways to manage congestion and improve safety, fairer licensing for older and younger drivers, better value petrol prices, greener motoring and much more.

Background to this Report

This Report identifies a number of relatively low cost ways to improve the design and operation of WestConnex and particularly its road tunnels.

The design and approval process for road tunnels understandably has a large focus on traffic modelling, fire and life threatening safety issues, and managing construction impacts such as noise and impacts to road users. Within this context, however, new ways to improve traffic flow and road safety have not always been given the attention they deserve.

NRMA strongly believes that WestConnex must learn from past mistakes. The recommendations and ideas in this Report are not meant to be exhaustive, but we believe they can contribute to making a positive difference for road users, and form the basis for generating other ideas.

Comments and Queries

All comments and queries about this report may be directed to:

Mark Wolstenholme, Senior Policy Advisor – Traffic & Safer Roads
The National Roads and Motorists' Association
PO Box 1026, STRATHFIELD NSW 2135
T: +61 2 8741 6000
E: Mark.Wolstenholme@mynrma.com.au

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Introduction

WestConnex is one of the most important transport infrastructure projects undertaken by the NSW Government in a generation. Not since the construction of the Sydney Harbour Bridge in the 1920s and 1930s has an infrastructure project had such potential to shape and influence Sydney's long term future and economic sustainability.

Just like the Sydney Harbour Bridge, it is crucial that the NSW Government and the WestConnex Delivery Authority ensure that WestConnex is designed to stand the test of time.

At approximately 13 kilometres long, the WestConnex Stage 1 tunnel between the M4 and St Peters will be the longest road tunnel in Australia, three times the size of Sydney's M5 East tunnel.

It is just one of an unprecedented number of proposed new road tunnels to be dug under Sydney. The WestConnex and NorthConnex tunnel projects combined will add an extra 26 kilometres (a 73% increase) to the existing 15 kilometres of major road tunnels. More tunnels are also currently being considered as part of the WestConnex extension to Victoria Road, for the F6 extension and for the Military / Spit Road corridor on the North Shore.

At 33 kilometres, WestConnex is the largest of a group of toll road projects proposed by the NSW Government to help keep Sydney moving. Once completed, it will provide important connections between Western and Southern Sydney, Sydney Airport and Port Botany, as well as with the Western Distributor and the North Shore.

It will help to deliver significant economic and social benefits for Sydney through faster and more reliable travel times, helping to relieve chronic congestion problems in Western and South Western Sydney on the M4 and M5 motorways. It will help in overcoming the sharp divisions between the west and east of Sydney, and will help fuse Sydney into a single housing and labour market.

WestConnex will also help to revitalise Parramatta Road, which has suffered from chronic traffic congestion, as well as creating opportunities to revitalise other roads, such as Forest and Stoney Creek roads through Bexley, and sections of the Princes Highway.

Over a number of years, NRMA has strongly advocated for the construction of WestConnex and the other missing links in Sydney's motorway network. Following NRMA's *Seeing Red on Roads* campaign in the lead up to the 2011 NSW State Election and the Australian Automobile Associations (AAA) *Demand Better Roads* campaign during the 2013 Federal Election, the NSW and Australian Governments announced a combined $3.3 billion commitment to allow construction of the first stage of WestConnex to begin in 2015.

NRMA is a strong supporter of WestConnex and welcomed the decision of the NSW and Australian Governments to commit funding towards its development. However, it must be noted that NRMA's support for WestConnex is not unconditional.

NRMA has clearly expressed to the NSW Government that it is crucial that it gets the planning right to ensure that WestConnex delivers value for money for motorists and caters for future growth. It is crucial that WestConnex provides a future proofed and lasting infrastructure solution, and the recommendations contained in this Report are intended to benefit motorists by helping to guide the development of WestConnex and future motorway projects.

Recommendations

Recommendation 1: New ways to keep WestConnex moving

NRMA recommends the NSW Government ensures that the WestConnex motorway is designed to keep traffic moving, both now and into the future.

The challenge, particularly with the WestConnex tunnels, is to get the design right up front, as there are limited opportunities to fix any problems once the motorway is open to traffic.

WestConnex must adopt new thinking in the way it is designed and operated.
The main overriding objective for the WestConnex project must be long term effective traffic management, not lowest cost or revenue maximisation.

This means that WestConnex must:

(a) Have sufficient traffic lanes to cater for foreseeable future demand;

It is crucial that the NSW Government and the WestConnex Delivery Authority ensure that like the Sydney Harbour Bridge, WestConnex is designed to stand the test of time.

With tunnels typically costing four times as much as surface roads, and with motorists paying tolls to travel on WestConnex, it is imperative WestConnex is designed and operated to keep traffic moving both now and into the future.

If the severely congested M5 East tunnel had been built with three lanes instead of two, it reputedly would have added just $100 million to the $800 million cost – a massive difference compared with the current proposal to go back and construct a new tunnel.

(b) Be actively managed like the Monash Freeway in Melbourne, to minimise congestion and ensure that high traffic flows and travel time reliability can be maintained;

The days of pumping more traffic into a motorway system to join the back of a queue of stationary traffic are over. Allowing motorways to operate like car parks in peak periods just when we need them most should no longer be an option.

NRMA's Decongestion Strategy[iii] revealed how the Victorian roads agency, VicRoads, has led the world in the development of motorway management systems. Sydney motorists continue to suffer from the 'business as usual' approach to managing motorways – neither of the recent upgrades to the M2 or the M5 motorways have embraced these systems.

In contrast, these motorway management systems will be operating on every freeway in Melbourne within the next five years, consistently maintaining high traffic flows in peak periods and enabling these critically important roads to be operated as a network, instead of as isolated links.

NRMA continues to have concerns that the 'in-house' system being considered by Transport for NSW for WestConnex will not perform as well as the tried and tested Melbourne system. Motorists paying to use WestConnex should have the best motorway management system.

(c) Ensure that entry and exit ramps and merge points are designed and operated to minimise motorway disruption and enhance safety;

WestConnex needs to make it easier and safer for motorists to merge with the main tunnel by extending the merging area within the tunnel on-ramps. This should be coupled with improved warning signs, road markings, and tunnel lighting to make it obvious where the merge takes place for both merging traffic and for traffic already in the main tunnel.

A previous NRMA report has revealed that two thirds (66%) of crashes on Sydney's motorways may be attributed to merge related issues[iv].

In stark contrast to travelling in tunnels, motorists travelling on surface motorways can usually see traffic about to join the motorway as it travels along the entry ramp. In response, motorists both on the ramp and those already on the motorway are able to adjust their speed and the gap between their vehicle and any vehicle in front.

In tunnels, however, traffic often appears from behind a tunnel wall to merge with very little warning. This has clear implications for both traffic flow and road safety, but in spite of this, tunnel on-ramps continue to be designed in the same way as surface motorways, with the same amount of distance provided for traffic to travel parallel to each other before merging[v].

(d) Avoid right hand on-ramps (such as the Cross City Tunnel to Eastern Distributor southbound ramp). Right to left merges are very difficult for drivers, particularly for truck drivers, resulting in both congestion and road safety issues;

(e) Avoid right hand off-ramps (such as the M5 East city bound off-ramp to Bexley Road). These contribute to congestion and impact on safety as they require slower vehicles to travel in the right hand lane to access the off-ramp. The M5 East issue is exacerbated by the left to right weave across the motorway resulting from traffic entering the M5 East at King Georges Road to exit at Bexley Road;

(f) Consider the implications for traffic flow when choosing locations for speed cameras; Motorists braking at speed cameras can cause 'shock-waves' to travel back (or forward) along the tunnel, causing congestion and increasing the potential for rear end crashes by requiring other motorists to also brake);

(g) Avoid steep uphill and downhill gradients as these can cause traffic to travel at different speeds, disrupting traffic flow. Grades can also contribute to the formation of shockwaves where the disruption travels forwards or backwards along a motorway causing traffic to grind to a halt for no apparent reason.

Without a real horizon to guide motorists in tunnels, both uphill and downhill grades can be difficult for motorists to perceive. Opportunities should be explored to orientate tunnel wall panels or use patterns on these panels to help illustrate when the road is going up or downhill.

Recommendation 2: New ways to minimise crashes and breakdowns

The main WestConnex tunnel will stretch over 13 kilometres from the end of the M4 motorway to the Princes Highway at St Peters. It will be the longest road tunnel in Australia, three times longer than Sydney's longest existing tunnel - the M5 East. Driving through WestConnex will be a new experience for Sydney's motorists. With mistakes by motorists contributing to 95 per cent of crashes, the challenge is to make it a good experience.

Whilst Sydney's existing road tunnels generally have a reasonable safety record, the longer the tunnel, the greater the likelihood of an incident, such as a crash or breakdown somewhere in the tunnel. NRMA's studies also show that the busier Sydney's motorways get, the more crashes occur.

When a big incident occurs on a surface motorway, like the M4, traffic is generally allowed to continue along the motorway and leave at the last exit prior to the incident. However, when these types of incidents occur in tunnels, the whole tunnel is closed and traffic on the surrounding surface streets and adjacent motorways slows to a crawl. WestConnex must be designed to minimise the number of crashes and breakdowns.

This means WestConnex must:

(a) Have the world's best systems and designs to stop over-height vehicles, and vehicles carrying dangerous goods from attempting to enter the tunnels. These include heavy vehicle diversion lanes, pull over bays, and active systems, for example, the ability to broadcast safety messages to warn drivers approaching the tunnel;

(b) Use innovative lighting and design to guide drivers safely through the tunnel, to keep drivers alert, and to reduce fatigue and tiredness;

The design of tunnels can positively or negatively influence driver's feelings and actions including stress, panic and speed.

Tunnels can be monotonous for drivers due to their form (e.g. few intersections, one way flow). Fatigue or tiredness in drivers in tunnels is more prevalent. Truck drivers can experience these effects more than drivers of other vehicles due to the large distances involved whilst in transit.

Whilst drivers must not be unduly distracted by tunnel designs, there is the potential for different lighting colours and images to be projected to guide drivers, maintain interest and reduce fatigue. Potentially lighting could also be tailored to different times of the day.

Lighting could also be used to highlight the location and radius (tightness) of curves, green and red lighting could be used to alternately reinforce to motorists when an off-ramp is open or closed.

New forms of lighting are being used in Scandinavian tunnels, and the 'Vivid Sydney' festival[vi] has provided a flavour of what can be achieved with modern lighting. Some examples from overseas tunnels are provided later in this report.

(c) Avoid locating drainage pits along the wheel path of driver's vehicles; Observations by NRMA from the M5 East 'Cooks River' Tunnel in Sydney reveal that drivers appear to be uncomfortable travelling across these pits located in the right hand lane, causing some drivers to shift their vehicle position to the left to avoid the uneven ride across the pits. This places their vehicle much closer to vehicles in the adjacent lane, with consequent implications for traffic flow and road safety;

(d) Reduce the mass of signs facing drivers as they approach tunnels; At 200 metres out from the tunnel, motorists are preparing and lining themselves up for entering the tunnel. They are generally not focused on signs, other than looking for speed limit signs, and are unable to read and respond to the existing mass of signs;

For example, NRMA has queried why RMS, unlike VicRoads, requires three static signs associated with electronic variable speed limits. Reducing sign clutter was another recommendation from NRMA's Decongestion Strategy[vii].

(e) Give national and international ITS experts and companies the freedom to recommend the systems and devices that should be used on WestConnex. This will help RMS and the TMC to identify and capture innovations;

RMS and the TMC have traditionally specified the devices and systems that should be included on private motorways. This approach can stifle innovation and limit private sector technology experts and providers from specifying what may well be better, or more cost effective technology.

This recommendation will help avoid the situation where RMS and the TMC failed to act on NRMA's previous suggestions and instead specified 20th Century technology on the recent M2 and M5 motorway upgrades.

This led to electronic variable message signs being installed that can only display amber text messages (instead of installing 21st Century signs that can display colour pictures of traffic signs along with text), along with fixed speed limit signs instead of variable speed limit signs.

NRMA has previously highlighted to RMS the benefits of installing picture VMS on the basis that "a picture tells a thousand words", helping motorists to recognise, process and respond quickly to information displayed on these signs. If picture VMS had been installed on the M2 and M5 upgrades it would also have helped road users who find word comprehension difficult, including people for whom English is a second language, have dyslexia, or other literacy deficiencies.

(f) Seek to positively influence driver behaviour by making sure motorists are aware that their actions are being captured on CCTV.

Recommendation 3: New ways to manage incidents and their impacts

Today, the M4 is Sydney's busiest motorway, carrying over 170,000 cars and trucks. More NRMA Members break down on the M4 than on any other road in metropolitan Sydney. Studies show that even a vehicle stopped in a breakdown lane can reduce the carrying capacity of a road by 250 vehicles per hour, as motorists slow when they drive past[viii].

Over the last ten years, NRMA has helped over 40,000 stranded motorists on the M4, coordinated from NRMA's Sydney Operations control centre strategically positioned next to the M4 / WestConnex at North Strathfield. Quickly responding and clearing incidents will be even more important for incident responders when WestConnex becomes operational.

As well as the congestion impacts, the level of safety (including the potential for secondary crashes) is largely dependent on the motorway operators and the people performing rescue services.

NRMA's Decongestion Strategy[ix] highlighted how traffic jams on busy motorways can build at the rate of 1.5 kilometres per minute. When something does go wrong on WestConnex it has the potential to quickly create 'gridlock' across Sydney, severely impacting on people's lives and on businesses.

To help address this, NRMA has identified a number of ways to better manage these incidents and their impacts when they do occur.

This means that WestConnex must:

(a) Include rigorous and detailed analysis about how traffic will be managed efficiently and how incidents will be minimised. This information should be made public in the same way that Environmental Impact Assessment information is made public;

(b) Ensure the detour routes maintain sufficient capacity to cater for the high traffic volumes that will be diverted to the surrounding streets, whenever WestConnex is closed. For example, new bus lanes proposed on Parramatta Road will need to be suspended during major incidents;

(c) Ensure the lane widths on detour routes are wide enough to safely cater for large trucks, including petrol tankers that are not permitted in the tunnels, so as to avoid conflict with other vehicles and vulnerable road users, such as cyclists and pedestrians;

(d) Be designed to minimise the number of times it is closed for maintenance;

NRMA's Decongestion Strategy revealed that the M5 East motorway was closed 72 times for planned maintenance and 45 times for unscheduled maintenance between July 2009 and July 2010[x].

(e) Be designed to enable incident responders to deliver rapid response during traffic incidents such as crashes and breakdowns; For example, incident response vehicles, including heavy tow trucks, must be strategically positioned at either end of the tunnels and at key entry and exit points;

(f) Take a network wide approach to clearing incidents by enlisting help from private WestConnex incident response teams to quickly clear traffic incidents both upstream and downstream from the WestConnex entry and exit points;

Whilst these locations are outside the traditional 'lease' area controlled by private motorway operators, it would make sense to involving the WestConnex operators in the incident response on these roads, given the proximity and potential to cause congestion on WestConnex, added costs for motorists, and the impact on toll revenue for the operator. It would also help to avoid any delays in the Transport Management Centre responding to incidents.

For example, under this proposal, incident response crews based at the existing M5 East control centre overlooking Marsh Street would be able to respond to crashes and breakdowns on Marsh Street, or in the airport tunnel, both of which are outside the current lease area but directly affect traffic travelling to and from the M5 East.

(g) Resolve the perverse situation where key incident responders, such as the Transport Management Centre (TMC), Roads & Maritime Services, NRMA and the emergency services, are required to pay tolls in order to keep Sydney moving;

As an example, today on the M5 motorway and adjacent roads, the NRMA, along with the TMC and emergency services help to keep Sydney moving by providing 24/7 response to traffic incidents. In spite of this, each of these organisations (other than emergency service vehicles displaying flashing blue lights) are required to pay tolls.

Traffic incidents are unplanned events that reduce road capacity. A 2007 Austroads report showed how they "can have significant impacts on roadway system operations, and hence road users and the community. Within major urban areas, incidents are a major contributor to traffic congestion" [xi].

NRMA has previously highlighted the issue of incident responders paying tolls with Transport for NSW and the TMC. Unfortunately the opportunity to resolve this issue was not taken during the contract negotiations for the recent M2 and M5 motorway upgrades. This issue must be addressed.

(h) Provide travel time information to motorists, along with much greater access to CCTV camera images and ensure that motorists are aware that their driving behaviour is being observed whilst travelling on WestConnex.

Recommendation 4: Celebrate Tunnel Infrastructure

Sydney's bridges, such as the Harbour and Anzac Bridges, are celebrated as iconic structures and engineering marvels.

By their nature, tunnels are hidden away from view, but this should not mean tunnels and their facades can be ignored. NRMA believes that there are real opportunities to improve motorist's experiences in road tunnels and to celebrate tunnel infrastructure.

The following examples from around the world reveal what is possible for WestConnex.

Image 1.1 – Image of the Södra länken motorway, Stockholm, Sweden

Image 1.2 – Image of a private car park tunnel, London, United Kingdom[xii]

Image 1.3 – Image of a private car park tunnel, London, United Kingdom[xiii]

Image 1.4 – Example of traditional tunnel lighting Lane Cove Tunnel, Sydney, Australia[xiv]

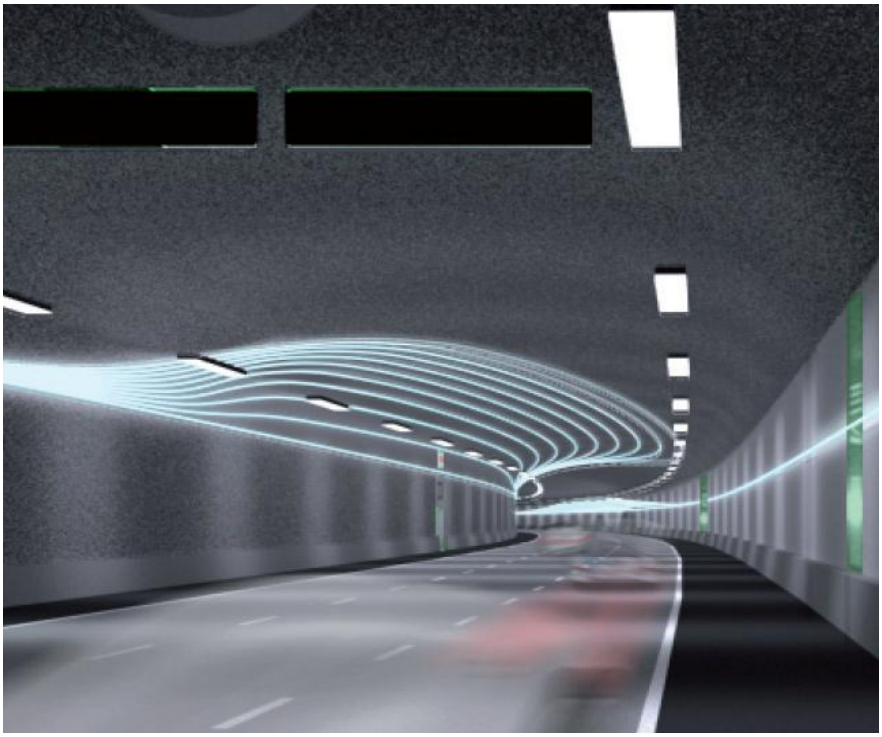

Image 1.5 – Concept design from the Stockholm bypass project (a new 21kilometres motorway with 18 kilometres of tunnels), Stockholm, Sweden[xv]

Supporting Information

WestConnex is one of the largest road infrastructure projects ever undertaken in Australia. Not since the construction of the Sydney Harbour Bridge has a single infrastructure project had the capacity to influence the long term future and prosperity of Sydney. WestConnex is the next step in providing a truly connected motorway network in Sydney.

Based on figures provided by the NSW Government in the *NSW Long Term Transport Master Plan* Sydney's population is expected to grow from 4.3 million to around 5.6 million by 2031[xvi], with a majority of this growth occurring in the North West and South West Growth Centres. It is estimated by the NSW Department of Planning and Infrastructure that these areas will see a significant increase in population with over 181,000 homes expected to be built over the next 25 to 30 years[xvii].

It is therefore critical that WestConnex is appropriately designed and constructed to ensure the safe and efficient movement of traffic in the long term, having particular regard to the expected future population growth and demand in the North West and South West Growth Centres.

It is arguable that many of the previous road infrastructure projects undertaken in Sydney in recent times have failed to consider a long term vision and have instead focused on the immediate or short term. Failure to anticipate or acknowledge future population growth and demand for road usage in Sydney has led to the construction of major road transport infrastructure projects that have reached capacity shortly after completion, causing lengthy delays and eventually necessitating difficult and expensive upgrades.

The opening of the two lane M5 East in December 2001 provides a good example of a project that failed to adequately address or anticipate future capacity issues due to increased road usage and Sydney's continued population growth. Soon after opening, the M5 East was already operating near capacity and today congestion extends across much of the day.

The M5 East sought to improve access between South Western Sydney, Sydney Airport and Port Botany, and the CBD, and aimed to reduce traffic congestion, improve traffic flow and remove heavy vehicles from local roads. These are not dissimilar to the planned goals for WestConnex.

Currently, 95,000 vehicles per day use the M5 East tunnel, many of these being heavy vehicles[xviii]. RMS has stated that congestion on the M5 East negatively impacts on access to Sydney Airport and Port Botany, hurting Sydney's economic productivity and competitiveness[xix].

These statistics support the conclusion that the M5 East, while also partly a victim of its own success, failed to adequately address capacity issues during the planning and design phase. Many lessons have been learnt from the design, public consultation and operation of the M5 East and from the subsequent Cross City and Lane Cove Tunnels, but as NRMA's recommendations in this Report reveal, there are a large number of other issues that also need to be considered for WestConnex.

Designing the WestConnex Stage 1 Tunnel – M4 to St Peters

The longest of the WestConnex tunnels, between the M4 and St Peters, will be 13 kilometers in length, making it the longest road tunnel in Australia, and one of the longest road tunnels in the world. It is therefore important that the tunnel is designed to allow for the efficient movement of traffic and to ensure the number of incidents and closures to the tunnel are minimised.

The main WestConnex tunnel will also be Sydney's longest road tunnel, more than three times the length of M5 East tunnel, which is currently Sydney's longest road tunnel. The graph below provides a comparison of the proposed WestConnex tunnel with other tunnels currently in operation in Sydney.

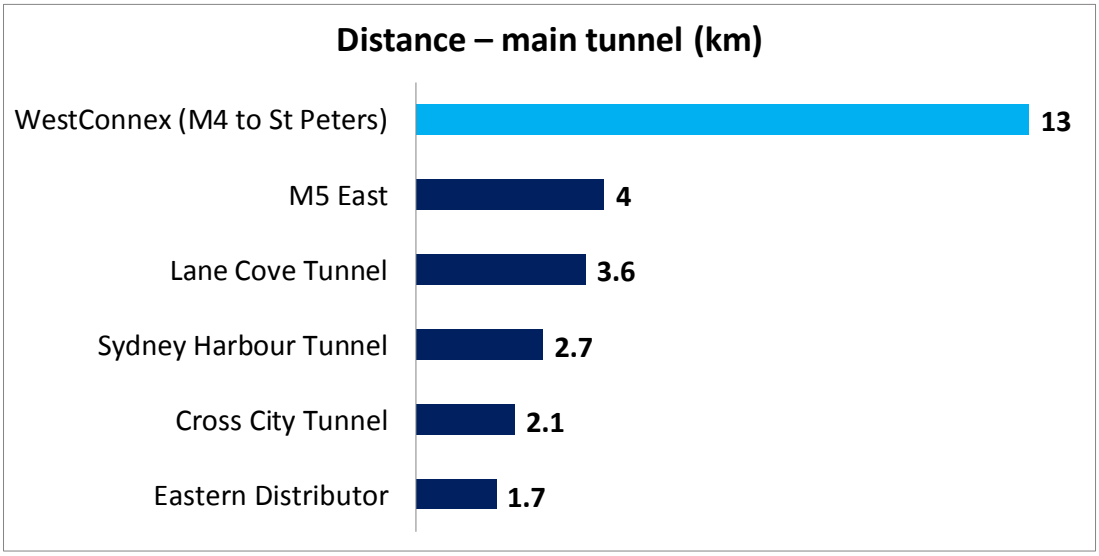

Figure 1.1 – Comparison of WestConnex with other road tunnels in Sydney

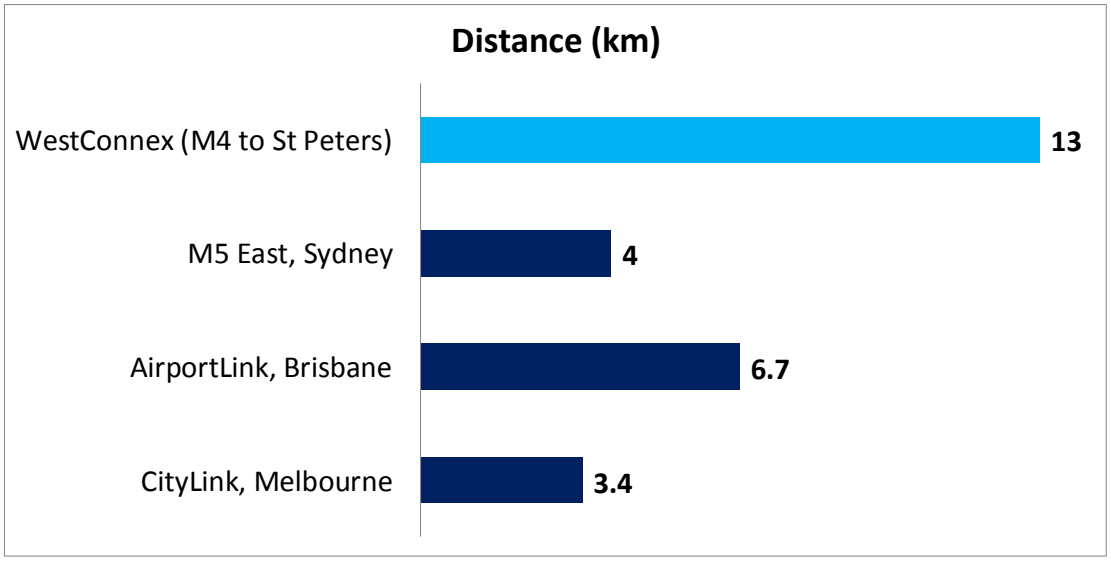

Figure 1.2 – Comparison of WestConnex with other existing road tunnels in Australia

Incorporating the longest road tunnel ever built in Australia, the WestConnex tunnels will require the world's best systems and designs embedded into the project to facilitate the efficient flow of traffic and provide a safe road environment for motorists. Taking the traditional approach to tunnel design and simply replicating the design of previous tunnel projects is unlikely to be sufficient for mega projects like WestConnex.

In constructing WestConnex, it is important that lessons are learnt from previous projects like the M5 East to ensure compromises are not made to critical elements of the design such as on and off ramps. It will also be important to ensure basic errors such as the construction of steep grades and right hand on and off ramps are not repeated in the design of WestConnex.

Incidents involving overheight and heavy vehicles

A key aim of WestConnex is to provide quicker and more reliable trips between Western Sydney, the Sydney Airport and Port Botany to assist freight movements[xx].

Sydney motorists know all too well the congestion associated with overheight vehicles that illegally attempt to enter the city's major road tunnels. Nearly every month, overheight vehicles are caught on the approach to tunnels, blocking traffic and causing extensive delays. As recently as 14 November 2013, an overheight vehicle caused significant damage to the M5 East tunnel during the morning peak, causing long and frustrating delays for motorists[xxi].

Heavy vehicle drivers travelling through Sydney's other major road tunnels are subject to height restrictions[xxii]. However many operators of heavy vehicles are either ignorant of these requirements or choose to take risks and simply ignore warning signs placed on the approach to the tunnels.

In an attempt to address this issue, the NSW Government has already signaled its intention to ensure the WestConnex tunnels are constructed higher than existing tunnels, but the WestConnex tunnels will also need to be equipped with advanced technologies and solutions to deter overheight vehicles from entering and potentially damaging the WestConnex tunnel.

The importance of managed motorways

For many years, NRMA has raised concerns about the reluctance of RMS to embrace the concept of managed motorways. A managed motorway approach seeks to use integrated technologies to manage the road network to reduce travel times, improve reliability and increase road safety[xxiii].

In May 2011, NRMA released a comprehensive strategy titled *Decongestion – 10 ways to relieve Sydney's traffic headache*[xxiv]*. The Decongestion Strategy* noted that up to 25 per cent more capacity could be achieved from Sydney's existing motorways by simply changing the way they are managed, and by adopting proven technology[xxv].

NRMA strongly believes that all new or upgraded motorways in NSW should incorporate an electronic freeway management system. Indeed, the ARRB Group has stated that the implementation of such systems 'should be considered whenever a new urban motorway is to be built or upgraded[xxvi]'.

Considering the high costs involved in building Sydney's motorway network, it makes sense to ensure that traffic using the network is properly managed using the latest and most advanced technologies. NRMA is disappointed that RMS failed to incorporate managed motorway principles and new technologies in either the M2 or M5 motorway upgrades. Trying to retrofit the devices and widened ramps will not only be costly, but also difficult to construct now that additional traffic resulting from the widening will need to be contended with.

The failure of RMS to embrace managed motorways for these upgrades is in stark contrast to the approach adopted by VicRoads in upgrading and managing Melbourne's road network. Melbourne's Monash Freeway uses intelligent transport systems such as information, communication and control systems to manage traffic flows, including motorway entry, lane use and driving speeds[xxvii].

VicRoads' adoption of managed motorways has delivered a 50 per cent improvement in travel times and a 50 per cent reduction in crashes on the Monash Freeway[xxviii]. Following on from this success,

the intention is for every freeway in Melbourne incorporates the same managed motorway technologies within the next five years. Queensland is now also implementing the Victorian system

NRMA believes that RMS must follow the lead of their counterparts in Melbourne and Brisbane and adopt the managed motorway principles in the design and operation of WestConnex. NRMA continues to have concerns that the 'in-house' system being considered by Transport for NSW for WestConnex will not perform as well as the tried and tested Melbourne system. Motorists paying to use WestConnex should have the best motorway management system.

Managing tunnel closures

The longer the tunnel, the greater the likelihood of unplanned incidents such as a crash or breakdown occurring somewhere in the tunnel. At 13 kilometres and more than three times the length of the current M5 East tunnel, this statement is particularly relevant for the main WestConnex tunnel. It is likely that the entire tunnel will be forced to shut down whenever a serious accident occurs within the tunnel. Therefore any serious incident within any of the WestConnex tunnels is likely to quickly result in traffic gridlock across the Sydney motorway and surrounding road network.

NRMA notes that following the release of NRMA *Decongestion Strategy* in 2011, the NSW Government adopted NRMA's recommendation to clear major road incidents on Sydney roads within 4 hours. This target has been included within *NSW 2021* as a target to help reduce travel times by improving the efficiency of the road network during peak times[xxix]. It is crucial that the Transport Management Centre, the private motorway operators and emergency services meet this critical target when unplanned incidents occur on WestConnex.

To ensure the WestConnex tunnels remain resilient and adaptive in the event of major unplanned incidents, NRMA believes that the NSW Government must continue to pursue new ways to manage incidents. The NSW Police response to the NSW Government adopting the target clearance time has been very successful and has resulted in more crash investigators being sent to major incidents, and to Operation Freeflow where highly visible Police vehicles have been stationed on Sydney's motorways.

This Operation has helped to slash Police response times to motorway incidents on average from 18 to 6 minutes and importantly has helped to change driver behaviour leading to a 25% reduction in the number of crashes.

The overwhelming success of visible policing indicates that it is important to let motorists know that they are being watched whilst travelling on WestConnex and particularly within the tunnels.

NRMA has also recommended elements of the UK's CLEAR initiative[xxx], such as using 3D laser scanning to quickly gather evidence at crash scenes can also help to reduce delays for road users.

Additionally, it is important that WestConnex is designed to ensure that detour and exit routes for the motorway have sufficient capacity to cater for vehicles that are unable to access the tunnels such as overheight vehicles and B-double petrol tankers. This will be particularly important should a major incident occur within the WestConnex tunnel, as all traffic will be required to these surface detour routes, mixing with petrol tankers and overheight trucks.

In such an event, NRMA believes that proposed bus lanes on Parramatta Road would need to be suspended and opened up to general traffic until the incident or breakdown is cleared by the emergency services and traffic is back to normal.

Innovative design to improve tunnel safety

Driving through lengthy road tunnels can quickly become tedious for motorists, with drivers experiencing greater levels of fatigue and tiredness. Clearly the longer the tunnel, the greater the likelihood of unplanned incidents such as a crash occurring somewhere in the tunnel.

This is particularly relevant for the longest of the WestConnex tunnels. This tunnel will be approximately 13 kilometres in length, double the length of Brisbane's Airport Link road tunnel. Not only will this make it the longest ever built in Australia, but it will also be one of the longest road tunnels built anywhere in the world.

As previously noted, the consequence of a major crash or incident in the WestConnex tunnel has the potential to cause gridlock across Sydney. Therefore it is important that the WestConnex tunnels are designed to minimise the number of unplanned incidents that could potentially close the tunnel for significant periods of time.

Traditionally, Sydney's road tunnels have been designed and constructed with a number of safety features to assist motorists in the event of a major incident. These include emergency broadcasts, electronic message boards, flashing lights to guide motorists to emergency exits, fire extinguishers and emergency phones located at least every 60 metres, and 24 hour CCTV monitoring[xxxi].

While it is expected that these safety features will be included in the design of the WestConnex tunnels, NRMA believes that due to the unprecedented length of the main tunnel, the NSW Government should consider incorporating best practice designs similar to those found in Scandinavian countries to keep drivers alert, and to guide them safely through the tunnel.

Tunnel design in Scandinavia

Some of the longest road tunnels in the world are located in Scandinavia. To help motorists safety navigate these long tunnels, Scandinavian road authorities have incorporated new technology solutions such as the use of innovative lighting displays in their design to make the driving experience safer for motorists.

The Lærdal Tunnel in Norway is 24 kilometres in length and is currently the longest road tunnel in the world, taking approximately 20 minutes to drive the length of the tunnel. Construction of this innovative tunnel commenced in 1995 and it opened to traffic in 2000, before Sydney's M5 East tunnel that opened in 2001, and well before Sydney's subsequent Cross City and Lane Cove Tunnels.

Image 1.6 – Image of the Lærdal Tunnel, Norway

Image 1.7 – Image of the Lærdal Tunnel, Norway

Given the significant length of the Lærdal Tunnel, the Norwegian Public Roads Administration (NPRA) designed the tunnel to ensure that motorists had a pleasant driving experiencing, incorporating new ideas to attempt to break the monotony of the long below ground trip[xxxii].

Image 1.6 above provides an example of the innovative approach undertaken by the NPRA in designing the Lærdal Tunnel. The tunnel is divided into four sections and includes three 30 metre diameter halls, similar to that of Image 1.6 above.

The NPRA used simulators to determine the best lighting levels to use in the tunnels. As shown by Image 1.7 above, the main tunnel is lit white, with blue and yellow lighting used within the three caves, giving motorists the impression of a sunrise[xxxiii]. The lighting in the caves are meant to break the routine for motorists, providing a refreshing view and allowing drivers to take a short rest from the perceived monotony of the tunnel.

It would not be difficult to incorporate new lighting designs within the WestConnex tunnels to enhance the driving experience for motorists, keeping motorists alert and providing a safer road environment which may assist in reducing the number of accidents within the tunnel.

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4879.

Director, Major Project Assessments
Department of Planning
GPO Box 39
Sydney NSW 2001

Submission: WestConnex M4 East EIS (SSI 6307)

I wish to express my strong objection to the WestConnex M4 East motorway proposal. If built it will generate additional traffic. Ultimately, it will heavily congested middle-ring and inner city roads, requiring the demolition of hundreds of homes and businesses to make way for road widenings on the surface road network to distribute the traffic from the motorway.

I also wish to register my objection to the government awarding tenders for the project before a full business case has been publicly released and before the EIS had been published and the public has exercised its right of participation.

The EIS process is supposed to allow for genuine public input and to result, potentially, in approval, non-approval, or approval with modifications, of the project. The present procedure makes a mockery of that right.

Government funding for this proposal – as part of the whole WestConnex proposal – will claim an extraordinary proportion of the state transport budget for years to come. This being the case, I am outraged that the EIS has failed to honestly and fully discuss its social, environmental, and economic impacts, its goals, its way it is preferable to other alternative public and active transport solutions.

In particular I draw attention to the EIS's failure to:

- Factor into the traffic modelling the very large increase in apartment construction – and therefore of population – that has been promoted by the WestConnex Delivery Authority and other agencies as a major rationalisation for the proposal.
- Honestly discuss public transport and freight rail alternatives.
- Publish a robust business case to justify expenditure of billions of dollars worth of taxpayers' funds.
- Properly discuss the long term impacts of air pollution generated by the increased traffic volumes the project is designed to facilitate.
- Consider more sustainable public and active transport options that will produce a lower level of greenhouse gas emissions.

Decades of long global experience of urban motorway construction has demonstrated conclusively that big new urban roads are counterproductive. They generate a flood of new road traffic and rapidly reach capacity. That is why, globally, they have fallen out of favour and are no longer seen as a solution to congestion.

POLITICAL DONATION DECLARATION
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ROBERT FERGUSON
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robfergusan1969@gmail.com

PLEASE PRINT CLEARLY

4880.

Date: 18/10/ 2015

Secretary
DP&E Project No. SSI 6307
NSW Dept. of Planning & Environment
GPO Box 39, SYDNEY NSW 2001
Re – WESTCONNEX PROJECT

I make the following Submission in relation to the Environmental Impact Statement for the WestConnex M4 East Tunnel Project. I strongly object to both the M4 East project and the entire WestConnex of which this is part and request a reply to the following concerns:

- I object to the lodging of an EIS before a full business case has made public and to billions of dollars of public money being signed away on contracts before any planning approval is given. This is a travesty of democratic planning.
- I object to the traffic impacts of the Westconnex including the M4 East tunnel. The government's own figures for the first M4 widening stage of WestConnex show that re-imposing a toll on the current M4 will increase traffic on Parramatta Rd by 35% and also increase traffic on the M2, Victoria Road and other major roads. Research shows that toll roads only provide temporary relief from traffic congestion; the evidence in the EIS is that the M4 tunnel would already be full by 2031. Many intersections on Parramatta Rd would continue to have an 'F' level of service. Local roads near the M4 and M5 would be choked.
- I object to $15.4 billion being spent on this toll road instead of significant public and active transport improvements. The EIS analysis of alternatives is superficial and dismissive
- WestConnex M4 widening is already making living conditions worse for people in suburbs such as Granville by leaving piles of asbestos near homes, removing vegetation and parks and exposing them to more traffic and pollution.
- Minor time savings for drivers of vehicles that are prepared to pay tolls are not worth $15.5 billion when Westconnex offers nothing to most residents beyond Parramatta who have been treated like second class citizens when it comes to public transport for too long.
- I object to hundreds of people being forced from their homes and businesses as a result of approximately 400 compulsorily acquisitions for the M4 East and M5. Many report that prices offered by government grossly undervalue their properties.
- I object to the destruction of heritage properties across the route including nearly a whole block in Haberfield, a conservation area of national and international significance.
- I object to the impacts on local business owners who were not consulted for the M4 EIS.
- I object to the impact that years of 24-hour construction work will have on communities. Across the route there will be thousands of diesel truck movements a day. Noise and vibration impacts cause stress and anxiety, affecting sleep patterns with consequent impacts on health and wellbeing. Wattle St Haberfield alone would be subject to 600 truck movements a day. As Ashfield Mayor Lucille McKenna said "this is not acceptable." I agree.
- I object to the toxic pollution that will come with the M4 East tunnel including unfiltered stacks. Pollution in local areas near portals will be worse. Traffic pollution has been linked to higher incidence of respiratory and heart disease and lung cancer, as well as impaired lung development in children. This is unacceptable given the high numbers of residents, businesses, schools, and child and aged care facilities near the project route.

Yours sincerely
Name: Sheron White Address: 23 South St, Marrickville

Phone (Opt): _____ Email: sheron.whitegrd.com

4881

Secretary
DP&E Project No. SSI 6307
NSW Dept. of Planning & Environment
GPO Box 39, SYDNEY NSW 2001
Re – WESTCONNEX PROJECT

Date: 18/10 2015

I make the following Submission in relation to the Environmental Impact Statement for the WestConnex M4 East Tunnel Project. I strongly object to both the M4 East project and the entire WestConnex of which this is part and request a reply to the following concerns:

- I object to the lodging of an EIS before a full business case has made public and to billions of dollars of public money being signed away on contracts before any planning approval is given. This is a travesty of democratic planning.
- I object to the traffic impacts of the Westconnex including the M4 East tunnel. The government's own figures for the first M4 widening stage of WestConnex show that re-imposing a toll on the current M4 will increase traffic on Parramatta Rd by 35% and also increase traffic on the M2, Victoria Road and other major roads. Research shows that toll roads only provide temporary relief from traffic congestion; the evidence in the EIS is that the M4 tunnel would already be full by 2031. Many intersections on Parramatta Rd would continue to have an 'F' level of service. Local roads near the M4 and M5 would be choked.
- I object to $15.4 billion being spent on this toll road instead of significant public and active transport improvements. The EIS analysis of alternatives is superficial and dismissive
- WestConnex M4 widening is already making living conditions worse for people in suburbs such as Granville by leaving piles of asbestos near homes, removing vegetation and parks and exposing them to more traffic and pollution.
- Minor time savings for drivers of vehicles that are prepared to pay tolls are not worth $15.5 billion when Westconnex offers nothing to most residents beyond Parramatta who have been treated like second class citizens when it comes to public transport for too long.
- I object to hundreds of people being forced from their homes and businesses as a result of approximately 400 compulsorily acquisitions for the M4 East and M5. Many report that prices offered by government grossly undervalue their properties.
- I object to the destruction of heritage properties across the route including nearly a whole block in Haberfield, a conservation area of national and international significance.
- I object to the impacts on local business owners who were not consulted for the M4 EIS.
- I object to the impact that years of 24-hour construction work will have on communities. Across the route there will be thousands of diesel truck movements a day. Noise and vibration impacts cause stress and anxiety, affecting sleep patterns with consequent impacts on health and wellbeing. Wattle St Haberfield alone would be subject to 600 truck movements a day. As Ashfield Mayor Lucille McKenna said "this is not acceptable." I agree.
- I object to the toxic pollution that will come with the M4 East tunnel including unfiltered stacks. Pollution in local areas near portals will be worse. Traffic pollution has been linked to higher incidence of respiratory and heart disease and lung cancer, as well as impaired lung development in children. This is unacceptable given the high numbers of residents, businesses, schools, and child and aged care facilities near the project route.

Yours sincerely

Name: Kathleen Tack Address: kathleenp@hotmail.com

Phone (Opt): _____ Email: 9 William St TEMPE NSW 2044

4882

2 November 2015

Director
Infrastructure Projects, Planning Services
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Submission: WestConnex M4 East Environmental Impact Statement (SSI 6307)

I write to express my strong objection to the WestConnex M4 East motorway proposal.

Global experience on experience of tollroad construction has demonstrated conclusively that these projects are enormously expensive and counter-productive. This tollroad will increase air pollution and encourage more car use, quickly filling the increased road capacity. It is not a long-term solution to Sydney's congestion problem.

The fact that the State Government has already signed multi-billion dollar contracts for WestConnex before this EIS was even placed on public exhibition undermines community confidence that this is a genuine consultation process.

I object to this proposal as it:

- Fails to provide a long term solution to traffic and congestion.
- Robs the limited NSW budget of funds to invest in much needed public transport.
- Will direct additional traffic into already heavily congested streets, like Parramatta and Victoria Roads.
- Requires the demolition and compulsory acquisition of hundreds of homes.
- Fails to compare this project against alternative public transport projects.
- Is not justified by any publicly-released business case.

One of the great 'let outs' applied by companies selected by Governments, such as that in power in NSW at the moment, is that they cite that the EIS is only the DRAFT - and so therefore they, such as those companies referred to above, can include the word 'generally' rather than apply direct scientific proof that the figures they produce on paper are factual - the question that needs to be asked should the Baird Government and its bureaucrats be brought before the ICAC in case serious donations were made prior to the election or is that a forgone conclusion - as alleged by the Media. The same type of deal and cover-up was applied to the M5 Tunnel and also the Cahill Expressway running through the city - in that instance evidence exposed that the Government at the time, had had ALL EPA Monitoring stations closed down - to ensure that no adverse readings could be submitted - it is alleged that one RTA employee had warned anyone wishing to live in the area close to that expressway should ensure that if they did so they did not have preexisting health problems especially relating to their lungs... as it was well known within that department that the area was heavily contaminated and more so since the building of the Cahill Expressway -
Clearly the Baird Government and his senior bureaucrats have followed the same regime and principles as their predecessors...
Included in the deliberate cover-up with the major health problems associated with the M5 Tunnel was the NSW HEALTH Department - their application of scientific facts went as follows - during a holiday period they telephoned residents near the Tunnel, more often than not they got a child at

the end of the telephone: 'Hello how are you, is your mother/father in' 'No' oh and how are you doing today, 'Good' so you are having a nice holiday, 'Oh good'
Those conversations were recorded as no health problems associated with the Tunnel...
This clearly will be the case again when push comes to shove all Regulatory Authorities are obedient Minister's servants as this country no longer has Public Servants their contacts cite that their loyalties are to the Minister of the day...

Yours sincerely

Josephine Wadlow-Evans
169 Lyons Rd
Drummoyne NSW 2047
wadlow@bullet.net.au

4883

25/10/15

Miss Jessica McFarlane
9 Shaftesbury Rd,
Burwood, NSW 2134

Attention Director – Infrastructure projects
Planning Services
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Dear Sir

Regarding Application number SSI 6307 Submission regarding M4 East Motorway

We are writing to express that we object to the M4 East Motorway being constructed under homes . We were never notified that the motor way was being built under our homes. We received a pamphlet in the letter box which was really hard to read which we feel is not an acceptable way to be informed. We have worked hard to buy our property and have large mortgages. We have great concerns for our property being damaged under construction of the M4 East Motorway. Consultations were vague and did not answer out concerns. We feel The State Government has let us down as we were led to believe the M4 East Motorway was being constructed under Parramatta rd, as that was the design we were originally shown and commented on. There has been a lot of secrecy behind this project and it has left us the property owners feeling disrespected.

Potential damage to property

We object to the M4 East Motorway as there will be tunnelling under our old Federation houses which have no footings and crumbling lime mortar. We object to 21 days of drilling and blasting. Chapter 18 subsection 18.3.3 page 18-15 indicates that 50mm settlement after drilling could be expected under Dobroyd Canal area and we object to tunnelling as we have concerns to our property being located so close to the canal.

Loss of Property value

We object to the M4 East Motor way as there will be potential loss of value to our properties. Volume 2E Appendix D Page D Strathfield Council consultations of 1st July suggests that those who assumed that they could fund their retirement through the sale of their homes, are likely to expect a decrease in the value as a result of the WestConnex project. We are now faced with the prospect of an easement on our property. We object to this as we did not purchase our property with an easement and our property will be worth less.

Aecom Lawsuit

We object to the M4 East motorway as Aecom who wrote the EIS has recently settled a lawsuit regarding the Brisbane tunnels for $280 million for deceitful conduct regarding traffic forecasting. This leaves us feeling very concerned about the information in the EIS

Tunnel Collapse

We object to the M4 East motorway as there will be potential risk of Tunnel collapse. Chapter 25 subsection 25.1 page 26.6 relates to tunnels at other locations and risks encountered at those areas. The EIS does not address the issues encountered by residents above the Brisbane Clem 7 and the Lane Cove Tunnel collapse. We feel there is a lack of information in the EIS which does not satisfy our concerns. We were advised by a tunnel expert that tunnel collapse is a possibility. We object to this risk to our property,

Tender has been accepted before approval.

We object to the M4 East motorway as the tender has been accepted before it has been approved. We find that extremely unacceptable.

Anxiety caused by project

We object to the M4 East Motorway as it has caused the residents lots of anxiety and stress. Some have not slept since discovering the tunnels will go under their home. There has been no empathy. We object to the M4 East motorway as there are many residents who do not speak English and cannot read the EIS as it is not printed in other languages and these people cannot make an informed decision.

We object to Homes being sacrificed

We object to the M4 East motorway as Seven hundred homes along the proposed route will be affected it is a shorter route and therefore the State Government will be putting cost savings and associated impacts before homes.

Political Donation

We have not made a political donation.

Privacy Statement

We have read the terms of the privacy statement on the website
http://majorprojects.planning.nsw.gov.au/

Yours Faithfully,

Jessica McFarlane

25/10/15

4884

[redacted]

From: Christine Hawkins [redacted]
Sent: Friday, 30 October 2015 4:53 PM
To: information-Planning
Subject: SSI 6307 WestConnex M4 East EIS submission

I wish to make a submission in response to the WestConnex M4 East Environment Impact Statement (EIS). I strongly object to the WestConnex M4 East proposal. I request a response to each of these concerns from the Secretary of the Department of Planning and Environment.

As a resident of the garden suburb of Haberfield, I believe that this porject would have a devastating effect on our local community. I have received a letter in the last fortnight telling me that the land under my property is to be acquired, which I object to. I also object to Wattle street coming within 12 metres of my back fence - however I feel we are lucky compared to some of our neighbours who are having part of the back gardens compulsorily acquired. I object to the loss of a number of what should be heritage-listed homes, being demolished for little gain. I note with interest the submission to the EIS process by the National Trust with regard to heritage matters. I object to the total change in our community as a result of this motorway proposal. I object to the smokestacks rising into the air at the top of my street, what will not only affect the air quality as they are not to be filtered, but will clearly be a visual eyesore, despite the assurances from (the o

ld) WDA officials saying that they will be heritage-looking, which is simply mind-boggling! These smokestacks, 'heritage' or not, should be filtered, regardless of the cost. I am concerned about noise pollution too and am please that the EIS mentions noise abatement to the rear of our property, but hopefully it will be of an appropriate height, standard and not be another visual eyesore. I am also concerned at our street (Walker Avenue) and other surrounding streets becoming 'rat runs' to avoid the motorways and tolls. Our street, despite the proximity to Wattle Street, Parramatta Road and Ramsay Street, is currently relatively quiet, and I would not want this to change.

My son attends Haberfield Public School, and my daughter will attend the same school from 2017, and I fully support their submission to the EIS process. The construction of the motorway will divide and destroy the school community, and the issues around air and noise pollution for both the constructoin and operational phases for the school are a major concern.

I strongly believe that a better system of 'park and ride, meaning parking hubs with links to public transport, are a much more sensible way forward, and a well thought out system of light rail, trains and bus transport is a much better way of spending taxpayers money and more efficiently moving the ever-expanding numbers of Sydney residents around.

I object to billions of taxpayer dollars being spent on a toll road that will only provide short-term relief. By 2031, the modeling in this EIS shows the M4 East will reach capacity. Traffic volumes will also increase significantly on key roads in the target area, including:

• Parramatta Rd at Homebush: Traffic on will increase by 46%, with average weekday traffic climbing from 33,600 to 49,800 by 2031.

• East-west traffic along Lyons Rd, Dobroyd Parade, Parramatta Rd and New Canterbury Rd: This will jump by about 48% if WestConnex is built, averaging around 193 cars a minute, 24 hours a day.

• The proposed tunnel linking the M4 and M5 in Stage 3 of the project will result in very high traffic densities.

I also object to the complete lack of transparency surrounding WestConnex:

• No business case has been revealed for the $15.4 billion WestConnex. The short 'summary' released by WestConnex to date is no substitute for a full and proper business case with detailed cost/benefit analyses, traffic modelling, and other data that can be independently scrutinised.

• In Dec 2014 the NSW Auditor-General noted that there were 'shortcomings in the level of independent assurance provided to the Government'. According to the Government's framework, an additional 4 'Gateway' reviews should have been conducted.

• The NSW Auditor-General noted fundamental conflicts in that WestConnex steering committees and boards also provided assurances to Government.

• The Sydney Motorway Corporation (SMC) is the public/private company charged with delivering WestConnex. Information about SMC cannot be captured through Freedom of Information requests, shielding it from scrutiny.

I object to claims made in this EIS that WestConnex will result in less pollution due to free-flowing traffic.

• Total traffic east-west across this part of Sydney will jump 53% by 2031. Such an increase is hardly going to improve air quality.

• The EIS shows that air quality at the 31 sites modelled across the M4 East area will greatly exceed the proposed national standard of 8 microns per cubic metre of air by 2021.

• The EIS also shows the air quality for a large section of Sydney, including Haberfield, Five Dock, Ashfield, Burwood, Strathfield, Concord, Canada Bay, Homebush and Flemington, will be about 25% worse in the next 6 years than the target air quality standard.

• Unfiltered pollution exhaust stacks will be located less than 500m from public schools, childcare centres and nursing homes.

• Modern diesel exhaust consists mostly of particles sized PM0.5 and smaller. There is no measurement in the M4 EIS of the quantity of these particles that drivers will be exposed to in WestConnex's tunnels.

• Fine particle matter has been placed by the World Health Organisation (WHO) in the same class of carcinogens as asbestos. They can penetrate deep into the throat and lungs, and are known to cause premature mortality, respiratory and heart diseases, cancers, impaired lung development in children, and more.

I object to the impact WestConnex will have on our environment and biodiversity:

• The M4 East EIS field surveys are very limited in duration and season. The EIS acknowledges this, stating "it is possible that seasonal species were not identified".

• Many homes targeted for acquisition and destruction for the M4 East have substantial yards with mature trees and green areas. Streetside green spaces will also disappear, along streets lined with established trees.

I object to the devastating impact WestConnex will have on people and communities:

• Around 400 homes and businesses are subject to compulsory acquisition by WestConnex for the M4 East and New M5 even before the projects are approved and a business case released.

• Haberfield will lose over 50% of its apartment dwellings, which are home to mostly single and elderly long-term residents, who will find it impossible to find similar accommodation nearby. Many will have to move away from the established communities that have been their home for years.

• Many residents report that prices being offered by the government grossly undervalue their properties, causing great stress at an already traumatic time.

• Thousands of residents will be impacted by increased noise and pollution, which will have significant negative health impacts. This is also likely to devalue many homes near the WestConnex.

• Consultations with Local Councils were only done on the concept plan regarding the M4East and were not repeated in 2015 after the final route was announced. Therefore councils were not given the opportunity to address the social and heritage impacts on the final route.

• Local communities will be carved up by multi-lane roads, cutting residents off from each other and vital social infrastructure.

• Communities will be subjected to years of disruption and traffic chaos during the construction phase of the tollway, creating stress and loss of amenity.

• Pedestrians and cyclists will be impacted as they face increased traffic density on key roads, increased travel times, and increased risks.

I object to the potential contamination of local waterways WestConnex will cause:

• Construction work will cause potential contamination of downstream waterways and groundwater, impacting on aquatic and riparian habitats.

• Accidental leaks or spills of chemicals, fuels, oils and/or greases from construction plants and machinery may result in pollution of local waterways and groundwater sources.
• Discharge of treated groundwater, stormwater runoff during rainfall events and direct deposition of airborne particles risk causing acute or chronic contamination of water quality in downstream waterways.

• Huge permanent sediment basins will have to be located at the Homebush Bay Drive interchange to accommodate contaminated runoff in storm events.

I object to the large-scale destruction of key Sydney heritage sites for the M4 East:

• The M4 East EIS notes that 53 properties within the Haberfield Conservation Area will be demolished, "permanently (removing) a substantial portion of the built heritage items fronting Wattle Street." 29 of these are assessed as 'contributory to the values of the Conservation Area'.

• The constant daily movement of large transport trucks severely degrades the urban environment, including those with heritage significance.

I therefore call on the Minister for Planning to reject this proposal.

Yours sincerely,

Christine Hawkins

52 Walker Avenue

Haberfield NSW 2045

4885

Attn: Secretary, Dept of Planning & Environment
28/10/15

Please find following my submission in response to the WestConnex M4 East Environment Impact Statement (EIS).

I wish to register my strong objection to this proposal, and to the overall WestConnex project.

I object to the induced demand that WestConnex will bring to Sydney by encouraging more people to drive making congestion worse.

I object to spending $15.4 billion on a toll road when this funding could pay for a fully integrated public transport system, and leave funds for other vital infrastructure like schools and hospitals.

I have enclosed handwritten letters for your information on my grievance and suggestions.

Yours faithful

Richard Davidson

82 Underwood Road
Homebush NSW 2140

Your problem of Parramatta Rd
and, the necessary divergence of
traffic into a tunnel has caused
problems for the residents of Underwood
Rd. Homebush
Homes have been taken over and homes of
long term residents forced by law to ~~be bought~~
~~bought and sold~~ to be sold and residents relocated.
There is said to be a smoke stack located
~~north~~ on the N/E corner of the present
paddock on the M/4. This smoke stack is
not being filtered.
Having lived adjacent to the ~~location~~
proposed location of the unfiltered stack
I can readily accept that when the
westerly winds blow the ugly fumes
will spread completely over the remaining
home to the detriment ~~of~~ ~~health~~ ~~harm~~
of residents still living in Underwood Rd and
those in Lamay ave.
I have lived in ~~Homebush~~ at 82 Underwood
for 68 years and I am reluctant about
the possibility of having to move at a late
time of life.

HAS THE ILLNESS WHICH WILL PREVAIL

My own attempt to solve the problem
that is Barcenilla

The attempt to solve the problem
that is Pinatta

~~The problem that is Pinatta Re~~

The ~~attempt~~ attempt

The Pinatta Re problem of
traffic delays is escalated

4886.

[redacted]

From: Bev JAN [redacted]>
Sent: Monday, 2 November 2015 8:45 AM
To: information-Planning
Subject: WestConnex M4 East SSI 6307 submission

To the Secretary, Dept Planning & Environment

I am writing to express my strong objection to the SSI 6307 WestConnex M4 East EIS and to formally request a response to my concerns.

I object to the entire WestConnex for a number of reasons. Global experience and research has shown conclusively that these kinds of toll road mega-projects are hugely expensive and counterproductive. WestConnex will increase air pollution and traffic, and expose NSW taxpayers to unacceptably high levels of financial risk. It is not a long-term solution to Sydney's congestion problem.

The fact that the State Government has already signed multi-billion dollar contracts for WestConnex before this EIS was even placed on public exhibition undermines community confidence that this is a genuine consultation process.

Failure to abide by the Major Projects Assurance Framework and employ best practice governance from project inception has also greatly reduced community confidence in WestConnex, including the M4 East EIS. The Community is being asked to comment on an EIS that is deficient in analysis of project justification.

A condition of consent for the M4 East should include adherence to the NSW Government's Major Projects Assurance Framework. Vital gateway reviews which should have been undertaken before the preparation of the EIS (and certainly before awarding construction contracts) should be commissioned, completed and made publicly available before any further approvals are issued.

In regards to this WestConnex M4 East proposal, I strongly object to the following points, and I ask you to respond to each in your reply:

• I strongly object to the lack of transparency in the entire WestConnex process. Billions of dollars of contracts have been let without a full business case having been released or the project being subjected to independent Gateway reviews.

• I strongly object to the short 55-day timeframe in which members of the community have been given to respond to the EIS for the M4 East. This document runs to nearly 5,000 pages, but the public was only given 55 days to

respond – despite hundreds of people calling and emailing the Minister for Planning to explain why this was not enough time.

• I strongly object to AECOM being paid millions of dollars of public funds to play the key role in the EIS for the M4 East. AECOM has been awarded other WestConnex contracts that give it a huge vested interest in the project going ahead, and this is demonstrated by the lack of independence and superficial analyses that characterise this EIS. In addition, AECOM has been sued for being negligent in relation to its past traffic studies, and has already paid more than $250m in settlement costs.

• I strongly object to having each section of the WestConnex assessed separately. Vague rationales for the whole project are used to justify the serious negative impacts of each stage. Projects such as the Southern motorway F8, which are not even at a planning stage, are included in the argument for the project without explanation.

• I strongly object to the failure to consider total negative impacts against the total claimed positive aspects. While the M4 East EIS repeatedly makes references to the positive impact of the entire WestConnex when arguing for the project, it fails to consider the negative impacts of the whole project – such as loss of housing, heritage and biodiversity.

• I strongly object to the failure to provide enough data to allow independent experts to verify the M4 East EIS's traffic analysis. For example, a detailed study undertaken by SGS Economics & Planning for the City of Sydney concluded that WestConnex would make traffic worse on Parramatta Rd, Victoria St and many local roads. The M4 East EIS claims it will improve traffic, but offers very little data that would allow experts to objectively assess this analysis.

• I strongly object to spending $15.4 billion for small savings that will not benefit most commuters. Instead of spending this amount of money to benefit a very small percentage of drivers in Sydney, and cut just one minute off overall road network traffic speeds, the NSW Government should be investing in public transport, traffic management solutions, and regional city centres to address traffic congestion and boost NSW's economic prosperity in the long term.

• I strongly object to the poor analysis of alternatives undertaken in the M4 East EIS. This section of the EIS is superficial and amounts to nothing more than a roundabout way of saying that the M4East tunnel project is preferred by WestConnex.

• I strongly object to the huge impact that the flow of cars and trucks out of tunnel exits. This will gridlock local roads throughout the Inner West.

• I strongly object to hundreds of residents being forced from their homes and businesses for the M4 East, and the failure of the EIS to assess the social impacts of this. Forcibly acquiring and destroying over 200 homes and businesses will result in massive social disruption in communities. There have been numerous reports of

homeowners and tenants being inadequately compensated for the loss of their properties. These acquisitions were in motion before the EIS was even completed. Yet the EIS Social Impact study failed to do any direct research on the impact of forced acquisitions on residents.

• I strongly object to the health risk and air quality analysis, which fails to assess the true impact of the M4 East. The claim is even made that WestConnex will improve local air quality – which will surely make it the first motorway in history to do so!

• I strongly object to the total inadequacy of the M4 East biodiversity assessment. This 'analysis' is based on insufficient studies. No attempt is made to assess cumulative impacts of the entire WestConnex project on loss of open space, gardens and other vegetation.

• I strongly object to the wholesale destruction of heritage homes and precincts. This is not acceptable, particularly for a project that will not resolve but add to Sydney's traffic congestion.

• I strongly object to the failure of WestConnex consultants to directly consult with business owners. Local business owners were not approached by WestConnex about the impact the M4 East would have on their livelihoods, despite the fact that many stand to see their businesses destroyed as thriving streets precincts are drowned in traffic.

I therefore call on the Minister for Planning to reject this proposal on the grounds that:

• Even the M4 East's inadequate traffic analysis shows that WestConnex will be at capacity by 2031.

• AECOM has not even met the basic Planning Secretary's requirements in its assessment.

• This is an outdated project that is not consistent with current trends in thinking about public transport, urban planning and livability of cities.

I recognise there is pressure on several NSW Departments, including Planning and Environment, to approve this project. I remind public servants of their obligation to the public and to the potential social, health and economic costs of spending $15.4 billion on WestConnex when it provides no solution to Sydney's transport needs.

Yours sincerely,

Bev JAN

Sydney NSW 2049, Australia

4887.

dgouder@outlook.com

Dear Director Infrastructure Projects, Planning Services

I am writing to make a submission as part of the Westconnex Environmental Impact Statement that has been supplied for comment. My comments are based on previously supplied comments to Wesconnex. The issues that I highlighted to Westconnex in my email dated 9 August 2015 included:

1) The closure of both
    a. the westbound on-ramp coming off Concord Road;
    b. while also closing the left turn off Parramatta Road onto the start of the M4

Is a serious error in judgement on Westconnex's part. There is a significant traffic demand for access off northbound Leister Avenue onto Concord Road to turn onto the current M4. It is highly desirable that the westbound on-ramp coming off Concord Road remain open to traffic as Leister Avenue serves an entire catchment south of the railway line at Strathfield that is likely to be underserviced via another route (currently proposed by Westconnex to be on Parramatta Road to the west of George Street at North Strathfield). Alternatively if the Concord Road onramp can not remain open, then the left turn off Parramatta Road onto the start of the M4 should remain open instead. Lack of provision of either one of these access points is likely to lead to a higher frequency of traffic congestion as drivers travel to the inadequate facility on Parramatta Road to the west of George Street. This in turn is likely to have congestion consequences for Parramatta Road and the wider road network. While the concept of managed motorways is to improve the capacity of the number of vehicles by delaying the entrance of vehicles onto the motorway, this should not mean that the entire surrounding network should be thrown into chaos from day 1.

I would propose that relocating the intersection of Parramatta Road for the onramp for westbound traffic for the M4, further to the west would benefit the project. I submit that shifting this intersection to align with Knight Street at Homebush would:

    a) Provide additional separation between the onramp intersection and George Street. This would allow for additional capacity for storage along the Parramatta Road corridor.
    b) Would align with an existing signalised intersection. Existing buildings on the northern side of Parramatta Road would need to be demolished to facilitate the additional leg of the signals on the northern side of Knight Street. I would recommend that double right turns be placed from the Parramatta Road (westbound) turning right into the onramp road.

2) Poor thought has been placed in the proposal with regard to pedestrian and cyclist movements along Concord Road. It was unclear how a pedestrian would be able to safely get down either /both sides of Concord Road under the proposal. Inadequate provision of facilities for pedestrians to travel along both sides of Concord Road is likely to increase the frequency of crashes between vehicles and vulnerable road users such as pedestrians and cyclcists.
3) The double left turn from the southbound lanes on Concord Road are likely to confuse drivers who either wish to go up and over to travel to the west, or down to access the M4 East. It would be better if a driver could turn left in a single left turn lane, and then once turning the first curve be able to make the decision to go east or west. By providing two lanes you effectively trap

infrequent drivers into making a decision before they can adequately comprehend their situation. This is likely to lead to drivers needing to change lanes at the last second, which in turn is likely to lead to a high number of crashes occurring.
Additionally, there seems to be a very short distance between the first left turn and the decision point to go east or west. This is likely to be a problem for drivers who are infrequent users of this interchange. Given that road design aims to cater for all road users, this is likely to lead to an increased frequency of crashes occurring as the driver attempts to change their lane.

4) The design and location of the proposed access on ramp off Parramatta Road onto the existing M4 to the west of Parramatta Road is a great example of an extremely poorly conceived design proposal. The existing right turn bay from Parramatta Road into George Street already draws a significant amount of traffic. In fact for extensive periods throughout the day this approximately 30m long right turn bay is an insufficient length to meet the current demand to turn right, and traffic queues back into the westbound median through lane Parramatta Road.

   Westconnex is proposing to have the on-ramp off Parramatta Road at a distance of approximately 50m away from the intersection at George Street. Westconnex's current proposal channels all of the southern traffic that travels from the southern side of the Western Rail Line at Strathfield, via Leister Street and then turns left onto Parramatta Road to then come down and turn onto the on-ramp to head westbound. Given that any reasonable person could expect the demand for the proposed on-ramp to exceed the currently potential storage area of up to 50m, this will cause major traffic disruption to the entire region.

   Additionally the close proximity of the two intersections that serve different functions would be problematic to phase. It would also mean that the close proximity would increase the likelihood of drivers being confused by two close sets of traffic signals. This would likely lead to an increase in vehicle crashes than a more appropriately design access point.

   I would propose that relocating the intersection of Parramatta Road for the onramp for westbound traffic for the M4, further to the west would benefit the project. I submit that shifting this intersection to align with Knight Street at Homebush would:

   a) Provide additional separation between the onramp intersection and George Street. This would allow for additional capacity for storage along the Parramatta Road corridor.
   b) Would align with an existing signalised intersection. Existing buildings on the northern side of Parramatta Road would need to be demolished to facilitate the additional leg of the signals on the northern side of Knight Street. I would recommend that double right turns be placed from the Parramatta Road (westbound) turning right into the onramp road.

5) For the on-ramp off Parramatta Road located to the west of George Street, and merging with the existing M4, the level difference that vehicles would have to travel up from Parramatta Road to the existing M4 would be significant. Combining the significant grade with vehicles such as heavy vehicles would mean that many vehicles would enter the existing M4 at slower speeds relative to the vehicles that would be already on the existing M4. There is also a very short merge taper to allow vehicles to get across into the westbound through lanes on the existing M4. Given this combination, it is likely that this would result in an increased rate of vehicle crashes than a more appropriately designed access point.

6) The way that the right turn bay proposed from Wattle Street into Ramsay Street has been designed may lead to drivers who are travelling down Ramsay Street during poor weather conditions to misinterpret this right turn as a left turn bay and travel onto the wrong carriageway. This may be more likely early in the morning when there is little traffic. There is the potential for an increased crash rate compared to a standard right turn bay.
7) All intersection movements should be provided at the intersection of Wattle Street and Ramsay Street. For example, not providing right turns from Ramsay Street onto Wattle Street would likely lead to an increase in the number of vehicles undertaking a g-loop type arrangement where they use Northcote Street. This would lead to an undesirable number of vehicles using a residential street to access a main road. This would increase the risk for residents of vehicle crashes occurring with vulnerable road users such as pedestrians and cyclists.

The Westconnex Environmental Impact Statement raises some significant concerns around some of the elements that I have raised and I am concerned that these considerations would be overlooked if I did not write to express my concern.

Regards,

Damian Goulder

[redacted]

Name: Domenic Liberatore
[redacted]n

Address:
[redacted]

Ashfield, NSW
2131

Content:
I'm not sure if this is a waste of time and its just a requirement for the project to get feedback and pretend to care about the needs of the community, yet continue to do as they wish (please prove me wrong).....

I am writing this submission to object to the proposed westconnex in its entirety.

The over priced EIS states that the improvement to traffic flow will be minimal, destruction of two heritage suburbs , increased noise and traffic congestion on surrounding streets not too mentioned an outrages waste of money which would be better spent on public transport.

They only people to gain from this project would be developers, consultants and politicians hence my objection.

[redacted]

SUBMISSION OF OBJECTION TO THE WESTCONNEX M4 EAST PROPOSAL

I very strenuously **object** to the Westconnex proposal. I believe this is an ill conceived, ill considered, badly planned concept that will not deliver positive outcomes for traffic or for communities. The entire process of the launch and promotion of the Westconnex proposition has been ludicrous and confusing from the start. The plans have either been vague and confusing, or keep changing; and the lack of transparency and genuine consultation is offensive. This is a has-been concept for an outdated mode of traffic management, that other major global cities are abandoning, and is not a vision for the future.

I **object** on the following grounds -

LACK OF TRANSPARENCY AND CONSULTATION
Information provided to the public has been confusing and contradictory.
Information packages are vague PR promises with no details and big claims.
Staff at consultation meetings and information booths don't really know much about anything and cannot or will not offer further information, explanation or clarification other than what is in the promotional materials.
The EIS does not disclose traffic modelling methodology to the extent that independent experts can assess accurately.
There is not a business case to justify the claims in the EIS.
The Gateway review process has been by passed.
Councils were only shared initial concept plans a year ago, but have not been involved in more detailed consultation about the actual plans and therefore the real impact on communities and amenities.
The Westconnex project has been transferred to a private corporation, rendering it more opaque to scrutiny.
Contracts have been issued before a business case and before the EIS consultation period – stinks of collusion, cronyism and corruption.
Exhibition period of only 55 days for the public and other interested organisations to read, interpret, assess 5,000 pages of complex and obscure information.

FINANCIALLY IRRESPONSIBLE
It is not financially responsible to commit $15.4 billion to a project that does not have a business case, will not provide the outcomes that it claims, does not and will not genuinely consider alternative solutions, benefits only a small portion of the population, and sucks funding out of other potential services and projects.
A percentage of this budget could achieve far greater benefit to a far wider section of the population if it was committed to improving and expanding public transport options, advanced traffic management systems, and exploring more efficient modes of transport for freight (phenomenal increases in freight movements are forecast for Port Botany and the airport, and Westconnex does not provide a solution to deal with this.)
Other privatised tollway/tunnels in Sydney have failed and have demanded compensation and/or subsidies – this will be another failed project that a private corporation will seek a financial bail out (of tax payers' money!)
AECOM is being paid millions of dollars, which is clearly a conflict of interest, as well as great concern since AECOM has been sued for previous traffic studies and has announced it won't be conducting traffic studies in the future.
The only beneficiaries of this project will be the private corporations/contractors, not the community.

IT WON'T WORK
This is an outdated mode for solving capital traffic congestion and freight issues.
Other major cities around the world are abandoning tollways and spaghetti interchanges.
The EIS does not provide data that adequately demonstrates significant improvements, any improvement may be infinitesimal.
Other independent traffic experts do not believe that it will achieve its aims, in fact there is much opinion stating that congestion will get worse, both on the tollway and on alternative non-toll roads.
Some commuters will reject the tollway and use non-toll roads adding to existing congestion.
The interchange at St Peters will allow hundreds of commuters to spew on to small local roads that will create traffic mayhem.
The tollway does NOT conduct commuters to the CBD so falls significantly short of its stated objectives!

It is inevitable that 24 hour clearways will need to be imposed on streets such as King St, Enmore Rd, Edgeware Rd, Liberty/Kingston St, Alice St, etc etc – while clearways are not addressed by the Westconnex project, it is abundantly clear that the additional traffic congestion on these roads will force the RMS and/or local councils to impose 24 hour clearways in order to try and address the clogged traffic caused by the Westconnex project spewing hundreds more vehicles on to these roads.

AIR POLLUTION
It is inconceivable that this project includes UNFILTERED ventilation stacks.
It is not world's best practice to install unfiltered vents; it is cheap, nasty, money-saving, meanness.
Micro particles from exhaust and road dust pose serious health risks to humans.
The proposed vents will spew this pollution high in to the air, in the hope that it may disperse, in residential areas that may also contain schools and hospitals and nursing homes etc.
This is absolutely UNACCEPTABLE.
Claims that it will improve local air quality are simply ridiculous and obviously UNTRUE.

DESTRUCTION OF HOMES, HERITAGE BUILDINGS, PARKS AND NATURAL HABITAT
Hundreds of homes including a swathe of heritage buildings, and businesses, parks and natural habitat will be destroyed by the construction of Westconnex and associated services.
Communities will be destroyed, and divided.
The high human cost has not been factored in to this proposal, and the negative impact it will have is intolerable.

Yours sincerely
Annelise Keohan
43 Victoria Rd
MARRICKVILLE NSW 2204

Note: I have made no donation to any political party, elected member, group or candidate.

[redacted]

Name: *John Fletcher*
[redacted]

Address:
[redacted]

Haberfield, NSW
2045

Content:
My submission is attached

[redacted]

WestConnex M4East EIS (SSI 6307) Submission

I am writing to express my strong **objections** to the WestConnex M4 East Motorway proposal (**the Project**) and to request a response to my concerns.

1. **No Gateway Review, Transparency or Due Process**

I strongly object to the complete failure of appropriate and due process for the Project.

1.1. I object that Project has proceeded to the current extent despite the **NSW Auditor General** criticising development of the Project and its business case and highlighting serious defects. For example, the following are extracts from the NSW Auditor General's Report: *Performance Audit : WestConnex Assurance to the Government of 18 December 2014* at : http://www.audit.nsw.gov.au/publications/performance-audit-reports/2014-reports/westconnex-assurance-to-the-government/westconnex-assurance-to-the-government

From the **Executive Summary, Conclusion** page 3

" In the period covered by this audit, the processes applied to WestConnex to provide independent assurance to Government did not meet best practice standards...

"The confusion and lack of clarity noted above occurred despite the Major Projects Assurance Framework being developed and announced concurrently with the WestConnex concept. It is surprising that the agencies concerned held the view that the Major Projects Assurance Framework would not apply to such a major project as WestConnex"

"These shortcomings have had practical implications. The preliminary business case submitted for Gateway review had many deficiencies and fell well short of the standard required for such a document. Further, on our analysis, the business case put to the Government still included some deficiencies that independent Gateway reviews and external assurance arrangements, if they had occurred, should have identified..."

From the **Overview** page 15

"The absence of a Gate Zero Gateway review strengthened the need for a Gateway review early in the business case development phase. No such Gateway review occurred."

"Infrastructure NSW was also conflicted in its roles of developing the concept and providing independent assurance to Government."

1.2. I object to the failure to abide by the Major Projects Assurance Framework and employ best practice governance from the Project's inception and that the public is being asked to comment on an EIS that is deficient in analysis of Project justification.

1.3. I object to the business case for the Project not being released to the public or provided for public scrutiny. That the NSW Auditor General has criticised the development of the Project only heightens the urgency for public scrutiny and debate.

1.4. I object to the acquisition of properties for the Project commencing before a business case has been released for public scrutiny, before the failures identified by the NSW Auditor General have been addressed and the Project re-considered, and before the EIS was produced and released.

1.5. I object to the Government awarding tenders for the Project before any of the above, before any opportunity for community consultation, and against strong community protest.

1.6. I object to AECOM having been engaged to play a central role in the EIS as referred to in paragraph 3.4 of this submission despite a vested interest in the Project proceeding and an alarming conflict of interest.

1.7. I object to all of the above occurring despite strong protest from affected local communities, including from the Councils of Ashfield, Leichhardt and the City of Sydney which have been outspoken against the Project from its early stages, and from the Councils for other affected suburbs including for Newtown and St Peters.

1.8. I object to the public not knowing how the balance of the cost of the Project after State and Federal contributions, will be funded, and that it must be assumed that the Government also does not know.

1.9. I object to control of the Project having now been transferred to a "private corporation" preventing information being captured by freedom of Information requests - effectively shutting down public scrutiny.

The EIS process is supposed to allow for genuine public input and to result, potentially, in approval, non-approval, or approval with modifications, of the Project. The procedure for the Project makes a mockery of that right and represents a total failure of due and proper process, which requires a public inquiry.

2. Severe Negative Impact on Haberfield and the Local Community

I have resided in Haberfield for over 25 years. I object to the severe impact of the Project on Haberfield and surrounding areas including Ashfield, and their communities.

2.1. Haberfield

Haberfield is a residential community of federation houses and buildings unique in Australia and of international significance as Australia's first planned garden suburb. It is protected by the Haberfield Conservation Area (**HCA**). Haberfield is a conserved Federation jewel, not only in Sydney, but NSW and Australia.

The Environment Impact Statement (EIS) comments about Haberfield include:

"The Haberfield Conservation area has significance as it is the first successful comprehensively planned and marketed garden suburb in Australia.... Haberfield predates the first garden suburbs in Britain by some five years."

"It is significant in the history of town planning in NSW...

"It is significant in the history of Australian domestic architecture for its fine ensemble of Federation houses and their fences, and shops, most with their decorative elements intact."

"It is outstanding for its collection of modest Federation houses displaying skilful use of material and high standard of workmanship of innovative design and detail particularly reflective of the burgeoning naturalistic spirit of the Federation year in which they were built."

"Almost the entire suburb of Haberfield, from Dobroyd Canal (Iron Cove Creek) to Hawthorne Canal and northwest to Iron Cove, but excluding the properties along Parramatta Road, is listed as a HCA of local and potential state significance on the Ashfield LEP 2013. It is Australia's first fully planned and developed garden suburb and is highly intact....";

2.2. **Project Impacts**

The impacts of the Project on Haberfield and the local community will be severe and cannot be reasonably mitigated. The impacts include:

- the acquisition and bulldozing of 53 properties, including those with heritage significance;
- the impact on tree lined streets within the Haberfield Conversation Area;
- loss of homes for those affected including long term residents and the elderly;
- the demolition of approximately 50% of Haberfield's apartment buildings which house residents who will find it difficult to find equivalent replacement homes;
- the impact of the constructed road, ramps and tunnel on the community ;
- right hand turn exits from the completed Project tunnel at Ramsay and Waratah streets funnelling traffic into Haberfield - significantly increasing traffic on local streets, permanently;
- air pollution from unfiltered ventilation stacks and the associated health impacts, including on children at Haberfield Public School and residents in their homes;
- the cutting off of one part of Haberfield from the remainder - and isolation of the western side;
- many years of high level construction effects – dust, noise and pollution;
- increased traffic on local streets from trucks and work vehicles during the many years of construction; and
- the attendant negative heritage, social, health, and community impacts of all of the above.

2.3. **EIS Findings**

The EIS finds all aspects of the Project to be significantly detrimental to Haberfield and not able to be mitigated. The following are only some extracts from the EIS concerning just the HCA and heritage impacts alone:

"the demolition of this number of individually listed and contributory items would have a major adverse impact on the heritage significance of Haberfield Conservation Area." (refer to table 19.26)"

"The project would impact on the legibility of the original subdivision designed by Richard Stanton, evident in the existing street layout and the pattern of the

freestanding and semi detached houses. The project would effectively fragment the suburb..."

"The new motorway infrastructure and associated elements would not be sympathetic to the existing built environment or landscape character of the conservation area."

"Heritage items, potential heritage items and HCAs above the proposed tunnels and in the vicinity of the construction works may be subject to vibration impacts. Vibration could affect the condition of the heritage fabric through cracking and settlement and in the worst case scenario, compromise a heritage item's structural integrity."

"The proposed future stage of WestConnex (M4-M5 link) could potentially have further impacts on the Haberfield HCA. The proposed scope of works would include tunnels underneath the Haberfield HCA and, while detailed information is not yet available, further surface works and additional demolitions may be required for construction compounds."

"..the impact of the proposal on the heritage significance of the Haberfield HCA and individual items within it would be significant and unable to be effectively mitigated."

2.4. **Mitigation**

The EIS makes it clear that the Project will have an extreme adverse impact on the Haberfield Conservation Area and the Haberfield community which is not able to be reasonably mitigated. The impacts cannot be justified.

If the Project proceeds notwithstanding all objections and the failure of due process, I strongly support all submissions by Ashfield Council for measures to seek to ameliorate impacts plus I urge:

- no exits at Ramsay and Waratah streets;
- any exits be confined to Parramatta Road; and
- continuation of the Project tunnel through to Glebe Island Bridge in substitution of Stage 3 of the WestConnex.

3. Project Traffic Issues

3.1. **Insubstantial Commuter Savings**

I object that for the cost of the Project and enormous adverse community, social, heritage and health impacts to be imposed on the inner west of Sydney by the Project, the EIS predicts only a 6-8 minute saving on travel times from the Western suburbs. Even if this correct, that is horrifyingly poor.

3.2. **Insufficient Data and Analysis**

I object to the EIS's failure to provide enough data to allow independent experts to verify its traffic analysis and that its analysis conflicts with that of others. For example:

a) the EIS claims the Project will improve traffic, but offers very little data that would allow experts to objectively assess this analysis;

b) a detailed study undertaken by SGS Economics & Planning for the Sydney City Council concluded that WestConnex would make traffic worse on Parramatta Rd, Victoria St and many local roads;

c) Eco Transit predicts that traffic on the motorway and arterial roads will be higher with the motorway in place and that the overall poor results will not be worth the estimated expenditure (*October 2015 Eco Transit News*); and

d) the EIS however also admits that traffic would get worse with the Project, not only during construction, but after completion when more cars will be lured onto the road with greater traffic at places such as the City West Link which would only reduce when (and if) Stage 3 was built. The analysis of traffic figures in the EIS shows at least four intersections in Haberfield/Leichhardt would be worse if the motorway were built, compared with if it were not built- Parramatta Road at Sloane, Norton and Crystal streets, and Dobroyd Parade at Timbrell Drive.

3.3. **EIS Assumptions and Omissions**

I object that the EIS in relation to traffic analysis:

a) fails to take into account the increased traffic which will result from construction of apartments and increased population along the corridor for the Project;

b) assumes unfunded infrastructure and factors not provided for in the Project's budget to achieve the forecasts, including:

- dedicated bus lanes including a dedicated bus lane on Parramatta Road and a new high frequency bus route between Burwood and the CBD,
- improved access to rail stations;
- upgrades to pedestrian and cyclist connections; and

c) repeats mistakes made in the modelling for the Lane Cove and Cross City Tunnels.

3.4. **AECOM Conflict of Interest**

I object to the alarming conflict of interest of AECOM in playing a key role in the EIS when AECOM has been awarded other WestConnex contracts, and is involved in NSW Urban Growth proposals for high rise apartment development along Parramatta Road - all comprising a huge vested interest in the Project going ahead. The involvements demonstrate a lack of independence, severe conflict of interest and makes the superficial analysis that characterises the EIS highly suspect and unreliable.

Further, AECOM has been sued in relation to its past traffic studies, and has reportedly paid more than $250m in settlement costs in relation to the insolvent Brisbane Airport Link, for misleading and deceptive conduct associated with its traffic forecasting.

In the circumstances it is wholly inappropriate for AECOM to have been involved in the EIS in a central role, or at all, and renders all traffic modelling and analysis highly suspect and unable to be relied upon.

3.5. **Increased Local Traffic**

I object that the Project will result in significantly increased traffic flow into, and congestion for, Haberfield, the City West Link and surrounding inner west suburbs including for the following reasons:

a) the City West Link between Haberfield and the Glebe Island Bridge, particularly between Haberfield and Balmain Road, Leichhardt, is already heavily congested and at a standstill at peak times and at various other times. The congestion already encourages rat running through Haberfield and Leichhardt to avoid the congestion;

b) termination of the Project tunnel and exits at Haberfield and the additional traffic generated by the tunnel from the western suburbs will severely exacerbate the pressure on that already congested section of road - which will not be tolerable;

c) right turn tunnel exits at Ramsay Street and Waratah Street will provide an escape route from the congestion, funnelling traffic into the centre of Haberfield's residential streets and on through to Leichhardt and other inner west suburbs;

d) the EIS itself admits increased traffic in areas such as the City West Link as commented above; and

e) local Council evaluations confirm increased traffic and rat running on local roads. For example Leichhardt Council's analysis of the EIS and the impact of the M4 East on roads not studied in the EIS criticises the EIS for not evaluating the impact of the Project on roads such as Ramsey Street, Marion Street and Darley Road in Haberfield and Leichhardt, and increased "rat-run" traffic on Balmain Road, and Catherine, Young and Johnston streets in Annandale.
"The smoking gun has now been revealed that the first stage of WestConnex will in fact significantly worsen congestion on Parramatta Road in Haberfield and Leichhardt." (Mayor Darcy Byrne October 2015 following the EIS release)

I also object that other inner west areas affected by the M4 East may be similarly impacted.

3.6. **Flawed Traffic Modelling**

The history of traffic modelling for major road projects predicts that the EIS's traffic analysis will prove to be deeply flawed, superficial and misleading, such as for example, predictions for the Brisbane Rail Link, Cross City Tunnel and Lane Cove Tunnel.

If the EIS's current predicted minor saving in commute time from western Sydney is somehow deemed an acceptable justification for the Project - which I strenuously submit it is not - the size, cost, and multiple serious adverse impacts of the Project make the risks of misleading or flawed predictions too high.

4. Stage 3 Issues

4.1. Lack of Disclosure or Analysis

I object that:

a) there has been no disclosure of the potential locations for the connections at Haberfield to the Stage 3 tunnel or of the tunnel route for Stage 3 of the M4 East which is to comprise a multi lane freeway under Haberfield, Leichhardt and Annandale;

b) the EIS and plans for the Project disclose only vague initial locations for the connections to Stage 3 at Haberfield yet the EIS recommends that the works to connect to Stage 3 should be done as part of Stage 1 and Stage 2 to minimise further impact on Haberfield. For example the EIS states:

"The proposed future stage of WestConnex (M4-M5 link) could potentially have further impacts on the Haberfield HCA. The proposed scope of works would include tunnels underneath the Haberfield HCA and, while detailed information is not yet available, further surface works and additional demolitions may be required for construction compounds."

and also:

"Heritage items, potential heritage items and HCAs above the proposed tunnels and in the vicinity of the construction works may be subject to vibration impacts. Vibration could affect the condition of the heritage fabric through cracking and settlement and in the worst case scenario, compromise a heritage item's structural integrity."

c) the EIS contains no disclosure or analysis of the effects of construction, vibration, ongoing noise, pollution from ventilation stacks and potential damage to the structural integrity of buildings including within the Haberfield Conservation Area from Stage 3;

d) the EIS does not say what works will be done or where for Stage 3, and the location plans provided in the EIS for Stage 3 connections in Haberfield, assuming they are even final, are impossible to interpret as to specific location or route;

e) if the Project proceeds as proposed by the EIS to Stage 3, the locations for the Stage 3 connecting ramps will be locked into position without any opportunity for public consultation, without an environmental impact assessment on those works and without any transparency or due process; and

f) alternatively, if the Project is constructed without the works being done for the Stage 3 connections at Haberfield- the EIS makes it clear that the severe and negative impacts on Haberfield of the Project will be repeated when the Stage 3 works are subsequently done.

Either way, Haberfield (and Leichhardt and Annandale) residents are being excluded from information and consultation about a significant adverse impact on their homes, environment and health - which is unacceptable.

4.2. **Non Viability of Stage 3**

Notwithstanding the above points:

a) the nature of WestConnex is that if Stage 3 does not proceed, the increase in traffic onto the already congested City West Link and into local roads radiating from the current planned tunnel exits will be permanent and ever increasing. Minister Duncan Gay admitted before the NSW Government March 2015 election that without Stage 3:

120,000 cars per day will be *"spewed into Newtown, Balmain, Leichhardt and Erskineville"* and with Stage 3 *"instead of rat runs through suburban streets, motorists can jump on and off this motorway,"*. Haberfield should also have been included in the Minister's prediction.

If Stage 3 does not eventuate, the Project condemns Haberfield and large sections of Sydney's inner west to permanent *"rat running through suburban streets"*.

This is also admitted by the EIS (as noted at paragraph 3.2 above), in admitting the increase in traffic in local streets in the absence of Stage 3; and

b) there is as yet no funding or approval for Stage 3, and its viability must be questionable given the failures of similar projects including the Cross City Tunnel. The study of the WestConnex by SGS Economics commissioned by the Sydney City Council also questioned the viability for Stage 3 and reported that even if the last Stage proceeded the overall benefits would be small for the size of the undertaking.

4.3. **Damned If Stage 3 Proceeds and Damned If It Doesn't**

Whether Stage 3 proceeds with its attendant impacts and without due process and opportunity for consultation, or whether it doesn't proceed for lack of funding or viability, the Haberfield community (and other inner western suburb communities impacted by Stage 3 issues) will bear a severe impact if the M4 East project proceeds - just to reduce the travelling time of western suburbs commuters by potentially only a few minutes.

How can that be justifiable on any basis?

5. Major Opportunity Cost for Insubstantial Benefit

5.1. I object that Government funding for the Project, as part of the whole WestConnex proposal, will claim an extraordinary proportion of the State's transport and infrastructure budget for years to come. However the EIS has failed to honestly and fully discuss its social, environmental, and economic impacts or to explain why it is preferable to other, alternative public and active transport solutions;

5.2. I object to over $15 billion being spent on WestConnex for small savings that will not benefit most commuters or the public, and will not benefit wider communities including regional communities desperately in need of public expenditure. Instead of spending this amount of money to benefit a very small percentage of drivers in Sydney, and cut just a few small minutes off overall road network traffic speeds in the short term, the NSW Government should be investing in public transport, traffic management solutions, and

regional city centres to address traffic congestion and boost NSW's economic prosperity in the long term;

As the City of Sydney Council points out about WestConnex on its website:

"It won't improve access to the city centre jobs as 90% of western Sydney workers commute to the city on overcrowded public transport.

It doesn't align with the State Metropolitan Strategy to create job opportunities in Western Sydney and transport links to them.

It won't help transfer freight from Port Botany Sydney Airport to Western Sydney.

Critical linking roads are underfunded.

It doesn't take it into account Badgerys Creek Airport.

It won't help the renewal of Parramatta Road.

It will funnel thousands more cars into Newtown, Erksinville, Alexandria, Waterloo, Redfern and Green Square. "
[to which we can add suburbs within the Ashfield and Leichhardt Council areas of Haberfield, Leichhardt and others];

5.3. I object to the poor analysis of alternatives undertaken in the M4 East EIS. This section of the EIS is superficial and amounts to no more than saying that the M4 East tunnel project is preferred by WestConnex;

5.4. I object to the EIS's failure to consider total negative impacts against the total claimed positive aspects. While the EIS repeatedly refers to the positive impact of the entire WestConnex when arguing for the Project, it fails to consider the negative impacts of the whole Project, including loss of housing, heritage, biodiversity and community; and

5.5. I object to the Project in its entirety when so many transport experts advise that decades-long global experience of urban motorway construction has demonstrated that big new urban roads are counterproductive. They generate a flood of new road traffic and rapidly reach capacity. Globally, traffic commentators agree they have fallen out of favour and are no longer seen as a solution to congestion, yet the NSW Government is committing over $15bill of public funds to proceed with an outdated and horrendously negative project.

Reject the Proposal

I object to so many aspects of the M4 East that it is not possible to comment on all given the complexity and volume of the EIS and the Project documentation. For instance I also object:

- that the EIS document runs to nearly 5,000 pages, yet the public was only given 55 days to respond, despite strong community protest and requests for extension;

- to the severe health impacts and social dislocation aspects of the Project on inner western Sydney communities which are better commented on by others, but which are deeply disturbing;

- to the compulsory acquisition of so many homes and properties throughout the inner west of Sydney to make way for the construction of the Project;

- to the impact on the residents and communities of Leichhardt, Ashfield, Croydon, Newtown, St Peters and other inner western suburbs of Sydney- which will no doubt be the subject of many objections from those communities and their Councils; and

- that the role of Government is to properly consider, act judiciously and wisely, and not endanger the health and welfare of the public- yet in proceeding with the Project, without undertaking a Gateway Review and without observing due process, it is evident the NSW Government has considered political interests and the interests of major corporations and other vested interests, to the severe detriment of one very large section of the public –the inner west of Sydney- and I am appalled that elected representatives should act in this way.

I recognise there is pressure on several NSW Departments, including Planning and the Environment, to approve this Project. I remind public servants, including the Minister, of their obligation to the public and to the potential social, health and economic costs of spending $15.4 billion on WestConnex when it provides no solution to Sydney's transport needs.

I therefore call on the Minister for Planning to reject the proposal for the Project.

Brent Devine

From: system@affinitylive.com on behalf of [redacted]
Sent: Sunday, 1 November 2015 10:19 PM
To: Brent Devine
Subject: Submission Details for [redacted]

Confidentiality Requested: yes

Submitted by a Planner: no

Disclosable Political Donation: no

[redacted]

[redacted]

Marrickville, NSW
2204

Content:
Concerns re: health effects during and post construction;

* My retired elderly parents live in Walker Ave, Haberfield and will be directly impacted by the effects of the years of construction and long term effects of pollution. They have pre-existing conditions that will be exacerbated by the noise and particle debris during construction. What alternate accommodation arrangements will contractors offer when there are periods of increased noise and debris?
What mitigation and or compensation will be offered for the negative impact the environmental noise and air quality will have on my parents health?

[redacted]

Brent Devine

From: system@affinitylive.com on behalf of [redacted]
Sent: Sunday, 1 November 2015 10:26 PM
To: Brent Devine
Subject: Submission Details for [redacted]

Confidentiality Requested: yes

Submitted by a Planner: no

Disclosable Political Donation: no

[redacted]

[redacted]

Marrickville, NSW
2204

Content:
Concerns re: traffic risks post construction
* During the construction phase Walker Ave, Haberfield will be temporarily converted into a part cul-de-sac- to deter traffic from Parramatta Rd (city bound) turning left into Walker Ave.
This is a sensible decision and has been considered in previous years due to traffic risks of vehicles turning right out of Walker Ave (at a dangerous blind spot) into Ramsey Street OR worse still rat racing through the lane and via the back streets of Haberfield Public School putting pedestrian children at increased risk.
Could this part cul-de-sac be considered as a permanent road configuration post construction?

[redacted]

Brent Devine

From: system@affinitylive.com on behalf of [redacted]
Sent: Sunday, 1 November 2015 10:34 PM
To: Brent Devine
Subject: Submission Details for [redacted]

Confidentiality Requested: yes

Submitted by a Planner: no

Disclosable Political Donation: no

[redacted]

[redacted]

Marrickville, NSW
2204

Content:
Concerns re: land use on Walker Ave, Haberfield- 'grey area' post construction-
* Several houses are being demolished so that the vacant area can be used during construction for trucks to park etc.
I have grave concerns as to the use of this land post construction- in particular will the zoning in this section of the street be at risk of changing?
How can the Haberfield and in particular the Walker Ave community have a say in how this land is used once vacated?
Options for community use- is a 'green space' for residents to care for a community flower garden with storm water design for water efficiency. Coupled with park bench, swings and Aboriginal totem polls and gathering area (such as in Cooks River area- Steel Park, Marrickville), a reserve of some kind a meeting area for locals.

[redacted]

Brent Devine

From: system@affinitylive.com on behalf of [redacted]
Sent: Sunday, 1 November 2015 10:39 PM
To: Brent Devine
Subject: Submission Details for [redacted]

Confidentiality Requested: yes

Submitted by a Planner: no

Disclosable Political Donation: no

[redacted]

[redacted]

Marrickville, NSW
2204

Content:
Heritage and retro building materials etc;
* Several homes on Walker Ave, Haberfield will be demolished to make space for a truck parking area :(why not remove Bunnings instead of destroying a neighbourhood?
* Many of these homes have lead light windows, rosettes, fire places and other materials and features of value and importance. What considerations are there on how these items will be preserved?
* Will they be auctioned off?
* How will the profits of these sales be used- they should be regenerated into the Walker Ave community in maintaining a green space in remembrance of what was once a beautiful neighbourhood, of which I spent 30years of my life in.

[redacted]